TOTAL CATALOGUE 2018 *Innovation in*

ALARM & SIGNAL



Qlight

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New Products

Warning/ Signal/ Stackable Lights 43

We produce a diverse portfolio of xenon and LED warning/ signal/ stackable light products that vary in size from 50mm to 180mm in diameter. The xenon and LED filaments are used to improve the lifetime and brightness of the products.



Signal Lights & Electric Horns/ Speakers 119

Excellent products that provide visual signals and audible sound. These products recently added an SDcard slot which allows users to input their own sound suitable for their application condition.



Heavy-Duty Warning Lights/ Horns 147

Products for vessels, heavy-duty, and heavy equipment require anti-vibration, corrosion, and waterproof qualities. Qlight's products are compliant with ABS, LR, CCS, KR, CE certifications.



Explosion Proof Warning Lights/ Horns 197

Explosion proof products are used in places such as offshore plants, petrochemical plants and gunpowder factories where lingering explosive gas/chemicals pose a higher risk for fire and explosion.
Qlight produces products which are compliant to IECEx, ATEX, NEPSI, KGS, KOSHA standards.



Warning Light Bars 227

Warning light bars require various shapes and sizes depending on the vehicle and purpose. Qlight's products can meet varying requirements due to the modular design of the light bar.



Contents

Aviation Obstruction Lights 237

Aviation obstruction lights are placed in high locations that can be costly for repair and inspection. Qlight's products use LED lights which provide long lasting durability and are virtually maintenance free. Qlight's products can meet the mid, low brightness and flame proof standards.



Signal Tower Lights 247

Signal tower lights can be used for a wide variety of industries and environments that require the transmission of visual and audible signals. Qlight tower lights are available in a number of shapes and also offer options for built-in sounds and melodies.



USB, ETN Signal Tower Lights 359

USB LED tower lights do not need a power source when connected via USB to a PC. Our Ethernet communication LED tower lights can be controlled over long distances by internet or LAN.



Wireless Control Product 381

The wireless network system helps users to remotely monitor and control the operation status of the signaling device through a PC or smartphone. By applying this wireless connected signaling system, users can improve the efficiency of their production environment.



Electronic Horns/ Speakers/ Motor Sirens 401

Electric horn products include 7 warning sounds, 13 melodies, and 30 MP3 sounds (via multiple channels) built-in. Products with the MP3 option allow users to input the proper sound for their working condition and environment.



Industrial LED Lights 419

Qlight produces industrial LED work lights for machine tools that are durable and waterproof. These industrial work lights can also be used in distribution panels and are IP67/ IP69K compliant for high pressure water cleaning environments.









Qlight Gives You a Brighter Future!

Qlight has been a world-leading provider of visual and audible status indicating systems and solutions for the last three decades. We pride ourselves in developing products which help our customer's improve productivity, safety, and quality control in the industrial automation and commercial industries. Our strong dedication to innovative products, quality assurance, well-established supply chain, customizable manufacturing and strong customer relationships have helped us earn the top market share in Korea and China. These core values have also been fundamental to our continued growth into new markets.
Qlight's products are certified by the International Quality Management System (ISO14001), IECEx, ATEX, UL, NEPSI, CE, Lloyd, KIMM, and KOSHA which display our dedication to stringent quality control and product development based on safety-pursuing industry standards.
Our assembly lines in Busan, South Korea and Shanghai, China presently provide a variety of more than 450 of products to more than 40 countries, based on sales offices in South Korea (Seoul, Busan) China (Shanghai, Shenzhen, Shenyang, Tianzhen, Tianjin, Wenzhou), and the U.S. (Silicon Valley). The Qlight brand reflects 30 years of research and development, certification, and manufacturing experience.
We will continue to establish ourselves as a industry-leading provider by pushing the boundaries of technology in order to enhance our customer's efficiency and safety in every industry and region of the world.



Qlight Global Networks

Country	Company name	Address	Phone
Korea	Qlight Co., Ltd.	HQ | A-412, 579, Gyeongin-ro, Guro-gu, Seoul, Korea	+82-80-328-2222
		Factory |185-25, Mukbang-Ro, Sangdong-Myeon, Gimhae-si, Gyeongsangnamdo, Korea	+82-80-328-1111
USA	Qlight USA, Inc.	#341, 3003 North First St., San Jose, CA 95134 USA	+1-408-519-5740
China	SHANGHAI Qlight Electronics Co.,Ltd	#19, Nanda Road, Baoshan Area, Shanghai, China	+86-21-6651-7100

Qlight Clients

Heavy industry / Ship building / Automotive / Steel / Machinery / Petrochemical / Power plants / Electronics / Semiconductor / Emergency Vehicles

HYUNDAI HEAVY INDUSTRIES CO.,LTD. · posco · DSME · SAMSUNG HEAVY INDUSTRIES · DOOSAN Doosan Infracore · HYUNDAI WIA
SK hynix · Hanwha · HYUNDAI · SAMSUNG ELECTRONICS · ex Korea Expressway Corporation · LG Electronics
BOEING · BROMMA · CAT · Danfoss · PSA

Company Introduction

Qlight uses novel management and production management systems in order to produce high quality products.

By adopting technology standards and quality assurance systems,

Qlight has achieved quality gentrification and standardization with a wide range of products in order to meet our customer's sophisticated needs.



Enterprise Resource Planning(ERP) System



■ **Enterprise Resource Planning(ERP) system maximizes our management's efficiency**

The comprehensive enterprise resource planning system allows Qlight to quickly understand, communicate, and manage current business conditions in an efficient and transparent platform.

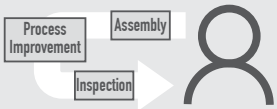
Quick On-Time Delivery System



■ **Highly efficient Supply Chain Management (SCM) ensures quick delivery time**

Our SCM's ability to visualize the entire supply chain at a glance from purchasing to production and to distribution allows for enhanced production efficiency for quick on-time delivery.

Cell Based Manufacturing Systems



■ **Apply Cell Manufacturing Systems where operators are responsible for the entire production procedure from beginning to end**

Modular parts and cell manufacturing systems allow for flexible manufacturing and mass product customization.

Small Quantity Batch Production System



■ **Flexible Customer-Driven Small Quantity Batch Production System (FMS: Flexible Manufacturing System)**

450 product families to satisfy diverse use cases and conditions. Prompt production system to produce approximately 15,000 types of parts.

Quick Response to Market Change



■ **One-stop System which allows Qlight to respond quickly to market needs**

Marketing strategy, R&D, purchasing, production and quality control activities are planned and carried out in one area with a one-stop system that allows Qlight to respond quickly to market needs.

Company History

Qlight has been striving to accomplish our mission to provide visual and audible status indicating systems and solutions to enhance our customer's work safety and efficiency for the last three decades.

1986-1992	1993-2005	2006-2010	2011 to Present	- Future
Business foundation and consolidation	Growing as a signal transmission device specialist	A great leap forward & business reconstruction	New engines for growth	The 2nd growth and globalization









2017	08	ISO 14001 : 2015 certificate aquired
	02	Obtained ICAO certification for SAOL1
2016	11	Obtained the patent for "multi-functional modular signal tower light" (Patent # : 10-1676863)
	09	Obtained the patent for "Emergency Vehicle Lightbar" (Patent # : 10-1662283)
	07	Obtained UL certificate for LED signal lights Q series
		Obtained the patent for "Bar style LED work lights" (Patent # : 10-1598123)
2015	09	The second headquarter factory built
	06	Limit switch models (3 items including SW2TS) acquired certificates from RMRS
	03	LED work lights (QML150/250, QMFL 500/600) UL listed
2014	10	Established the Qlight USA, Inc. in San Jose, CA.
		Horn which that emits light patented (Patent # : 10-1452447)
		Fan/ tilt type bracket patented (Patent # : 10-1452445)
	09	LED strobe light with multi-lens patented (Patent # : 10-1444391)
	08	Explosion proof product family including SNE, SNES, SESA, SEA, SPNA acquired IECEx certificates
	06	Selected as a promising export company by Small & Medium Business Admin., Korea
	01	Non-sparking explosion proof tower lights including ST45ML and STB45ML acquired KGS and NEPSI certificates
2013	01	Portable warning lights for agricultural machine applications patented (Patent # : 10-1226959)
2012	12	Explosion proof warning lights (SNE, SNES) acquired CCS certificates
		LED work light with cylindrical lens attached patented (Patent # : 10-1219020)
	09	Explosion proof warning lights (SESA, SEA, SPNA) and heavy-duty warning lights (SH1, SED, SEWN30) certified by CCS
	01	LED warning light with LED reflector patented (Patent # : 10-1108102)
2011	11	SNE, SNES certified by NEPSI, SNE, SNES, SESA, SEA, SPNA certified by KOSHA
	08	KCC (Korea Communications Commission) certificate acquired
	07	Light equipment applying prism system patented (Patent # : 10-1051056)
2010	05	QEB certified by KIMM
		LED warning light, bulb revolving warning light patented (Patent # : 10-0961472)
	03	Research and development center established
2009	12	SSEL certified by KIMM
		LED tower lights compliant with the RoHS directive
2008	04	Motor drive system patented (Patent # : 20-0439536)
	03	LED revolving type lens patent acquired (patent # :10-0808669)
2007	11	Explosion proof electric horn (SPNA) acquired NEPSI certificates
	05	Tower light models including ST45, ST56,ST80) UL listed
2005	07	Heavy-duty products for vessel applications acquired Lloyd's (UK's Maritime Classification Society) certificates
	04	ABS certificates acquired for 18 products including SH1
2004	06	ISO 9001:2000 certificates acquired
2001	02	Established Shanghai Qlight Electronic Co.,Ltd. in China
2000	07	Established Qlight Limited
1993	11	Nominated for developing domestic explosion proof warning lights by Korean Ministry of Science & Technology
1988	03	Developed limit switches for vessel applications
1986	07	Established Qlight

R&D Center and Lab for Testing Explosion Proof Products

R&D Center

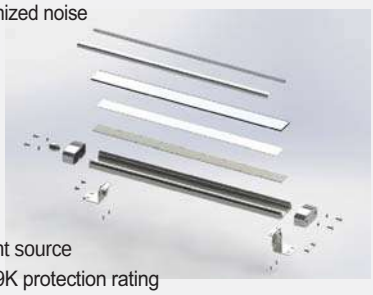
Qlight's R&D laboratory continually strives to enhance our technology in the areas of product miniaturization, unmanned operation, and strengthened durability in order to develop products that can satisfy our customer's sophisticated needs.

Considering our customer's diverse operational conditions, we constantly pursue the best product quality by testing and measuring our products under the most extreme conditions. We achieve our high quality through standardized processes acknowledged by world-leading certificate organizations such as UL, CE, ATEX, IECEx and etc.



Research Achievements

01. Interchangeable layer type tower lights
02. Warning light globes applying optical-path direction lighting system
03. Floodlight with high efficiency LED for inspecting cracks in industrial sites and industrial machinery
04. A lens that helps deliver the LED's light in the lateral direction, and bulbs applying this lens (LR-transparent)
05. High intensity LED revolving warning lights applying multi-directional reflector
06. Explosion proof electric horns applying sintered flame arrester
07. Brushless DC motor
08. Motors applying V-belt drive, featuring high energy efficiency and minimized noise
09 Multiple color LED warning lights
10. Signal lights applying LED bulbs as light source
11. Solar powered warning lights
12. Direct-drive warning lights
13. Special driving gear for revolving warning lights
14. LED Bulb applying special lens
15. Warning lights for heavy industry applying multi lens system
16. Signal horns embedded in the enclosure body that functions as a light source
17. LED Work light bars specifically designed for machine tools with IP69K protection rating





Lab for Testing Explosion Proof Products

Qlight has invested in our own explosion proof test facilities in order to quickly develop new technologies and conduct pre-certification testing. This helps us maximize our efficiency in developing products within market driven timelines.
The pre-certification testing follows the strict IEC 60079-0, IEC 60079-1 standards to ensure our product's quality and smooth certification process when submitted to universal standards bodies.

Process of Explosion Proof Testing



New Products

Warning Lights/ Signal Lights

Q70NSC
P62



- Ø70mm xenon strobe warning light
- Superior visibility with distinctive direct light distribution system
- Medium screw base(E26)
- Protection rating : IP65

Q70NSN
P63



- Ø70mm xenon strobe warning light
- Superior visibility with distinctive direct light distribution system
- Cable entry : PF 1/2" (male)
- Protection rating : IP65

S80NS
P66



- Ø80mm LED strobe warning light
- Superior visibility with direct light distribution system
- Protection rating : IP66

S80LS
P67



- Ø80mm LED strobe signal light
- Excellent durability to shock, vibration and moisture
- Protection rating : IP65

S125LSE
P68



- Ø125mm LED strobe warning light
- Excellent durability to shock, vibration, and moisture
- Protection rating : IP54

SKTL/ SKTLB/ SKTLM/ SKTLBM
P86-87



- Cube-shaped LED warning lights for vehicle
- Direct mount, magnet base, built-in siren buzzer are optionally provided
- Special light filter structure provides clear signal light transmission
- Sound volume : Max 105dB at 1m
- Protection rating : IP66

MFL60/ MFL80/ MFL100/ MFL125
P103-104



- LED signal light with multi-light functions
- Multi-functional model with selectable steady/flashing, strobe, and simulated revolving flashing mode in one unit
- Sound volume : Max 80dB at 1m
- Protection rating : IP65

QMCL60/ QMCL80/ QMCL100/ QMCL125
P109-110



- Multi-color led steady signal lights
- 7 color modes configuration
- Sound volume : Max 80dB at 1m
- Protection rating : IP65

Signal Light & Audible Alarm Combination Products

QWTD
P124-125



- Wall mount LED signal tower with built-in alarm
- 5 selectable sound patterns from 20 sound options
- Sound volume : Max 85dB at 1m
- Protection rating : IP54

QAD80H/ QAD80BZ
P127



- Signal light and electric horn(-H type) / high-volume buzzer (-BZ type) combinations
- Sound volume : Max 100dB at 1m (QAD80H)
- Sound volume : Max 105dB at 1m (QAD80BZ)
- Protection rating : IP65

QAD100H/ QAD100BZ
P128



- Signal light and smart electric horn (-H type) /high volume buzzer (-BZ type) combinations
- A variety of pre-recorded sounds and SDcard sound input supported
- Sound volume : Max 100dB at 1m (QAD100H)
- Sound volume : Max 105dB at 1m (QAD100BZ)
- Protection rating : IP65

QAD125H/ QAD125BZ
P129



- Signal light and smart electric horn (-H type) /high volume buzzer (-BZ type) combinations
- A variety of pre-recorded sounds and SDcard sound input supported
- Sound volume : Max 115dB at 1m (QAD125H)
- Sound volume : Max 105dB at 1m (QAD125BZ)
- Protection rating : IP65

New Products

QWCD35/ QWCD50

P130-132



- LED strobe signal light and electric horn combinations
- Qlight's innovative patent holding light emitting horn enclosure
- A variety of built-in sounds binary input and SDcard sound input supported
- Sound volume : Max 115dB at 1m (QWCD35)
- Sound volume : Max 123dB at 1m (QWCD50)
- Protection rating : IP66

STNDL

P142-143



- LED tower light and electric horn combination
- Pre-recorded sounds and SDcard sound input supported
- Sound volume : Max 105dB at 1m
- Protection rating : IP54

STND100LR/ STND100L/ STND100R

P144



- Warning light and electric horn combinations
- Pre-recorded sounds and SDcard sound input supported
- Sound volume : Max 105dB at 1m
- Protection rating : IP54

STND125LR/ STND125L/ STND125R

P145



- Warning light and electric horn combinations
- Pre-recorded sounds and SDcard sound input supported
- Sound volume : Max 105dB at 1m
- Protection rating : IP54

Heavy-Duty Products for Vessels and Heavy Industry

QA115HLS/ QA115HLSP

P155



- LED strobe warning light for heavy industry
- Can select between direct mount type and pole mount type
- Protection rating : IP66

QWH35/ QWH50

P183-184



- Smart wall mount electric horn embedded in the enclosure body
- 30 variety of built-in tones with SDcard sound input supported
- Sound volume : Max 115dB at 1m (QWH35)
- Sound volume : Max 123dB at 1m (QWH50)
- Protection rating : IP66

Explosion proof Warning Lights

QTEX/ QTEXB

P208-209



- Explosion proof tower light
- Superior durability with aluminum housing
- Mounting options : wall mount type, direct mount type
- Sound volume : Max 102dB at 1m
- Protection rating : Ex d IIC T6, IP66

QMFL-300-Ex-24

P226



- Non sparking LED work light
- Can be used in Zone 2 applications
- Special epoxy sealed structure provides excellent oil resistance
- Features tempered glass for enhanced durability
- Protection rating : IP67/ IP69K

Warning Light Bars

QLV-1250/ QLV-1150/ QLV-885

P228-230



- Warning light bar for emergency vehicle
- Slim design
- Vivid & powerful signal sign
- Sound volume : Max 123dB at 1m
- Protection rating : IP56

SAMP-100

P231



- Amplifier for QLV warning light bars
- Simple linkage between sound signal and warning lights
- Clear and stable sound signal
- Equipped with a microphone for emergency voice notifications

SM-100ND

P231



- Sounder for QLV warning light bars
- 100W high volume horn with clear warning sounds
- Mounting bracket for applications in various environments

Aviation Obstruction Lights

QAOL1

P241



- Low intensity LED aviation obstruction light
- Excellent durability from the polycarbonate housing structure
- Light color : Amber
- Light function : Flashing
- Luminous intensity : 200cd/m
- Protection rating : IP56

SAOL2

P242



- Low intensity LED aviation obstruction light
- Aluminum housing structure
- Light color : Red
- Light function : Steady
- Luminous intensity : 19cd ±25%
- Protection rating : IP66

SAOL3

P243



- Low intensity LED aviation obstruction light
- Aluminum housing structure
- Light color : Red
- Light function : Steady
- Luminous intensity : 48cd/m
- Protection rating : IP66

SAOL4

P244



- Medium intensity LED aviation obstruction light
- Aluminum housing structure
- Light color : Red, White
- Light function : Flashing(A, B type)
  Steady(C type)
- Luminous intensity : 2,000cd ± 25%
- Protection rating : IP66

QEAL1

P245



- Explosion proof low intensity LED aviation obstruction light
- Aluminum housing structure
- Light color : Red
- Light function : Steady
- Luminous intensity : 50cd ± 25%
- Protection rating : Ex d ⅡC T4, IP66

QEAL2

P246



- Explosion proof medium intensity LED aviation obstruction light
- Aluminum housing structure
- Light color : Red, White
- Light function : Flashing
- Luminous intensity : 2,000cd ± 25%
- Protection rating : Ex d ⅡC T4, IP66

Signal Tower Lights

QWT
P263~264



- Wall mount LED signal tower light with built-in buzzer
- Superior side visibility with round-shaped lens
- Sound volume : Max 85dB at 1m
- Protection rating : IP54

QTA56L
P259~260



- LED Steady Tower Lights
- hexagon shaped metal housing
- Folding type mount bracket
- Volume : Max 85dB at 1m
- Protection rating : IP44(standard type), IP23(buzzer type)

QT56MCL
P280~281



- Multi-color led steady tower lights
- 7 color modes configuration
- Hexagon shaped metal housing
- Sound volume : Max 90dB at 1m
- Protection rating : IP44 (standard type), IP23 (buzzer type)

QTA56L
P301~306



- Layer re-arrangable LED steady/ flashing tower lights
- A variety of mounting bracket options
- Built-in buzzer with adjustable volume level type available
- Sound volume : Max 85dB at 1m
- Protection rating : IP65(standard type), IP54(buzzer type)

QTG50/ QTG60/ QTG70
P307~314



- Modular LED steady/flashing tower lights
- Excellent visibility with special color diffusing lens
- Easy addition and rearrangement of modules by using the lock-type structure
- Sound volume : Max 85dB at 1m
- Protection rating : IP65 (standard type), IP54 (buzzer type)

QTC50/ QTC60/ QTC70
P315~322



- LED steady/flashing tower lights
- Separate color filter lens inside the outer lens provides clear signal
- Easy addition and rearrangement of modules by using the lock-type structure
- Buzzer volume adjustable
- Sound volume : Max 85dB at 1m
- Protection rating : IP65 (standard type), IP54 (buzzer type)

QTR50/ QTR60/ QTR70
P323~330



- LED steady/flashing tower lights
- Milky color filter provides comfortable viewing for the operator
- Easy addition and rearrangement of modules by using the lock-type structure
- Buzzer volume adjustable
- Sound volume : Max 85dB at 1m
- Protection rating : IP65 (standard type), IP54 (buzzer type)

Wireless Control Product

QTG60-WIZ/ QTG70-WIZ

P389~396



- Wireless LED tower lights
- Can remotely monitor and control the operating status using a PC or smartphone
- Allows the construction of a low cost advanced production system
- Protection rating : IP65(standard type), IP54(buzzer type)

QMCL125-WIZ

P397~399



- Wireless multiple color LED steady signal lights
- Can remotely monitor and control the operating status using a PC or smartphone
- Allows the construction of a low cost advanced production system
- Can generate 7 color light signals in one light unit
- Protection rating : IP65

Electric Horns

QMPS

P408~409



- Panel mounted multi-functional smart electric horn
- A variety of pre-recorded sounds and MP3(SDcard) sound input supported
- Sound volume : Max 98dB at 1m
- Protection rating : IP54

QAP80H/ QAP80BZ

P412



- Electric horn/ high-volume buzzer
- Sound volume : Max 100dB at 1m (QAD80HC)
- Sound volume : Max 105dB at 1m (QAD80BZC)
- Protection rating : IP65

QAP100H/ QAP100BZ

P413



- Electric horn/ high-volume buzzer
- A variety of pre-recorded sounds and MP3(SDcard) sound input supported
- Sound volume : Max 100dB at 1m (QAP100H)
- Sound volume : Max 105dB at 1m (QAP100BZ)
- Protection rating : IP65

QAP125H/ QAP125BZ

P414



- Electric horn/ high-volume buzzer
- A variety of pre-recorded sounds and MP3(SDcard) sound input supported
- Sound volume : Max 115dB at 1m (QAP125H)
- Sound volume : Max 105dB at 1m (QAP125BZ)
- Protection rating : IP65

SMP35/ SMP50

P417



- Multifunctional electric horn with 30 sounds
- Pre-recorded sounds and MP3 (SDcard) sound input supported
- Sound volume : Max 115dB at 1m (SMP35)
- Sound volume : Max 123dB at 1m (SMP50)
- Protection rating : IP65

LED Work Lights and LED Light Bars for Industrial Use

QML/ QMHL

P424~427



- Water, dust, and oil resistant high-intensity LED work light
- Superior durability with special sealing structure
- Light transmitting lens made of tempered glass
- Mounting options : Oil resistant K bracket (tilt type) and MF bracket (tilt/ pan type)
- Protection rating : IP67/ IP69K

QFL/ QFLC

P428~429



- Water and vibration resistant high-intensity LED light bars
- Excellent front and side luminance with special light distribution system
- LED direct AC power supply system
- Superior durability with polycarbonate lens
- Protection rating : IP67

New Products

QMFLN

P430~431



- Water, dust, and oil resistant high-intensity LED light bars
- Superior durability with oil-resistant epoxy bonding structure
- Light transmitting lens made of tempered glass
- Available in a variety of lengths depending on your application needs
- Protection rating : IP67/ IP69K

QCML/ QCMLC

P435~437



- Waterproof LED light bars for multi-use
- Multi silicon rubber sealing structure for superior protection from water
- Light color options : warm white, cool white, yellow and red
- Protection rating : IP67/IP69K

QEL/ QELT/ QELS/ QELTS

P440~442



- LED light bars specially designed for distribution panel applications
- LED direct AC power supply system
- Available in a variety of lengths
- Detachable bracket with easy mounting hole space adjustment
- Terminal box and switch option available

QPL/ QPLC/ QPHL/ QPHLC

P432~434



- Waterproof LED light bars
- Aesthetically pleasing round-shaped lens structure
- LED direct AC power supply system
- Available in a variety of lengths depending on your application needs
- Protection rating : IP65

QGL/ QGLC

P438~439



- LED light bar for general indoor use
- LED direct AC power supply system
- Available in a variety of lengths depending on your application needs
- Detachable bracket with easy mounting hole space adjustment

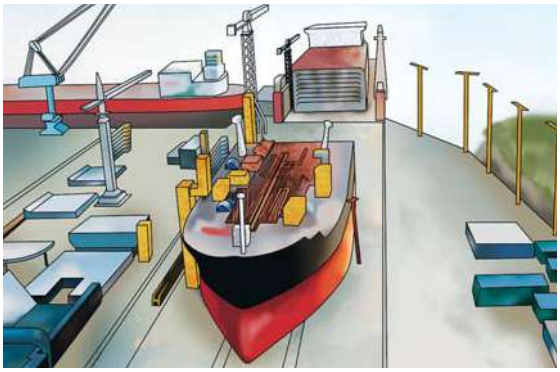
List of Technical Information

This catalogue has a lot of technical information for our customer's reference and education.
Please be advised that the common specifications for each product category are located in the front of the contents followed by specific information about each product.

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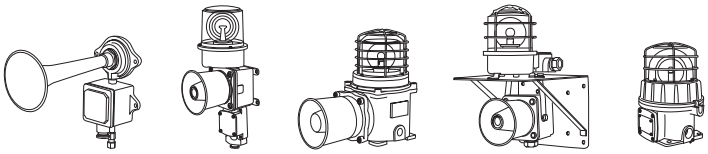
Application Areas

Qlight's products are used in a wide range of industries. With our various product families, we offer a wide selection of products appropriate for every facility and working condition.



Shipbuilding Industry

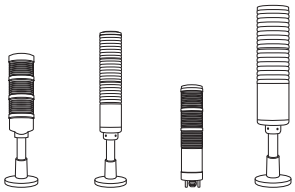
Explosion proof products have the durability, enclosed structure, and corrosion resistance features to protect it from dangerous situations in ships or manufacturing plant environments.





Semiconductor Manufacturing Equipment

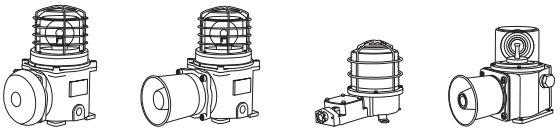
Semiconductor manufacturing equipment has a high automation utilization rate and for that reason its operating condition is monitored by signaling devices. In this case, signal tower lamps are typically used. On the other hand, for places/ equipment that use ultra-high purity gases in its process (for example gas cabinets), non sparking explosion proof signal tower lamps are used.





Offshore Plant

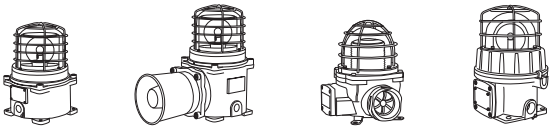
For offshore oil and gas rigs in the ocean, safety is a priority. In order to maintain safe and stable operating conditions, Heavy-duty products are often selected because of its shock/ corrosion/water resistance features.





Petrochemical Plant

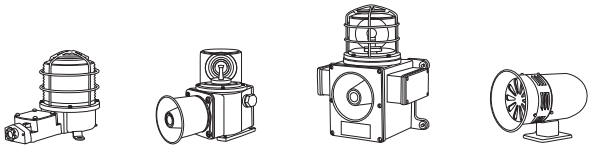
Places such as petrochemical plants and gunpowder factories where explosive gas is ubiquitous and has a higher risk of fire and explosion. Explosion proof signaling devices are often used in order to ensure proper safety in these hazardous locations.





Steel Industry

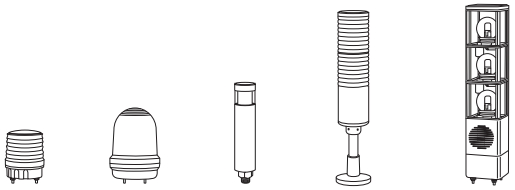
Steel mills have high-risk of an accidents due to its 24-hour a day operation in high-temperature environments. Various warning lights and alarms are installed to ensure safety, mostly heavy-duty products that have high resistance to vibration and shock are used in this application area.





Unmanned Automation Equipment

Various audio-visual signaling devices are used in locations where unmanned automated machines are in operation. They are used to notify the current status of the manufacturing process/ equipment. With our products, operators can quickly respond to any situation.

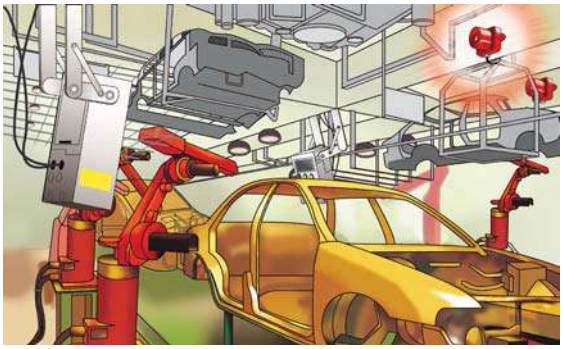




Machine Tools

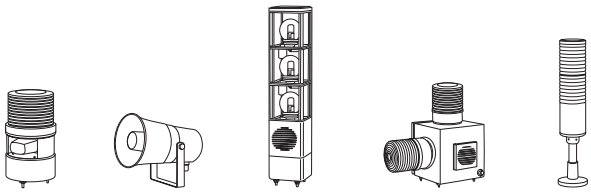
It is often difficult to monitor the operating status inside a machine tool. Therefore, signal tower lamps with auditory tones are mainly used and mounted outside the machine tool to help notify the user of its operating status. On the other hand, work lights installed inside the machine help with visibility inside the tool and require high durability and resistance to oil. Qlight has LED work lights for machine tools that are suitable for IP69K environments.





Automotive Industry

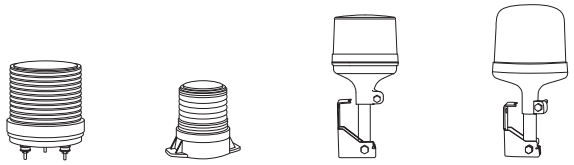
Manufacturing efficiency drops significantly when a failure occurs in a working line of a automobile plant. A signaling system is valuable in tracking the status of the equipment in order to provide immediate response to the situation or problem.





Industrial Vehicles, Construction Machinery

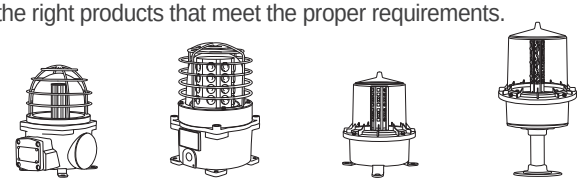
Industrial vehicles such as forklifts, excavators, and wheel loaders use warning lights to warn people from getting close to the vehicles. Industrial vehicles and construction machinery are exposed to harsh environments such as heavy vibration/ shock. Therefore, these products require high durability and superior weather resistance.





Obstruction Lights

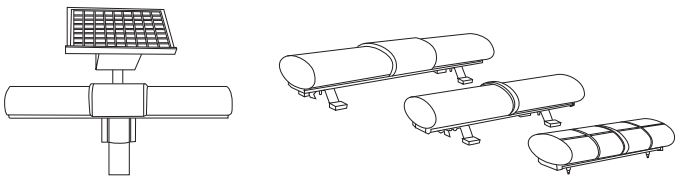
It is mandatory to install obstruction lights on structures likely to interfere with the flight path and safety of an aircraft. Since these product specifications are defined by each government's aviation regulatory bodies, users must select the right products that meet the proper requirements.





Road Safety and Emergency Vehicles

Installed in vehicles such as police cars, ambulances and tow trucks to ensure safety. Also installed in hazardous areas such as steep slopes to warn drivers to drive safely in dangerous areas.



Technical Certification

Qlight products are designed to meet strict quality and technical standards. Thus, the Qlight brand is widely recognized for its high quality and technical innovations from leading institutions around the world.

ISO International Organization for Standardization

Qlight quality assurance systems have been certified by ISO by applying the ISO 9001:2008, KS Q ISO 9001:2009 regulation.

IECEx International Explosion Proof Certification (IECEx)

Certified that Qlight's products are being manufactured and manage according to international standards.

ATEX The European Regulatory Framework or Manufacture, Installation and Use of Equipment in Explosive Atmospheres

Qlight explosion proof products comply with ATEX Directives 94/9/EC.

NEPSI National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation

Qlight's design and manufacturing system meets the People's Republic of China National explosion proof Standard.
(Chinese Standard-GB3836/GB12476)

KGS Korea Gas Safety Corporation

Approved from "Korea Gas Safety Corporation" that Qlight's design and manufacturing system meets the standard of KGS.

KOSHA Korea Occupational Safety and Health Agency

Approved by the "Korea Occupational Safety and Health Agency" that Qlight's design and manufacturing system meets the standard of KOSHA.

ABS American Bureau of Shipping

Qlights design and quality assurance system has been certified by the American Bureau of Shipping.

LR Lloyd's Register

Qlight design and quality assurance system has been certified from Lloyd's Register.

CCS China Classification Society

Qlight design and quality assurance system has been certified by the China Classification Society.

RMRS Russian Maritime Register of Shipping

Qlight design and quality assurance system has been certified from Russian Maritime Register of Shipping.

KR Korean Register of Shipping

Qlight design and quality assurance system has been certified by the Korean Register of Shipping.

CE European Commission

Qlight has been certified by the European Commission.

UL Underwriters Laboratories

Qlight design and quality assurance system has been certified from UL to ensure the stability of consumption goods and to protect consumers.

KC Korea Safety Certification

Qlight products are certified by KC for preventing accident caused by fire.

CCC China Compulsory Certificate

Qlight has obtained CCC which guarantees safety, protection against fraud, environment, etc.

ICAO International Civil Aviation Organization

Qlight guarantees our products satisfy the criteria regulated by the International Civil Aviation Organization(ICAO, FAA).

E-mark Commission Directive Regarding Vehicle Industry

Qlight has obtained EU mark for approved vehicles and vehicle components sold into the EU(EEA : European Economic Area)

RoHS Restriction of Hazardous Substances Directive

Qlight complies with the Restriction of Hazardous Substances Directive by limiting its use of hazardous materials.

SELECTION OF WARNING LIGHT

The selection of signaling devices will depend on the particular situation and environment.

- Whether the location of installation is dark or bright.
- Whether the signal transmission range should be short or long, or should have good visibility.
- Whether you need an economical but short lifetime product or upscale product with longer lifetime.
- Whether the environment is harsh with vibration and shock, or the environment is stable so that the life of the lights can be guaranteed.
- The selection of signaling device can be different depending on the situation and environment. The convenience and efficiency of maintenance should also be considered.

* Factors to consider in signal selection

1. Purpose 2. Signal transmission 3. Environment 4. Budget 5. Ease of maintenance

TYPE OF LIGHT SOURCE



Bulb

Light bulb is a light source that uses temperature reflection generated by the current flowing through the light bulb filament (thin line of metal), tungsten wire coil filament is often used. The hot filament is protected from oxidation with a glass sphere injected with inert gas (Argon gas, etc.). Typical characteristics of the gas injected bulb is described below.

1. If the input voltage decreases more than 10% of the rated voltage, the bulb life increases four times than before, and the power consumption is reduced by 85%.

2. On the other hand, If input voltage is 10% higher than the rated voltage, the life of the bulb is shortened by about 30% and the power consumption increases about 16%, and the brightness is increased by about 40%. The standard service life of a normal bulb is about 1,000 - 1,500 hours.



LED

The LED is a light emitting diode which emits light by injecting a current in the PN junction of the special semiconductor, semiconductors such as GaAs, GaP that Maximizes the electro-optical conversion effects are used. Like other semiconductors, over-voltage or ambient temperature affects the lifetime, but due to the absence of mechanical abrasion of the part, LED is shock/ vibration resistant so there is no need for proper seismic design. The standard service life of an LED is about 50,000 hours.

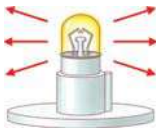


Xenon Lamp

Xenon lamp is a flash type light source that emits bright light instantly by inserting high energy into the lamp. Compared with the steady type lamp, xenon lamps need a lot of input power instantly and a extremely large amount of light it is diffused.

The lamp is filled with xenon(Xe) gas due to the convenience of the production(choice of materials), its use, xenon lamp was named after the xenon gas that it uses. xenon lamps are also resistant to vibration due to its mounting method. In addition, it is visible even in bright environments not only because the spectacle distribution of the visible light is close to the sunlight, it uses the same method as the strobe of the camera.

Warning Light/ Indicator Light Operating Principle



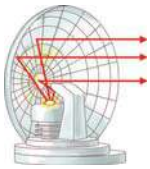

Bulb Steady/ Flashing Type

- Highly diffusible light bulb that refracts light though a special lens and can be used in a steady or flashing state



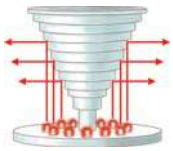

Bulb Revolving Type

- By combining a highly diffusible light bulb and a reflector, light is reflected in a parallel beam with a rotating cycle
- Our bulb revolving model has a long lifetime enabled by using a high durability bulb and a power transfer system that minimizes noise and abrasion



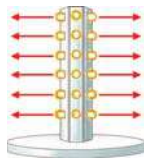

LED Revolving Type

- The combination of an LED and a reflector creates a parallel light beam with a rotating cycle
- Our LED revolving model is patented for emitting light with the same level of uniformity and brightness compared to the bulb reflecting type




LED Steady/ Flashing Type

- The indirect light distribution system uses a special structure to radiate a uniform light signal throughout the entire body of the lens by using a multi-stage reflector
- The direct light distribution system uses a high-intensity LED light and diffusion lens to transfer signal over a long distance. Qlight LED lights / flashing lights are equipped with two structures depending on the model type, Steady or Flashing Type

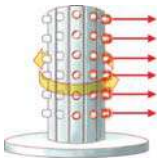






LED Strobe-Type

- By shortening the LED flashing period and supplying the maximum current to the LED, It produces a flash effect just like the xenon lamp




LED Simulated Revolving Type

- By uniformly arranging the LED lens in a 360 degree circumferential direction, it will produce a flash in a regular rotating sequence
- The visual effect looks just the same as the revolving model



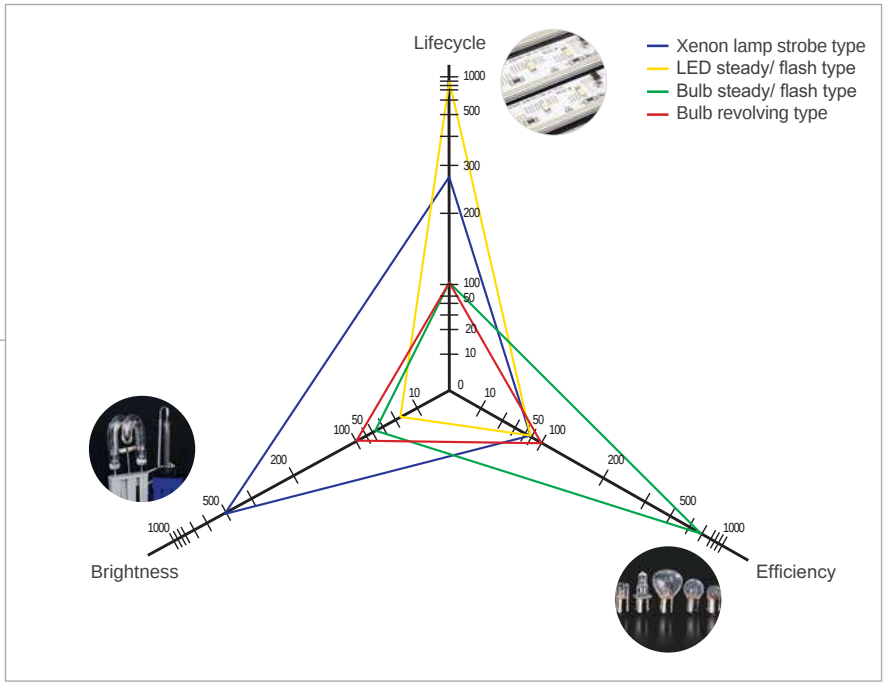

Xenon Lamp Strobe-Type

- The strobe type model uses a xenon lamp that instantly emits a high brightness light by supplying large energy
- Requires more power than other flashing type models, and the flash is brighter in comparison
- Has excellent vibration resistance compared to regular light bulbs but is not superior to LEDs
- Can spread strong light signals in all directions because of the light projecting structure

Comparison of Light Source Characteristics

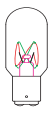
Comparing light source by Brightness/ Lifecycle/ Efficiency

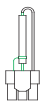
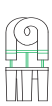
	Bulb Steady/ flashing	Bulb Revolving	LED Steady/ flashing	LED Revolving	Xenon lamp strobe	Explanation of details
Brightness						Xenon lamp strobe type by comparison is the brightest, and the LED is the darkest. But recently, LED technology is advancing rapidly and LED brightness is improving.
Lifecycle						LED has the longest lifetime, but is easily affected by the ambient temperature and overvoltage. Compared to the LED, the bulb has a short lifetime because it consumes the filament every time it is lit up and the lifetime gets even shorter with a flash type model.
Efficiency						When it comes to economics, light bulb is the best choice because its structure is simple and it does not need any special circuits. The LED is expensive compared to other light sources. Xenon lamp is also expensive than bulbs due to its control circuit.



Bulb Specification

The table below summarizes bulb specifications that are equipped with Qlight's products. Please carefully review the bulb specification in case bulb replacement is needed. Otherwise it may cause part malfunction.

Layout	Part#	Feature	Spec	Voltage	Current	Product
	1	14V 5W	G14 9S	12V	0.357A	S50, ST45
	2	27V 5W	G14 9S	24V	0.185A	
	3	120V 5W	T16×28 9S	110V	0.042A	S50, ST45
	4	240V 5W	T16×28 9S	220V	0.021A	
	5	14V 5W	T16×35 15S	12V	0.357A	S60 S80, SR SJ, SJD
	6	27V 5W	T16×35 15S	24V	0.185A	
	7	120V 5W	T16×35 15D	110V	0.042A	S60
	8	240V 5W	T16×35 15D	220V	0.021A	
	9	14V 10W	T16×35 15S	12V	0.714A	S100 S125 SE ST56 ST80
	10	27V 10W	T16×35 15S	24V	0.370A	
	11	52V 10W	T16×35 15S	48V	0.192A	
	12	120V 10W	T16×35 15S	110V	0.083A	S100 S125 ST56 ST80
	13	240V 10W	T16×35 15S	220V	0.042A	
	14	52V 10W	T16×35 15D	48V	0.192A	S100E S125E
	15	120V 10W	T16×35 15D	110V	0.083A	
	16	240V 10W	T16×35 15D	220V	0.042A	
	17	14V 15W	G23 15S	12V	1.071A	SK S150, SH1 SH2, SED SD, SHD SHD2 SMD, SESA SEBA, SEA
	18	27V 15W	G23 15S	24V	0.556A	
	19	52V 15W	G23 15S	48V	0.288A	
	20	120V 15W	G23 15S	110V	0.125A	
	21	240V 15W	G23 15S	220V	0.063A	
	22	120V 15W	G23 15D	110V	0.125A	S150, SH1 SH2, SED SD, SHD SHD2 SMD, SESA SEBA, SEA
	23	240V 15W	G23 15D	220V	0.063A	
	24	12V 23W	S25 15S	12V	1.916A	S150, SH2 SD, SMD SESA SEBA, SEA
	25	24V 23W	S25 15S	24V	0.958A	
	26	52V 25W	T23×62 15D	48V	0.481A	S150, SH2 SD, SMD SESA SEBA, SEA
	27	120V 25W	T23×62 15D	110V	0.208A	
	28	240V 25W	T23×62 15D	220V	0.104A	
	29	14V 35W	RP35 15S	12V	2.500A	S180
	30	27V 35W	RP35 15S	24V	1.296A	

Layout	Part#	Feature	Spec	Voltage	Current	Product
	31	120V 35W	RP35 15S	110V	0.292A	S180
	32	240V 35W	RP35 15S	220V	0.146A	
	33	110V 60W	E26 ES	110V	0.545A	S150, SH2 SD, SMD SESA, SE SEBA, SEA
	34	220V 60W	E26 ES	220V	0.272A	
	35	12V 30W	A60 E26	12V	2.500A	S150, SH2 SD, SMD
	36	24V 60W	A60 E26	220V	2.500A	
	37	110V 60W	A60 E26	110V	0.545A	S150, SH2 SD, SMD
	38	220V 60W	A60 E26	220V	0.272A	
	39	14V 35W	15S Halogen	12V	2.500A	SKH
	40	27V 35W	15S Halogen	24V	1.296A	
	41	120V 35W	15D Halogen	110V	0.292A	S150, SH2 SD, SMD SESA, SE SEBA, SEA
	42	240V 35W	15D Halogen	220V	0.146A	
	43	14V 55W	15S Halogen	12V	3.929A	S150, SH2 SD, SMD SESA, SE SEBA, SEA
	44	27V 55W	15S Halogen	24V	2.037A	
	45	120V 55W	15D Halogen	110V	0.458A	S150, SH2 SD, SMD SESA, SE SEBA, SEA
	46	240V 55W	15D Halogen	220V	0.229A	
	47	220V -350V	BGA2120 -BBC I Type xenon lamp		4W	S80S, S80AS
	48	200V -550V	EUB0641 -1A(G) U Type xenon lamp		6W	S100S, S125S S150S, SJS SH1S, SH2S SEDS, SDS SHDS, SHD2S SMDS,SCDWS, SNE-S, SNES-S SESAS, SE-S SEBAS, SEAS ELMS, ELRS, ELPS
	49	280V -400V	BH0647(G) W Type xenon lamp		16W	S125HS, S150HS S180US, S180UHS SH1HS, SH2HS SEDHS, SDHS SHDHS, SHD2HS SMDHS SESAHS, SEAHS ELVS

Intensity of Sound

Intensity of Sound

Sound intensity is defined as the sound power per unit area. The usual context is the measurement of sound intensity in the air at a listener's location. The basic units are watts/m2 or watts/cm2 . Many sound intensity measurements are made relative to a standard threshold of hearing intensity. The most common approach to sound intensity measurement is to use the decibel scale.

For better understanding, here is an example

If the voltage, current, or sound pressure becomes 2x higher —— $dB = 20\log_{10}(2x) \Rightarrow 6dB$
If the electric power becomes 2x higher —— $dB = 10\log_{10}(2x) \Rightarrow 3dB$

The value of sound pressure intensity (dB) is typically 1x = 0dB, 2x = 6dB, 3x = 10dB, 5x = 14dB, 10x = 20dB. It is easy to calculate the multiplying factor by using these values. For example, to calculate the value of 6x follow as below.



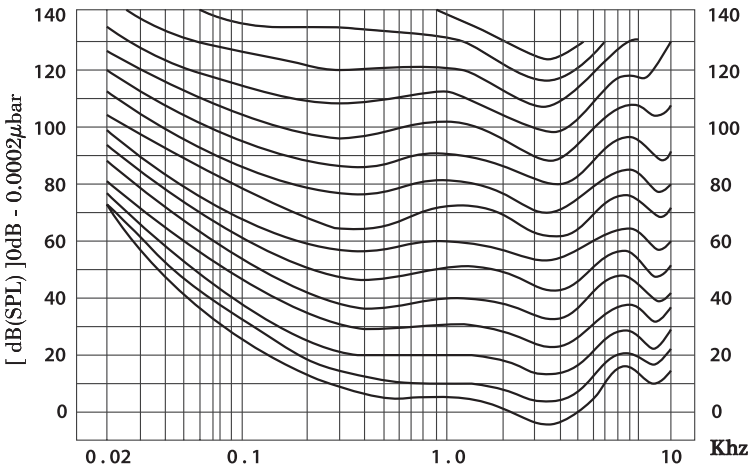
By multiplying the values in the same way above and adding the dB value, the value of 6x is 16dB.
This calculation method is useful when calculating the size of the sound by distance. If the sound pressure is calculated according to the distance(1meter) between the sound source, being 1M away gives you a negative(-) multiplying factor, on the other hand if being closer than 1M gives a positive (+) multiplying factor. Which means, 100dB in 1M becomes 100dB-6dB(2x) = 94dB In 2M, and 100dB-16dB = 84dB in 6M.
Sound is noticeable when the sound intensity is 3 - 6dB or higher than the ambient noise; however, when you need to alert the area the sound intensity should be at least 80dB. For that reason, Qlight product supports volume up to 123dB.

The Emotional Frequency and Loudness Characteristic of Sound

The frequency of sound that can be heard by people is between 20 - 20,000Hz. The frequency people can hear might be different depending on gender, age, skill, and listening environment. In addition, the intensity of the sound that an ear can feels is different depending on the actual frequency (frequency) of the sound wave. If sound is compared with the same intensity, the midrange sound (1Khz inside and outside) is the loudest and then the treble (6 - 10Khz or less), and the bass (100Hz or fewer) it is the smallest.

When we feel loud sounds we can feel pain, the highest sound a human can hear is called the Maximum audibility limit and the lowest sound a human can hear is called the minimum audibility limit.

The Maximum audibility limit is about 140dB, regardless of the frequency. The gap between dB is at its widest at 1,000 - 5,000Hz which is 130dB. Which means 1,000 - 5,000Hz is the most comfortable frequency to hear. The frequency is highest in this order warning sound – alarm – melody – voice. The warning sound has the highest while the voice sound has the lowest.



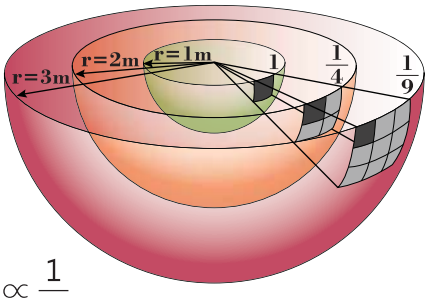
< Loudness characteristic curve>

Intensity of Sound

Relationship of Sound Intensity and Distance

Sound intensity is inversely proportional to the square of the distance from the sound wave source.

Since sound waves carry its energy though a two-dimensional or three-dimensional medium, the intensity of the sound wave decreases with increasing distance form the source. The decrease in intensity with increasing distance is explained by the fact that the wave is being distributed over a greater surface area. Since energy is conserved and the area through which energy is transported is increasing, the intensity must decrease.



The wave intensity (I) formula $I \propto A^2 f^2$ is roughly expressed as the square of the amplitude (A) multiplied by the square of the frequency (f). The wave intensity (I) is inversely proportional to the square of the distance, $I \propto \frac{1}{r^2}$.

Therefore, the relationship between amplitude (A) and distance (r) is $A^2 \propto \frac{1}{r^2}$, $A \propto \frac{1}{r}$

The above amplitude is inversely proportional to the distance where sound intensity is proportional to the squares of the amplitudes of the frequencies.

Sound Intensity Perception

Even with the same sound intensity, the perceived sound may not match the actual intensity value (dB). For example, sounds with different frequencies may sound differently to the ear. Normally, sounds with higher frequency are expressed as a larger and more stressed volume than lower frequency sounds.

Thus, a perceived sound volume is louder at higher frequency and decibels. For example, when our products utilize the same 115db sound, the product that has the higher frequency will be perceived as louder compared to the sound of the product with a lower frequency.

» Sound Intensity and Frequency

Sound Intensity (dB)	Voice Message ⇒ Melody ⇒ Alarm ⇒ Warning Sounds frequency of sound(Hz) ⋯›	Examples of Sound Intensity
140		Aircraft carrier deck
130		Military aircraft jet take-off with a 50ft afterburner
125		
123		
120		Thunder, chain saw, oxygen torch
115		
110		Automobile horn at 1 meter, live rock music
100		Jet take-off (at 305 meters), jackhammer, jet flyover at 1000 ft
90		Motorcycle at 25 ft, power mower
80		Food blender, Average Factory, Garbage disposal
70		Department store, commercial area
60		Conversation within 1 meter, phone ringing
50		Office, background music, classroom
40		Quiet suburb
30		Quiet rural area, quite conversation
20		Whisper within 1meter
10		Rustling leaves
0		Breathing
	0 125 250 500 1000 2000 5000 10000 20000	

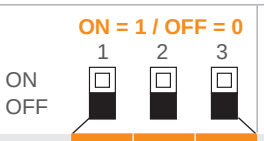
When the sound wave frequency is higher and the amplitude is larger the sensed sound volume is louder.

Pre-recorded Sound Tone and Sound Combination Chart

■ 20 pre-recorded sound tones for standard type products

Sound Number	Sound Tone	Sound Number	Sound Tone
SND01	Fire.A-ANG	SND11	Piano Sonata
SND02	Emergency WA-U(Yelp)	SND12	Turkish March
SND03	Ambulance PI-PO(Hi-low)	SND13	Magic Flute
SND04	Abandon Alarm	SND14	Badinerie
SND05	Machinery Fault	SND15	Pine Apple Rag
SND06	High Expansion	SND16	Beep Intermittent
SND07	7 Short PI. / 1 Long	SND17	Door Chime
SND08	Sweet Home	SND18	Phone Ring
SND09	For Elise	SND19	PI.PI.PI Short
SND10	Cuckoo's Waltz	SND20	Tripping Beat

• Standard sound combination for WS/ WP type products

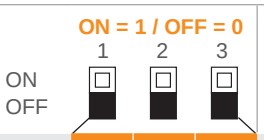


7 sounds per combination can be selected according to your preference.
8 combinations are available.

No.	1	2	3	Ch1	Ch2	Ch3	Ch4	Ch5
1	1	0	0	SND01 Fire.A-ANG	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND05 Machinery Fault	SND06 High Expansion
2	0	1	0	SND01 Fire.A-ANG	SND04 Abandon Alarm	SND05 Machinery Fault	SND06 High Expansion	SND07 7 Short PI. / 1 Long
3	1	1	0	SND01 Fire.A-ANG	SND02 Emergency WA-U	SND04 Abandon Alarm	SND05 Machinery Fault	SND06 High Expansion
4	0	0	1	SND01 Fire.A-ANG	SND03 Ambulance PI-PO	SND05 Machinery Fault	SND06 High Expansion	SND07 7 Short PI. / 1 Long
5	1	0	1	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND05 Machinery Fault	SND06 High Expansion
6	0	1	1	SND01 Fire.A-ANG	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND07 7 Short PI. / 1 Long
7	1	1	1	SND01 Fire.A-ANG	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND06 High Expansion	SND07 7 Short PI. / 1 Long
8	0	0	0	SND02 Emergency WA-U	SND03 Ambulance PI-PO	SND04 Abandon Alarm	SND05 Machinery Fault	SND07 7 Short PI. / 1 Long

※ You can select sound tones using the 3P switches located on the circuit board of the WS Type and WP Type products.

• Standard sound combination for WM/ WA type products



13 sounds per combination can be selected according to your preference.
8 combinations are available.

No.	1	2	3	Ch1	Ch2	Ch3	Ch4	Ch5
1	1	0	0	SND08 Sweet Home	SND09 For Elise	SND10 Cuckoo's Waltz	SND11 Piano Sonata	SND12 Turkish March
2	0	1	0	SND16 Beep Intermittent	SND17 Door Chime	SND18 Phone Ring	SND19 PI.PI.PI Short	SND20 Tripping Beat
3	1	1	0	SND08 Sweet Home	SND11 Piano Sonata	SND13 Magic Flute	SND17 Door Chime	SND19 PI.PI.PI Short
4	0	0	1	SND13 Magic Flute	SND14 Badinerie	SND15 Pine Apple Rag	SND08 Sweet Home	SND09 For Elise
5	1	0	1	SND10 Cuckoo's Waltz	SND11 Piano Sonata	SND17 Door Chime	SND18 Phone Ring	SND20 Tripping Beat
6	0	1	1	SND08 Sweet Home	SND12 Turkish March	SND16 Beep Intermittent	SND17 Door Chime	SND18 Phone Ring
7	1	1	1	SND08 Sweet Home	SND11 Piano Sonata	SND12 Turkish March	SND17 Door Chime	SND19 PI.PI.PI Short
8	0	0	0	SND11 Piano Sonata	SND12 Turkish March	SND13 Magic Flute	SND16 Beep Intermittent	SND18 Phone Ring

※ You can select sound tones using the 3P switches located on the circuit board of the WM Type and WA Type products.

Pre-recorded Sound Tone and Sound Combination Chart

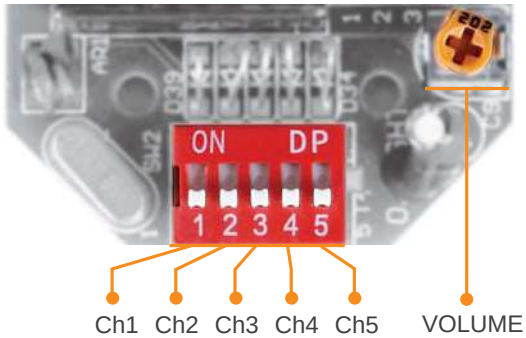
■ Sound tone combinations for standard type products

For standard type products, user can select from a variety of 5 pre-recorded sound combinations including 5 warning sounds, 5 special warning sounds, 5 melodies, 5 alarms, and 5 customizable sound.

	Sound Category	Channel	Sound Tone	Sound Combination #
WS	5 warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion	WS/ WP No.1
WP	5 special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short PI. / 1 Long	WS/ WP No.2
WM	5 melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March	WM/ WA No.1
WA	5 alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat	WM/ WA No.2
WV	5 customizable sound	Ch1 Ch2 Ch3 Ch4 Ch5	1. Voice messages are pre-recorded and provided from factory upon user's request 2. Each channel has recording space for 16 sec 3. 5 channels available 4. When only one channel is used, maximum recordable space is 80 sec	-

※ Please refer to page 24 for detailed information about selectable sound patterns.

■ **Sound Selection of Signal Sounds**



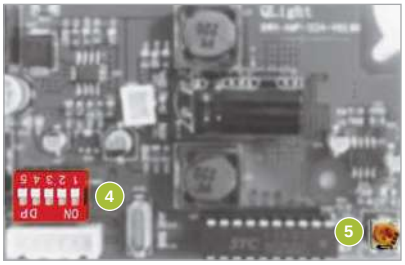
Standard specification : Use internal switches
Turn on dip switches of each channel, designated sound will be played.

Special Alarm Type Feature

■ How to set-up the special alarm type products

- A special alarm type products are classified into two models; basic model with special alarm and SDcard (MP3) model.
- The 2 models have 31 built-in sounds, which can be chosen and played by binary input method.
- When storing MP3 files on the SDcard (MP3) type models, you can select and play up to 31 sounds by using the binary input method. The bit input method can play 5 sound from #1 to #5, depending on the specifications given in the file name(For file specifications refer to Page30.)
- Includes eight play mode settings. For example, when the continuous playback setting/ function is selected the warning message is played continuously for conditions that require frequent playback.

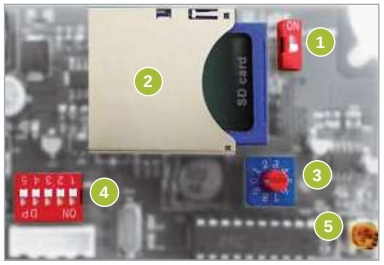
■ Built-in sound type model



1 - 2 N/A
4 Sound select switch
5 Volume

* Built-in sound type model can select and play 31 sounds by using the sound selection switch.

■ SDcard type model



1 Sound setting switch
2 MP3 playable SDcard
3 Play mode setting switch
4 Sound select switch
5 Volume

■ SDcard(MP3) type product feature

1 SOUND setting switch

- If the switch is ON the SDcard (MP3) will be played, and if the switch is OFF the built-in sounds will be played.

2 SDcards

- The SDcard is a compact flash memory card for storing MP3 files.
- After saving the MP3 files in the SDcard with the specified format, insert the card into the SDcard slot and switch the sound setting switch to ON so the sounds can be played from the SDcard.

3 PLAY MODE setting switch

- PLAY MODE setting switch is used to choose the channel input method or select various playing modes. Refer to the table below for switch features.
- Switch #0 and #9 is not used.

1	Bit Input Mode	5 sounds can be played from the selected group (choose one group from six groups) Play sound only once (if using sequential signal input or pulse signal input)
2	Binary Input Mode	Up to 31 sounds available for each model. Plays sound only once (sequential signal input only)
3	Bit Input Hold Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
4	Binary Input Hold Playback Mode	Up to 31 sounds available for each model The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
5	Bit Input Sound Reduction Mode	5 sounds can be played from the selected group (choose one group from six groups) You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
6	Binary Input Sound Reduction Mode	Up to 31 sounds available for each model You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
7	Bit Input Sequence Memory Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) If the sound is inputted in a order, it will remember the order and play each sound about 3 seconds. The last input channel is fully played (bit input mode only)
8	Test Mode	In test mode, Ch1 of group is automatically played back repeatedly. To end the test mode, switch back to the other modes.

4 Channel selection switch

- By using 5 channel selection switches, one can choose the appropriate sound source depending on the Binary input and Bit input.

5 VOLUME

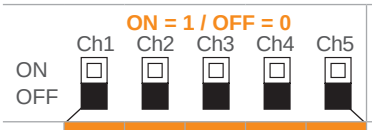
- You can adjust the speakers sound output by using the volume dial.

Sound Pattern and Combination for Special Alarm Type

■ Sound pattern for special alarm type

- Special alarm type product has 31 pre-recorded sound tones.
- Supports binary input mode. 5ch switch allows for 31 sound tones.

• Composition of binary input mode



Left channel switch allows for choosing 31 sound tones.
Channel switch will be substituted for an external wiring in case of LC type products.

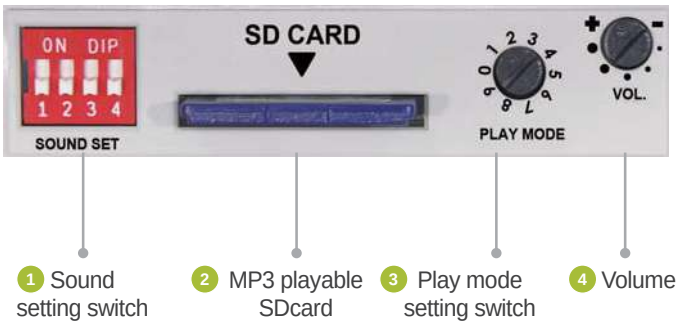
No.	1	2	3	4	5	Sound tone	Frequency
0	0	0	0	0	0	No sound	
1	0	0	0	0	1	Rel rel rel	730Hz-920Hz
2	0	0	0	1	0	Slow Ambulance PI-PO	820Hz-1.05kHz
3	0	0	0	1	1	Oit Oit warning sound	360Hz-1.56kHz
4	0	0	1	0	0	Emergency WA-U(Yelp)	770Hz-1.2kHz
5	0	0	1	0	1	Pi- buzzer	770Hz
6	0	0	1	1	0	7 Short PI. / 1 Long	715Hz
7	0	0	1	1	1	Pi o Pi o	940Hz-2.19kHz
8	0	1	0	0	0	Phone Ring	740Hz-910Hz
9	0	1	0	0	1	Pi- buzzer	600Hz
10	0	1	0	1	0	Pi pi pi short	420Hz
11	0	1	0	1	1	Di o Di o 2 tones buzzer	600Hz-1.14kHz
12	0	1	1	0	0	Oit Oit warning sound	500Hz-1.11kHz
13	0	1	1	0	1	Slow Ambulance PI-PO	380Hz-470Hz
14	0	1	1	1	0	Slow Di o Di o	680Hz-840Hz
15	0	1	1	1	1	Fast Li o li o	380Hz-470Hz
16	1	0	0	0	0	Fire.A-ANG	770Hz-1.11kHz
17	1	0	0	0	1	Fast Ambulance PI-PO	680Hz-840Hz
18	1	0	0	1	0	Slow Ambulance PI-PO	650Hz-840Hz
19	1	0	0	1	1	Ri ro ri ro warning sound	420Hz-470Hz
20	1	0	1	0	0	Repeat Di-o 3 times	680Hz-840Hz
21	1	0	1	0	1	Fire.A-ANG	500Hz-1kHz
22	1	0	1	1	0	Ambulance PI-PO	680Hz-840Hz
23	1	0	1	1	1	Slow Fire.A-ANG	480Hz-1.14kHz
24	1	1	0	0	0	Pi-pi- buzzer low frequency	690Hz
25	1	1	0	0	1	Pi-pi- buzzer high frequency	950Hz
26	1	1	0	1	0	Di-di- buzzer high frequency	800Hz
27	1	1	0	1	1	Di-di- buzzer low frequency	500Hz
28	1	1	1	0	0	Rising Po-ong	500Hz-1.2kHz
29	1	1	1	0	1	Fast Ambulance PI-PO	825Hz-1.07kHz
30	1	1	1	1	0	Rising frequency	150Hz-1kHz
31	1	1	1	1	1	Repeat A-ANG	1.4kHz-1.56kHz

Multifunctional Type Feature

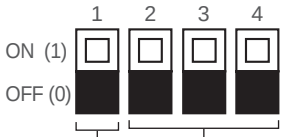
■ How to set up the multifunctional products(MP3)

- Multifunctional type products can play MP3 sounds by using an SDcard and can also play WS (5 Warning sounds), WP (5 special warning sounds 1st Group), WM (5 Melodies), WA (5 Alarms), WO (5 special warning sounds 2nd Group), and WN (5 special warning sounds 3rd Group) when not using a SDcard.
- Includes seven different functions. For example, it is able to playback the message continuously with the continuous play-back function for warning message that needs to be repeated often.

■ Function setting



1 Sound setting switch



Group Choice in Bit Input Mode
001 : WS (5 Warning sounds)
010 : WP (5 special warning sounds 1st Group)
011 : WM (5 Melodies)
100 : WA (5 Alarms)
101 : WO (5 special warning sounds 2nd Group)
110 : WN (5 special warning sounds 3rd Group)

Sound Selection
0 : Built-in sound
1 : SDcard(MP3)

- #1 switch from the sound setting switch is for selecting Built-in sound/ SDcard
- #2 – #4 switch is for selecting a group of sound incase you have selected bit input mode

2 SDcards

- The SDcard is a compact flash memory card for storing MP3 files.
- After saving the MP3 files in the SDcard with the specified format, insert the card into the SDcard slot and switch the sound setting switch to ON so the product will be able to play sounds from the SDcard.

3 PLAY MODE setting switch

- PLAY MODE setting switch is used to choose the channel input method or select various play modes. Refer to the table below for switch features.
- Switch #0 and #9 is not used.

1	Bit Input Mode	5 sounds can be played from the selected group (choose one group from six groups) Play sound only once (if using sequential signal input or pulse signal input)
2	Binary Input Mode	Up to 30 sounds available for each model. Plays sound only once (sequential signal input only)
3	Bit Input Hold Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
4	Binary Input Hold Playback Mode	Up to 30 sounds available for each model The sound is repeated if the input signal is maintained. (sequential signal input only) If the STOP signal is inputted, the sound is turned off, and if the STOP signal is disabled the sound is played repeatedly
5	Bit Input Sound Reduction Mode	5 sounds can be played from the selected group (choose one group from six groups) You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
6	Binary Input Sound Reduction Mode	Up to 30 sounds available for each model You can reduce the volume(15dB) by using a separate volume reduction signal line (same as volume reduction signal input)
7	Bit Input Sequence Memory Playback Mode	5 sounds can be played from the selected group (choose one group from six groups) If the sound is inputted in a order, it will remember the order and play each sound about 3 seconds . The last input channel is fully played (bit input mode only)
8	Test Mode	In test mode, Ch1 of group is automatically played back repeatedly. To end the test mode, switch back to the other modes.

4 VOLUME

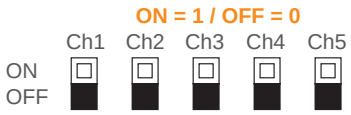
- You can adjust the speakers sound output by using the volume dial.

Sound Pattern and Combination for Multifunctional Product

■ Sound patterns for multifunctional products

- Multifunctional product has 30 pre-recorded sound tones.
- 30 sound tones in binary input mode supported. Bit input mode has 5 sound tones within 1 group among 6 groups.

• Bit input mode's sound tone combinations

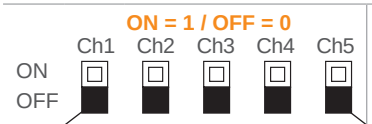


Left channel switch allows to select 5 tons individually within designated group.
(For group selection, please refer to page 28 "How to set-up the multifunctional products")
Channel switch will be substituted for external wiring in case of LC type products.

Sound		Ch	Sound Tone
WS	5 Warning Sounds	Ch1	Fire.A-ANG(560Hz-1.5kHz)
		Ch2	Emergency WA-U(Yelp)(600Hz-1.5kHz)
		Ch3	Ambulance PI-PO(Hi-low)(450Hz-900Hz)
		Ch4	Machinery Fault(820Hz)
		Ch5	High Expansion(1kHz)
WP	5 Special Warning Sounds (1st Group)	Ch1	Fire.A-ANG(560Hz-1.5kHz)
		Ch2	Abandon Alarm(820Hz)
		Ch3	Machinery Fault(820Hz)
		Ch4	High Expansion(1kHz)
		Ch5	7 Short PI. / 1 Long(1kHz)
WM	5 Melodies	Ch1	Sweet Home
		Ch2	For Elise
		Ch3	Cuckoo's Waltz
		Ch4	Piano Sonata
		Ch5	Turkish March

Sound		Ch	Sound Tone
WA	5 Alarms	Ch1	Beep Intermittent
		Ch2	Door Chime
		Ch3	Phone Ring
		Ch4	PI.PI.PI Short
		Ch5	Tripping Beat
WO	5 Special Warning Sounds (2nd Group)	Ch1	Rel rel rel(730Hz-920Hz)
		Ch2	Slow Ambulance PI-PO(820Hz-1.05kHz)
		Ch3	Wye yong Wye yong(770Hz-1.2kHz)
		Ch4	Phone ring 2(740Hz-910Hz)
		Ch5	Fire.A-ANG(770Hz-1.11kHz)
WN	5 Special Warning Sounds (3rd Group)	Ch1	Oit Oit(500Hz-1.11kHz)
		Ch2	Pi o Pi o(940Hz-2.19kHz)
		Ch3	Slow Di o Di o(680Hz-840Hz)
		Ch4	Li long Li ling(420Hz-470Hz)
		Ch5	911 Siren(500Hz-1kHz)

• Binary input mode's sound tone combinations



Left channel switch allows the user to select from 30 available sound tones.
Channel switch will be substituted for external wiring in case of LC type products.

No.	1	2	3	4	5	Sound tone	Frequency
0	0	0	0	0	0	No sound	
1	0	0	0	0	1	Fire.A-ANG	560Hz-1.5kHz
2	0	0	0	1	0	Emergency WA-U(Yelp)	600Hz-1.5kHz
3	0	0	0	1	1	Ambulance PI-PO(Hi-low)	450Hz-900Hz
4	0	0	1	0	0	Pi-ik Pi-ik	820Hz
5	0	0	1	0	1	Machinery Fault	820Hz
6	0	0	1	1	0	High Expansion	1kHz
7	0	0	1	1	1	Alarm	1kHz
8	0	1	0	0	0	Sweet Home	-
9	0	1	0	0	1	For Elise	-
10	0	1	0	1	0	Cuckoo's Waltz	-
11	0	1	0	1	1	Piano Sonata	-
12	0	1	1	0	0	Turkish March	-
13	0	1	1	0	1	Magic Flute	-
14	0	1	1	1	0	Badinerie	-
15	0	1	1	1	1	Pineapple Rag	-
16	1	0	0	0	0	Beep Intermittent	-
17	1	0	0	0	1	Door Chime	-
18	1	0	0	1	0	Phone Ring	-
19	1	0	0	1	1	PI.PI.PI Short	-
20	1	0	1	0	0	Tripping Beat	-
21	1	0	1	0	1	Rel rel rel	730Hz-920Hz
22	1	0	1	1	0	Slow Ambulance PI-PO	820Hz-1.05kHz
23	1	0	1	1	1	Wye yong Wye yong	770Hz-1.2kHz
24	1	1	0	0	0	Phone ring 2	740Hz-910Hz
25	1	1	0	0	1	Fire.A-ANG	770Hz-1.11kHz
26	1	1	0	1	0	Oit Oit	500Hz-1.11kHz
27	1	1	0	1	1	Pi o Pi o	940Hz-2.19kHz
28	1	1	1	0	0	Slow Di o Di o	680Hz-840Hz
29	1	1	1	0	1	Li long Li ling	420Hz-470Hz
30	1	1	1	1	0	911 Siren	150Hz-1kHz

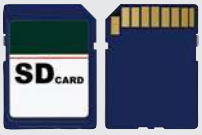
How to Use a MP3 Type Product

MP3-type models have 30 or 31 built-in alarm sounds and the users can play their voice messages or music files(MP3). You can choose two methods for playing up to 31 sounds with the binary input method. While the bit input method can only play 5 sounds from #1 to #5.

■ What is a MP3?

- MP3 is a audio compression technology(Audio layer-3) design by MPEG (Motion Picture Experts Group) MP3 (MPEG-1 Audio Layer-3) is a standard technology and format for compressing a sound sequence into a very small file while preserving the original level of sound quality when it is played.
- Extension of the MP3 file can be found as "*.mp3", and any voice message, alarm message, and music can be played and saved as MP3 files.

■ What is a SDcard?



SD memory card is a compact flash memory card for storing various data such as MP3s or document files, Models with MP3 features can save voice messages or alarm messages in the SDcard.

* SDcard sold separately.

Saving a MP3 file

- MP3 file can be saved and played in accordance with the standards specified by filename.
- Using binary input method according to the specifications given in the file name, a SDcard which is used in special alarm type models(MP3) can save up to 31 sounds, multifunctional type models can save and play up to 30 sounds.
- Using bit input method according to the specifications given in the file name, you can select and play up to five sounds from the MP3 file.

User-defined sound(MP3) type

23	_	For Elise	.mp3

- For Elise: 40 alphabets
- _: Indicator between file number and name
- 23: File number 01-30(31)

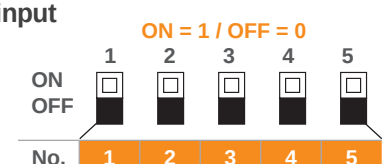
[Example]

- 01_Fire alarm.mp3
- 02_Emergency alarm.mp3
- 03_For Elise.mp3
- ⋮
- 30_Cuckoo Waltz.mp3

Binary input and Bit input method

Special alarm type models and multifunctional type models are divided into Binary input method or Bit input method depending on the source selection method.

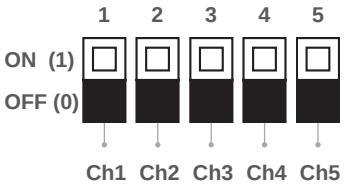
■ Binary input



No.	1	2	3	4	5
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
:	:	:	:	:	:
31	1	1	1	1	1

You can only show 2 numbers with 1 switch "0", "1". With 5 switches you can have 31 combinations. Selecting one sound from 5 switches is the Binary input method.

■ Bit input



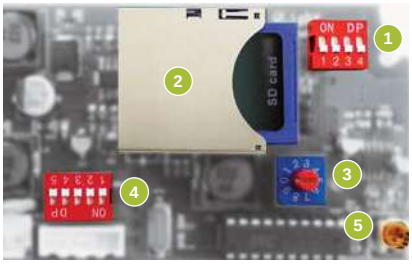
The Bit input method only recognizes one of the 5 switches at a time. This method doesn't support two inputs at once. The number of combinations is small, but it is much more convenient to remember the channel number.

How to Use a MP3 Type Product

■ MP3 supported model basic description

- MP3 supported products can play 30-31 built-in sounds or MP3 files saved in an SDcard.
- Binary input method can play up to 30 - 31 sounds, and Bit input method can play 5 sounds in accordance with the standards specified by filename.
- Can choose and play 5 sounds from #1 to #5.

<Switch select type>



<Line-out type>



1. Sound setting switch
2. MP3 playable SDcard
3. Play mode setting switch
4. Sound select switch
5. Volume

■ How to set-up a MP3 type product

Select Built-in sound

Select built-in or external sound

Select Built-in or external sound by using #1 switch in the sound setting switch.

For sound setting refer to page26 for special alarm type model, and page28 for multifunctional type model.

Play mode setting

Select Bit/binary input by using #3 the play mode setting switch.

For play mode setting, refer to page26 for special alarm type model, and page28 for multifunctional type model.

Bit input mode

Select sound group

Select one of the 6 groups by using #3 the sound setting switch.

built-in sounds of special alarm type models does not support bit input. Refer to page29 for multifunctional type model.

Select sound (play)

Select and play one of the 5 sounds using #4 sound select switch or line-out.

For sound selection settings, refer to page27 for special alarm type model, and page29 for multifunctional type model.

Binary input mode

Select sound (play)

Select and play one of the 30/31 sounds using #4 sound select switch or line-out.

For sound selection settings, refer to page27 for special alarm type model, and page29 for multifunctional type model.

Select external(MP3) sound

Insert SDcard

Insert #2 the SDcard that has the mp3 files into the SDcard slot.

Play mode setting

Select Bit/binary input by using #3 the play mode setting switch.

For play mode setting, refer to page26 for special alarm type model, and page28 for multifunctional type model.

Bit input mode

Select sound (play)

Select and play one of the 5 sounds using #4 sound select switch or line-out.

For sound selection settings, refer to page27 for special alarm type model, and page29 for multifunctional type model.

Binary input mode

Select sound (play)

Select and play one of the 30/31 sounds using #4 sound select switch or line-out.

For sound selection settings, refer to page27 for special alarm type model, and page29 for multifunctional type model.

Waterproof and Dustproof Protection Structure

Comparing waterproof dustproof protection structure

■ IP rating : Known as "Ingress Protection rating" indicated in two-digit code showing the amount of protection against solid and the liquid.(IEC60529)

IP 6 7

First Number
Protection against solid

0	Test No protection
1	Protected against solid objects over 50mm, e.g. accidental touch by persons hands.
2	Protected against solid objects over 12.5mm, e.g. persons fingers.
3	Protected against solid objects over 2.5mm (tools and wires).
4	Protected against solid objects over 1mm (tools, wires, and small wires).
5	Protected against dust limited ingress (no harmful deposit).
6	Totally protected against dust.

Second Number
Protection against liquid

0	Test No protection
1	Protection against vertically falling drops of water e.g. condensation.
2	Protection against direct sprays of water up to 15° from the vertical.
3	Protected against direct sprays of water up to 60° from the vertical.
4	Protection against water sprayed from all directions - limited ingress permitted.
5	Protected against low pressure jets of water from all directions - limited ingress.
6	Protected against temporary flooding of water, e.g. for use on ship decks - limited ingress permitted.
7	Protected against the effect of immersion between 15 cm and 1 m.
8	Protects against long periods of immersion under pressure.

※ The configurations below are mainly used. Other configurations tend to be illogical.
※ IP00/IP11, IP12/IP21, IP22, IP23/IP31, IP32, IP33, IP34/IP41, IP42, IP43, IP44/IP54, IP55, IP56/IP65, IP66, IP67

NEMA Protection Ratings

■ **NEMA SIZE :** National Electrical Manufacturers Associations standard for enclosure protection rating, NEMA1-6 and 11-13 type is applicable in Non-Hazardous Locations, NEMA 7-10 is applicable in Hazardous Locations.

Type	Usage place	Environment	Protection Grade
1	Indoor Use	Non-explosion proof	Provides protection against falling dirt
2	Indoor Use	Non-explosion proof	Provides protection against falling dirt and dripping/light splashing water
3	Outdoor Use	Non-explosion proof	Provides protection against falling dirt, windblown dust, water (rain, sleet, snow); and prevents damage by the external formation of ice on the enclosure
3R	Outdoor Use	Non-explosion proof	Provides protection against falling dirt, water (rain, sleet, snow); and undamaged by the external formation of ice on the enclosure
3S	Outdoor Use	Non-explosion proof	Provides protection against falling dirt, water (rain, sleet, snow); and external mechanism operable when ice laden
4	Indoor/ Outdoor Use	Non-explosion proof	Provides protection against falling dirt, windblown dust, water (rain, sleet, snow splashing water, and hose directed water); undamaged by the external formation of ice on the enclosure
4X		Non-explosion proof	Same as Type4 with additional level of protection against corrosion
5	Indoor Use	Non-explosion proof	Provide protection against falling dirt and settling airborne dust, lint, fibers, and flyings, dripping/light splashing water
6	Indoor/ Outdoor Use	Non-explosion proof	Provides protection against falling dirt; and hose directed water and the entry of water during occasional temporary submersion at a limited depth
6P		Non-explosion proof	Provides protection against falling dirt; and hose directed water and the entry of water during prolonged submersion at a limited depth
7	Outdoor Use	Explosion proof	Enclosures constructed for indoor use in hazardous (classified) locations for gas
8	Indoor/ Outdoor Use	Explosion proof	Enclosures constructed for either indoor or outdoor use in hazardous (classified) locations for explosion proof construction by oil enclosure
9	Indoor Use	Explosion proof	Enclosures constructed for indoor use in hazardous (classified) locations for dust
10	Indoor/ Outdoor Use	Explosion proof	Enclosures constructed to meet the requirements of the Mine Safety and Health Administration, 30 CFR, Part 18.
11	Indoor Use	Non-explosion proof	Provides protection against the corrosive effects of liquids and gases
12	Indoor Use	Non-explosion proof	Provides protection to personnel against access to hazardous parts, against falling dirt and circulating dust, lint, fibers, and dripping/light splashing water
12K	Indoor Use	Non-explosion proof	Same as Type 12 for enclosures constructed with knockouts
13	Indoor Use	Non-explosion proof	Provide protection against falling dirt and circulating dust, lint, fibers, flyings, dripping/light splashing water, spraying, splashing, and seepage of oil and non-corrosive coolants.

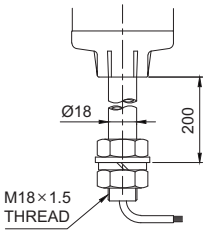
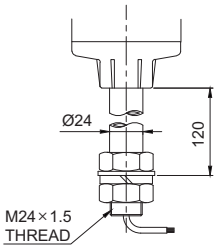
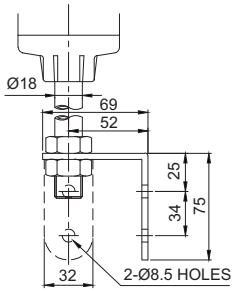
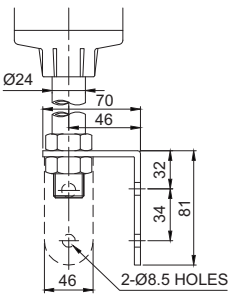
■ **NEMA Ratings and IP Ratings Equivalency Chart :** The chart below is for comparison between two enclosure ratings. It is only for reference and these two rating standards are not exactly converted.

NEMA ENCLOSURE TYPE	IP ENCLOSURE TYPE
1	IP23
2	IP30
3	IP64
4	IP66
4X	IP66
6	IP67
12	IP55 IP65
13	IP65

Tower Light Mounting Brackets

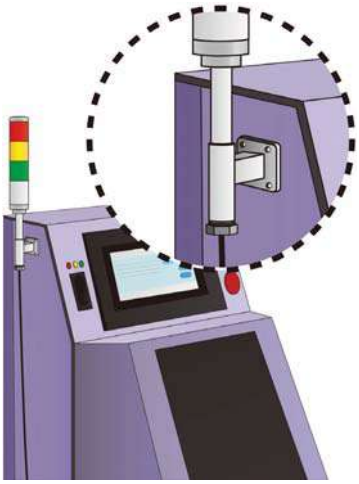
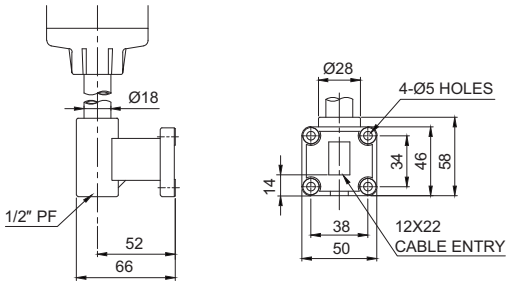
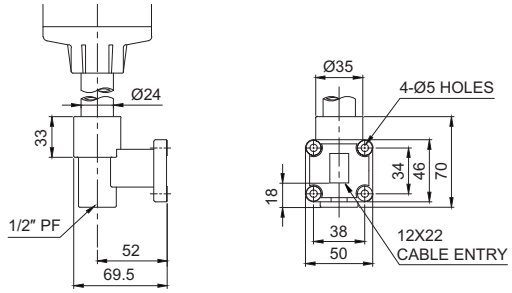
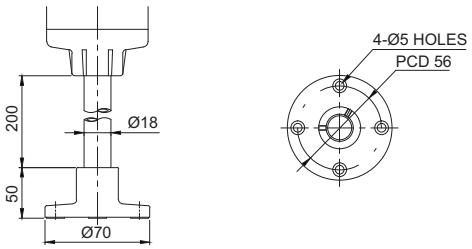
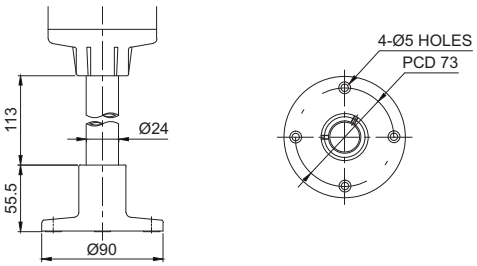
User can select from a variety of mounting brackets options depending on their application conditions.

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
Standard type pole mount installation. There is a screw at the end of the pole and it is equipped with nut for installation. Material : Steel 	 18mm SCREW & NUT (Standard Type)	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45L, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF, ST45L-ETN, ST56EL-ETN, ST56L-ETN, ST45L-USB, ST56EL-USB, ST56L-USB
	 24mm SCREW & NUT (Standard Type)	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR, ST80EL-ETN, ST80L-ETN, ST80EL-USB, ST80L-USB
L-type bracket is attached to the pole mount tower light for installation to the side of the equipment. Material : Steel 	 LB18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, ST56WL, STC45L, STC56EL, STC56L, QT50L, QT50LF,QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF, ST45L-ETN, ST56EL-ETN, ST56L-ETN, ST45L-USB, ST56EL-USB, ST56L-USB
	 LB24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR, ST80EL-ETN, ST80L-ETN, ST80EL-USB, ST80L-USB

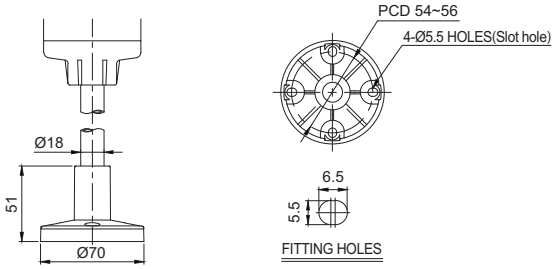
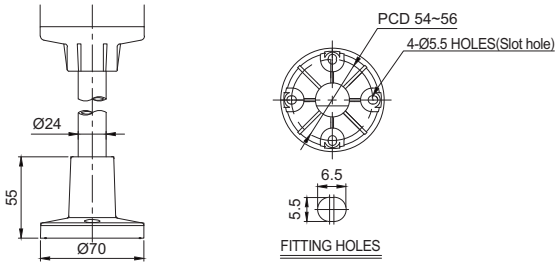
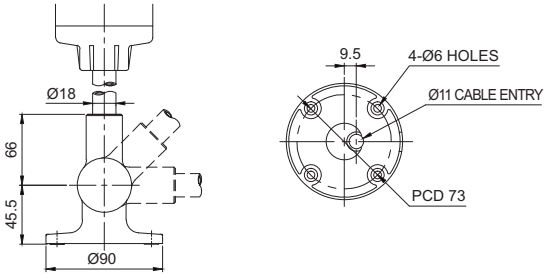
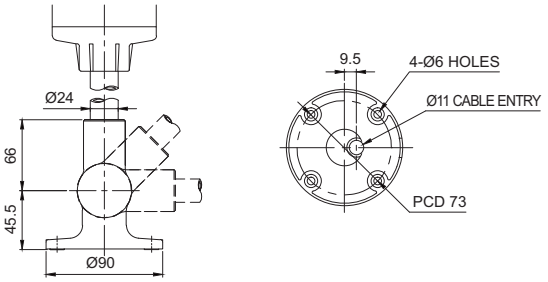
Tower Light Mounting Brackets

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
High-end L-type bracket is attached to the pole mount tower light for side of equipment installations. Wires can be threaded through the side of the bracket or come out at the bottom. The threads inside the bottom of the bracket can enable use of cable connectors. Material : PC Color : Ivory 	 LW18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45L, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF
	 LW24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR
Round-shaped bracket for horizontal surface installation. Material : Al Color : Silver 	 SZ18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG50L, STG40LF, STG50L, STG50LF
	 SZ24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR

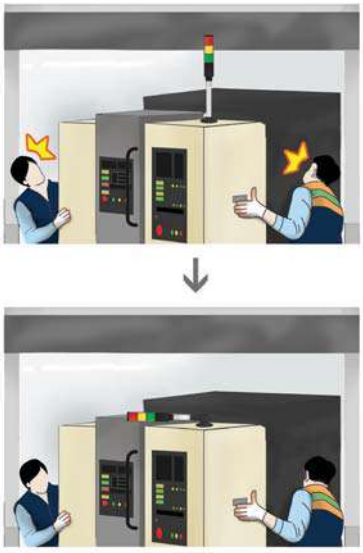
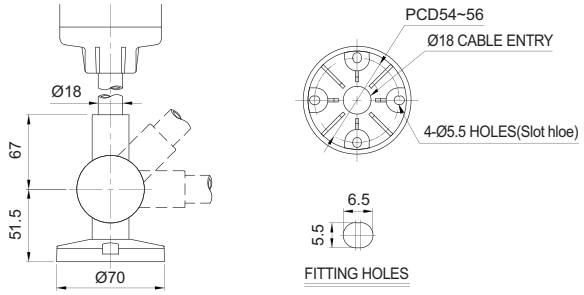
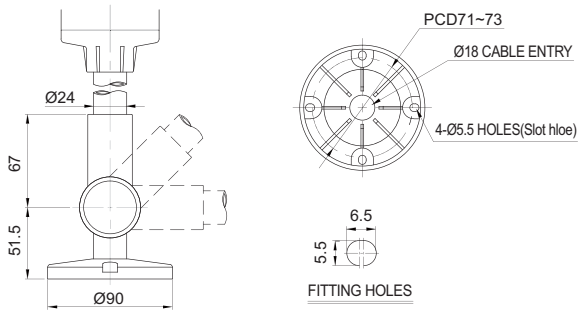
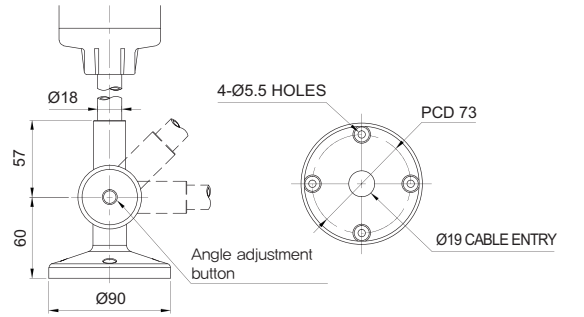
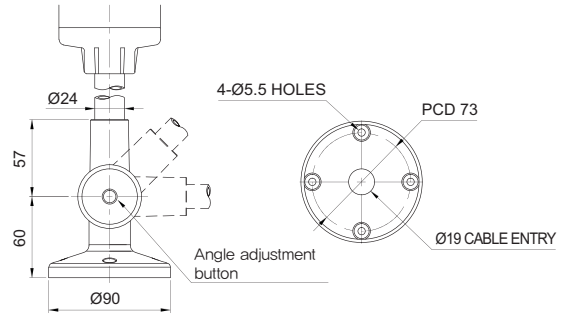
Tower Light Mounting Brackets

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
Round-shaped bracket for horizontal surface installation. Material : PC Color : Black	 QZ18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45L, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF
	 QZ24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR
A angle adjustable bracket (15 degree intervals for a range of 0-180 degrees) enables easy vertical, horizontal, and slanted installation. Material : Al Color : Silver	 SL18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45L, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF
	 SL24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR

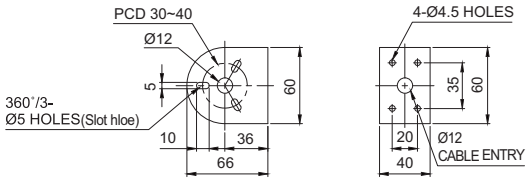
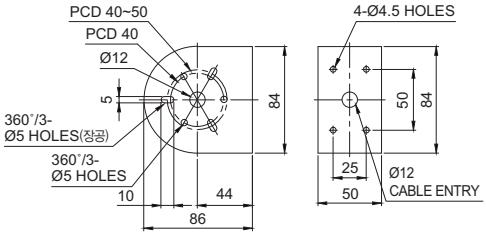
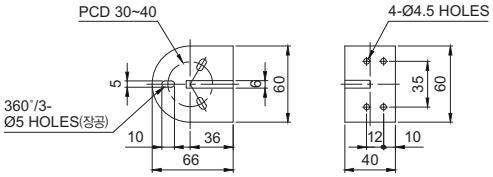
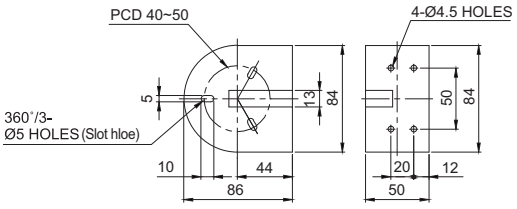
Tower Light Mounting Brackets

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
A angle adjustable bracket (5 degree intervals for a range of 0-180 degrees) enables easy vertical, horizontal, and slanted installation. Material : PC Color : Black 	 QL18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF
	 QL24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR
QLA bracket is angle-adjustable with the adjustment button located on the side. It enables 3 angle adjustments at 0, 45, 90 degrees. Material : PC Color : Black 	 QLA18	 ST45B, ST45BF, ST45L, ST45LF, ST56B, ST56BF, ST56L, ST56LF, ST56EL, ST56ELF, STC45, STC56EL, STC56L, QT50L, QT50LF, QT50LS, QT50LR, STG40L, STG40LF, STG50L, STG50LF, STG40L, STG40LF, STG50L, STG50LF
	 QLA24	 ST80B, ST80BF, ST80L, ST80LF, ST80EL, ST80ELF, STC80L, STC80LF, STC80EL, STC80ELF, QT70L, QT70LF, QT70LS, QT70LR

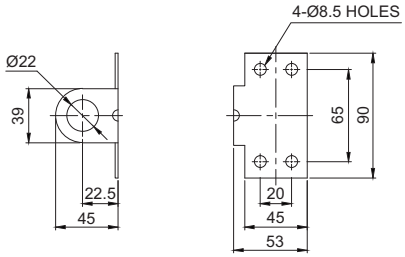
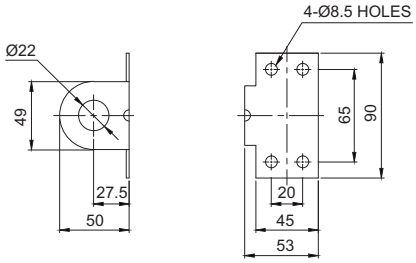
Tower Light Mounting Brackets

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
Bracket options for direct mount tower light installation. Material : Steel Color : Silver, Ivory	 TWS45	 ST45MB, ST45MBF, ST45ML, ST45MLF, ST56MB, ST56MBF, ST56ML, ST56MLF, ST56MEL, ST56MELF, STG40ML, STG40MLF, STG50ML, STG50MFL, STC45ML, STC45MLF, STC56ML, STC56MLF, STC56MEL, STC56MELF, QTG50ML, QTG50MLF, QTG60ML, QTG60MLF, QTC50ML, QTC50MLF, QTC60ML, QTC60MLF, QTR50ML, QTR50MLF, QTR60ML, QTR60MLF, QT50ML, QT50MLF, QT50MLS, QT50MLR
	 TWS80	 ST80MB, ST80MBF, ST80ML, ST80MLF, STC80ML, STC80MLF, QTG70ML, QTG70MLF, QTC70ML, QTC70MLF, QTR70ML, QTR70MLF, QT70ML, QT70MLF, QT70MLS, QT70MLR
High-end bracket options for direct mount tower light installation. Bracket structure allows for contained and tidy wiring with no exposed wires. Material : PC Color : Black, Ivory	 TWA45	 ST45MB, ST45MBF, ST45ML, ST45MLF, ST56MB, ST56MBF, ST56ML, ST56MLF, ST56MEL, ST56MELF, STG40ML, STG40MLF, STG50ML, STG50MFL, STC45ML, STC45MLF, STC56ML, STC56MLF, STC56MEL, STC56MELF, QTG50ML, QTG50MLF, QTG60ML, QTG60MLF, QTC50ML, QTC50MLF, QTC60ML, QTC60MLF, QTR50ML, QTR50MLF, QTR60ML, QTR60MLF, QT50ML, QT50MLF, QT50MLS, QT50MLR
	 TWA80	 ST80MB, ST80MBF, ST80ML, ST80MLF, STC80ML, STC80MLF, QTG70ML, QTG70MLF, QTC70ML, QTC70MLF, QTR70ML, QTR70MLF, QT70ML, QT70MLF, QT70MLS, QT70MLR

Tower Light Mounting Brackets

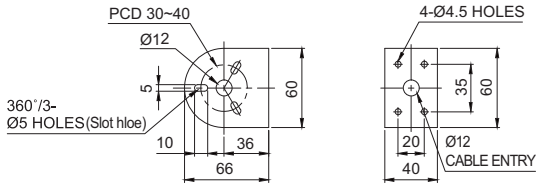
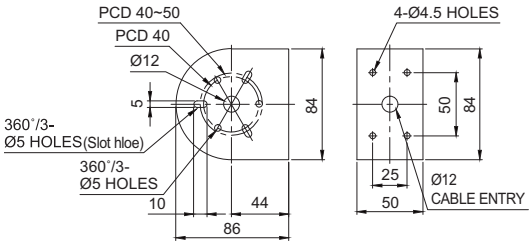
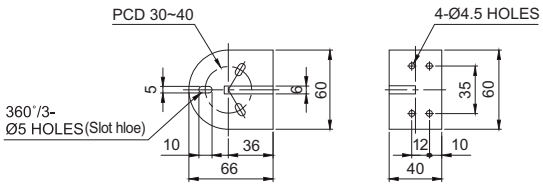
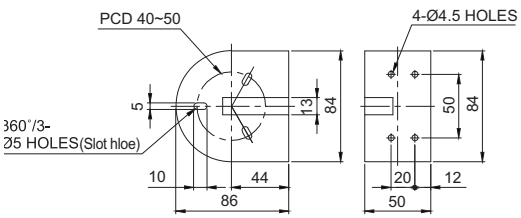
(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
Bracket options for installation of the direct mount slim tower light to the side of equipment. Material : Steel Color : Silver, Ivory 	 STAWB25	 STA25SLM, STA35SL, STA35SLM
	 STAWB45	 STA45SLM

Bracket instructions for warning/ signal lights

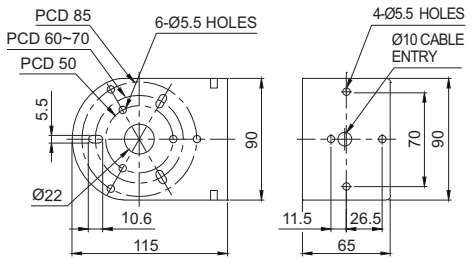
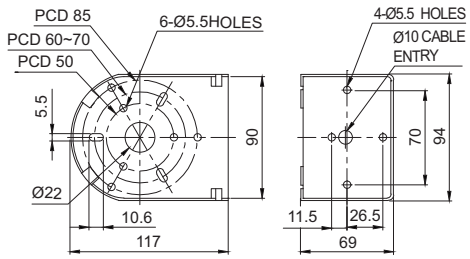
User can select from a variety of bracket options depending on their application conditions.

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
Bracket options for direct mount warning/ signal light installation. Material : Steel	 TWS45	 S50B, S50L, S60R, S60LR, S60L, MFL60
	 TWS80	 S80R, S80RLR, S80U, S80LR, S80L, S80S, S80SOL, MFL80, SMCL80, QMCL80
		
Bracket options for direct mount warning/ signal light installation. Bracket structure allows for contained and tidy wiring with no exposed wires.	 TWA45	 S50B, S50L, S60R, S60LR, S60L, MFL60
	 TWA80	 S80R, S80RLR, S80U, S80LR, S80L, S80S, S80SOL, MFL80, SMCL80, QMCL80
		

Warning/ Signal Light Mounting Brackets

(Units : mm)

Features	Product Image	Technical Diagram for Applicable Models
Bracket options for direct mount warning/ signal light installation. Material : Steel Color : Ivory	 SWP125	 S100R, S100E, S100RLR, S100UR, S100URLR, S100U, S100UA, S100LR, S100L, S100S, S125R, S125E, S125RL, S100D, S125D, STDL, STNDL, STND100, STND125
Bracket options for direct mount warning/ signal light installation Bracket structure allows for contained and tidy wiring with no exposed wires. Material : PC Color : Ivory	 SWM125	 S100R, S100E, S100RLR, S100UR, S100URLR, S100U, S100UA, S100LR, S100L, S100S, S125R, S125E, S125RL, S100D, S125D, STDL, STNDL, STND100, STND125

Icon Description

This catalogue helps users quickly identify the product's specifications and features by using several types of icons. If you understand the concept for each icon, you will find it easy to understand the catalogue information.

Light Source and Operating Mode Icons

Icon	Operating Mode	Icon	Operating Mode
	Bulb steady type		Bulb steady/flashing type
	Bulb revolving type		LED revolving type
	LED steady type		LED steady/ flashing type
	LED simulated revolving type		LED strobe type
	Xenon lamp strobe type		

Acoustic Signal Icons

Icon	Operating Mode	Icon	Operating Mode
	Buzzer		Speaker
	Horn		Bell
	Motor siren		MP3
	Decibel		

Specifications Icons

Icon	Operating Mode	Icon	Operating Mode
	Magnet type		Ambient operating temperature
	NPN type transistor		PNP type transistor
	IP rating		Wireless Network

Detail Icons

Icon	Operating Mode	Icon	Operating Mode
	Common specification		External view drawing
	Wiring		Mounting
	User specifications		Model selection

TOTAL CATALOGUE

Warning/ Signal/ Stackable Lights

INNOVATION IN ALARM & SIGNAL



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Product specifications 51

Specification List for Revolving Warning/ Signal Lights

LED Revolving Warning Lights









Model number		S60LR	S80DR	S80LR	S80DRK	S80LRK	S80ADR	S80ALR
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø70	Ø83	Ø83	Ø84	Ø84	Ø83	Ø83
	Height	121	131	133	153	155	125	127
	Depth	-	-	-	-	-	113	113
Volume		-	Max 90dB at 1m	Max 90dB at 1m	-	-	Max 90dB at 1m	Max 90dB at 1m
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Mount bracket	Mount bracket	Wall mount	Wall mount
Protection rating		IP44	IP44	IP44	IP44	IP44	IP44	IP44
Certificates								
Customization		Wall mount	Wall mount	Wall mount	Pole mount	Pole mount	-	-
Page		P52	P56	P56	P57	P57	P58	P58









Model number		S100LR	S100MLR	S125LR	S125MLR	SKMPLR	SKLR	SKMLR
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V
Dimension (mm)	Diameter	Ø101	Ø101	Ø119	Ø119	-	-	-
	Height	152	149	158	161	142	135	138
	Depth	-	-	-	-	185(Length)	183(Length)	183(Length)
Volume		Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	-	-	-
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC
Mount bracket		Self stand	Detachable magnet	Self stand	Detachable magnet	Detachable magnet	Self stand	Detachable magnet
Protection rating		IP44	IP54	IP44	IP54	IP54	IP54	IP54
Certificates								
Customization		Wall mount 2 tones buzzer S100DR, S100RLR	AC type	Wall mount 2 tones buzzer S125RLR	AC type	Oval-shaped Rubber Magnet	-	-
Page		P72	P73	P79	P80	P84	P85	P85






Model number		S150ULR	S150ULR-FT	S150RLR	S150RLR-FT		
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V		
Dimension (mm)	Diameter	Ø138	Ø138	Ø140	Ø140		
	Height	193	196	189	194		
	Depth						
Volume		Max 90dB at 1m	Max 90dB at 1m	-	-		
Material		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-STS	Lens-PC Housing-STS		
Mount bracket		Self stand	Mount bracket	Self stand	Mount bracket		
Protection rating		IP44	IP44	IP44	IP44		
Certificates							
Customization		2 tones buzzer	2 tones buzzer	-	-		
Page		P96	P96	P97	P97		

Specification List for Revolving Warning/ Signal Lights

Bulb Revolving Warning Lights



Model number		S60R	S80R	S80U	S80RK	S80UK	S80AR	S80AU
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø70	Ø83	Ø83	Ø84	Ø84	Ø83	Ø83
	Height	121	131	133	153	155	125	127
	Depth	-	-	-	-	-	113	113
Volume		-	Max 90dB at 1m	Max 90dB at 1m	-	-	Max 90dB at 1m	Max 90dB at 1m
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Mount bracket	Mount bracket	Wall mount	Wall mount
Protection rating		IP44	IP44	IP44	IP44	IP44	IP44	IP44
Certificates		CE	CE	-	-	-	-	-
Customization		Wall mount	Wall mount	Wall mount	Pole mount	Pole mount	-	-
Page		P52	P53	P53	P54	P54	P55	P55



Model number		S100R	S100U	S100UA	S100M	S125R	S125U	S125M
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V
Dimension (mm)	Diameter	Ø101	Ø101	Ø101	Ø101	Ø119	Ø119	Ø119
	Height	149	152	155	149	161	158	161
	Depth							
Volume		Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Detachable magnet	Self stand	Self stand	Detachable magnet
Protection rating		IP44	IP44	IP44	IP54	IP44	IP44	IP54
Certificates		CE	-	-	-	CE	-	-
Customization		Wall mount Efficient product (S100E), FT Bracket equipped	Wall mount 2 tones buzzer Dome type lens (S100UR)	Wall mount 2 tones buzzer	AC type	Wall mount Efficient product (S125E), FT Bracket equipped	Wall mount 2 tones buzzer	AC type
Page		P69	P70	P70	P71	P76	P77	P78



Model number		SK/ SKH	SKM/ SKMH	SKMP/ SKMPH	S150U	S150U-FT	S150R	S150R-FT
Voltage		DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	-	-	-	Ø138	Ø138	Ø140	Ø140
	Height	135	138	142	193	196	189	194
	Depth	183(Length)	183(Length)	185(Length)	-	-	-	-
Volume		-	-	-	Max 90dB at 1m	Max 90dB at 1m	-	-
Material		Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-STS	Lens-PC Housing-STS
Mount bracket		Self stand	Detachable magnet	Detachable magnet	Self stand	Mount bracket	Self stand	Mount bracket
Protection rating		IP54	IP54	IP54	IP44	IP44	IP44	IP44
Certificates		-	-	-	-	-	CE	CE
Customization		-	-	Oval-shaped rubber magnet	2 tones buzzer	2 tones buzzer	-	-
Page		P83	P83	P84	P96	P96	P97	P97

Specification List for Revolving Warning/ Signal Lights

Bulb Revolving Warning Lights









Model number		S180R	S180R-FT	S180U	SR	SRP	SJ	SJP
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø176	Ø176	Ø186	Ø83	Ø83	□95×95	□95×95
	Height	206	210	216	162-350	363-551	183-375	387-579
	Depth							
Volume		-	-	Max 90dB at 1m	-	-	Max 90dB at 1m	Max 90dB at 1m
Material		Lens-AS Housing-STS	Lens-AS Housing-STS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Mount bracket	Self stand	Self stand	Pole mount	Self stand	Pole mount
Protection rating		IP44	IP44	IP44	IP44	IP44	IP44	IP44
Certificates		-	-	-	-	-	CE	CE
Customization		-	-	2 tones buzzer Mount hole PCD 120mm	4 layers, Color combination except for standard	4 layers, Color combination except for standard	2 tones buzzer 4 layers, Color combination except for standard	2 tones buzzer 4 layers, Color combination except for standard
Page		P100	P100	P101	P113	P113	P115	P115

LED Steady/ Flashing Signal Lights









Model number		S50L	S60L	S80L	S80LK	S80AL	S100L	S125L
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø50	Ø70	Ø83	Ø84	Ø83	Ø101	Ø119
	Height	60	121	133	155	127	152	158
	Depth	-	-	-	-	113	-	-
Volume		-	-	Max 90dB at 1m	-	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Mount bracket	Wall mount	Self stand	Self stand
Protection rating		IP44	IP44	IP44	IP44	IP44	IP44	IP44
Certificates		-	-	CE	-	-	CE, KIMM	CE, KIMM
Customization		Wall mount	Wall mount	Wall mount	Pole mount	-	Wall mount 2 tones buzzer	Wall mount 2 tones buzzer
Transistor								
Page		P51	P52	P59	P60	P61	P74	P81

Specification List for Revolving Warning/ Signal Lights

LED Steady/ Flashing Signal Lights/ Stackable Lights









Model number		SKTL	SKTLB	SKTLM	SKTLBM	S150UL	S150UL-FT	S150RL	S150RL-FT
Voltage		DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	□105×105	□105×105	□105×105	□105×105	Ø138	Ø138	Ø140	Ø140
	Height	98	98	90	90	193	196	189	194
	Depth								
Volume		-	Max 105dB at 1m	-	Max 105dB at 1m	Max 90dB at 1m	Max 90dB at 1m	-	-
Material		Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-STS	Lens-PC Housing-STS
Mount bracket		Self stand	Self stand	Detachable magnet	Detachable magnet	Self stand	Mount bracket	Self stand	Mount bracket
Protection rating		IP66	IP66	IP66	IP66	IP44	IP44	IP44	IP44
Certificates									
Customization		-	-	Color combination except for standard	Color combination except for standard	2 tones buzzer	2 tones buzzer	-	-
Page		P86	P86	P87	P87	P98	P98	P99	P99










Model number		S80SOL	S100SOL	S125SOL	SRL	SRLP	SJL	SJLP	S125TL
Voltage		DC2.4V	DC2.4V	DC2.4V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø83	Ø101	Ø119	Ø83	Ø83	□95×95	□95×95	Ø125
	Height	143	158	175	162-350	363-551	183-375	387-579	207-407
	Depth								
Volume		-	-	-	-	-	Max 90dB at 1m	Max 90dB at 1m	-
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Self stand	Pole mount	Self stand	Pole mount	Self stand
Protection rating		IP54	IP54	IP54	IP44	IP44	IP44	IP44	IP44
Certificates		CE	CE	CE	-	-	-	-	-
Customization		Wall mount Magnet mount	Wall mount Magnet mount	Wall mount Magnet mount	-	-	2 tones buzzer	2 tones buzzer	Color combination except for standard, Strobe type(S125TS)
Transistor		-	-	-	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P105	P106	P106	P114	P114	P116	P116	P117

Specification List for Revolving Warning/ Signal Lights

LED Steady/ Flashing Signal Lights








Model number		Q60L	Q60LW	Q60LP	Q80L	Q80LW	Q80LP
Voltage		DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V
Dimension (mm)	Diameter	Ø69	Ø69	Ø69	Ø83	Ø83	Ø83
	Height	100	129	334	120	157	278
	Depth	-	107	-	-	114	-
Volume		Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m
Material		Lens-PC Housing-ABS	Lens-PC Housing-ABS Mount-PC	Lens-PC Housing-ABS Pole-Al	Lens-PC Housing-ABS	Lens-PC Housing-ABS Mount-PC	Lens-PC Housing-ABS Pole-Al
Mount bracket		Self stand	Wall mount	Pole mount	Self stand	Wall mount	Pole mount
Protection rating		IP65	IP65	IP65	IP65	IP65	IP65
Certificates		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL	CE, UL
Customization		-	-	Customized pole length available	-	-	Customized pole length available
Page		P88	P88	P89	P90	P90	P91








Model number		Q100L	Q100LW	Q100LP	Q125L	Q125LW	Q125LP
Voltage		DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V
Dimension (mm)	Diameter	Ø97	Ø97	Ø97	Ø116	Ø116	Ø116
	Height	136	173	294	155	192	313
	Depth	-	121	-	-	130	-
Volume		Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m
Material		Lens-PC Housing-ABS	Lens-PC Housing-ABS Mount-PC	Lens-PC Housing-ABS Pole-Al	Lens-PC Housing-ABS	Lens-PC Housing-ABS Mount-PC	Lens-PC Housing-ABS Pole-Al
Mount bracket		Self stand	Wall mount	Pole mount	Self stand	Wall mount	Pole mount
Protection rating		IP65	IP65	IP65	IP65	IP65	IP65
Certificates		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL	CE, UL
Customization		-	-	Customized pole length available	-	-	Customized pole length available
Page		P92	P92	P93	P94	P94	P95

Multiple Function LED Signal Lights






Model number		MFL60	MFL80	MFL100	MFL125
Voltage		DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V	DC12V-24V AC110V-220V
Dimension (mm)	Diameter	Ø69	Ø83	Ø97	Ø116
	Height	100	120	136	155
	Depth	-	-	-	-
Volume		Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m
Material		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Self stand
Protection rating		IP65	IP65	IP65	IP65
Certificates		CE	CE	CE	CE
Customization		Wall mount	Wall mount	Wall mount	Wall mount
Page		P103	P103	P104	P104

Multiple Color LED Signal Lights




Model number		SWTC	SWTCE
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø90(Half)	Ø90(Half)
	Height	216	216
	Depth	46	46
Volume		Max 90dB at 1m	Max 90dB at 1m
Material		Lens-PC Housing-ABS	Lens-PC Housing-ABS
Mount bracket		Wall mount	Wall mount
Protection rating		IP55	IP55
Certificates		CE	CE
Customization		Color combination except for standard, 2 tones buzzer	Color combination except for standard, 2 tones buzzer
Transistor		NPN type	NPN type
Page		P111	P111

Specification List for Revolving Warning/ Signal Lights

Multiple Color LED Signal Lights



Model number		SMCL80	SMCL100	SMCL125	QMCL60	QMCL80	QMCL100	QMCL125
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V
Dimension (mm)	Diameter	Ø83	Ø101	Ø119	Ø69	Ø83	Ø97	Ø116
	Height	132	152	158	80	85	95	110
	Depth							
Volume		Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m	Max 80dB at 1m
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Mount bracket		Self stand	Self stand	Self stand	Self stand	Self stand	Self stand	Self stand
Protection rating		IP44	IP44	IP44	IP65	IP65	IP65	IP65
Certificates		CE	CE	CE	CE	CE	CE	CE
Customization		Wall mount Color combination except for standard	Wall mount Color combination except for standard	Wall mount Color combination except for standard	Wall mount	Wall mount	Wall mount	Wall mount
Transistor		NPN type	NPN type	NPN type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P107	P107	P108	P109	P109	P110	P110

LED Strobe Signal Lights



Model number		S80NS	S80LS	S125LSE				
Voltage		DC12V-24V	DC12V-24V	DC12V, DC24V				
Dimension (mm)	Diameter	Ø83	Ø83	Ø123				
	Height	111	106	125				
	Depth	-	-	-				
Volume		-	-	-				
Material		Lens-PC Housing-ABS+GF	Lens-PC Housing-ABS	Lens-PC Housing-ABS				
Mount bracket		Self stand	Self stand	Self stand				
Protection rating		IP66	IP65	IP54				
Certificates		-	CE, UL	-				
Customization		-	-	Wall mount				
Page		P66	P68	P68				

Xenon Lamp Strobe Signal Lights



형번		Q70NSC	Q70NSN	S80S	S80SM	S80AS	S100S	S100SM
사용전압		AC110V	DC12V-80V AC110V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V
외형 치수 (mm)	Outdia	Ø72	Ø72	Ø83	Ø83	Ø83	Ø101	Ø101
	Height	128	128	106	106	127	113	113
	Depth	-	-	-	-	113	-	-
부저음량		-	-	-	-	Max. 90dB at 1m	-	-
재질		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
취부 방법		Convenient wiring	Self stand	Self stand	Detachable magnet	Wall mount	Self stand	Detachable magnet
보호 등급		IP66	IP66	IP54	IP54	IP44	IP54	IP54
인증		–	–	CE	–	–	CE, KIMM	–
주문 사양		–	–	Wall mount	AC type	Dome type lens	Wall mount	AC type
Page		P62	P63	P64	P64	P65	P75	P75

Specification List for Revolving Warning/ Signal Lights

								
Model number		S125S	S125SM	S150US	S150US-FT	S150RS	S150RS-FT	S180US/ S180UHS
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø123	Ø123	Ø138	Ø138	Ø140	Ø140	Ø186
	Height	125	123	193	196	189	194	216
	Depth							
Volume		-	-	Max 90dB at 1m	Max 90dB at 1m	-	-	Max 90dB at 1m
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-STS	Lens-PC Housing-STS	Lens-ABS Housing-ABS
Mount bracket		Self stand	Detachable magnet	Self stand	Mount bracket	Self stand	Mount bracket	Self stand
Protection rating		IP54	IP54	IP44	IP44	IP44	IP44	IP44
Certificates		CE	-	-	-	-	-	-
Customization		Wall mount	AC type	2 tones buzzer, High brightness (S150UHS)	2 tones buzzer, High brightness (S150UHS-FT)	High brightness (S150RHS)	High brightness (S150RHS-FT)	2 tones buzzer, Mount hole PCD 120mm
Page		P82	P82	P98	P98	P99	P99	P102

S50 series

Ø50mm Signal Lights

IP44 | -30~+50℃ | RoHS



S50B



S50L



Common Specifications(S50B/ S50L)

- Ø50mm compact signal lights
- Enhanced visibility that employs a special scattering lens
- Suitable for office-automation applications, small machines, and portable automation equipment with confined space environments
- Powerful omni-directional light source that enables high visibility
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS(for S50L Model)
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

S50B Bulb Steady Signal Light

- Standard condition operates with steady light function but the flashing light condition can be enabled with external contacts
- Employs a special filament to prevent damage caused by possible voltage variations

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S50B	DC12V	0.437A	12V5W	G14 9S	1	-	0.05kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.290A	24V5W	G14 9S	2		0.05kg	
	AC110V	0.051A	110V5W	T16x28 9S	3		0.05kg	
	AC220V	0.025A	220V5W	T16x28 9S	4		0.05kg	

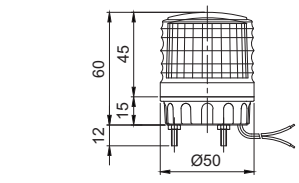
S50L LED Steady/ Flashing Signal Light

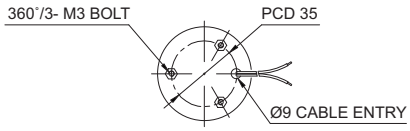
- Built-in switch for selection between steady and flashing mode
- Flashing rate : 60-80 flashes/min
- Compliant with RoHS directive

Model number	Voltage	Current	Certificates	Weight	Color
S50L	DC12V	0.047A	-	0.08kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.040A		0.08kg	
	AC110V	0.042A		0.08kg	
	AC220V	0.042A		0.08kg	

Technical Diagram (Units : mm)

S50B/ S50L





Customization

- Wall mount bracket options:
  Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Wiring Instructions

- S50B Model : External power line standard UL1007 AWG22(0.3sq) 400mm
- S50L Model : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Ordering Specification

S50B	-	220	-	R
[Model number]		[Voltage]		[Color]
• S50B • S50L		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S60 series

Ø60mm Warning/ Signal Lights

IP44 -20~+50°C



S60R



S60LR



S60L

Common Specifications(S60R/ S60LR/ S60L)

- Ø60mm compact warning/ signal lights
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

S60R Bulb Revolving Warning Light

- Revolving speed : 120-140RPM
- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S60R	DC12V	0.484A	12V5W	T16x35 15S	5	CE	0.18kg	● R-Red
	DC24V	0.310A	24V5W	T16x35 15S	6		0.18kg	● A-Amber
	AC110V	0.072A	110V5W	T16x35 15D	7	-	0.27kg	● G-Green
	AC220V	0.036A	220V5W	T16x35 15D	8		0.27kg	● B-Blue

S60LR LED Revolving Warning Light

- Revolving speed : 120-140RPM

Model number	Voltage	Current	Certificates	Weight	Color
S60LR	DC12V	0.183A	-	0.21kg	● R-Red
	DC24V	0.127A		0.21kg	● A-Amber
	AC110V	0.040A		0.28kg	● G-Green
	AC220V	0.020A		0.28kg	● B-Blue

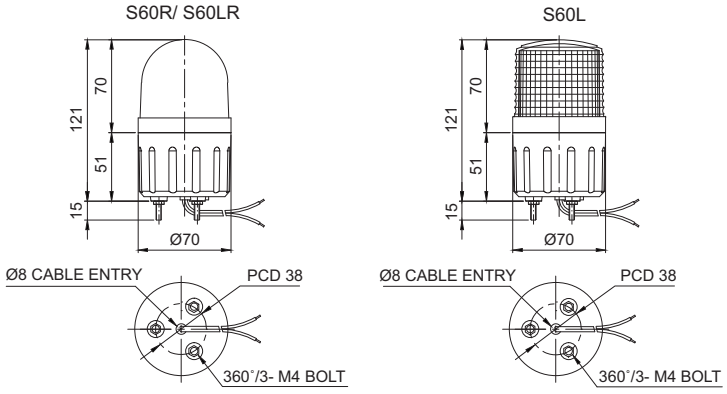
S60L LED Steady/ Flashing Signal Light

- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
S60L	DC12V	0.118A	-	0.15kg	● R-Red
	DC24V	0.083A		0.15kg	● A-Amber
	AC110V	0.026A		0.20kg	● G-Green
	AC220V	0.013A		0.20kg	● B-Blue

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC type for S60R/S60LR : Black output line is negative(-)
- S60L can be wired regardless of polarity

Customization

- Wall mount bracket options:
  Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket
TWS45



Wall Mount Bracket
TWA45

Ordering Specification

S60R	-	24	-	R
[Model number]		[Voltage]		[Color]
• S60R • S60LR • S60L		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm Bulb Revolving Warning Lights

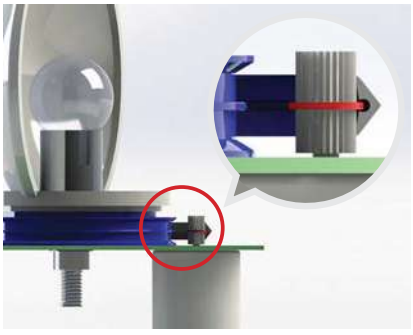
IP44 | -20~+50°C | BUZZER | 90dB



S80R



S80U



V belt type power transfer system feature

Designed to minimize the abrasion of the belt, and to efficiently deliver torque from the drive shaft to the reflector.
(Patent registered)

S80R/ S80U Bulb Revolving Warning Lights

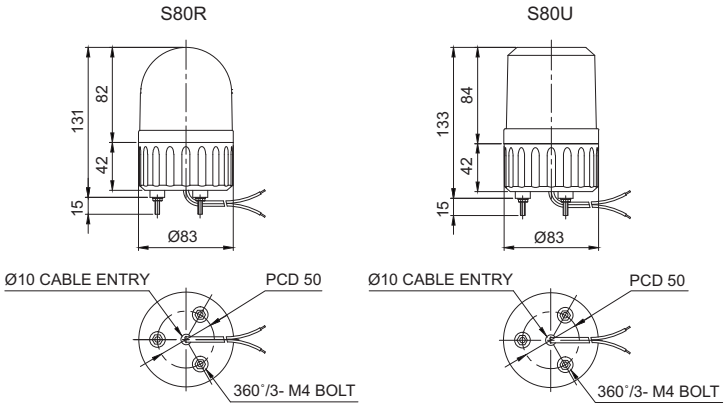
- Ø80mm bulb revolving warning lights
- Adopts a special power transmission system that reduces noise and wear
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44
- Certificates : CE Compliant

Specifications

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S80R S80U	DC12V	0.484A	12V5W	T16x35 15S	5	CE	0.28kg	R-Red A-Amber G-Green B-Blue
	DC24V	0.310A	24V5W	T16x35 15S	6		0.28kg	
	AC110V	0.080A	12V5W	T16x35 15S	5	-	0.48kg	
	AC220V	0.040A	12V5W	T16x35 15S	5		0.48kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Customization

- Wall mount bracket options :
  Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

S80U	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80R • S80U		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

IP44 -20~+50℃



S80RK



S80UK

S80RK/ S80UK Bulb Revolving Warning Lights

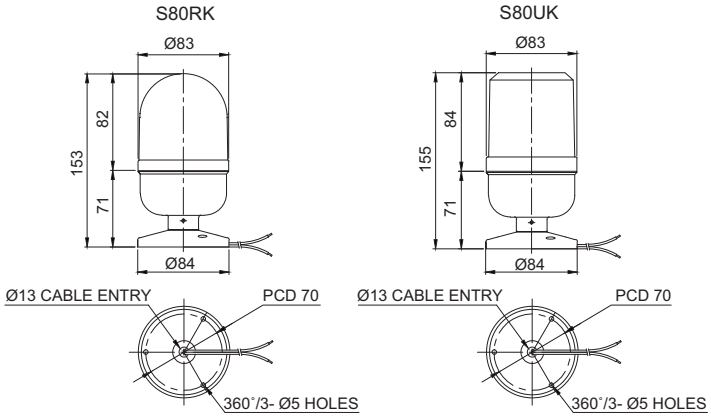
- Ø80mm bulb revolving warning lights
- Adopts a special power transmission system that reduces noise and wear
- Circular mount bracket allows convenient installation
- No buzzer options available
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

Specifications

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S80RK S80UK	DC12V	0.484A	12V5W	T16x35 15S	5	-	0.26kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.310A	24V5W	T16x35 15S	6		0.26kg	
	AC110V	0.080A	12V5W	T16x35 15S	5		0.48kg	
	AC220V	0.040A	12V5W	T16x35 15S	5		0.48kg	

Technical Diagram

(Units : mm)



Wiring Instructions

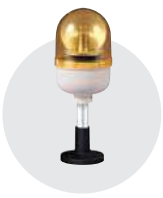
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Customization

- Pole mount type

Standard	QZ18	SZ18	SL18	QLA18
Steel	PC	Al	Al	PC

※ Please refer to page34-39 for detailed dimension of mount bracket



Ordering Specification

S80RK	-	24	-	R
[Model number]		[Voltage]		[Color]
• S80RK • S80UK		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

IP44 | -20~+50°C | BUZZER | 90dB



S80AR



S80AU



S80A series enable easy wiring

S80A series enables easy wiring with its terminal block attached to the fixed base plate. With this system the contacts in the housing sends power directly to the terminal block.

S80AR/ S80AU Bulb Revolving Warning Lights

- Equipped wall mount allows for easy assembly. Additional mounting brackets not required
- Terminal block designed inside the side mount bracket enables easy wiring
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

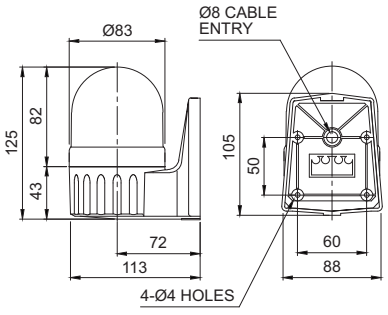
Specifications

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S80AR S80AU	DC12V	0.484A	12V5W	T16x35 15S	5	-	0.31kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.310A	24V5W	T16x35 15S	6		0.31kg	
	AC110V	0.080A	12V5W	T16x35 15S	5		0.50kg	
	AC220V	0.040A	12V5W	T16x35 15S	5		0.50kg	

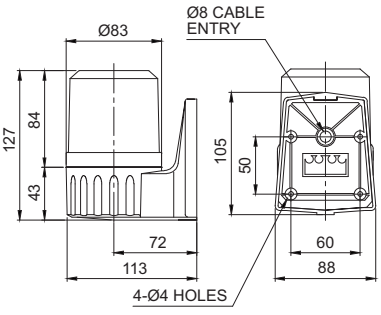
Technical Diagram

(Units : mm)

S80AR



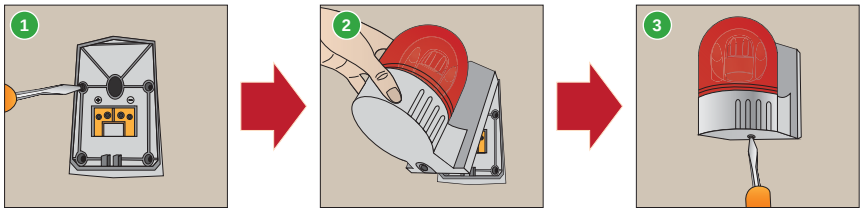
S80AU



Wiring Instructions

- Attach the power supply wire to the terminal block
- DC Type : Black output line is negative(-)

Mounting Instructions



1. Secure the base plate to the mounting surface, and the power line to the terminal block
2. Mount the warning light by inserting the ring(hook) into the upper part of the base plate
3. Screw in the bolt at the base of the mounting bracket to complete assembly

Ordering Specification

S80AR	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80AR • S80AU		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S80 series

Ø80mm LED Revolving Warning Lights

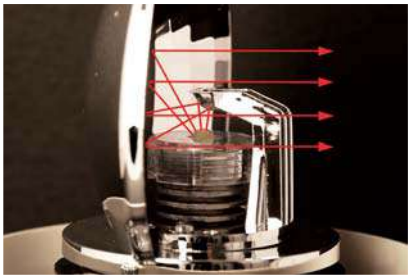
IP44 | -20~+50°C | BUZZER | 90dB | RoHS



S80DR



S80LR



Feature of LED revolving warning lights

LED revolving warning lights has Qlight's distinctive LED light collecting system and special multifaceted reflector allowing excellent omni-directional visibility.
(Patent registered)

Replacement for old version

S80DR substitutes for S80RLR, so they have same dimension, function and feature.

S80DR/ S80LR LED Revolving Warning Lights

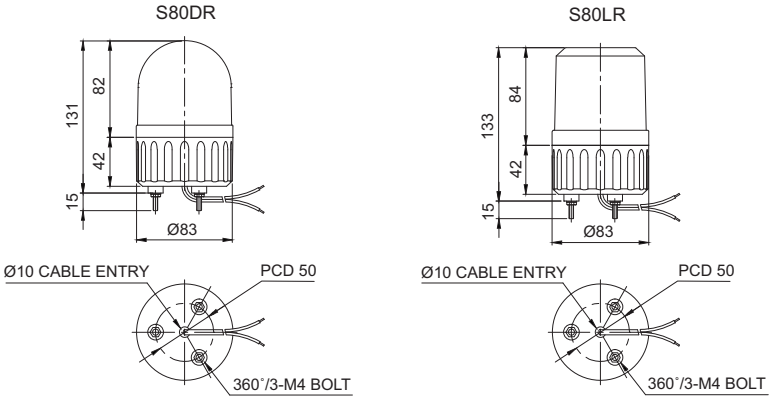
- Ø80mm compact LED revolving warning lights
- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80DR S80LR	DC12V	0.183A	-	0.23kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.127A		0.23kg	
	AC110V	0.035A		0.38kg	
	AC220V	0.017A		0.38kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Customization

- Wall mount bracket options :
  Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

S80DR	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80DR • S80LR		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm LED Revolving Warning Lights

IP44 | -20~+50℃ | RoHS



S80DRK



S80LRK

S80DRK/ S80LRK LED Revolving Warning Lights

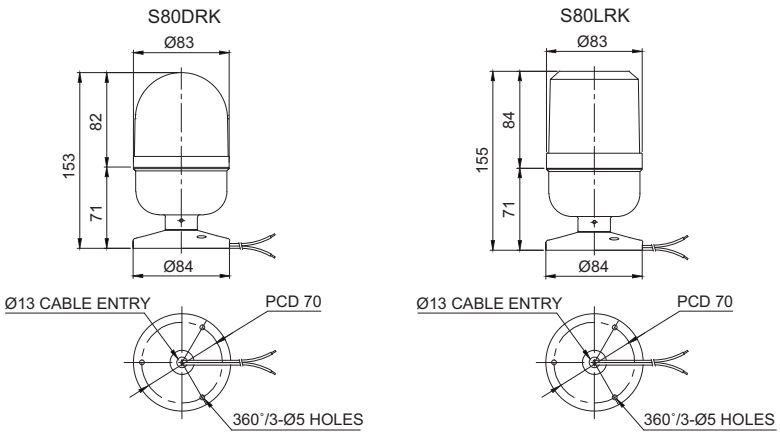
- Ø80mm LED revolving warning lights
- Adopts a special power transmission system that reduces noise and wear
- Circular mount bracket allows convenient installation
- No buzzer allowed
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80DRK S80LRK	DC12V	0.183A	-	0.24kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.127A		0.24kg	
	AC110V	0.035A		0.43kg	
	AC220V	0.017A		0.43kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Customization

- Pole mount type

Standard	QZ18	SZ18	SL18	QLA18
Steel	PC	Al	Al	PC

※ Please refer to page34-39 for detailed dimension of mount bracket



Replacement for old version

S80DRK substitutes for S80RLRK, so they have same dimension, function and feature.

Ordering Specification

S80DRK	-	24	-	R
[Model number]		[Voltage]		[Color]
• S80DRK • S80LRK		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm LED Revolving Warning Light

IP44 | -20~+50°C | BUZZER | 90dB | RoHS



S80ADR



S80ALR



S80A series can be wall mounted easily without an additional mounting bracket.

Replacement for old version

S80ADR substitutes for S80ALR and S80ALR substitutes for S80AULR so they have the same dimension, function and feature.

S80ADR/ S80ALR LED Revolving Warning Lights

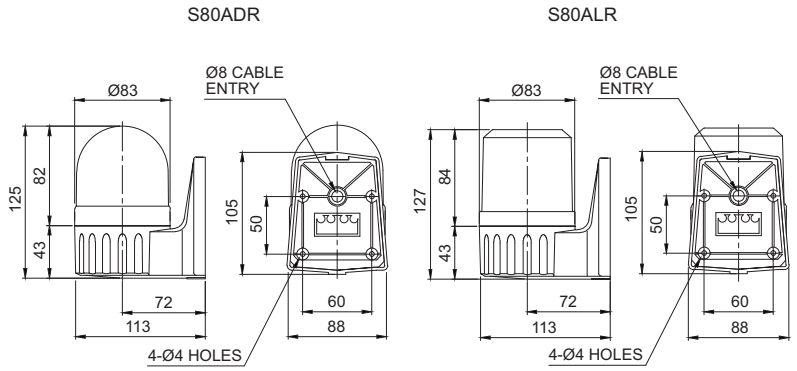
- Equipped wall mount allows for easy assembly. Additional mounting brackets not required
- Terminal block designed inside the side mount bracket enables easy wiring
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80ADR S80ALR	DC12V	0.183A	-	0.34kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.127A		0.34kg	
	AC110V	0.035A		0.49kg	
	AC220V	0.017A		0.49kg	

Technical Diagram

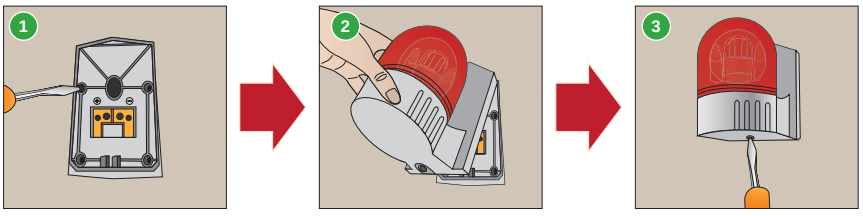
(Units : mm)



Wiring Instructions

- Attach the power supply wire to the terminal block
- DC Type : Black output line is negative(-)

Mounting Instructions



1. Secure the base plate to the mounting surface, and the power line to the terminal block
2. Mount the warning light by inserting the ring(hook) into the upper part of the base plate
3. Screw in the bolt at the base of the mounting bracket to complete assembly

Ordering Specification

S80ALR	-	BZ	-	110	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80ADR • S80ALR		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

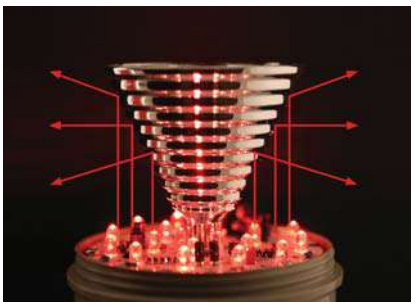
Ø80mm LED Steady/ Flashing Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB | RoHS



S80L





Feature of indirect light diffusing system

Indirect light diffusing system emits intense and constant level of signal lights via multi reflector throughout the lens.

S80L LED Steady/ Flashing Signal Light

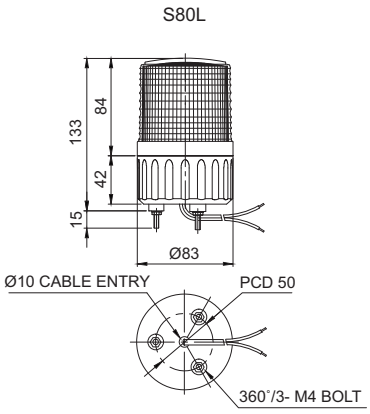
- Ø80mm LED steady/ flashing signal lights
- Multi reflector system emits intense and constant level of signal lights
- Built-in switch for selection between steady and flashing mode
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Certificates : CE Compliant
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80L	DC12V	0.123A	CE DC24V only	0.20kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.094A		0.20kg	
	AC110V	0.035A		0.32kg	
	AC220V	0.017A		0.32kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- Wall mount bracket options :
  Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

S80L	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80L		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm LED Steady/ Flashing Signal Lights

IP44 | -30~+50℃ | RoHS



S80LK



S80LK LED Steady/ Flashing Signal Light

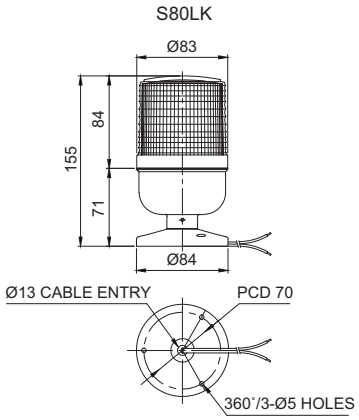
- Ø80mm LED steady/ flashing signal lights
- Circular mount bracket allows for convenient installation
- Buzzer not allowed
- Switch for selection between steady and flashing mode
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80LK	DC12V	0.123A	-	0.20kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.094A		0.20kg	
	AC110V	0.035A		0.37kg	
	AC220V	0.017A		0.37kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- Pole mount type

Standard	QZ18	SZ18	SL18	QLA18
Steel	PC	Al	Al	PC

※ Please refer to page34-39 for detailed dimension of mount bracket



Ordering Specification

S80LK	-	24	-	R
[Model number]		[Voltage]		[Color]
• S80LK		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm LED Steady/ Flashing Signal Lights

IP44 | -30~+50℃ | BUZZER | 90dB | RoHS



S80AL





S80A series enable easy wiring

S80A series enables easy wiring with its terminal block attached to the fixed base plate. With this system the contacts in the housing sends power directly to the terminal block.

S80AL LED Steady/ Flashing Signal Light

- Equipped wall mount allows for easy assembly. Additional mounting brackets not required
- Maintenance reduced with longlasting LED light source
- Buzzer not allowed
- Terminal block designed inside the side mount bracket enables easy wiring
- Built-in buzzer available(Volume : Max 90dB at 1m)
- Built-in switch for selection between steady and flashing mode
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Compliant with RoHS directive

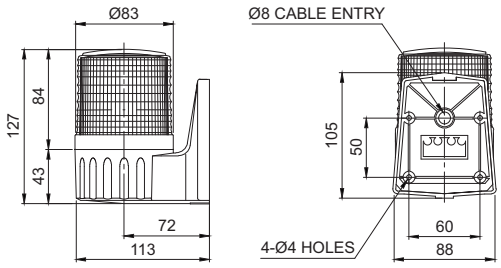
Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80AL	DC12V	0.123A	-	0.26kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.094A		0.26kg	
	AC110V	0.035A		0.35kg	
	AC220V	0.017A		0.35kg	

Technical Diagram

(Units : mm)

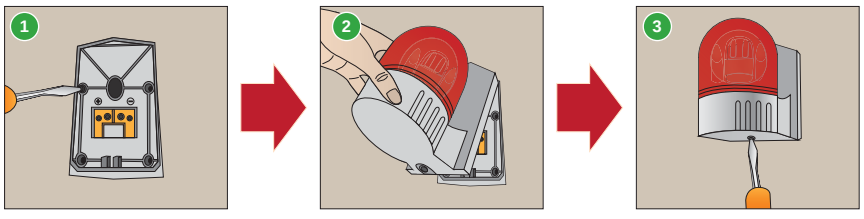
S80AL



Wiring Instructions

- Attach the power supply wire to the terminal block
- Product can be wired regardless of polarity

Mounting Instructions



1. Secure the base plate to the mounting surface, and the power line to the terminal block
2. Mount the warning light by inserting the ring(hook) into the upper part of the base plate
3. Screw in the bolt at the base of the mounting bracket to complete assembly

Ordering Specification

S80AL	-	BZ	-	110	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80AL		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

IP66 -40~+50℃



Q70NSC



Q70NSC Xenon Lamp Strobe Signal Lights

- Ø70mm xenon lamp strobe signal lights
- High efficiency strobe light that offers excellent outdoor visibility and long-distance signal light luminance close to natural light
- Lamp connector fastening structure allows for convenient lamp replacement
- Flashing rate : 60-80 flashes/min
- Materials : Lens-PC, Housing-ABS
- Ambient operating temperature : -40°C to +50°C
- Protection rating : IP66

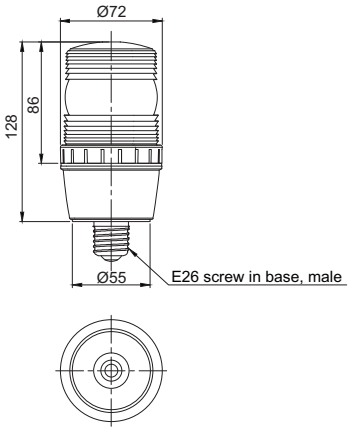
Specifications

Model number	Voltage	Current	Certificates	Weight	Color
Q70NSC	AC110V	Max. 0.050A	-	0.19kg	● R-Red ● A-Amber ● G-Green ● B-Blue

Technical Diagram

(Units : mm)

Q70NSC



Wiring Instructions

- Edison screw bulb (E26) socket allows for easy and convenient wiring.



Ordering Specification

Q70NSC	-	110	-	A
[Model number]		[Voltage]		[Color]
• Q70NSC		• 110-AC110V		● R-Red ● A-Amber ● G-Green ● B-Blue

Q70NSN

Ø80mm LED Xenon Lamp Strobe Signal Lights

IP66 -40~+50°C



Q70NSN



Q70NSN Xenon Lamp Strobe Signal Lights

- Ø70mm xenon lamp strobe signal lights
- High efficiency strobe light that offers excellent outdoor visibility and long-distance signal light luminance close to natural light
- Lamp connector fastening structure allows for convenient lamp replacement
- Bottom nut base allows for convenient mounting
- Flashing rate : 60-80 flashes/min
- Materials : Lens-PC, Housing-ABS
- Ambient operating temperature : -40°C to +50°C
- Protection rating : IP66

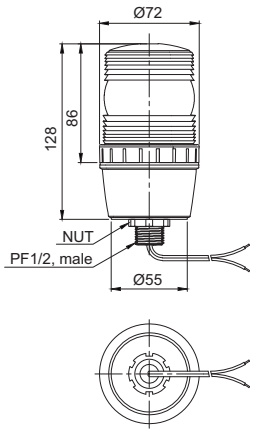
Specifications

Model number	Voltage	Current	Certificates	Weight	Color
Q70NSN	DC12V-80V	Max. 0.262A	-	0.188kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	AC110V	Max. 0.050A		0.191kg	

Technical Diagram

(Units : mm)

Q70NSN



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Ordering Specification

Q70NSN	-	12/80	-	R
[Model number]		[Voltage]		[Color]
• Q70NSN		• 12/80-DC12V-80V • 110-AC110V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm Xenon Lamp Strobe Signal Lights

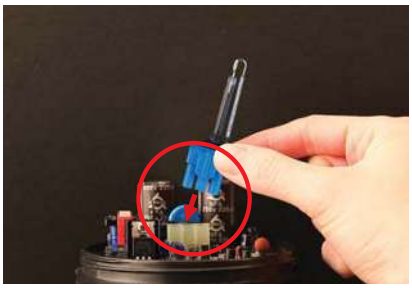
IP54 | -30~+50°C | N S MAGNET



S80S



S80SM



Xenon lamp replacement instructions

Convenient lamp replacement with connector lamp type. Lamp replacement is safe after the product is powered off for 30 mins.

Customization

- AC Type (S80SM)
- Wall mount bracket options (S80S) : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Common Specifications(S80S/ S80SM)

- Ø80mm xenon lamp strobe signal lights
- High efficiency strobe light that offers excellent outdoor visibility and long-distance signal light luminance close to natural light
- Lamp connector fastening structure allows for convenient lamp replacement
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS,
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP54

S80S Xenon Lamp Strobe Light

- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S80S	DC12V	0.433A	220V -350V	BGA2120 -BBC I type	47	CE	0.21kg	R-Red
	DC24V	0.216A					0.21kg	A-Amber
	AC110V	0.076A				-	0.21kg	G-Green
	AC220V	0.061A					0.21kg	B-Blue

Wiring Instructions

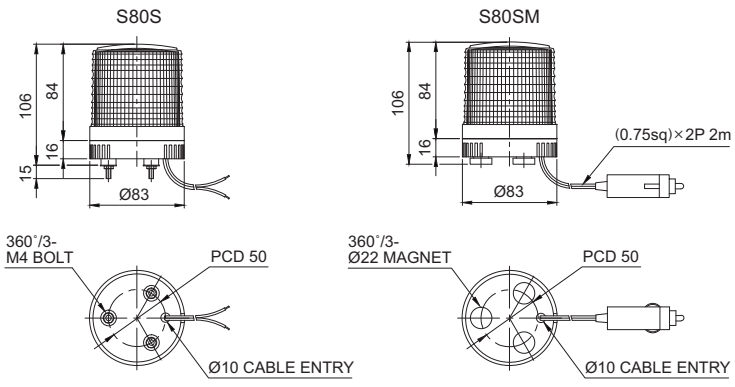
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

S80SM Xenon Lamp Strobe Light Equipped with Magnet

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S80SM	DC12V	0.433A	220V -350V	BGA2120 -BBC I type	47	-	0.24kg	R-Red
								A-Amber
	DC24V	0.216A					0.24kg	G-Green
								B-Blue

Technical Diagram

(Units : mm)



Wiring Instructions

- Cigarette lighter plug : IEC42(0.75sg)×2P 2m

Ordering Specification

S80S	-	24	-	R
[Model number]		[Voltage]		[Color]
• S80S • S80SM		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S80 series

Ø80mm Xenon Lamp Strobe Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB



S80AS





S80A series enable easy wiring

S80A series enables easy wiring with its terminal block attached to the fixed base plate. With this system the contacts in the housing sends power directly to the terminal block.

S80AS Xenon Lamp Strobe Signal Light

- Ø80mm xenon lamp strobe signal lights
- High efficiency strobe light that offers excellent outdoor visibility and long-distance signal light luminance close to natural light
- Lamp connector fastening structure allows for convenient lamp replacement
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

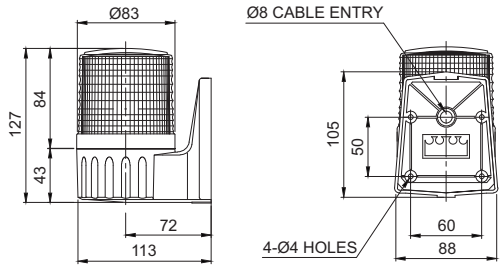
Specifications

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S80AS	DC12V	0.433A	220V -350V	BGA2120 -BBC I type	47	-	0.27kg	● R-Red
	DC24V	0.216A					0.27kg	● A-Amber
	AC110V	0.076A					0.24kg	● G-Green
	AC220V	0.061A					0.24kg	● B-Blue

Technical Diagram

(Units : mm)

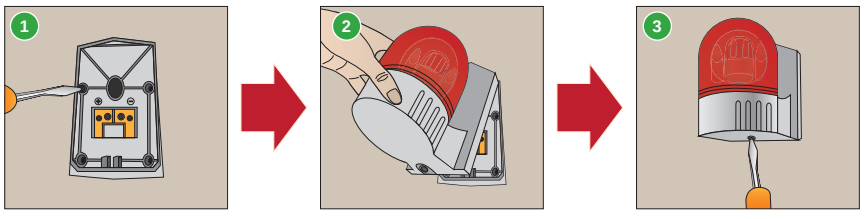
S80AS



Wiring Instructions

- Attach the power supply wire to the terminal block
- Product can be wired regardless of polarity

Mounting Instructions



1. Secure the base plate to the mounting surface, and the power line to the terminal block
2. Mount the warning light by inserting the ring(hook) into the upper part of the base plate
3. Screw in the bolt at the base of the mounting bracket to complete assembly

Ordering Specification

S80AS	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S80AS		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S80 series

Ø80mm LED Strobe Signal Lights

IP66 -30~+50°C

Superior light output similar to xenon lamp through novel diffusion lens



S80NS

S80NS LED Strobe Signal Light

- Ø80mm LED strobe signal lights
- LED lights can be strongly emitted by convex lens
- Adopts excellent light distribution structure
- LED lamp provides high durability in conveyor machines, cars, press machines which have vibration and impact
- Excellent durability and air tightness by sealed PCB
- Adopts strobe type for good visibility
- Flashing rate : 50-60 flashes/min
- Materials : lens-PC, Housing-ABS+GF
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP66

Specifications

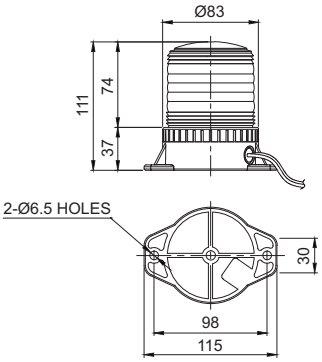
Model number	Voltage	Current	Certificates	Weight	Color
S80NS	DC12V-24V	Max 0.500A	-	0.50kg	● R-Red ● A-Amber ● G-Green ● B-Blue

※ DC type allows free voltage with range of 10V-30V.

Technical Diagram

(Units : mm)

S80NS





S80NS is sealed by epoxy inside of product. Good performance in poor environments such as high vibration, impact, heavy dust and poor weather.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Ordering Specification

S80NS	-	12/24	-	A
[Model number]		[Voltage]		[Color]
• S80NS		• 12/24-DC12V-24V		● R-Red ● A-Amber ● G-Green ● B-Blue

IP65 -30~+50℃

Enhanced visibility by adopting a diffusion lens



S80LS

S80LS LED Strobe Signal Light for Forklifts

- Ø80mm LED strobe signal light
- Extremely bright signal light that reduces attenuation of the signal light
- Excellent visibility in daytime as bulb or xenon lamp
- Vibration and water resistance product
- Flashing rate : 60-80 flashes/min
- Materials : Lens-PC, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protect rating : IP65
- Certificates : CE Compliant, UL Listed

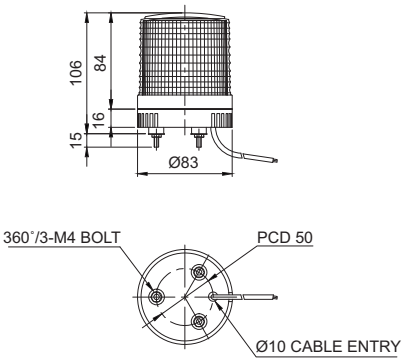
Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S80LS	DC12V-24V	Max 0.160A	CE UL	0.25kg	● R-Red ● A-Amber ● G-Green ● B-Blue

※ DC type allows free voltage with range of 10V-30V.

Technical Diagram (Units : mm)

S80LS





S80LS has an extremely bright signal light that reduces signal attenuation under direct sunlight. Therefore, signal light output of this lamp has excellent visibility similar to a bulb or xenon lamp in daytime.

Wiring Instructions

- External power line standard : UL2095 AWG20(0.5sq×2C) 400mm
- Product can be wired regardless of polarity

Ordering Specification

S80LS	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• S80LS		• 12/24-DC12V-24V		● R-Red ● A-Amber ● G-Green ● B-Blue

S125LSE

Ø125mm LED Strobe Signal Lights

IP54 -30~+50℃



S125LSE

S125LSE LED Strobe Signal Light

- Ø125mm LED strobe signal lights
- Extremely bright signal light that reduces attenuation of the signal light
- Excellent visibility in daytime as bulb or xenon lamp
- Vibration and water resistance product
- Flashing rate : 60-80 flashes/min
- Materials : lens-PC, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP54

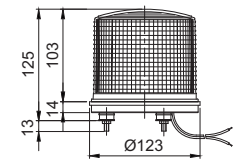
Specifications

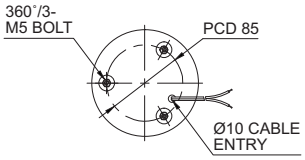
Model number	Voltage	Current	Certificates	Weight	Color
S125LSE	DC12V	0.910A	-	0.33kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.360A		0.33kg	

Technical Diagram

(Units : mm)

S125LSE





Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- Wall mount bracket :
  Power line threading the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

S125LSE	-	24	-	R
[Model number]		[Voltage]		[Color]
• S125LSE		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

S100 series

Ø100mm Bulb Revolving Signal Light

IP44 | -20~+50°C | BUZZER | 90dB



S100R



V belt type power transfer system feature

Designed to minimize the abrasion of the belt, and to efficiently deliver torque from the drive shaft to the reflector. (Patent registered)

Common Specifications(S100R/ S100U/ S100UA/ S100M)

- Ø100mm general-purpose bulb revolving signal lights
- Adopts a special power transmission system that reduces noise and wear
- Built-in buzzer available (Volume : max 90dB at 1M)
- Revolving speed : 120-140RPM
- Material : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C

S100R Bulb Revolving Signal Light

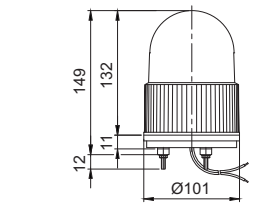
- Protection rating : IP 44
- Certificates : CE Compliant

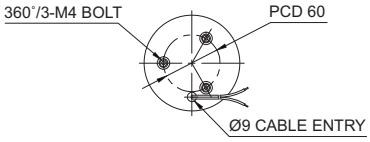
Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S100R	DC12V	0.966A	12V10W	T16x35 15S	9	CE	0.34kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.566A	24V10W	T16x35 15S	10		0.34kg	
	AC110V	0.130A	12V10W	T16x35 15S	9	-	0.60kg	
	AC220V	0.065A	12V10W	T16x35 15S	9		0.60kg	

Technical Diagram

(Units : mm)

S100R





Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

• Efficient type with AC bulb(Model number : S100E)	• FT bracket equipped (Model number : S100E-FT)	• Wall mount bracket : Power line threading the bracket hole or into the wall mount	
			
S100E	**S100E-FT**	Wall Mount Bracket **SWP125**	Wall Mount Bracket **SWM125**

Ordering Specification

S100R	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S100R		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S100 series

Ø100mm Bulb Revolving Signal Lights

IP44 | -20~+50°C | BUZZER | 90dB



S100U



S100UA

Enhanced diffusion through a special 12 sided diffusive lens



S100U set on 1st floor security gate of public office for disabled persons.

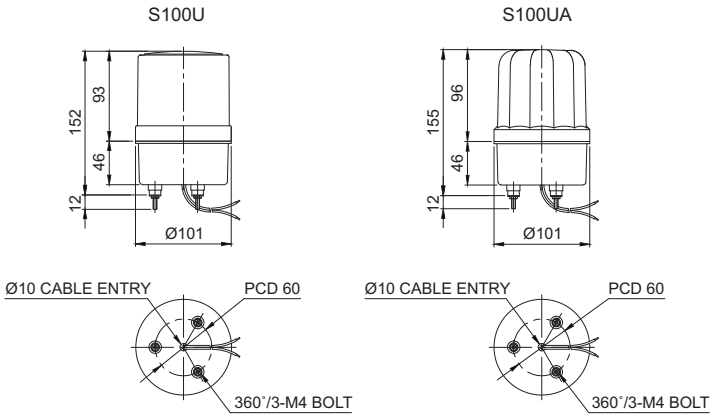
S100U/ S100UA Bulb Revolving Signal Lights

• Protection rating : IP44

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S100U S100UA	DC12V	0.966A	12V10W	T16x35 15S	9	-	0.36kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.566A	24V10W	T16x35 15S	10		0.36kg	
	AC110V	0.130A	12V10W	T16x35 15S	9		0.59kg	
	AC220V	0.065A	12V10W	T16x35 15S	9		0.59kg	

Technical Diagram

(Units : mm)



Wiring Instructions

• External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• DC type : Black output line is negative(-)

Customization

• 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available

• Product used dome type lens (Model number : S100UR)	• Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount	
 **S100UR**	 Wall Mount Bracket **SWP125**	 Wall Mount Bracket **SWM125**

Ordering Specification

S100U	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S100U • S100UA		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S100 series

Ø100mm Bulb Revolving Signal Lights



S100M



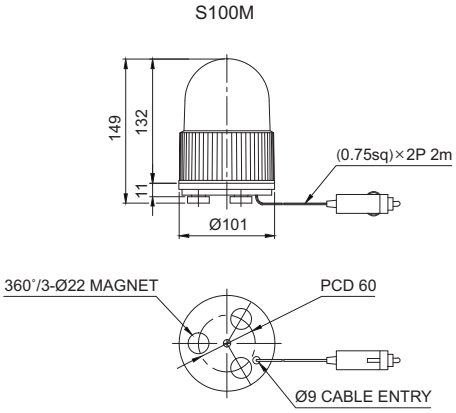
S100M Bulb Revolving Signal Light for Vehicle

- Three powerful magnets provide strong adhesion to the vehicle
- Power supply through cigarette lighter plug
- Protection rating : IP54

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S100M	DC12V	0.966A	12V10W	T16x35 15S	9	-	0.37kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.566A	24V10W	T16x35 15S	10		0.37kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Customization

- AC Type

Ordering Specification

S100M	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S100M		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

S100 series

Ø100mm LED Revolving Warning Lights





S100LR

Common Specifications(S100LR/ S100MLR)

- Ø100mm general purpose LED revolving warning lights
- Shock and vibration-resistant and easy maintenance with long-lasting LED light source
- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Circular mount bracket allows convenient installation
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C

S100LR LED Revolving Warning Light

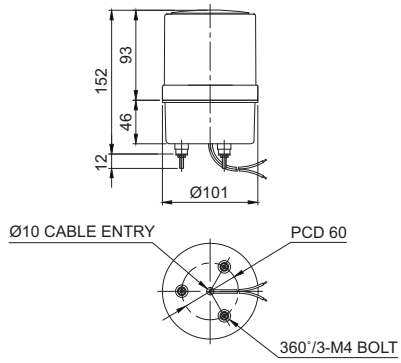
- Protection rating : IP44
- Compliant with RoHS directive

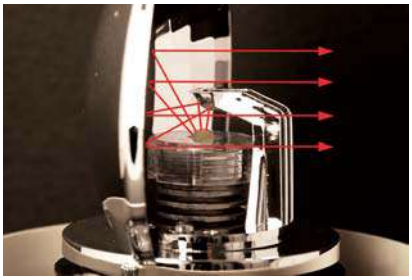
Model number	Voltage	Current	Certificates	Weight	Color
S100LR	DC12V	0.183A	-	0.39kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.127A		0.39kg	
	AC110V	0.035A		0.47kg	
	AC220V	0.017A		0.47kg	

Technical Diagram

(Units : mm)

S100LR





Feature of LED revolving warning light

LED revolving warning light has Qlight's distinctive LED light collecting system and special multifaceted reflector allowing excellent omni-directional visibility.
(Patent registered)

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available
- Model number : S100RLR/ S100DR
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



S100RLR



S100DR



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

S100LR	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S100LR		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S100 series

Ø100mm LED Revolving Warning Lights for Vehicle

IP54 | -20~+50℃ | N S MAGNET | BUZZER | 90dB



S100MLR



S100MLR LED Revolving Warning Light for Vehicle

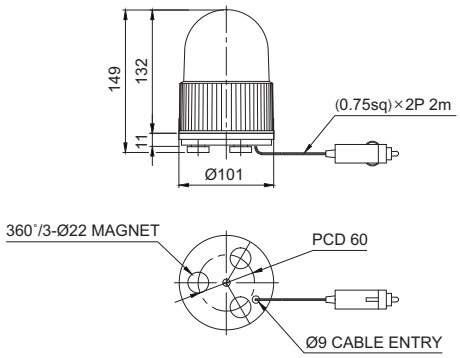
- Three powerful magnets provide strong adhesion to the vehicle
- Power is supplied through the cigarette lighter plug
- Shock and vibration-resistant from vehicle operation with long-lasting LED
- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Protection rating : IP54

Model number	Voltage	Current	Certificates	Weight	Color
S100MLR	DC12V	0.183A	-	0.37kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.127A		0.37kg	

Technical Diagram

(Units : mm)

S100MLR



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Customization

- AC Type

Ordering Specification

S100MLR	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S100MLR		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

S100 series

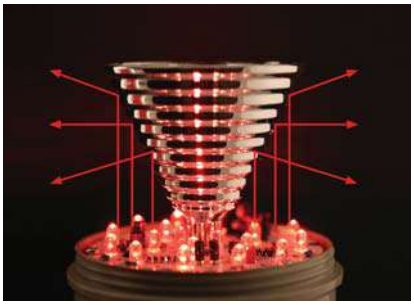
Ø100mm LED Steady/ Flashing Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB | RoHS



S100L





Feature of indirect light diffusing system

Qlight's Indirect light diffusing system emits an intense and constant level of signal light via a multi-tiered reflector throughout the lens.

S100L LED Steady/ Flashing Signal Light

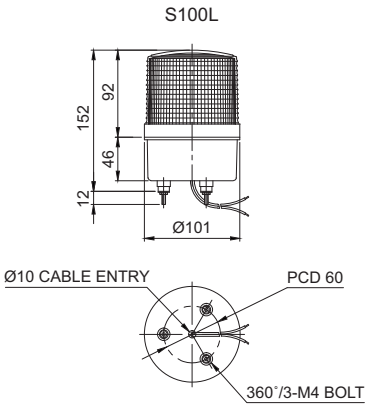
- Ø100mm multi-purpose LED steady/ flashing signal light
- Shock and vibration-resistant and easy maintenance with long-lasting LED
- Built-in switch for selection between steady and flashing mode
- Material : Lens - AS, Housing - ABS, Reflector - Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Certificates : KIMM, CE Compliant
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S100L	DC12V	0.182A	KIMM, CE, DC only	0.26kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.163A		0.26kg	
	AC110V	0.044A		0.45kg	
	AC220V	0.022A		0.45kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato(beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

S100L	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S100L		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S100 series

Ø100mm Xenon Lamp Strobe Signal Lights

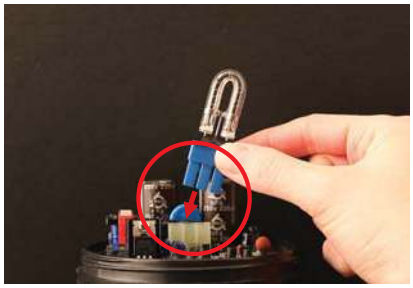
IP54 | -30~+50°C | N S MAGNET



S100S



S100SM



Xenon lamp replacement instructions

Convenient lamp replacement with connector lamp type. Lamp replacement is safe after the product is powered off for 30 mins.

Customization

- AC type (S100SM)
- Wall mount bracket options (S100S) : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Common Specifications(S100S/ S100SM)

- Ø100mm xenon lamp strobe signal lights
- High efficiency strobe light that offers excellent outdoor visibility and long-distance signal light luminance close to natural light
- Lamp connector structure for convenient lamp replacement
- Flashing rate : 60-80 flashes/min
- Material : Lens -AS, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP54

S100S Xenon Lamp Strobe Signal Light

- Certificates : KIMM, CE Compliant

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S100S	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	KIMM CE DC24V only	0.25kg	R-Red
	DC24V	0.616A					0.25kg	A-Amber
	AC110V	0.133A					0.25kg	G-Green
	AC220V	0.106A					0.25kg	B-Blue

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

S100SM Magnet Mount Xenon Lamp Strobe Signal Light

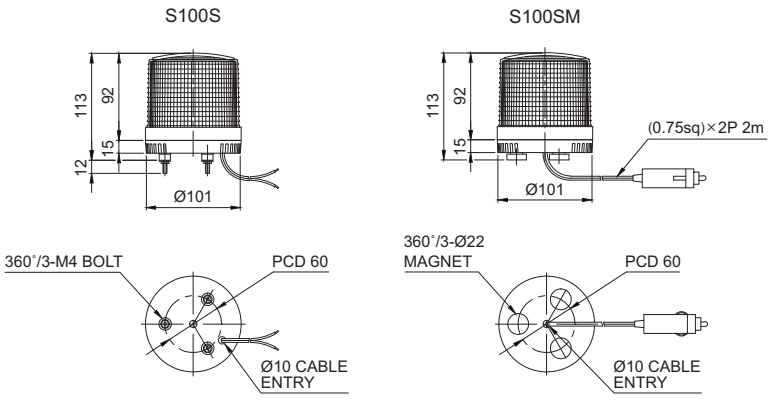
Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S100SM	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	-	0.34kg	R-Red
	DC24V	0.616A					0.34kg	A-Amber G-Green B-Blue

Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Technical Diagram

(Units : mm)



Ordering Specification

S100S	-	220	-	R
[Model number]		[Voltage]		[Color]
• S100S • S100SM		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S125 series

Ø125mm Bulb Revolving Warning Lights

IP44 | -20~+50°C | BUZZER | 90dB



S125R

Common Specifications(S125R/ S125U/ S125M)

- Ø125mm standard-sized bulb revolving warning lights
- Adopts a special power transmission system that reduces noise and wear
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C

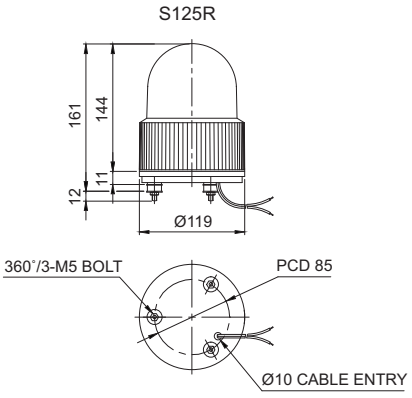
S125R Bulb Revolving Warning Light

- Protection rating : IP44
- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S125R	DC12V	0.966A	12V10W	T16x35 15S	9	CE	0.40kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.566A	24V10W	T16x35 15S	10		0.40kg	
	AC110V	0.130A	12V10W	T16x35 15S	9	-	0.65kg	
	AC220V	0.065A	12V10W	T16x35 15S	9		0.65kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC type : Black output line is negative(-)

Customization

• Cost efficient model with AC type bulb (Model number : S125E)	• Item used FT bracket (Model number : S125E-FT)	• Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount	
			
S125E	**S125E-FT**	Wall Mount Bracket **SWP125**	Wall Mount Bracket **SWM125**

Ordering Specification

S125R	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S125R		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S125 series

Ø125mm Bulb Revolving Warning Lights

IP44 | -20~+50°C | BUZZER | 90dB



S125U



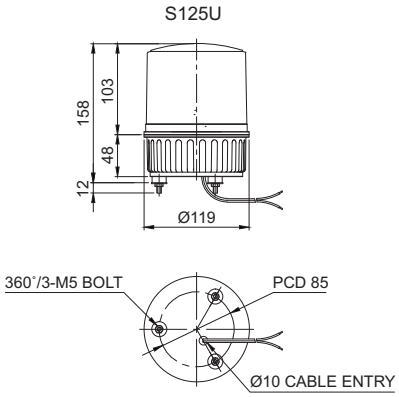
S125U Bulb Revolving Warning Light

• Protection rating : IP44

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S125U	DC12V	0.966A	12V10W	T16x35 15S	9	-	0.41kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.566A	24V10W	T16x35 15S	10		0.41kg	
	AC110V	0.130A	12V10W	T16x35 15S	9		0.65kg	
	AC220V	0.065A	12V10W	T16x35 15S	9		0.65kg	

Technical Diagram

(Units : mm)



Wiring Instructions

• External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• DC Type : Black output line is negative(-)



CNC machine equipped with S125U

Customization

• 2 buzzer sound types : Both prolonged (beep, beep) and staccato(beep, beep, beep) buzzer output available

• Wall mount bracket options :
Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

S125U	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S125U		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S125 series

Ø125mm Bulb Revolving Warning Lights



S125M



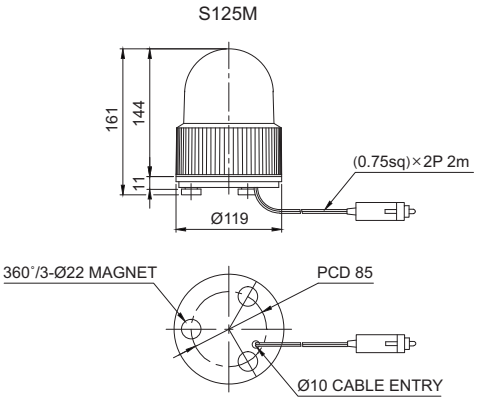
S125M Bulb Revolving Warning Light for Vehicle

- Three powerful magnets provide strong adhesion to the vehicle
- Power supply through cigarette lighter plug
- Protection rating : IP54

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S125M	DC12V	0.966A	12V10W	T16x35 15S	9	-	0.45kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.566A	24V10W	T16x35 15S	10		0.45kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Customization

- AC type

Ordering Specification

S125M	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S125M		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

S125 series

Ø125mm LED Revolving Warning Lights

IP44 | -20~+50°C | BUZZER | 90dB | RoHS



S125LR

Common Specifications(S125LR/ S125MLR)

- Ø125mm standard LED revolving warning lights
- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Built-in buzzer available(Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens - AS, Housing - ABS, Reflector - Heat resistant ABS
- Ambient operating temperature : -20°C to +50°C

S125LR LED Revolving Warning Light

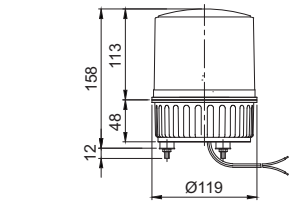
- Protection rating : IP44
- Compliant with RoHS directive

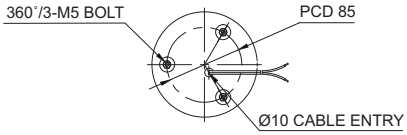
Model number	Voltage	Current	Certificates	Weight	Color
S125LR	DC12V	0.422A	-	0.43kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.266A		0.43kg	
	AC110V	0.082A		0.66kg	
	AC220V	0.041A		0.66kg	

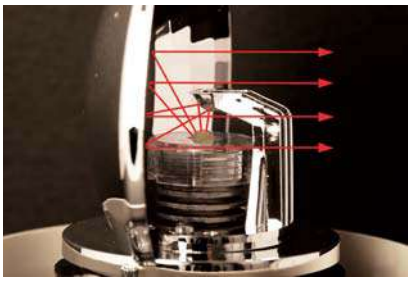
Technical Diagram

(Units : mm)

S125LR







Feature of LED revolving warning light

LED revolving warning light has Qlight's distinctive LED light collecting system and special multifaceted reflector allowing excellent omni-directional visibility.
(Patent registered)

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type: Black output line is negative(-)

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available

• Same design with S125R (Model number : S125RLR)	• Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount	
		
S125RLR	Wall Mount Bracket **SWP125**	Wall Mount Bracket **SWM125**

Ordering Specification

S125LR	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S125LR		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S125 series

Ø125mm LED Revolving Warning Lights



S125MLR



S125MLR LED Revolving Warning Lights for Vehivle

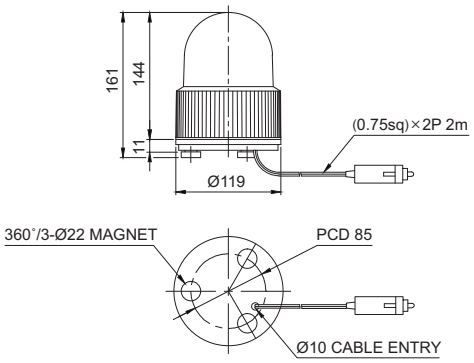
- Three powerful magnets provide strong adhesion to the vehicle
- Power supply through cigarette lighter plug
- Shock and vibration-resistant from the vehicle with long-lasting LED light bulbs
- Excellent omni-directional visibility with LED light collecting system and special multi-faced reflector
- Protection rating : IP54

Model number	Voltage	Current	Certificates	Weight	Color
S125MLR	DC12V	0.422A	-	0.46kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.266A		0.46kg	

Technical Diagram

(Units : mm)

S125MLR



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Customization

- AC type

Ordering Specification

S125MLR	-	BZ	-	24	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S125MLR		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S125 series

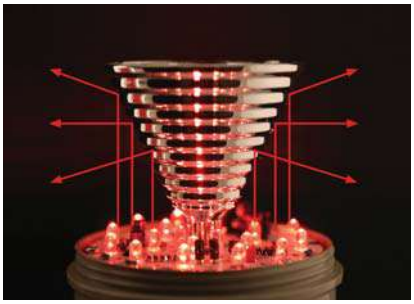
Ø125mm LED Steady/ Flashing Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB | RoHS



S125L





Feature of indirect light diffusing system

Qlight's Indirect light diffusing system emits an intense and constant level of signal light via a multi-tiered reflector throughout the lens.

S125L LED Steady/ Flashing Signal Light

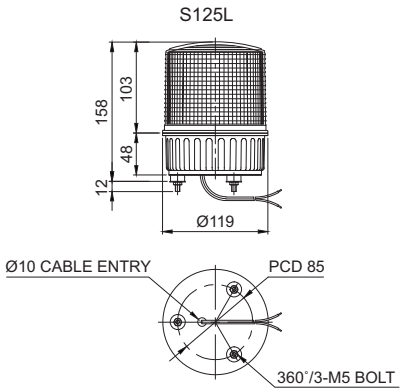
- Ø125mm LED steady/ flashing signal light
- Shock and vibration-resistant and easy maintenance with long-lasting LED light source
- Built-in switch for selection between steady and flashing mode
- Built-in buzzer type available(Volume : Max 90dB at 1m)
- Flashing rate : 60-80 flashes/min
- Material : Lens - AS, Housing - ABS, Reflector - Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Certificates : KIMM, CE Compliant
- Compliant with RoHS directive

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
S125L	DC12V	0.300A	KIMM, CE, DC only	0.33kg	R-Red, A-Amber, G-Green, B-Blue
	DC24V	0.200A		0.33kg	
	AC110V	0.060A		0.51kg	
	AC220V	0.030A		0.51kg	

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato(beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

S125L	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S125L		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S125 series

Ø125mm Xenon Strobe Signal Lights

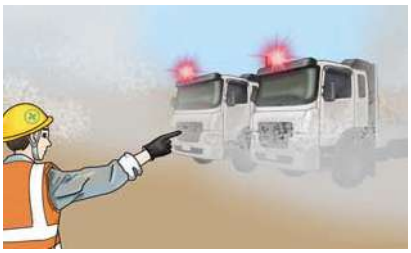
IP54 | -30~+50°C | N S MAGNET



S125S



S125SM



Excellent visibility in fog and dust environments.

Customization

- AC type(S125SM)
- Wall mount bracket options (S125S) : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Common Specifications(S125S/ S125SM)

- Ø125mm xenon strobe signal lights
- High efficiency strobe light that offers excellent outdoor visibility and long-distance signal light luminance close to natural light
- Lamp connector for convenient lamp replacement
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP54

S125S Xenon Strobe Signal Light

- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S125S	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	CE	0.37kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.616A					0.37kg	
	AC110V	0.133A				-	0.32kg	
	AC220V	0.106A					0.32kg	

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

S125SM Magnet Mount Xenon Strobe Signal Light

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S125SM	DC12V	1.001A	220V -350V	EUB0641 -1A(G) U type	48	-	0.40kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.616A					0.40kg	

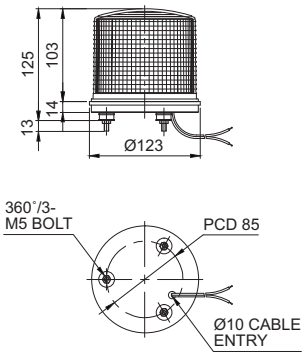
Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

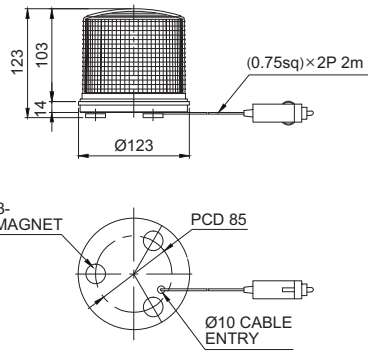
Technical Diagram

(Units : mm)

S125S



S125SM



Ordering Specification

S125S	-	220	-	R
[Model number]		[Voltage]		[Color]
• S125S • S125SM		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

SK series

Streamlined Bulb/ LED Revolving Warning Lights

IP54 | -20~+50°C | N S MAGNET



SK/ SKH



SKM/ SKMH



A spare bulb inside the SK series allows for immediate bulb replacement when damaged.

Ordering Specification

SKMH	-	24	-	R
[Model number]		[Voltage]		[Color]
• SK • SKH • SKM • SKMH		• 12-DC12V • 24-DC24V		• R-Red • A-Amber • G-Green • B-Blue

Common Specifications(SK/ SKM/ SKMP/ SKMPLR)

- Adopts a special power transmission system that reduces noise and wear
- Metal body structure inside the cover gives the product a stylish look
- Contains a spare bulb inside the product
- Materials : Lens-PC, Housing-PC, Reflector-PC/STS
- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP54

SK/ SKH Streamlined Bulb Revolving Warning Lights

- SKH : Features super-bright high intensity with 35W halogen bulb

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SK	DC12V	1.544A	12V15W	G23 15S	17	-	0.54kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		0.54kg	
SKH	DC12V	3.077A	12V35W	15S halogen	39		0.54kg	
	DC24V	1.544A	24V35W	15S halogen	40		0.54kg	

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output lines is negative(-)

SKM/ SKMH Streamlined Bulb Revolving Warning Lights with Magnet

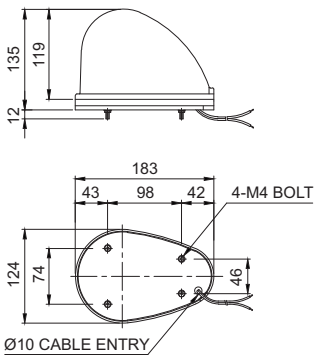
- Securely attached to the vehicle's surface by 4 strong magnets
- SKMH : Features a super-bright high intensity 35W halogen bulb

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SKM	DC12V	1.544A	12V15W	G23 15S	17	-	0.58kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		0.58kg	
SKMH	DC12V	3.077A	12V35W	15S halogen	39		0.59kg	
	DC24V	1.544A	24V35W	15S halogen	40		0.59kg	

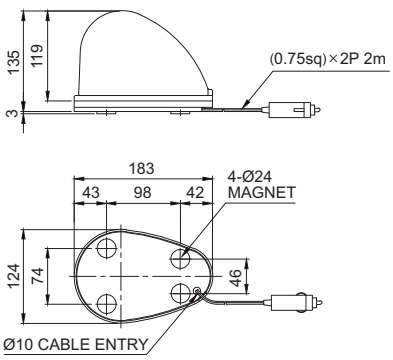
Technical Diagram

(Units : mm)

SK/ SKH



SKM/ SKMH



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

IP54 | -20~+50℃ | N S MAGNET

Revolving warning lights with detachable rubber magnet for emergency response vehicles



SKMP/ SKMPH



SKMPLR



Special rubber magnet adheres securely to the vehicle's surface without damaging it!

SKMP, SKMPH, SKMPLR has a large-sized rubber magnet to prevent potential damage on the vehicle's surface. The special rubber magnet adheres securely to the vehicle and it does not detached from sudden deceleration and road impacts.

SKMP/ SKMPH Streamlined Bulb Revolving Warning Lights

- Exceptional attachment to vehicles which operate in shock and vibration environments The rubber magnet securely attaches along the curved surfaces of the vehicle
- Detachable rubber magnet equipped to prevent potential scratches in vehicle's surface
- Contains a spare bulb inside the product
- Easy power connection with cigarette lighter plug equipped
- DC(12V, 24V) only

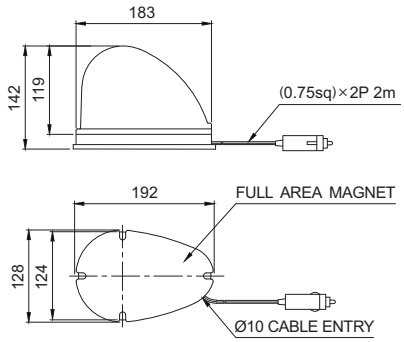
Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SKMP	DC12V	1.544A	12V15W	G23 15S	17	-	0.78kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		0.78kg	
SKMPH	DC12V	3.077A	12V35W	15S halogen	39		0.78kg	
	DC24V	1.544A	24V35W	15S halogen	40		0.78kg	

SKMPLR Streamlined LED Revolving Warning Light

Model number	Voltage	Current	Certificates	Weight	Color
SKMPLR	DC12V	0.422A	-	0.63kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.266A		0.63kg	

Technical Diagram (Units : mm)

SKMP/ SKMPH/ SKMPLR



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Customization

- Oval-shaped rubber magnet



Oval-shaped rubber magnet

Ordering Specification

SKMP	-	24	-	R
[Model number]		[Voltage]		[Color]
• SKMP • SKMPH • SKMPLR		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

SK series

Streamlined LED Revolving Warning Lights

IP54 | -20~+50°C | N S MAGNET | RoHS



SKLR



SKMLR



SKMLR equipped on patrol vehicle.

Common Specifications(SKLR/ SKMLR)

- Excellent visibility with special multi-faced reflector structure
- Adopts a special power transmission system that reduces noise and wear
- Attractive appearance by installed structure cover inside products
- Materials : Lens-PC, Housing-PC, Reflector-Heat resistant ABS
- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP54

SKLR Streamlined LED Revolving Warning Light

- Has a 4 bolt structure to fix the product
- Compliant with RoHS directive

Model number	Voltage	Current	Certificates	Weight	Color
SKLR	DC12V	0.422A	-	0.38kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.266A		0.38kg	

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output lines is negative(-)

SKMLR Streamlined LED Revolving Warning Light

- 4 strong magnets enable secure attachment to the vehicle

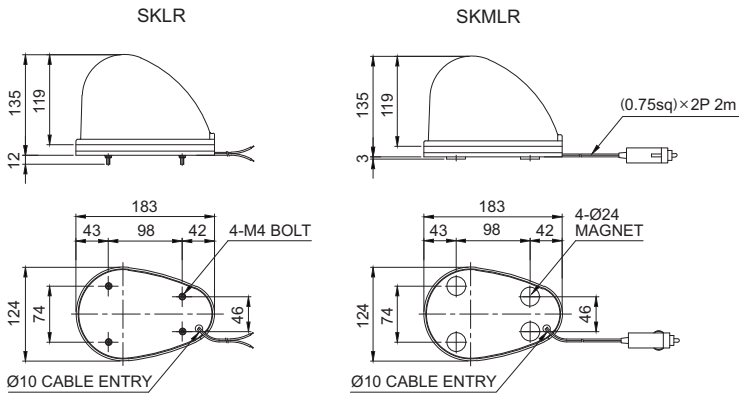
Model number	Voltage	Current	Certificates	Weight	Color
SKMLR	DC12V	0.422A	-	0.46kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.266A		0.46kg	

Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Technical Diagram

(Units : mm)



Ordering Specification

SKLR	-	24	-	R
[Model number]		[Voltage]		[Color]
• SKLR • SKMLR		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

SKTL series

Cubic LED Warning Lights for Vehicles

IP66 | -30~+50°C | BUZZER | 105dB | N S MAGNET



SKTL



SKTLB



Common Specifications(SKTL/ SKTLB)

- High brightness LED with special light filter structure provides clear signal light transmission even in outdoor environments with intense sunlight
- Excellent vibration and impact resistance with use of polycarbonate lens
- Lens with special coating material maintains transparency even when exposed to harsh environments where scratches, dust and direct sunlight is possible
- Water resistant, dustproof, and weather resistant structure provides excellent durability under harsh environments such as rainstorms, frost, and intense heat
- Different lights from side to side improve efficiency of emergency signal transmission effect (SKTLM/ SKTLBM)
- 4 strong magnets enable secure attachment to the desired place(SKTLM/ SKTLBM)
- Convenient emergency signal sound control with built-in ON/OFF switch(SKTLBM)
- Materials : Lens, Housing-PC
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP66

SKTL Cube-Shaped LED Warning Light, Direct Mount

- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
SKTL	DC12V	1.000A	-	0.35kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
	DC24V	0.555A		0.35kg	

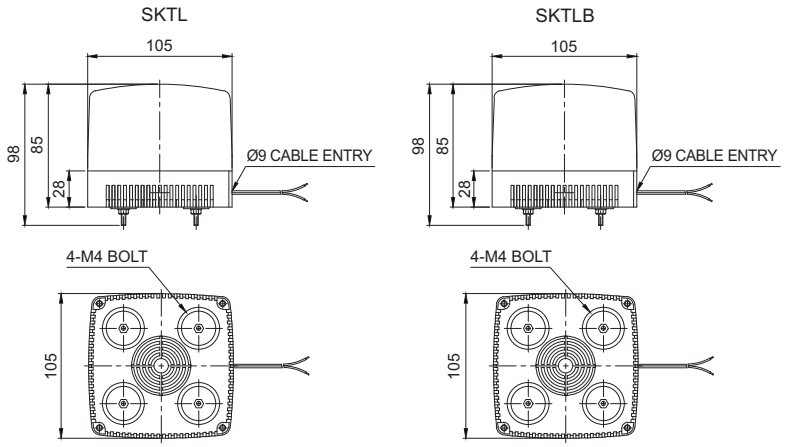
SKTLB Cube-Shaped LED Warning Light with Built-in Siren Buzzer, Direct Mount

- Sound volume : Max 105dB at 1m

Model number	Voltage	Current	Certificates	Weight	Volume	Color
SKTLB	DC12V	1.250A	-	0.45kg	Max 105dB	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
	DC24V	0.705A		0.45kg		

Technical Diagram

(Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm

Ordering Specification

SKTL	-	24	-	R/B
[Model number]		[Voltage]		[Color]
• SKTL • SKTLB		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

SKTL series

Cubic LED Warning Lights for Vehicles

IP66 | -30~+50℃ | BUZZER | 105dB | N S MAGNET



SKTLM

Normal cigarette lighter plug



SKTLBM

Operation controlled by ON/OFF switch attached to the cigarette plug





The special rubber magnet adheres securely to the vehicle without damaging the surface of the vehicle!

SKTLM Cube-Shaped LED Warning Light for Vehicles with Magnet

- Flashing rate : 60-80 flashes/min
- 4 strong magnets enable secure attachment to curved vehicle surfaces

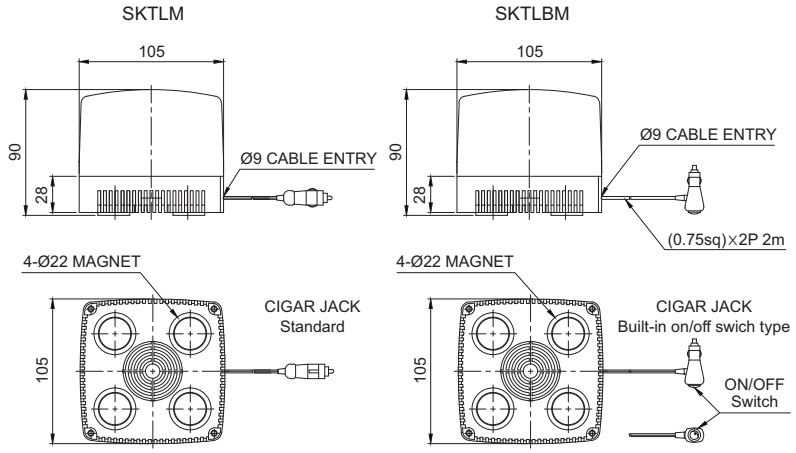
Model number	Voltage	Current	Certificates	Weight	Color
SKTLM	DC12V	1.000A	-	0.45kg	●●R/B-Red/Blue
	DC24V	0.555A		0.45kg	

SKTLBM Cube-Shaped LED Warning Light with Built-in Siren Buzzer with magnet, Direct Mount

- Sound volume : Max 105dB at 1m
- Easy control of warning sound with built-in ON/OFF switch

Model number	Voltage	Current	Certificates	Weight	Volume	Color
SKTLBM	DC12V	1.250A	-	0.55kg	Max 105dB	●●R/B-Red/Blue
	DC24V	0.705A		0.55kg		

Technical Diagram (Units : mm)



Wiring Instructions

- Cigarette lighter plug, IEC42(0.75sq)×2P 2m

Customization

- Additional color combinations available upon customer's request

Ordering Specification

SKTLM	-	24	-	R/B
[Model number]		[Voltage]		[Color]
• SKTLM • SKTLBM		• 12-DC12V • 24-DC24V		●● R/B-Red/Blue

Q60L series

Ø60mm LED Steady/ Flashing Signal Lights

IP65 | -30~+50°C | BUZZER | 80dB | RoHS



Q60L



Q60LW

Wall mount type model allows for contained and tidy wiring with no exposed wires.

Common Specifications(Q60L/ Q60LW/ Q60LP)

- Small-sized signal lights of 60mm diameter with attractive appearance
- Shock and vibration-resistant, maintenance reduced with long-lasting energy-efficient LED light bulbs
- Selectable mounts available depending on your application environment (direct mount, wall mount, pole mount)
- Materials : Lens-PC, Housing-ABS, Mounting bracket-PC
- Features high visibility with special diffusive lens and direct LED light distribution system
- Built-in buzzer available (Volume : Max 80dB at 1m)
- Built-in switch for selection between steady and flashing light mode
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Voltage	Current	Certificates	Weight	Color
Q60L Q60LW Q60LP	DC12V-24V	Max 0.140A	CE DC only	• Q60L-0.13kg • Q60LW-0.45kg • Q60LP-1.06kg (Weight Above Include QZ18)	• R-Red • A-Amber • G-Green • B-Blue
	AC110V-220V	Max 0.045A	UL DC only		

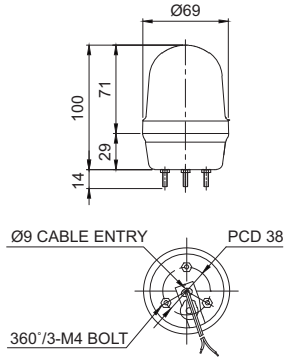
※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

Q60L Direct Mount LED Steady/ Flashing Signal Light

- Direct mount type with the three bolts/screws located on the bottom of the product

Technical Diagram (Units : mm)

Q60L

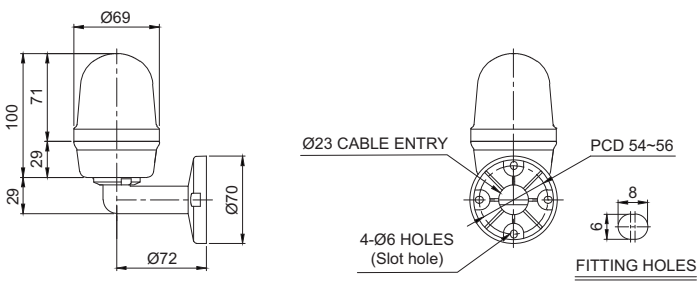


Q60LW Wall Mount LED Steady/ Flashing Signal Light

- Wall mount type with the bracket equipped

Technical Diagram (Units : mm)

Q60LW

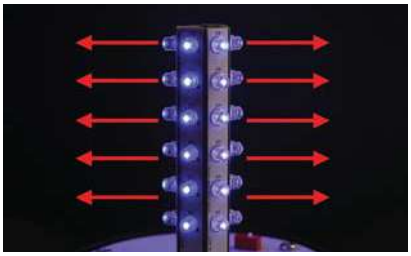


IP65 | -30~+50℃ | BUZZER | 80dB | RoHS



Q60LP

The picture for QZ18 equipped



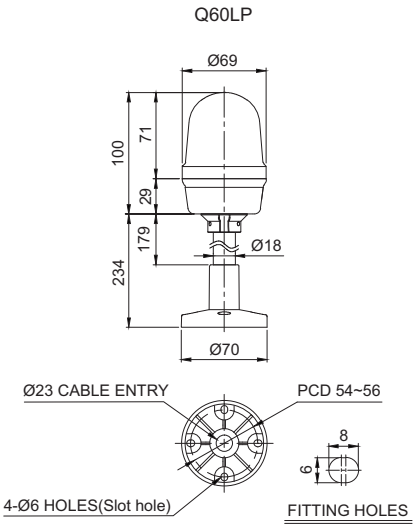
Direct Light Distribution LED Type (Q60L)

High brightness LED with a direct light distribution system makes the signal bright and clear; visible even from long distances.

Q60LP Pole Mount LED Steady/ Flashing Signal Light

- Pole mount type
- Various mounting options are available

Technical Diagram (Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Mounting Bracket

Standard	QZ18	SZ18	SL18	QLA18
				
Steel	PC	Al	Al	PC



※ Please refer to page34-39 for detailed dimension of mount bracket.

Customization

- Customized pole length available

Ordering Specification

Q60LP	-	BZ	-	12/24	-	R	-	QZ18
[Model number]		[Buzzer option]		[Voltage]		[Color]		[mount bracket]
• Q60L • Q60LW • Q60LP		• None - No buzzer • BZ - Built-in buzzer		• 12/24 -DC12V-24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue		• None - Standard • Bracket - QZ18 - SZ18 - SL18 - QLA18

Q80L series

Ø80mm LED Steady/ Flashing Signal Lights





Q80L



Q80LW

Wall mount type models allow for contained and tidy wiring with no exposed wires.

Common Specifications(Q80L/ Q80LW/ Q80LP)

- Small-sized signal light of 80mm with attractive appearance
- Shock and vibration-resistant, maintenance reduced with long-lasting energy-efficient LED light bulb
- Selectable mounts available depending on your application environment (direct mount, wall mount, pole mount)
- Materials : Lens-PC, housing-ABS, mounting bracket-PC
- Features high visibility with special diffusive lens and direct LED light distribution system
- Built-in buzzer available (Volume : Max 80dB at 1m)
- Built-in switches for steady and flashing light function mode
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Voltage	Current	Certificates	Weight	Color
Q80L Q80LW Q80LP	DC12V-24V	Max 0.190A	CE DC only	• Q80L-0.15kg • Q80LW-0.57kg • Q80LP-1.09kg (Weight Above Include QZ24)	• R-Red • A-Amber • G-Green • B-Blue
	AC110V-220V	Max 0.052A	UL DC only		

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

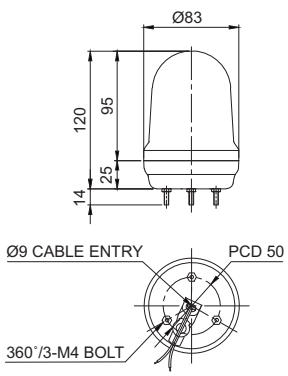
Q80L Direct Mount LED Steady/ Flashing Signal Light

- Direct mount type with the three bolts/screws located on the bottom of the product

Technical Diagram

(Units : mm)

Q80L



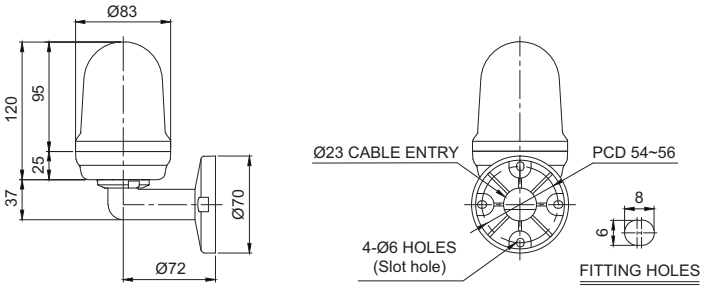
Q80LW Wall Mount LED Steady/ Flashing Signal Light

- Wall mount type with the bracket equipped

Technical Diagram

(Units : mm)

Q80LW



IP65 | -30~+50℃ | BUZZER | 80dB | RoHS



Q80LP

The picture for QZ24 equipped



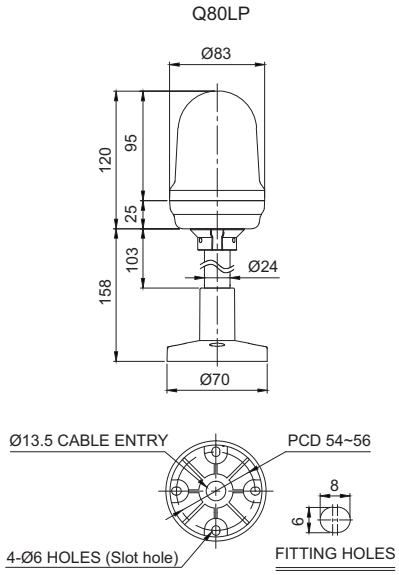
LED Light diffusion shape of direct light distribution

High visibility with special diffusive lens and direct high brightness LED light distribution system.

Q80LP Pole Mount LED Steady/ Flashing Signal Light

- Pole mount type
- Various mounting options are available

Technical Diagram (Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Mounting Bracket

Standard	QZ24	SZ24	SL24	QLA24
				
Steel	PC	Al	Al	PC



※ Please refer to page34-39 for detailed dimension of mount bracket.

Customization

- Customized pole length available

Ordering Specification

Q80LP	-	BZ	-	12/24	-	R	-	QZ24
[Model number]		[Buzzer option]		[Voltage]		[Color]		[mount bracket]
• Q80L • Q80LW • Q80LP		• None - No buzzer • BZ - Built-in buzzer		• 12/24 -DC12V-24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue		• None - Standard • Bracket - QZ24 - SZ24 - SL24 - QLA24

Q100L series

Ø100mm LED Steady/ Flashing Signal Lights

IP65 | -30~+50°C | BUZZER | 80dB | RoHS



Q100L



Q100LW

Wall mount type models allow for contained and tidy wiring with no exposed wires.

Common Specifications(Q100L/ Q100LW/ Q100LP)

- Standard-sized signal lights of Ø100mm with attractive appearance
- Shock and vibration-resistant, maintenance reduced with long-lasting energy-efficient LED light source
- Selectable mounts available depending on your application environment (direct mount, wall mount, pole mount)
- Features high visibility with special diffusive lens and direct LED light distribution system
- Built-in buzzer available (Volume : Max 80dB at 1m)
- Built-in switches for steady and flashing light function mode
- Flashing rate : 60-80 flashes/min
- Materials : Lens-PC, Housing-ABS, Bracket-PC
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Voltage	Current	Certificates	Weight	Color
Q100L Q100LW Q100LP	DC12V-24V	Max 0.255A	CE DC only	• Q100L-0.28kg • Q100LW-0.70kg • Q100LP-1.22kg (Weight Above Include QZ24)	• R-Red • A-Amber • G-Green • B-Blue
	AC110V-220V	Max 0.067A	UL DC only		

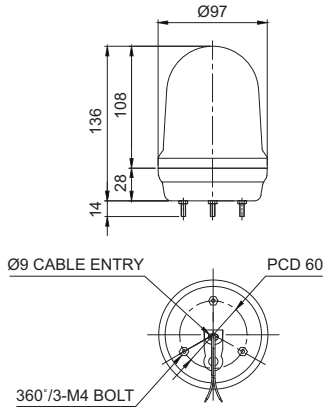
※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

Q100L Direct Mount LED Steady/ Flashing Signal Light

- Direct mount type with the three bolts/screws located on the bottom of the product

Technical Diagram (Units : mm)

Q100L

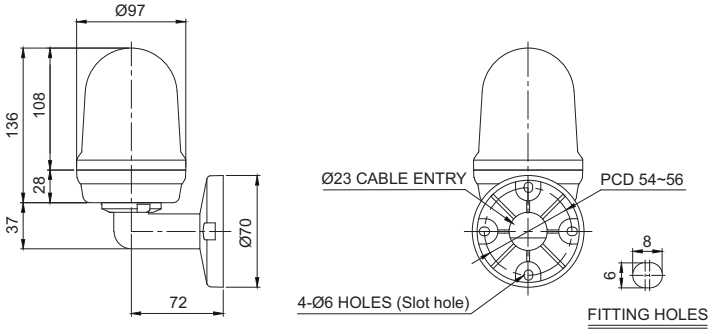


Q100LW Wall Mount LED Steady/ Flashing Signal Light

- Wall mount type with the bracket equipped

Technical Diagram (Units : mm)

Q100LW



Q100L series

Ø100mm LED Steady/ Flashing Signal Lights

IP65 | -30~+50℃ | BUZZER | 80dB | RoHS



Q100LP

The picture for QZ24 equipped



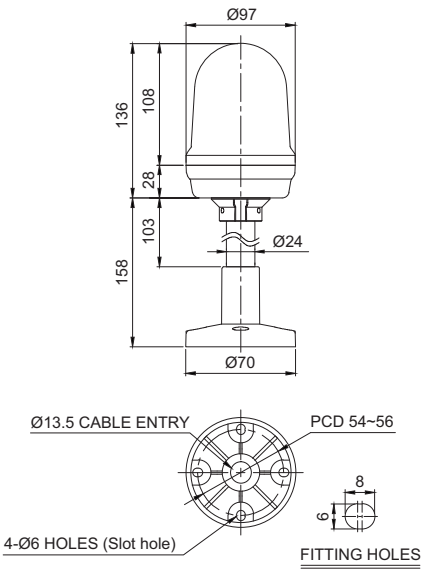
Q100LP Pole Mount LED Steady/ Flashing Signal Light

- Pole mount type
- Selectable mounting bracket available depending on the installation requirements

Technical Diagram

(Units : mm)

Q100LP



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Mounting Bracket

Standard	QZ24	SZ24	SL24	QLA24
Steel	PC	Al	Al	PC



※ Please refer to page34-39 for detailed dimension of mount bracket.

Customization

- Customized pole length available

Ordering Specification

Q100LP	-	BZ	-	12/24	-	R	-	SZ24
[Model number]		[Buzzer option]		[Voltage]		[Color]		[mount bracket]
• Q100L • Q100LW • Q100LP		• None - No buzzer • BZ - Built-in buzzer		• 12/24 -DC12V-24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue		• None - Standard • Bracket - QZ24 - SZ24 - SL24 - QLA24

Q125L series

Ø125mm LED Steady/ Flashing Signal Lights

IP65 | -30~+50°C | BUZZER | 80dB | RoHS



Q125L



Q125LW

Wall mount type models allow for contained and tidy wiring with no exposed wires.

Common Specifications(Q125L/ Q125LW/ Q125LP)

- Standard-sized signal lights of Ø125mm with attractive appearance
- Shock and vibration-resistant, maintenance reduced with long-lasting energy-efficient LED light bulbs
- Selectable mounts available depending on your application environment (direct mount, wall mount, pole mount)
- Materials : Lens-PC, Housing-ABS, Wall mount bracket-PC
- Features high visibility by applying a special diffusive lens and direct LED light distribution system
- Built-in buzzer available (Volume : Max 80dB at 1m)
- Built-in switches for steady and flashing light function mode
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Voltage	Current	Certificates	Weight	Color
Q125L Q125LW Q125LP	DC12V-24V	Max 0.255A	CE DC only	• Q125L-0.34kg • Q125LW-0.76kg • Q125LP-1.28kg (Weight above include QZ24)	• R-Red • A-Amber • G-Green • B-Blue
	AC110V-220V	Max 0.067A	UL DC only		

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

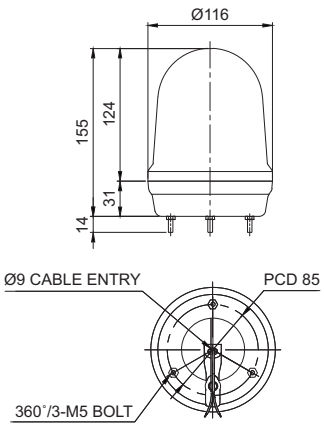
Q125L Direct Mount LED Steady/ Flashing Signal Light

- Direct mount type with the three bolts located on the bottom of the product

Technical Diagram

(Units : mm)

Q125L



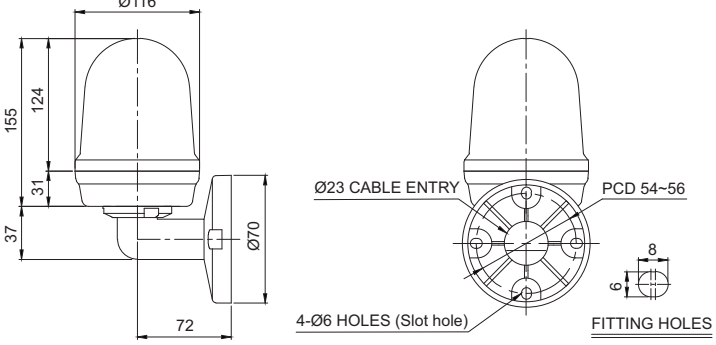
Q125LW Wall Mount LED Steady/ Flashing Signal Light

- Wall mount type with the bracket equipped

Technical Diagram

(Units : mm)

Q125LW



Q125L series

Ø125mm LED Steady/ Flashing Signal Lights

IP65 | -30~+50℃ | BUZZER | 80dB | RoHS



Q125LP

The picture for QZ24 equipped



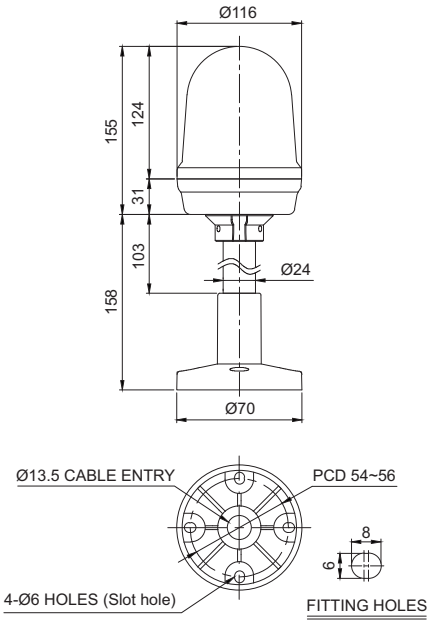
QLA24 bracket allows for angle adjustment of 0, 45, 90 degrees by using of angle adjustment button without additional tools.

Q125LP Pole Mount LED Steady/ Flashing Signal Light

- Pole mount type
- Selectable mounting bracket available depending on the installation requirements

Technical Diagram (Units : mm)

Q125LP



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Mounting Bracket

Standard	QZ24	SZ24	SL24	QLA24
				
Steel	PC	Al	Al	PC



※ Please refer to page34-39 for detailed dimension of mount bracket.

Customization

- Customized pole length available

Ordering Specification

Q125LP	-	BZ	-	12/24	-	R	-	QLA24
[Model number]		[Buzzer option]		[Voltage]		[Color]		[mount bracket]
• Q125L • Q125LW • Q125LP		• None - No buzzer • BZ - Built-in buzzer		• 12/24 -DC12V-24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue		• None - Standard • Bracket - QZ24 - SZ24 - SL24 - QLA24

S150 series

Ø150mm Large Sized Warning Lights

IP44 | -20~+50°C | BUZZER | 90dB



S150U



S150U-FT



S150ULR



S150ULR-FT

Common Specifications(S150U/ S150ULR)

- Special power transmission system which allows low noise and less wear
- Mounting bracket allows convenient installation in case of XXX-FT type
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Revolving speed : 120-140RPM
- Materials : Lens - PC, Housing - ABS, Reflector - PC/Heat resistant ABS, Mounting bracket - STS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

S150U/ S150U-FT Bulb Revolving Warning Lights

- Suitable for Long distance signal transmission by adopting high capacity bulb and large sized reflector

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S150U S150U-FT	DC12V	1.155A	12V15W	G23 15S	17	-	0.65kg	● R-Red
	DC24V	0.766A	24V15W	G23 15S	18		0.65kg	● A-Amber
	AC110V	0.204A	12V15W	G23 15S	17		1.04kg	● G-Green
	AC220V	0.102A	12V15W	G23 15S	17		1.04kg	● B-Blue

S150ULR/ S150ULR-FT LED Revolving Warning Lights

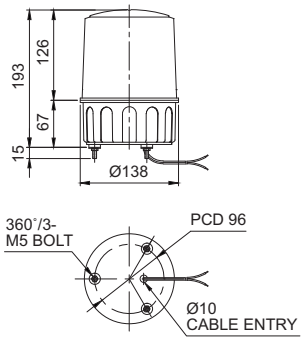
- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector

Model number	Voltage	Current	Certificates	Weight	Color
S150ULR S150ULR-FT	DC12V	0.422A	-	0.66kg	● R-Red
	DC24V	0.266A		0.66kg	● A-Amber
	AC110V	0.082A		0.85kg	● G-Green
	AC220V	0.041A		0.85kg	● B-Blue

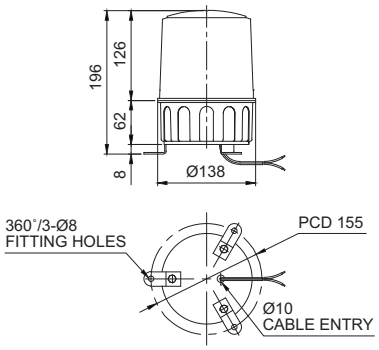
Technical Diagram

(Units : mm)

S150U/ S150ULR



S150U-FT/ S150ULR-FT



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available

Ordering Specification

S150U	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S150U • S150U-FT • S150ULR • S150ULR-FT		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S150 series

Ø150mm Large Sized Warning Lights

IP44 -20~+50°C



S150R



S150R-FT



S150RLR



S150RLR-FT

Common Specifications(S150R/ S150RLR)

- Features highly durable housing made of corrosion-proof stainless steel (STS)
- Mounting bracket allows convenient installation in case of XXX-FT type
- Revolving speed : 120-140RPM
- Materials : Lens-PC, Housing-STS, Reflector-PC/ Heat resistant ABS, Mount Bracket-STS
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

S150R/ S150R-FT Bulb Revolving Warning Lights

- High power light bulb and large rotating reflector enables superior visibility from a distance
- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S150R S150R-FT	DC12V	1.155A	12V15W	G23 15S	17	CE	0.85kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		0.85kg	
	AC110V	0.204A	12V15W	G23 15S	17	-	1.24kg	
	AC220V	0.102A	12V15W	G23 15S	17		1.24kg	

S150RLR/ S150RLR-FT LED Revolving Warning Lights

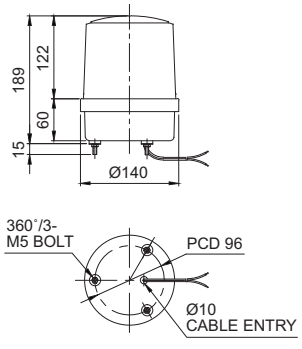
- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector

Model number	Voltage	Current	Certificates	Weight	Color
S150RLR S150RLR-FT	DC12V	0.422A	-	0.77kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.266A		0.77kg	
	AC110V	0.082A		1.16kg	
	AC220V	0.041A		1.16kg	

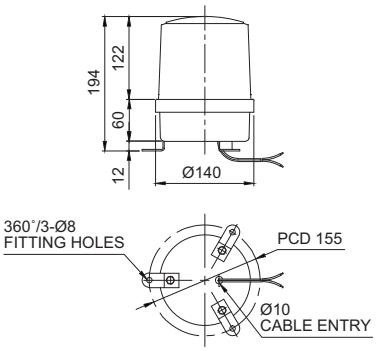
Technical Diagram

(Units : mm)

S150R/ S150RLR



S150R-FT/ S150RLR-FT



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC Type : Black output line is negative(-)

Ordering Specification

S150R	-	220	-	R
[Model number]		[Voltage]		[Color]
• S150R • S150R-FT • S150RLR • S150RLR-FT		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S150 series

Ø150mm Large Sized Warning Lights

IP44 | -30~+50°C | BUZZER | 90dB



S150UL/ S150US



S150UL-FT/ S150US-FT

Common Specifications(S150UL/ S150US)

- Mounting bracket allows convenient installation in case of XXX-FT type
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Flashing rate : 60-80 flashes/min
- Materials : Lens - PC, Housing - ABS, Reflector - Heat resistant ABS, Mounting bracket - STS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

S150UL/ S150UL-FT LED Steady/ Flashing Signal Lights

- Built-in switch for selection between steady and flashing mode

Model number	Voltage	Current	Certificates	Weight	Color
S150UL S150UL-FT	DC12V	0.300A	-	0.52kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.200A		0.52kg	
	AC110V	0.060A		0.92kg	
	AC220V	0.030A		0.92kg	

S150US/ S150US-FT Xenon Lamp Strobe Signal Lights

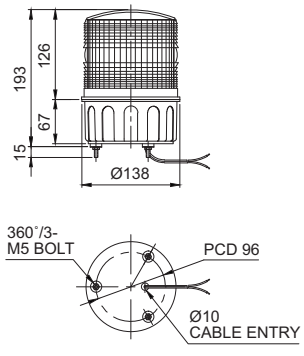
- Connector type lamp socket allows convenient lamp replacement

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S150US S150US-FT	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U Type	48	-	0.56kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.616A					0.56kg	
	AC110V	0.133A					0.54kg	
	AC220V	0.106A					0.54kg	

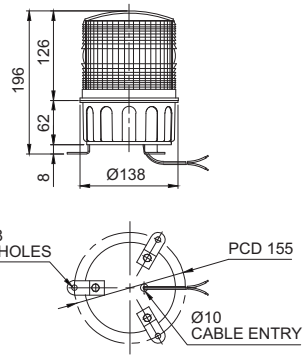
Technical Diagram

(Units : mm)

S150UL/ S150US



S150UL-FT/ S150US-FT





Hyper illuminance xenon lamp

- S150US/S150US-FT can be optionally equipped with a hyper illuminance xenon lamp bulb BH0647(G) upon the customers request.
  (model number : S150UHS/S150UHS-FT)
- Dimension, mounting hole and other functions are identical with normal type.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available
- Hyper illuminance xenon lamp type(model number : S150UHS/S150UHS-FT)

Ordering Specification

S150UL	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S150UL • S150UL-FT • S150US • S150US-FT		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S150 series

Ø150mm Large Sized Warning Lights

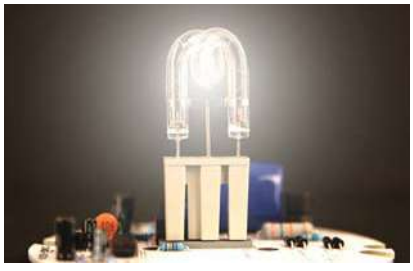
IP44 -30~+50°C



S150RL/ S150RS



S150RL-FT/ S150RS-FT



Hyper illuminance xenon lamp

- S150RS/S150RS-FT can be optionally equipped with a hyper illuminance xenon lamp bulb BH0647(G) upon the customers request.
  (model number : S150RHS/S150RHS-FT)
- Dimension, mounting hole and other functions are identical with normal type.

Common Specifications(S150RL/ S150RS)

- Stainless Steel(STS) housing allows excellent anti-corrosiveness and durability
- Mounting bracket allows convenient installation in case of XXX-FT type
- Flashing rate : 60-80 flashes/min
- Materials : Lens - AS, Housing - STS, Reflector - Heat resistant ABS,
  Mounting bracket - STS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

S150RL/ S150RL-FT LED Steady/ Flashing Signal Lights

- Built-in switch for selection between steady and flashing mode

Model number	Voltage	Current	Certificates	Weight	Color
S150RL S150RL-FT	DC12V	0.300A	-	0.64kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.200A		0.64kg	
	AC110V	0.060A		0.92kg	
	AC220V	0.030A		0.92kg	

S150RS/ S150RS-FT Xenon Lamp Strobe Signal Lights

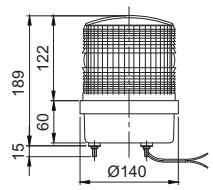
- Connector type lamp socket allows convenient lamp replacement

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S150RS S150RS-FT	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U Type	48	-	0.68kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.616A					0.68kg	
	AC110V	0.133A					0.66kg	
	AC220V	0.106A					0.66kg	

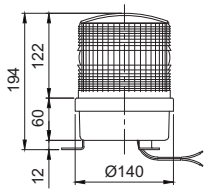
Technical Diagram

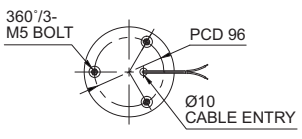
(Units : mm)

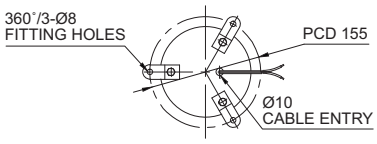
S150RL/ S150RS



S150RL-FT/ S150RS-FT







Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Customization

- Hyper illuminance xenon lamp type(model number : S150RHS/S150RHS-FT)

Ordering Specification

S150RS	-	220	-	R
[Model number]		[Voltage]		[Color]
• S150RL • S150RL-FT • S150RS • S150RS-FT		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S180 series

Ø180mm Bulb Revolving Warning Lights

IP44 -20~+50℃



S180R



S180R-FT



S180 type has strong flashing light characteristics with dual reflector.

S180R/ S180R-FT Bulb Revolving Warning Lights

- Features high durability with housing made of corrosion-proof stainless steel
- Excellent long distance signal transmission effect with 35W capacity bulb and dual reflectors
- FT Models : Easy installation with flange brackets
- Materials : Lens-AS, Housing-STS, Reflector-PC
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

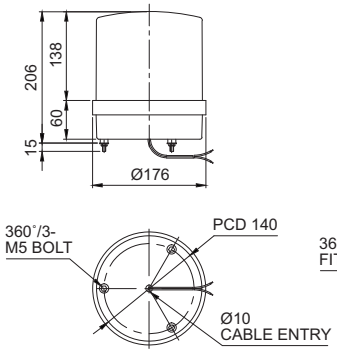
Specifications

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S180R S180R-FT	DC12V	3.077A	12V35W	RP35 15S	29	-	1.22kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.544A	24V35W	RP35 15S	30		1.22kg	
	AC110V	0.388A	12V35W	RP35 15S	29		1.99kg	
	AC220V	0.194A	12V35W	RP35 15S	29		1.99kg	

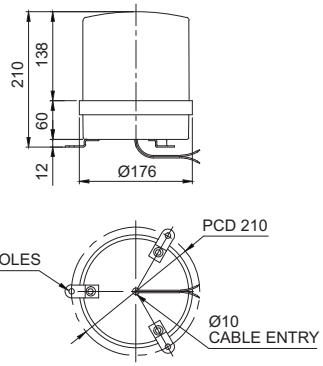
Technical Diagram

(Units : mm)

S180R



S180R-FT



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC type : Black output line is negative(-)

Ordering Specification

S180R-FT	-	24	-	R
[Model number]		[Voltage]		[Color]
• S180R • S180R-FT		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S180 series

Ø180mm Bulb Revolving Warning Lights

IP44 | -20~+50°C | BUZZER | 90dB

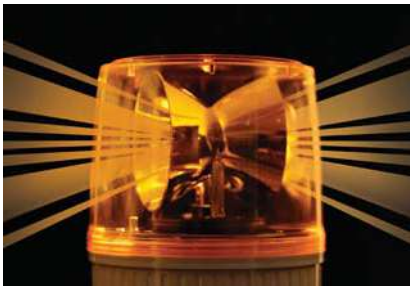


S180U





S180U has a spare bulb inside the product for easy replacement if required.



S180 type has strong flashing light characteristics with dual reflector.

S180U Bulb Revolving Warning Light

- Excellent long distance signal transmission effect with 35W capacity bulb and dual reflectors
- A spare bulb is provided inside the product for quick replacement if provided
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Materials : Lens-AS, Housing-ABS, Reflector-PC
- Ambient operating temperature : -20°C to +50°C
- Protection rating : IP44

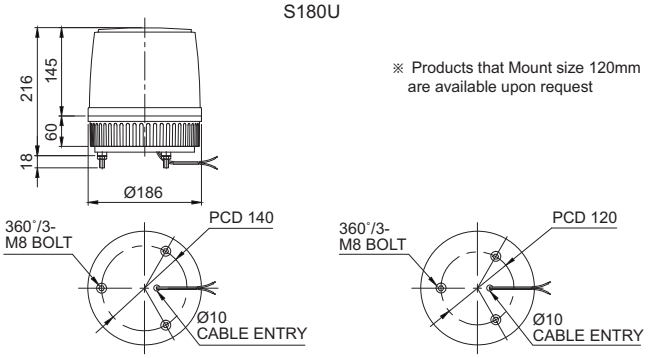
Specifications

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S180U	DC12V	3.077A	12V35W	RP35 15S	29	-	0.89kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	1.544A	24V35W	RP35 15S	30		0.89kg	
	AC110V	0.388A	12V35W	RP35 15S	29		1.65kg	
	AC220V	0.194A	12V35W	RP35 15S	29		1.65kg	

Technical Diagram

(Units : mm)

S180U



※ Products that Mount size 120mm are available upon request

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC type : Black output line is negative(-)

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available
- The product mount hole size 120mm(PCD 120mm)

Ordering Specification

S180U	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S180U		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

S180 series

Ø180mm Xenon Lamp Strobe Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB



S180US/ S180UHS



S180UHS is equipped with the hyper brightness xenon lamp, and emits a strong flashing light.

S180UHS ultra high intensity strobe light has 3 built-in high intensity xenon lamps!

Maintains excellent visibility even in distant environments where there is a lot of fog or dust.



S180UHS type is a product that improves long distant visibility by equipping three high-intensity xenon lamps. The high performance product is typically used in habors where there is fog, or mills/ steel mills where there is dust.

Common Specifications(S180US/ S180UHS)

- Excellent long distance visibility from flashing light of the high capacity xenon lamp
- Adopts a translucent lens which provides a luminous light and subdued signal
- Convenient lamp change adopts lamp connector type structure
- Built-in buzzer available(Volume : Max 90dB at 1m)
- Materials: Lens-ABS, Housing-ABS
- Flashing rate : 60-80 flashes/min(2 time consecutively flashing off or two in a row)
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

S180US Xenon Lamp Strobe Signal Light

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S180US	DC12V	1.277A	280V -400V	BH0647(G) W Type	49	-	0.84kg	● R-Red
	DC24V	0.655A					0.84kg	● A-Amber
	AC110V	0.233A					0.80kg	● G-Green
	AC220V	0.186A					0.80kg	● B-Blue

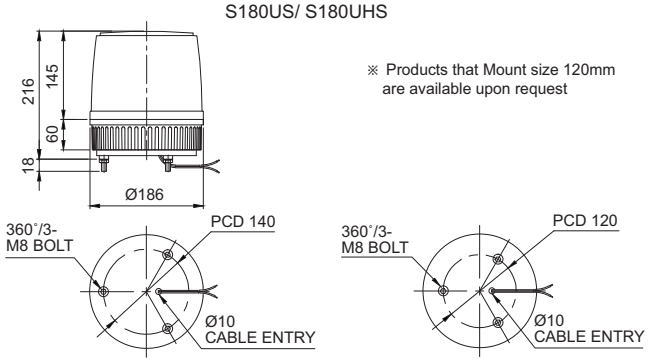
S180UHS Hyper Brightness Xenon Lamp Strobe Signal Light

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S180UHS	DC12V	2.277A	280V -400V	BH0647(G) W Type	49	-	1.18kg	● R-Red
	DC24V	1.055A					1.18kg	● A-Amber
	AC110V	0.711A					1.02kg	● G-Green
	AC220V	0.422A					1.02kg	● B-Blue

Technical Diagram

(Units : mm)

S180US/ S180UHS



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- DC type : Black output line is negative(-)

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available
- The product mount hole size 120mm(PCD 120mm)

Ordering Specification

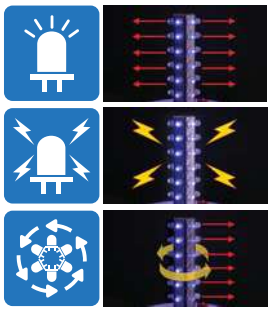
S180US	-	BZ	-	220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• S180US • S180UHS		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

MFL series

Multiple Function LED Signal Lights

IP65 | -30~+50°C | BUZZER | 80dB | RoHS

Operating steady/ flashing, strobe, simulated revolving flashing, Multiple function LED signal lights



- **LED Steady/ Flashing**
  Repeat operation of LED signal light on/off
- **LED Strobe**
  Short LED Steady/ Flashing cycle. Creates a xenon flashing effect by providing maximum electric current
- **LED Simulated Revolving**
  LEDs flash steadily around the cylindrical LED filaments which makes a simulated revolving effect



Manual switch to select operation

ON=1 / OFF=0



Operate 4 kinds of function by dip switches



No.	1	2	Operation
0	0	0	LED Steady
1	0	1	LED flashing
2	1	0	LED Strobe
3	1	1	LED Simulated revolving flashing

Common Specifications(MFL60/ MFL80/ MFL100/ MFL125)

- Product has multi functions of LED Steady/ Flashing, strobe, and simulated revolving
- Operating options with switches inside product or external connect
- Shock and vibration-resistant, maintenance reduced with long-lasting energy-efficient LED light bulb
- Built-in buzzer available(Volume : Max 80dB at 1m)
- Flashing type(LF) flashing rates : 60-80 flashes/min
- Strobe type(LS) flashing rates : 70-80 flashes/min
- Simulated revolving type(LR) flashing rates : 120-140 flashes/min

Materials : Lens-PC, housing-ABS, Mounting bracket-PC

- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant
- Compliant with RoHS directive



MFL60

MFL60 Ø60mm Multiple Function LED Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
MFL60	DC12V-24V	Max 0.140A	CE UL DC only	0.21kg	R-Red A-Amber G-Green B-Blue
	AC110V-220V	Max 0.045A		0.32kg	

MFL80 Ø80mm Multiple Function LED Signal Light

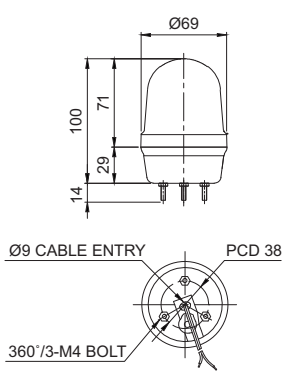
Model number	Voltage	Current	Certificates	Weight	Color
MFL80	DC12V-24V	Max 0.190A	CE UL DC only	0.28kg	R-Red A-Amber G-Green B-Blue
	AC110V-220V	Max 0.052A		0.51kg	

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

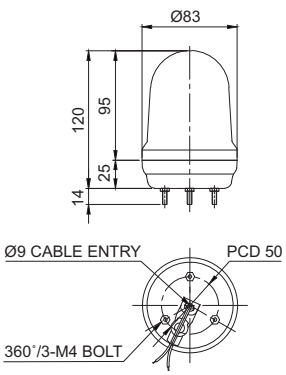


MFL80

MFL60



MFL80



MFL series

LED Signal Light with Multiple Light Functions

IP65 | -30~+50°C | BUZZER | 80dB | RoHS

Multi-functional model with selectable steady/ flashing strobe, and simulated revolving flashing mode



MFL100



MFL125



MFL100 Ø100mm Multiple Light Function LED Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
MFL100	DC12V-24V	Max 0.255A	CE UL DC only	0.30kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	AC110V-220V	Max 0.067A		0.52kg	

MFL125 Ø125mm Multiple Light Function LED Signal Light

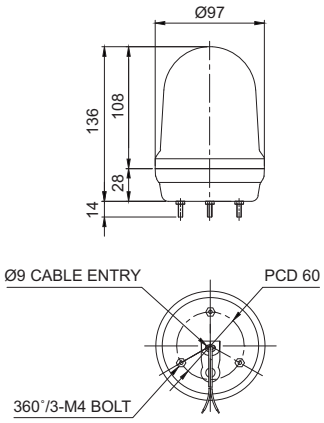
Model number	Voltage	Current	Certificates	Weight	Color
MFL125	DC12V-24V	Max 0.255A	CE UL DC only	0.52kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	AC110V-220V	Max 0.067A		0.92kg	

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

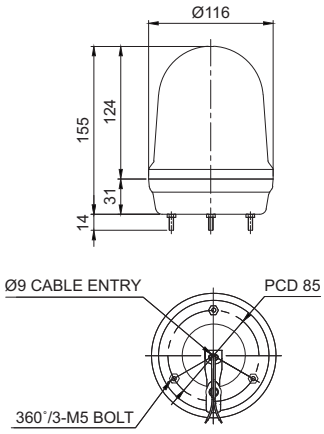
Technical Diagram

(Units : mm)

MFL100



MFL125



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Product can be wired regardless of polarity

Accessories

- Wall mounting bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount

- MFL60



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

- MFL80



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

- MFL100/ MFL125



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

MFL100	-	BZ	-	110/220	-	R
[Model number]		[Buzzer option]		[Voltage]		[Color]
• MFL60 • MFL80 • MFL100 • MFL125		• None - No buzzer • BZ - Built-in buzzer		• 12/24 -DC12V-24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue

SOL series

Solar Rechargeable LED Flashing Signal Lights

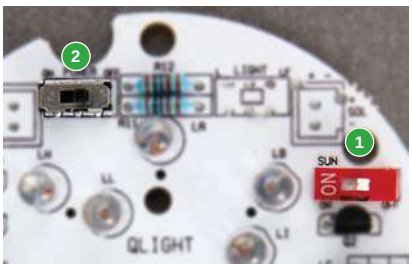
IP54 -25~+50°C



- Applicable in road construction sites with a limited power supply
- Applicable on vehicles that require a warning light at night
- Can be used to display vehicle position in dark residential parking areas



S80SOL



1 **Sun Switch**
Automatically turns on the light when darkness is detected.
Factory default is set to OFF.

2 **Power Switch**
ON/OFF power switch that prevents discharge prior to use.
Factory default is set to OFF.

SOL solar light model does not require external power supply or wiring!

Features High Energy Efficiency and Longevity

SOL Solar light models can be used in environmental conditions where power supply is limited or wiring is difficult.



Features High Energy Efficiency and Longevity

Qlight's solar rechargeable signal lights have a special design that mounts the solar panels inside a structure that minimizes adverse effects such a dust and moisture. This improves the efficiency and extends the lifetime of the product.



High-tide maritime surveillance systems



Low-speed night vehicle operation

Common Specifications(S80SOL/ S100SOL/ S125SOL)

- Solar rechargeable LED flashing signal light that does not require an external power supply or wiring
- Built-in Darkness Detection System that automatically begins to operate when darkness is detected
- Fully enclosed structure that can withstand storm and severe dust environments (IP54)
- Prevents discharge using a built-in power switch
- Flashing Rate : 60-80 flashes/min
- Materials : Lens-AS, Body-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP54
- Certificates : CE Compliant

S80SOL Ø80mm Solar Rechargeable LED Flashing Signal Light

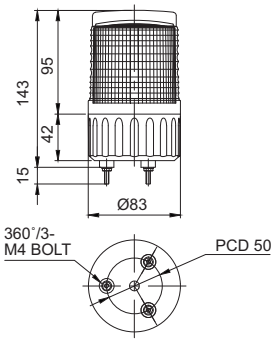
- 80mm Compact model
- A single charge (8 hours) serves up to 30 hours of continuous operation

Model number	Battery Voltage	Battery Capacity	Continuous operating time with no charge	Certificates	Weight	Color Options
S80SOL	2.4V	0.77Ah	30Hr	CE	0.27kg	• R-Red • A-Amber

Technical Diagram

(Units : mm)

S80SOL



SOL series

Solar Rechargeable LED Flashing Signal Lights

IP54 -25~+50°C



S100SOL

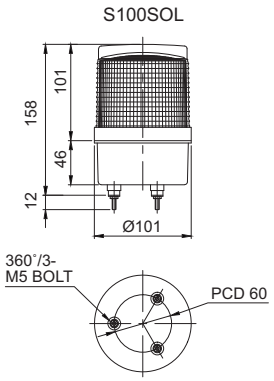
S100SOL Ø100mm Solar Rechargeable LED Flashing Signal Light

- Ø100mm model for general purpose
- 40 hours operation continuous by 1 time recharge(8 hours)

Model number	Battery Voltage	Battery Capacity	Continuous operating time with no charge	Certificates	Weight	Color Options
S100SOL	2.4V	0.77Ah	40Hr	CE	0.41kg	● R-Red ● A-Amber

Technical Diagram

(Units : mm)





S125SOL

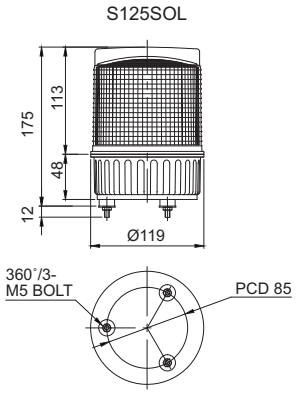
S125SOL Ø125mm Solar Rechargeable LED Flashing Signal Light

- Ø125mm standard item
- 50 hours of continuous operation from 1 time recharge(8 hours)

Model number	Battery Voltage	Battery Capacity	Continuous operating time with no charge	Certificates	Weight	Color Options
S125SOL	2.4V	0.70Ah	50Hr	CE	0.51kg	● R-Red ● A-Amber

Technical Diagram

(Units : mm)



Ordering Specification

S80SOL	-	R
[Model number]		[Color]
• S80SOL • S100SOL • S125SOL		● R-Red ● A-Amber

Accessories

- Magnetic mounting bracket
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount

- S80SOL



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

- S100SOL/ S125SOL



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

SMCL series

Multiple Color LED Steady/ Flashing Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB | NPN | RoHS

Signal lights that produces two or three multicolored LED signals

This budget model uses a multiple color LED light source to provide signals in two or three colors.







Common Specifications(SMCL80/ SMCL100/ SMCL125)

- Ideal for locations where space requirements need one warning light to convey multiple color signals
- LED light distribution system with multi-tiered reflector provides uniformed light signals throughout the entire lens
- The subdued light provides a comfortable and stable viewing condition for operation in close proximity
- Built-in buzzer available(Volume : Max 90dB at 1m)
- Can select between steady/ flashing mode
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Body-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Certificates : CE Compliant
- Compliant with RoHS directive



SMCL80



SMCL100

SMCL80 Ø80mm Multi-Color LED Steady/ Flashing Signal Light

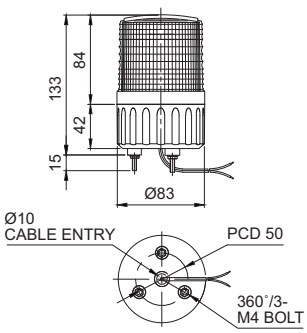
Model number	Voltage	Current	Certificates	Weight	Color
SMCL80	DC12V	0.234A	CE DC24V only	0.18kg	● R-Red ● A-Amber ● G-Green
	DC24V	0.132A		0.18kg	
	AC110V	0.066A		0.28kg	
	AC220V	0.033A		0.28kg	

SMCL100 Ø100mm Multi-Color LED Steady/ Flashing Signal Light

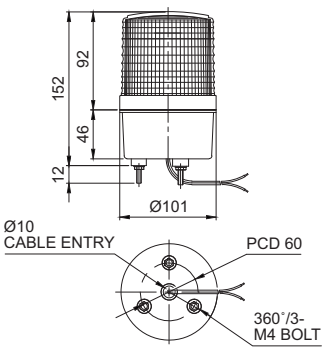
Model number	Voltage	Current	Certificates	Weight	Color
SMCL100	DC12V	0.387A	CE DC24V only	0.23kg	● R-Red ● A-Amber ● G-Green
	DC24V	0.212A		0.23kg	
	AC110V	0.093A		0.32kg	
	AC220V	0.046A		0.32kg	

Technical Diagram (Units : mm)

SMCL80



SMCL100



SMCL series

Multiple Color LED Steady/ Flashing Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB | NPN | RoHS



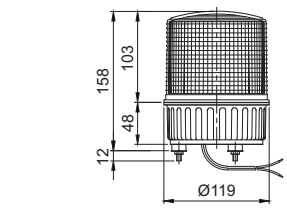
SMCL125

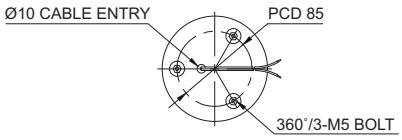
SMCL125 Ø125mm Multi-Color LED Steady/ Flashing LED Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
SMCL125	DC12V	0.410A	CE DC24V only	0.27kg	• R-Red • A-Amber • G-Green
	DC24V	0.227A		0.27kg	
	AC110V	0.104A		0.36kg	
	AC220V	0.052A		0.36kg	

Technical Diagram (Units : mm)

SMCL125





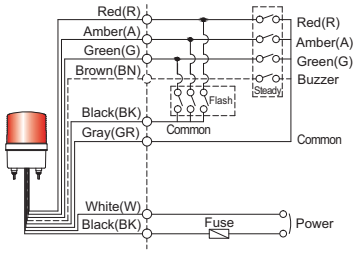
Wiring Instructions

- SMCL type can be wired with external contacts and transistor
- Wiring to transistor, use the NPN transistor. Please wire properly based on wiring instructions
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- External signal line standard : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity

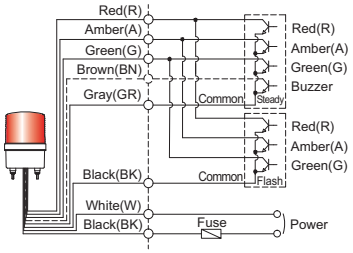
Wiring Instructions

SMCL80/ SMCL100/ SMCL125-DC/AC

EXTERNAL CONTACT



EXTERNAL TRANSISTOR-NPN



Accessories

- Wall mounting bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount

- SMCL80



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

- SMCL100/ SMCL125



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

SMCL100	-	BZ	-	3	-	220	-	RAG
[Model number]		[Buzzer option]		[Color]		[Voltage]		[Color]
• SMCL80 • SMCL100 • SMCL125		• None - No buzzer • BZ - Built-in buzzer		2-2colors 3-3colors		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green

QMCL series

Multiple Color LED Steady Signal Lights

IP65 | -30~+50℃ | BUZZER | 80dB | NPN | PNP | RoHS

• 7 Color modes available via wiring

You can configure seven color signals by combining the 4 signal wires (red, green, blue, black) attached to the warning light.

Multi-Color Warning Light with Seven Color Options

• Emits a cozy and comfortable hue

QMCL series signal lights have a milky translucent hue when turned on. These signal lights provide a comfortable and stable viewing condition for workers in close proximity.



Common Specifications(QMCL60/ QMCL80/ QMCL100/ QMCL125)

- Helps reduce the costs of installation by reducing the space needed to emit seven color signals in a single warning light
- Milky translucent color when off, the soft LED illuminates designated color when on
- Built-in buzzer available (Volume : Max 80dB at 1m)
- Materials : Lens-AS, Body-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant
- Compliant with RoHS directive



QMCL60

QMCL60 Ø60mm Multiple Color LED Steady Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
QMCL60	DC12V	0.120A	CE	0.12kg	7 Colors
	DC24V	0.060A		0.12kg	



QMCL80

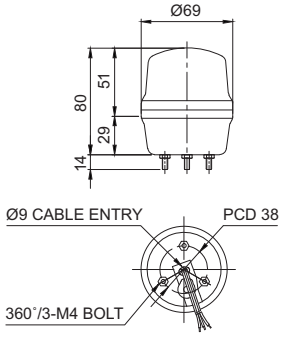
QMCL80 Ø80mm Multiple Color LED Steady Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
QMCL80	DC12V	0.120A	CE	0.17kg	7 Colors
	DC24V	0.060A		0.17kg	

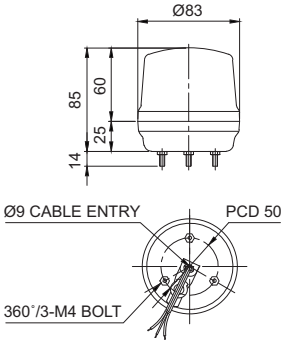
	Voltage	AC/DC12V	AC/DC24V
QMCL60 QMCL80	Signal Line Power Consumption	0.120A	0.060A
	Buzzer Line Power Consumption	0.020A	0.020A
QMCL100 QMCL125	Signal Line Power Consumption	0.240A	0.120A
	Buzzer Line Power Consumption	0.020A	0.020A

Technical Diagram (Units : mm)

QMCL60



QMCL80



QMCL series

Multiple Color LED Steady Signal Lights

IP65 | -30~+50℃ | BUZZER | 80dB | NPN | PNP | RoHS

New innovative LED signal light that can be configure with 7 colors in 1 signal lamp



QMCL100



QMCL125

QMCL100 Ø100mm Multiple Color LED Steady Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
QMCL100	DC12V	0.240A	CE	0.24kg	7 Colors
	DC24V	0.120A		0.24kg	

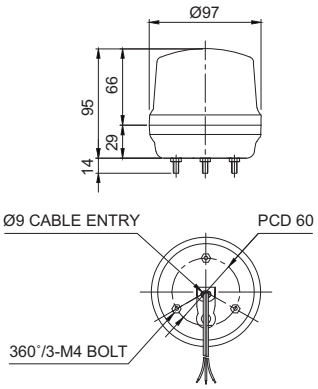
QMCL125 Ø125mm Multiple Color LED Steady Signal Light

Model number	Voltage	Current	Certificates	Weight	Color
QMCL125	DC12V	0.240A	CE	0.31kg	7 Colors
	DC24V	0.120A		0.31kg	

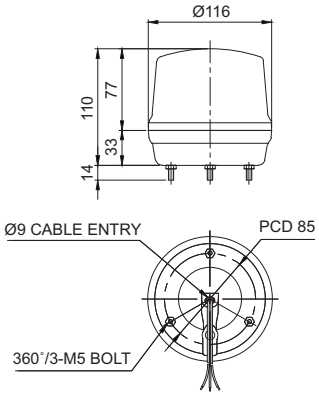
Technical Diagram

(Units : mm)

QMCL100



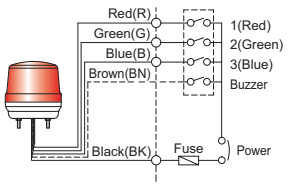
QMCL125



Wiring Instructions

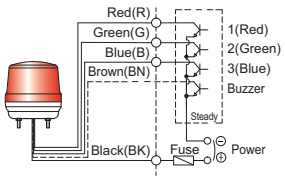
QMCL60/ QMCL80/ QMCL100/ QMCL125-DC

EXTERNAL CONTACT

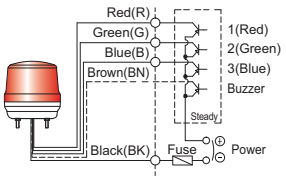


No.	Color	Wiring
1	Red	1(Red)
2	Green	2(Green)
3	Blue	3(Blue)
4	Amber	1(Red)+2(Green)
5	Cyan	2(Green)+3(Blue)
6	Purple	1(Red)+3(Blue)
7	White	1(Red)+2(Green)+3(Blue)

EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP



Wiring Instructions

- External signal line standard : Signal line 4P(R,G,B,K) threading, signal line standard UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- Please refer to Wiring Instructions diagram to properly configure color options

Ordering Specification

QMCL80	-	BZ	-	24
[Model number]		[Buzzer option]		[Voltage]
• QMCL60 • QMCL80 • QMCL100 • QMCL125		• None - No buzzer • BZ - Built-in buzzer		• 12-DC12V • 24-DC24V

Customization

- Wall mounting bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount

- QMCL60/ QMCL80



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

- QMCL100/ QMCL125



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

SWTC series

Wall Mounting Multiple Color LED Steady/ Flashing Signal Lights

IP55 | -30~+50°C | BUZZER | 90dB | NPN | PNP | RoHS

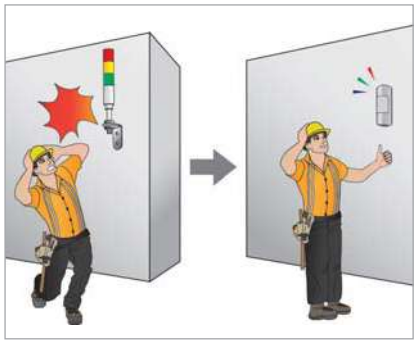
New innovative LED signal light that can be configure with 2-3 colors in 1 signal lamp



SWTC
Chromium Plated Body



SWTCE



Semi circular design allows for convenient wall mount

SWTC/ SWTCE Wall Mounting Multiple Color LED Steady/ Flashing Signal Lights

- Cost effective model which transfers two or three signals with one lamp
- Wide angle lens structure provides excellent visibility in all directions
- Excellent visibility by adopting direct LED light radiation structure
- Tightly sealed structure allows outdoor installation
- Lens Colors Arrangement
  Two colors : ● Red ● Green
  Three colors : ● Red ● Amber ● Green
- Built-in buzzer available (Volume Max 90dB at 1m)
- Materials : Lens-PC, Body-ABS, Filter Lens-PC, Cover-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP55
- Certificates : CE Compliant
- Compliant with RoHS directive

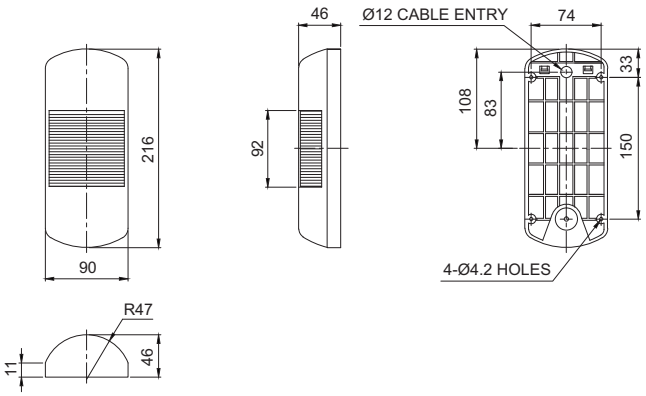
Specifications

Model number	Voltage	Current	Certificates	Weight	Color
SWTCL Steady	DC12V	0.444A	CE	0.31kg	● R-Red ● A-Amber ● G-Green
SWTCLF Steady/ Flashing	DC24V	0.200A		0.31kg	
SWTCEL Steady	AC110V	0.073A	-	0.46kg	
SWTCELF Steady/ Flashing	AC220V	0.036A		0.46kg	

Technical Diagram

(Units : mm)

SWTC/ SWTCE



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 112 for detailed wiring information.

Customization

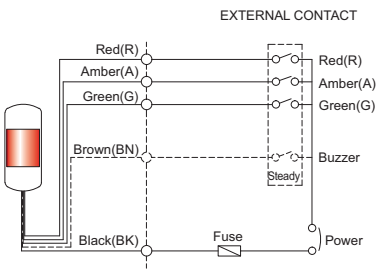
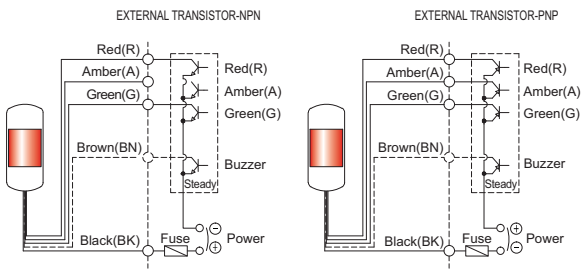
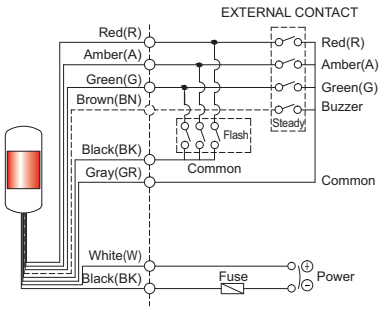
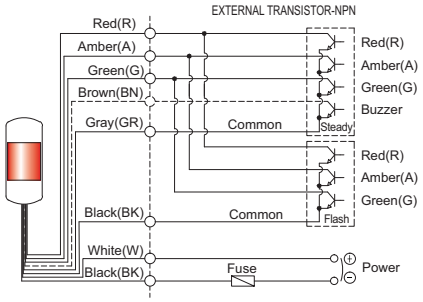
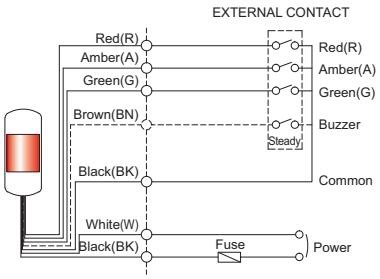
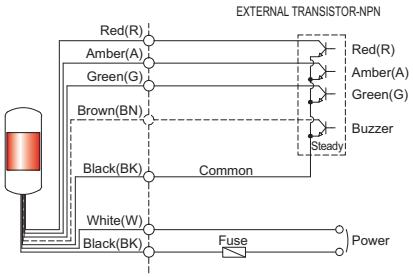
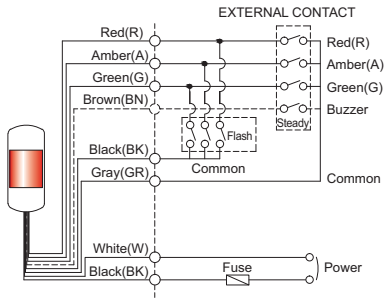
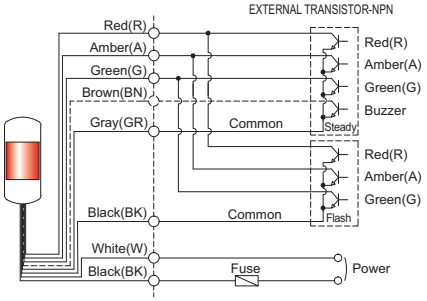
- Special color combination
- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available

Ordering Specification

SWTCL	-	BZ	-	3	-	220	-	RAG
[Model number]		[Buzzer option]		[Colors]		[Voltage]		[Color]
• SWTCL • SWTCLF • SWTCEL • SWTCELF		• None - No buzzer • BZ - Built-in buzzer		2-2color 3-3color		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green

Wiring Instructions

- SWTC series can be wired with external contacts and transistors
- In case of wiring with transistors, please select the proper transistor type : Either NPN or PNP based on the source voltage setting
- Please wire properly based on the technical diagram
- Product can be wired regardless of polarity

	By external contact	By transistor
DC Steady type	SWTC(E)L-DC 	SWTC(E)L-DC 
DC Steady/ Flashing type	SWTC(E)LF-DC 	SWTC(E)LF-DC 
AC Steady type	SWTC(E)L-AC 	SWTC(E)L-AC 
AC Steady/ Flashing type	SWTC(E)LF-AC 	SWTC(E)LF-AC 

- DC steady type : External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm
- AC steady, AC/DC steady/ flashing type : External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
  Signal line standard : UL1007 AWG22(0.3sq) 400mm

SR series

Stackable Warning/ Signal Lights

IP44 | -20~+50℃ | NPN | PNP



SR



SRP

Common Specifications(SR/SRL)

- Ø80mm stacked structure
- Multi signal transmissions capable in 1 signal light
- Standard color
  1st layered - ● Red
  2nd layered - ● Red ● Green
  3rd layered - ● Red ● Yellow ● Green
- Materials : Lens-AS, Body-ABS, Reflector-Heat resistant ABS
- Protection rating : IP44

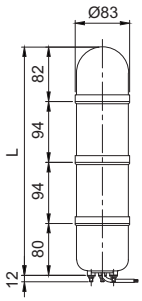
SR/ SRP Bulb Revolving Tower Warning/ Signal Lights

- Adopts a special power transmission system that reduces noise and wear
- 2nd & 3rd stacked lens colors can be changeable except for the top layer lens
- Revolving speed : 120-140RPM
- Ambient operation temperature : -20°C to +50°C

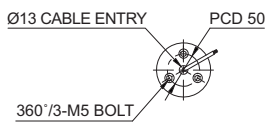
Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no			
SR SRP	1	DC12V	0.488A	12V5W	T16x35 15S	5	-	0.28kg	● R-Red
		DC24V	0.310A	24V5W	T16x35 15S	6		0.28kg	
		AC110V	0.102A	12V5W	T16x35 15S	5		0.49kg	
		AC220V	0.051A	12V5W	T16x35 15S	5		0.49kg	
	2	DC12V	0.968A	12V5W	T16x35 15S	5		0.53kg	● R-Red ● G-Green
		DC24V	0.620A	24V5W	T16x35 15S	6		0.53kg	
		AC110V	0.146A	12V5W	T16x35 15S	5		0.76kg	
		AC220V	0.073A	12V5W	T16x35 15S	5		0.76kg	
	3	DC12V	1.453A	12V5W	T16x35 15S	5		0.71kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.930A	24V5W	T16x35 15S	6		0.71kg	
		AC110V	0.191A	12V5W	T16x35 15S	5		1.03kg	
		AC220V	0.095A	12V5W	T16x35 15S	5		1.03kg	

Technical Diagram (Units : mm)

SR/ SRL

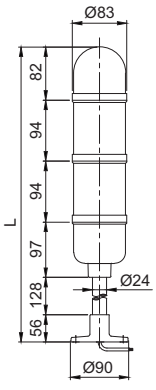


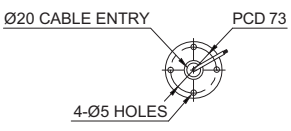
LAYER	L
1	162
2	256
3	350



SRP/ SRLP

LAYER	L
1	363
2	457
3	551





IP44 -30~+50℃ NPN PNP RoHS



SRL



SRLP

SRL/ SRLP LED Steady/ Flashing Signal Towers

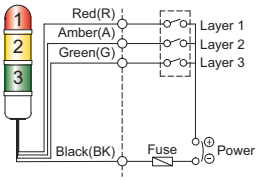
- Qlight's exclusive LED light distribution system with multi-tiered reflector spreads light evenly throughout the surface of the 94mm height special diffusing lens
- Fixed user selected color arrangement
- Flashing rate : 60-80 flashes/min(Built-in switch for selection between steady/ flashing mode)
- Ambient operating temperature : -30°C to +50°C
- Compliant with RoHS directive

Model number	Layer	Voltage	Current	Certificates	Weight	Color
SRL SRLP	1	DC12V	0.123A	-	0.23kg	● R-Red
		DC24V	0.094A		0.23kg	
		AC110V	0.062A		0.45kg	
		AC220V	0.031A		0.45kg	
	2	DC12V	0.246A		0.37kg	● R-Red ● G-Green
		DC24V	0.188A		0.37kg	
		AC110V	0.075A		0.70kg	
		AC220V	0.037A		0.70kg	
	3	DC12V	0.369A		0.53kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.283A		0.53kg	
		AC110V	0.091A		0.89kg	
		AC220V	0.045A		0.89kg	

Wiring Instructions

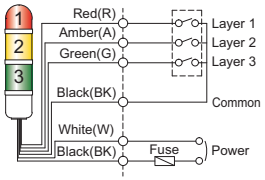
SR(P)/ SRL(P)-DC

EXTERNAL CONTACT



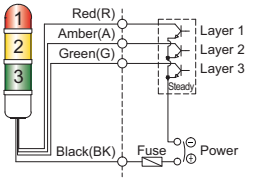
SR(P)/ SRL(P)-AC

EXTERNAL CONTACT

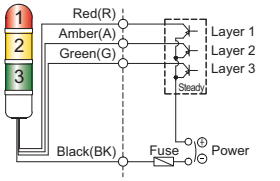


SRL(P)-DC

EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line : UL1007 AWG22(0.3sq) 400mm
- DC type : Black output line is negative(-)

Customization

- 4 layers available upon request
- Customized color arrangement available

Ordering Specification

SRL	-	3	-	220	-	RAG
[Model number]		[Number of Tiers]		[Voltage]		[Color]
• SR • SRP • SRL • SRLP		• 1-1tier • 2-2tiers • 3-3tiers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green

Please note for installation

- SRL/SRLP model wiring can be done with either external contacts or external transistors.
- In case of wiring with transistors, please select the proper transistor type : either NPN or PNP based on the source voltage setting.
- The SR/SRP type warning lights use light bulbs which do not allow the use of transistors to register the connection. Please use external contacts.

SJ series

Cubic Stackable Warning/ Signal Lights

IP44 | -20~+50°C | BUZZER | 90dB | NPN | PNP



SJ



SJP

Common Specifications(SJ/ SJL)

- Beautiful appearance from stacking 95×95mm cubed tower lights
- Multi signal transmission in space of 1 signal light
- Built-in buzzer available (Volume Max 90dB at 1m)
- Standard color
  1Layer - ● Red
  2Layers - ● Red ● Green
  3Layers - ● Red ● Yellow ● Green
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Protection rating : IP44
- Certificates : CE Compliant

SJ/ SJP Bulb Revolving Tower Warning/ Signal Lights

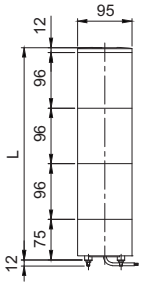
- Adopts a special power transmission system which minimizes noise and wear
- Available in customized color arrangements
- Revolving speed : 120-140RPM
- Ambient operation temperature : -20°C to +50°C

Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no			
SJ SJP	1	DC12V	0.488A	12V5W	T16x35 15S	5	CE	0.65kg	● R-Red
		DC24V	0.310A	24V5W	T16x35 15S	6		0.65kg	
		AC110V	0.102A	12V5W	T16x35 15S	5	-	0.83kg	
		AC220V	0.051A	12V5W	T16x35 15S	5		0.83kg	
	2	DC12V	0.968A	12V5W	T16x35 15S	5	CE	0.89kg	● R-Red ● G-Green
		DC24V	0.620A	24V5W	T16x35 15S	6		0.89kg	
		AC110V	0.146A	12V5W	T16x35 15S	5	-	1.15kg	
		AC220V	0.073A	12V5W	T16x35 15S	5		1.15kg	
	3	DC12V	1.453A	12V5W	T16x35 15S	5	CE	1.18kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.930A	24V5W	T16x35 15S	6		1.18kg	
		AC110V	0.191A	12V5W	T16x35 15S	5	-	1.28kg	
		AC220V	0.095A	12V5W	T16x35 15S	5		1.28kg	

Technical Diagram

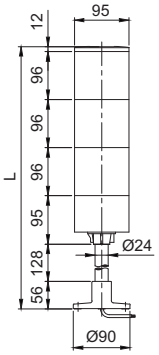
(Units : mm)

SJ/ SJL

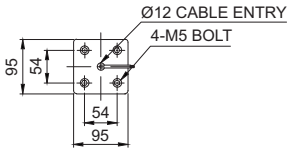


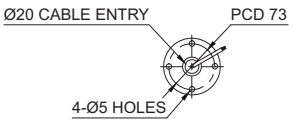
LAYER	L
1	183
2	279
3	375

SJP/ SJLP



LAYER	L
1	387
2	483
3	579





SJ series

Cube-shaped Stackable Warning/ Signal Lights

IP44 | -30~+50°C | BUZZER | 90dB | NPN | PNP | RoHS



SJL



SJLP

SJL/ SJLP LED Steady/ Flashing Tower Signal Lights

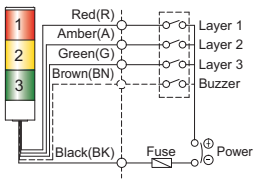
- Strong LED signal light emitted through the 96mm height diffusion lens
- Fixed lens colors
- Flashing rate : 60-80 flashes/min
- Ambient operation temperature : -30°C to +50°C
- Compliant with RoHS directive

Model number	Layer	Voltage	Current	Certificates	Weight	Color
SJL SJLP	1	DC12V	0.182A	-	0.63kg	● R-Red
		DC24V	0.163A		0.63kg	
		AC110V	0.062A		0.80kg	
		AC220V	0.031A		0.80kg	
	2	DC12V	0.364A		0.76kg	● R-Red ● G-Green
		DC24V	0.326A		0.76kg	
		AC110V	0.077A		1.03kg	
		AC220V	0.038A		1.03kg	
	3	DC12V	0.546A		1.01kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.489A		1.01kg	
		AC110V	0.093A		1.24kg	
		AC220V	0.046A		1.24kg	

Wiring Instructions

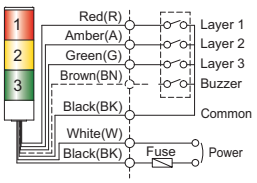
SJ(P)/ SJL(P)-DC

EXTERNAL CONTACT



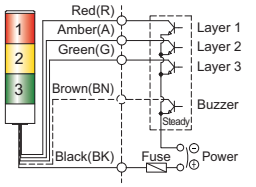
SJ(P)/ SJL(P)-AC

EXTERNAL CONTACT

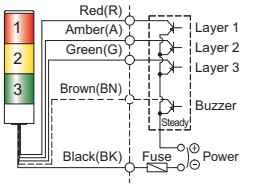


SJL(P)-DC

EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line : UL1007 AWG22(0.3sq) 400mm
- DC type : Black output line is negative(-)

Customization

- 4 layers available upon request
- Lens colors arrangement except for standard
- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available
- Xenon lamp strobe type(model number : SJS/SJSP)

Ordering Specification

SJL	-	BZ	-	3	-	220	-	RAG
[Model number]		[Buzzer option]		[Layer]		[Voltage]		[Color]
• SJ • SJP • SJL • SJLP				• 1-1Layer • 2-2Layers • 3-3Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green

Please note for installation

- SJL/ SJLP type can be wired with external contacts and transistor.
- Wiring to transistor, use the NPN transistor. Please wire properly based on technical diagram.
- SJ/ SJP used bulb can not be connected by using transistors. Please use the external contacts.

S125TL

Ø125mm Large-Sized Stackable Signal Light

IP44 | -30~+50℃ | NPN | PNP | RoHS



S125TL



S125TL model applied in a freeway toll section.

S125TL LED Steady/ Flashing Signal Tower

- Ø125mm large-sized stackable signal lights
- Large light emitting area and special light diffusing lens provides excellent long distance visibility
- Saves mounting space by stacking one, two, or three signal lenses
- Standard color arrangements
  1Layer - ● Red
  2Layers - ● Red ● Green
  3Layers - ● Red ● Yellow ● Green
- The reflector with multi-tiered surface diffuses light over a wide area for uniform signal transmission
- The user selected color arrangement will be fixed
- Built-in switch for selection between steady and flashing mode
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Body-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44
- Compliant with RoHS directive

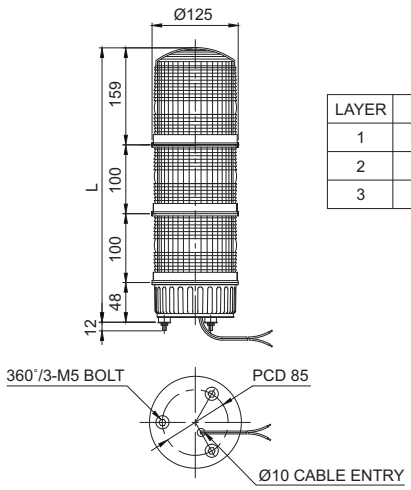
Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
S125TL	1	DC12V	0.300A	-	0.62kg	● R-Red
		DC24V	0.200A		0.62kg	
		AC110V	0.077A		0.84kg	
		AC220V	0.038A		0.84kg	
	2	DC12V	0.600A		0.88kg	● R-Red ● G-Green
		DC24V	0.400A		0.88kg	
		AC110V	0.106A		1.11kg	
		AC220V	0.053A		1.11kg	
	3	DC12V	0.900A		1.15kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.600A		1.15kg	
		AC110V	0.140A		1.38kg	
		AC220V	0.070A		1.38kg	

Technical Diagram

(Units : mm)

S125TL



LAYER	L
1	207
2	307
3	407

Customization

- Customized color arrangements available
- User selected xenon strobe lamp type available upon request (Model number : S125TS)

S125TL

Ø125mm Large-Sized Stackable Signal Light

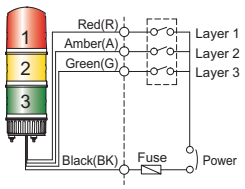
Please note for installation

- S125TL type can be wired with external contacts and transistors.
- Wiring to transistor, use the NPN transistor. Please wire properly based on technical diagram.
- S125TS which uses a xenon lamp can not be connected by using transistor Please use an external contact.

Wiring Instructions

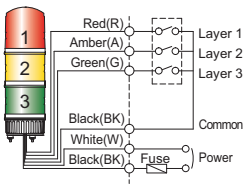
S125TL-DC

EXTERNAL CONTACT



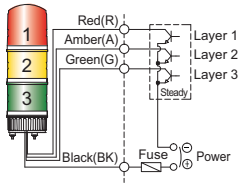
S125TL-AC

EXTERNAL CONTACT

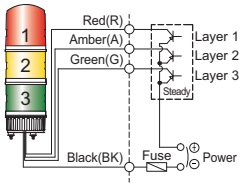


S125TL-DC

EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line : UL1007 AWG22(0.3sq) 400mm
- DC type : Black output line is negative(-)

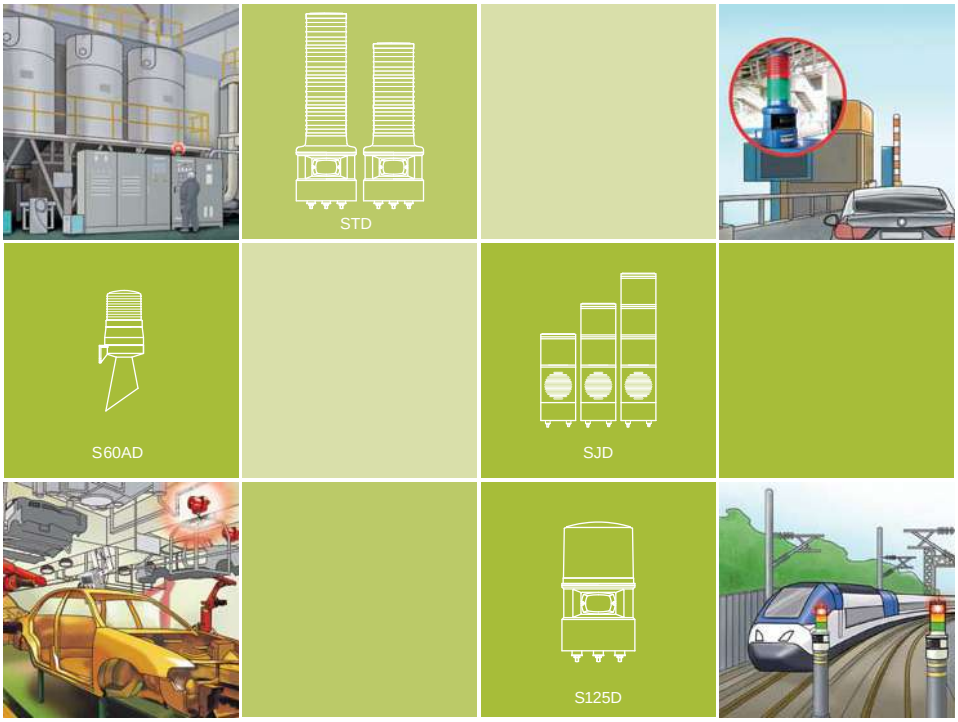
Ordering Specification

S125TL	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• S125TL		• 1-1Layer • 2-2Layers • 3-3Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green

TOTAL CATALOGUE

Signal Lights & Electric Horns

INNOVATION IN ALARM & SIGNAL



References 120
Products specifications 122

Reference for Warning/ Signal Lights & Electric Horns








	Model number	S60AD	QWTD	QAD80H	QAD80BZ	QAD100H	QAD100BZ
	Voltage	DC12V, DC24V AC110V, AC220V	AC/DC12V, AC/DC24V AC110V-AC220V	DC12V-24V	DC12V, DC24V	DC12V-24V AC110V-220V	DC12V, DC24V AC110V-220V
Dimension (mm)	Diameter	Ø70	Ø70	Ø83	Ø83	Ø97	Ø97
	Height	233	154-318	198	198	215	218
	Depth	86	76	93	93	109	109
	Material	Lens-AS Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS
Lamp & Operation	Bulb Steady/Flashing	•					
	Bulb Revolving						
	LED Revolving						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
	xenon lamp strobe	•					
Sound & Volume	High Buzzer	Max 100dB at 1m			Max 105dB at 1m		Max 105dB at 1m
	5 Signal sounds		Max 85dB at 1m				
	Voice						
	30 signal sounds			Max 100dB at 1m		Max 100dB at 1m	
	31 signal sounds						
	MP3					Max 95dB at 1m	
	Mount type	Wall mount	Wall mount	Wall mount	Wall mount	Wall mount	Wall mount
	IP	IP54	IP54	IP65	IP65	IP65	IP65
	Certificates	CE	CE	-	-	-	-
	Customization	2 tones buzzer	2 tones buzzer, Color combinations except for standard	-	-	-	-
	transistor	-	NPN Type	NPN Type	-	NPN Type	-
	Page	P122	P124	P127	P127	P128	P128







	Model number	QAD125H	QAD125BZ	QWCD35	QWCD50	SJD	
	Voltage	DC12V-24V AC110V-220V	DC12V, DC24V AC110V-220V	DC12V-DC24V AC110V-220V	DC12V, DC24V AC110V-220V	DC12V, DC24V AC110V, AC220V	
Dimension (mm)	Diameter	Ø116	Ø116	136×179	168×222	95×95(Cubic)	
	Height	244	244	-	-	274-466	
	Depth	132	132	126	163	-	
	Material	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Horn-PC Housing-PC+ABS	Horn-PC Housing-PC+ABS	Lens-AS Housing-ABS	
Lamp & Operation	Bulb Steady/Flashing						
	Bulb Revolving					•	
	LED Revolving						
	LED Steady/Flashing	•	•			•	
	LED Strobe			•	•		
	LED Simulated revolving						
	xenon lamp strobe					•	
Sound & Volume	High Buzzer		Max 105dB at 1m				
	5 Signal sounds					Max 90dB at 1m	
	Voice					Max 80dB at 1m	
	30 signal sounds	Max 115dB at 1m					
	31 signal sounds			Max 115dB at 1m	Max 123dB at 1m		
	MP3	Max 100dB at 1m		Max 113dB at 1m	Max 118dB at 1m		
	Mount type	Wall mount	Wall mount	Wall mount	Wall mount	Self stand	
	IP	IP65	IP65	IP66	IP66	IP23	
	Certificates	-	-	CE, UL	CE, UL	-	
	Customization	-	-	External signal line	External signal line	Lens color expect for standard	
	transistor	NPN Type	-	NPN Type	NPN Type	NPN Type	
	Page	P129	P129	P131	P132	P133-134	

Reference for Warning/ Signal Lights & Electric Horns



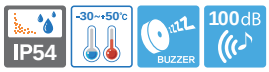





		STD	S100D	S125D	STNDL	STND100	STND125
Model number							
Voltage		AC/DC12V, AC/DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø80(Globe) Ø119(Body)	Ø101(Globe) Ø119(Body)	Ø115(Globe) Ø119(Body)	Ø80(Globe) Ø119(Body)	Ø101(Globe) Ø119(Body)	Ø115(Globe) Ø119(Body)
	Height	232-512	226	215	267-547	261	250
	Depth	-	-	-	-	-	-
Material		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Lamp & Operation	Bulb Steady/Flashing	•			•	•	•
	Bulb Revolving		•	•			
	LED Revolving		•	•			
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
	xenon lamp strobe		•	•			
Sound & Volume	High Buzzer						
	5 Signal sounds	Max 105dB at 1m	Max 105dB at 1m	Max 105dB at 1m			
	Voice	Max 95dB at 1m	Max 95dB at 1m	Max 95dB at 1m			
	30 signal sounds				Max 105dB at 1m	Max 105dB at 1m	Max 105dB at 1m
	31 signal sounds						
	MP3				Max 98dB at 1m	Max 98dB at 1m	Max 98dB at 1m
Mount type		Self stand	Self stand	Self stand	Self stand	Self stand	Self stand
IP		IP54	IP54	IP54	IP54	IP54	IP54
Certificates		CE	CE	CE	CE	CE, UL	CE
Customization		Customized lens height	-	-	Customized lens height	-	-
transistor		NPN Type	NPN Type	NPN Type	NPN Type	NPN Type	NPN Type
Page		P135	P137	P139	P142	P144	P145

S60AD series

Signal/ Warning Lights with High Volume Built-in Buzzer





S60AD series



Common Specifications(S60ADL/ S60ADS/ S60ADB)

- Ø60mm warning light with high volume built-in buzzer in a vertical configuration
- Cone-shaped horn helps diffuse sound to generate clear and distinctive sound signals
- Suitable for applications that require downward audible signals in elevated locations
- Buzzer sound volume (Max 100dB at 1m)
- Materials : Lens-AS, Body-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection Rating : IP54
- Certificates : CE Compliant

S60ADL LED Steady/Flashing Signal Light

- LED reflector with multi-tiered design provides an even and clear illumination throughout the entire lens
- Selectable between steady and flashing mode
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
S60ADL	DC12V	0.166A	CE DC24V only	0.17kg	R-Red A-Amber G-Green B-Blue
	DC24V	0.125A		0.17kg	
	AC110V	0.043A		0.32kg	
	AC220V	0.022A		0.32kg	

S60ADS Xenon Lamp Strobe Signal Light

- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
S60ADS	DC12V	0.550A	CE DC24V only	0.29kg	R-Red A-Amber G-Green B-Blue
	DC24V	0.266A		0.29kg	
	AC110V	0.088A		0.27kg	
	AC220V	0.044A		0.27kg	

S60ADB Bulb Steady/Flashing Signal Light

- Employs a special filament to prevent damage caused by possible voltage variations
- Selectable between steady and flashing mode
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
S60ADB	DC12V	1.008A	12V10W	T16x35 15S	9	CE DC24V only	0.19kg	R-Red A-Amber G-Green B-Blue
	DC24V	0.556A	24V10W	T16x35 15S	10		0.19kg	
	AC110V	0.127A	110V10W	T16x35 15S	12		0.18kg	
	AC220V	0.064A	220V10W	T16x35 15S	13		0.18kg	

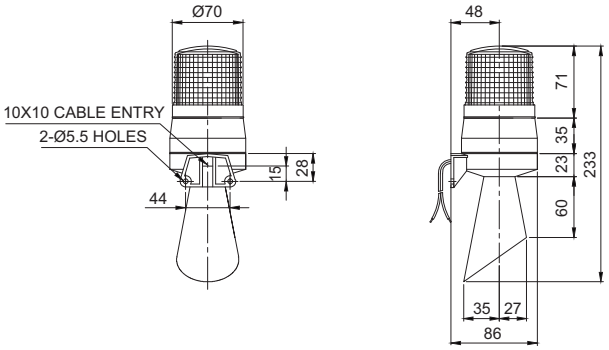
S60AD series

Signal/ Warning Lights with High Volume Built-in Buzzer



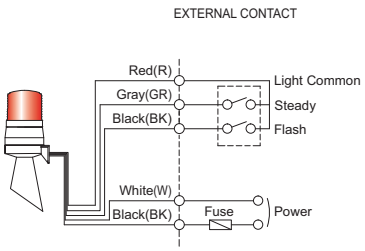
Technical Diagram (Units : mm)

S60ADL/ S60ADS/ S60ADB

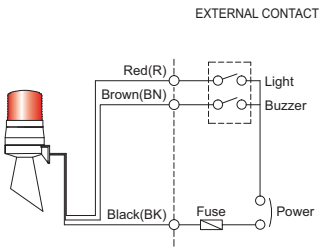


Wiring Instructions

S60ADB-DC/AC



S60ADL/ S60ADS-DC/AC



- S60ADB : Power line standard UL1015 AWG18(0.75sq)×2C 400mm
  Signal line standard UL1007 AWG22(0.3sq) 400mm
- S60ADL/ S60ADS : Signal line UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity



S60AD emits powerful buzzer sound through the cone type sound radiating structure.

Customization

- 2 buzzer sound types : Both prolonged(beep, beep) and staccato(beep, beep, beep) buzzer output available
- Strong buzzer type 105dB(model number : S60AD-HBZ)

Ordering Specification

S60ADL	-	220	-	R
[Model number]		[Voltage]		[Color]
• S60ADL • S60ADS • S60ADB		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

QWTD series

Wall Mount LED Signal Towers with Built-in Siren

IP54 | -30~+50°C | SPK | 85dB | NPN | RoHS

Wall mount signal tower with built-in audible alarm is now available!

- **WS (5 Warning sounds)**
- **WP (5 Special warning sounds)**
- **WM (5 Melodies)**
- **WA (5 Alarms)**



QWTD series



QWTD Speaker

QWTD embedded speaker design minimizes risk of contamination from debris while providing efficient sound output.

QWTD Ø70mm Wall Mount LED Steady/Flashing Signal Towers

- Wall mount model that minimizes the chance of damage from moving obstacles or personnel
- Superior side visibility with round-shaped lens
- 5 selectable sound pattern combinations(5 warning sounds, 5 special warning sounds, 5 melodies, 5 alarms)
- Selectable between steady/flashing mode with proper wire arrangement
- Standard color arrangements
  1 Layer : ● Red
  2 Layers : ● Red ● Green
  3 Layers : ● Red ● Amber ● Green
  4 Layers : ● Red ● Amber ● Green ● Blue
  5 Layers : ● Red ● Amber ● Green ● Blue ● Clear White
- Available for customized color arrangements
- Built-in siren sound volume (Max 85dB at 1m)
- Materials : Lens-PC, Cover-ABS, Case-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP54
- Certificates : CE Compliant
- Compliant with RoHS directive

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QWTDL Steady QWTDLF Steady/ Flashing	1	AC/DC12V	0.065A	CE DC Only	0.14kg	● R-Red
		AC/DC24V	0.050A		0.14kg	
		AC110V-220V	Max 0.025A		0.27kg	
	2	AC/DC12V	0.130A		0.18kg	● R-Red ● G-Green
		AC/DC24V	0.100A		0.18kg	
		AC110V-220V	Max 0.050A		0.32kg	
	3	AC/DC12V	0.195A		0.23kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.150A		0.23kg	
		AC110V-220V	Max 0.075A		0.36kg	
	4	AC/DC12V	0.260A		0.27kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.200A		0.27kg	
		AC110V-220V	Max 0.100A		0.41kg	
	5	AC/DC12V	0.325A		0.32kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.250A		0.32kg	
		AC110V-220V	Max 0.125A		0.45kg	

QWTD-WS	5 Pre-Recorded Warning Sounds
QWTD-WP	5 Pre-Recorded Special Warning Sounds
QWTD-WM	5 Pre-Recorded Melodies
QWTD-WA	5 pre-Recorded Alarms

※ AC type model has a free-voltage range of 100V-240V.
※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/Audible Line Power Consumption (per each layer)

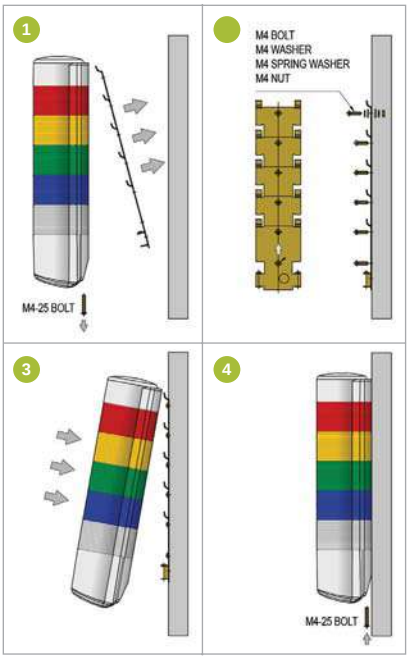
Voltage Rating	AC/DC12V	AC/DC24V	AC110V-220V
Signal Line Power Current	0.040A	0.040A	Max 0.024A
Audible Line Power Current	0.300A	0.160A	Max 0.031A

※ You can even rearrange the pre-assembled LED color arrangements after installation.

QWTD series

Wall Mount LED Signal Towers with Built-in Siren

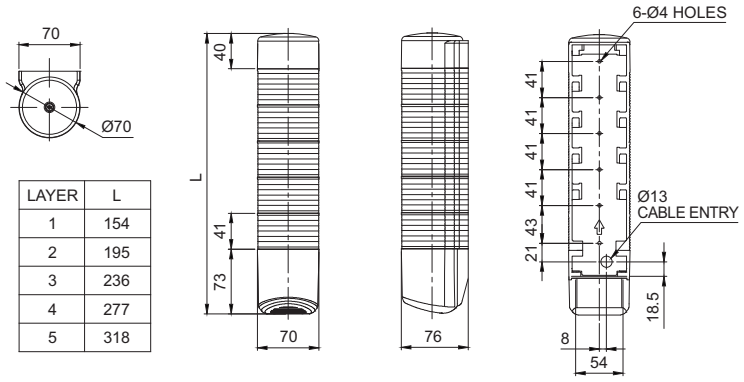
How to mount



1. Dismantle body and mount by loosening two M4 bolts at the bottom of the lamp
2. Put the mounting bracket on the mounting hole
3. Hang the lamp on the mount
4. Fasten two M4 bolts at the bottom of the lamp after completing installation on the mount

Technical Diagram (Units : mm)

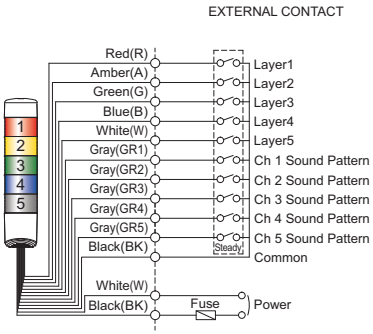
QWTD



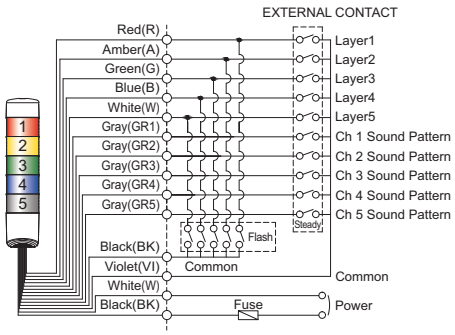
LAYER	L
1	154
2	195
3	236
4	277
5	318

Wiring Instructions

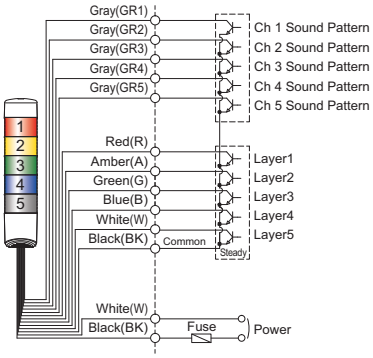
QWTDL-DC/AC (Steady)



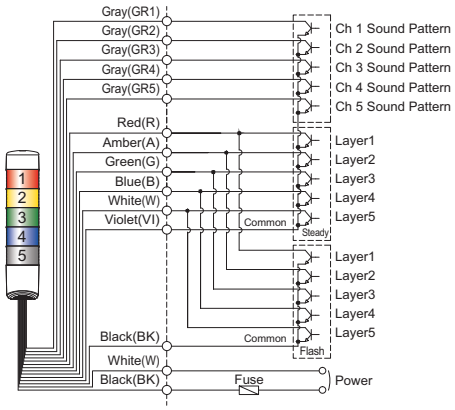
QWTDLF-DC/AC (Steady/Flashing)



QWTDL-DC/AC (Steady)



QWTDLF-DC/AC (Steady/Flashing)



- Wiring both external power line and transistor
- QWTD allows steady/flash mode by wiring
- External power line standard, UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard, UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity

Customization

- Special color combinations

Ordering Specification

QWTDL	-	WS	-	3	-	110/220	-	RAG
[Model number]		[Sounds]		[Layers]		[Voltage]		[Color]
• QWTDL • QWTDLF		• WS-Warning sound • WP-Special warning sound • WM-Melody • WA-Alarm		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

Wall Mount Dome Type Signal Light with Electrical Horn

Siren Buzzer 105dB, Electric Horn 100-115dB

- 6 Bit input, 5 sound tones for each group
- Binary input 30 sound tones output
  SD Card(MP3) support



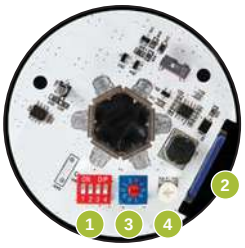
• Sound Tone Selection & Volume Control

QAD series are the combination of dome type signal lights and electric horn that allow sound tone selection and volume control through a built-in control panel.

QAD series (external sound product) can the support MP3 format through SD Card. (QAD100H/ QAD125H)

Multi-functional Product

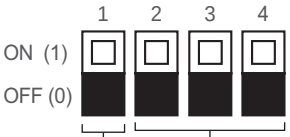
• How to Setup



1. Sound setup switch
2. SD Card for MP3 play
3. Play mode set up switch
4. Volume

• Sound Setup Switch

Built-in sound and user-defined sound is toggled by using the sound setup switch '1'.



Group Choice in Bit Input Mode
001 : WS (5 Warning sounds)
010 : WP
(5 special warning sounds 1st group)
011 : WM (5 Melodies)
100 : WA (5 Alarms)
101 : WO
(5 special warning sounds 2nd group)
110 : WN
(5 special warning sounds 3rd group)

Sound Selection
0 : Built-in sound
1 : SD Card(MP3)

- Built-in sounds(5WS, 5WP, 5WM, 5WA, 5WO and 5WN)
- Support SD Card(MP3)
- Binary Input : 30Ch
- Bit input : 5Ch(6 groups)
- Support MP3 format through SD Card
- Detailed instructions for multi-functional products are shown on page 28

Common Specifications(QAD80/ QAD100/ QAD125)

- Combination of warning light and horn allow for both visual and audible signal transmission at once
- Flashing rate : 60-80 flashes/min(Built-in Steady-Flash selection switch)
- Appropriate sound tones can be chosen depending on the various working environment among various available sound tones
- Sound tone selector and volume controller in front of the device allows for convenient use
- SD Card type allows user defined sound tone
- Built-in 30 sound tones, Support Binary and Bit input modes
- Bit input mode consists of 5 sound types with 6 groups. Choose one of the groups to play 5 sounds.(MP3 does not support group)
- MP3 support(QAD100H/ QAD125H)
- Materials : Lens - PC, Housing - ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Compliant with RoHS directive

30 Built-in sounds

Multi-functional product has built-in 30 sound tones

Sound	Category	Ch	Sound Tone
WS	5 warning sounds	Ch1	Fire.A-ANG
		Ch2	Emergency WA-U(Yelp)
		Ch3	Ambulance PI-PO(Hi-low)
		Ch4	Machinery Fault
		Ch5	High Expansion
WP	5 special warning sounds (1st group)	Ch1	Fire.A-ANG
		Ch2	Abandon Alarm
		Ch3	Machinery Fault
		Ch4	High Expansion
		Ch5	7 Short PI. / 1 Long
WM	5 melodies	Ch1	Sweet Home
		Ch2	For Elise
		Ch3	Cuckoo's Waltz
		Ch4	Piano Sonata
		Ch5	Turkish March

Sound	Category	Ch	Sound Tone
WA	5 alarms	Ch1	Beep Intermittent
		Ch2	Door Chime
		Ch3	Phone Ring
		Ch4	PI.PI.PI Short
		Ch5	Tripping Beat
WO	5 special warning sounds (2nd group)	Ch1	Rel rel rel
		Ch2	Slow Ambulance PI-PO
		Ch3	Wye yong Wye yong
		Ch4	Phone ring 2
		Ch5	Fire.A-ANG
WN	5 special warning sounds (3rd group)	Ch1	Oit Oit
		Ch2	Pi o Pi o
		Ch3	Slow Di o Di o
		Ch4	Li long Li ling
		Ch5	911 Siren

User-defined sound (MP3)

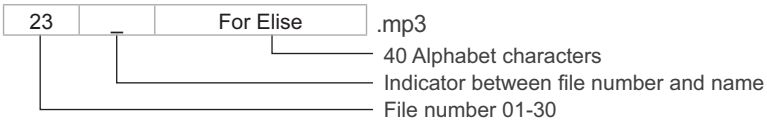
User-defined sound(MP3) type



Customer can create a playlist and grouping conveniently through PC. Product supports up to 32Gbyte. SD Card is an optional item.

*SD Card needs to be purchased.

MP3 file naming



QAD series

Signal/ LED Warning Lights with High Volume Built-in Buzzer

IP65 | -30~+50°C | HORN 100dB | BUZZER 105dB | NPN | RoHS

- **6 Bit input, 5 sound tones for each group**
- **Binary input 30 sound tones output**



QAD80 series

QAD80 does not support SD Card.



QAD series buzzer and electric sound is rich and clear because the RESONANCE CHAMBER amplifies the sound.

Do not supply power into the signal line. Product may be damaged as a result

- Once powering on, signal light will work. However, the speaker will require additional wiring.

QAD80H Wall Mount Type LED Steady/ Flash & Electric Horn

• Built-in sound

Model number	Voltage	Current	Sound Pattern and volume	Certificates	Weight	Color
QAD80H	DC12V-24V	Max 0.640A	• Bit Input : 5Ch • Binary Input: 30Ch • Warning sounds : Max 100dB	-	0.70kg	• R-Red • A-Amber • G-Green • B-Blue

※ Operating range for DC model : DC10V-30V

QAD80BZ Wall Mount Type LED Steady/ Flash & Strong Buzzer

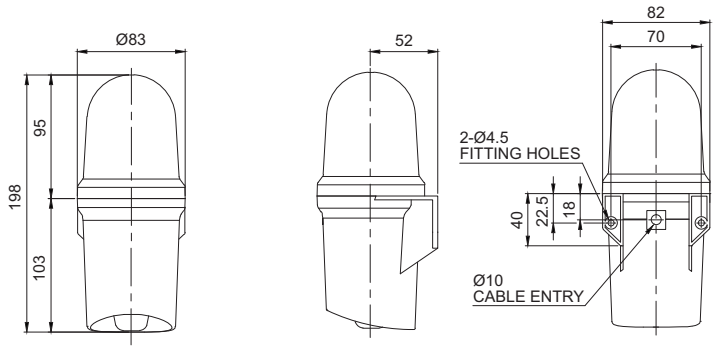
• Built-in strong buzzer

Model number	Voltage	Current	Sound Pattern and volume	Certificates	Weight	Color
QAD80BZ	DC12V	0.500A	• Buzzer Volume : Max 105dB	-	0.75kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.270A			0.75kg	

Technical Diagram

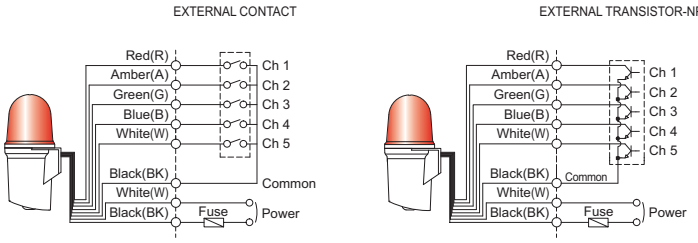
(Units : mm)

QAD80H/ QAD80BZ



Wiring Instructions

QAD80H-DC



- External power line standard, UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard, UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- In case of 6 Bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played

※ Detailed instructions for multi-functional products are shown on page 28. (Wiring Instructions substitutes for channel selection switch)

Ordering Specification

QAD80H	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• QAD80H		• 12/24-DC12V-24V		• R-Red • A-Amber • G-Green • B-Blue
• QAD80BZ		• 12-DC12V • 24-DC24V		

QAD series

Signal/ LED Warning Lights with High Volume Built-in Buzzer

IP65 | -30~+50°C | HORN 100dB | BUZZER 105dB | SD mp3 95dB | NPN | RoHS

- **6 Bit input, 5 sound tones for each group**
- **Binary input 30 sound tones output SD Card(MP3) support**



QAD100 series



QAD series buzzer and electric sound is rich and clear because the RESONANCE CHAMBER amplifies the sound.

Do not supply power into the signal line. Product may be damaged as a result

- Once powering on, signal light will work. However, the speaker will require additional wiring.

QAD100H Wall Mount Type LED Steady/ Flash & Electric Horn

• Built-in sound/ MP3

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QAD100H	DC12V-24V	Max 1.055A	• Bit Input : 5Ch • Binary Input : 30Ch • Warning : Max 100dB • MP3 : Max 95dB	-	0.92kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	AC110V-220V	Max 0.360A			0.94kg	

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

QAD100BZ Wall Mount Type LED Steady/ Flash & Strong Buzzer

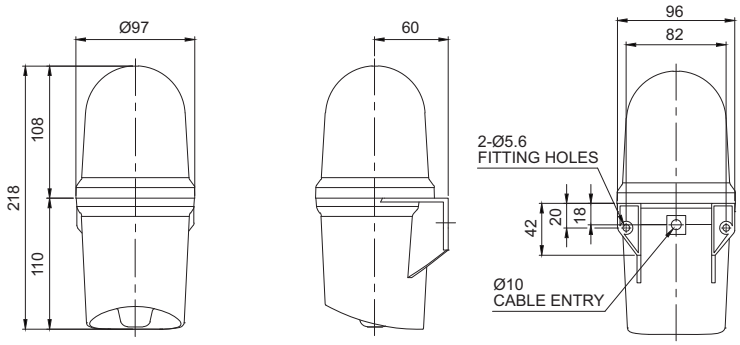
• Built-in strong buzzer

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QAD100BZ	DC12V	0.550A	• Buzzer Volume : Max 105dB	-	0.98kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.300A				
	AC110V-220V	Max 0.100A			1.01kg	

※ AC type model has a free-voltage range of 100V-240V.

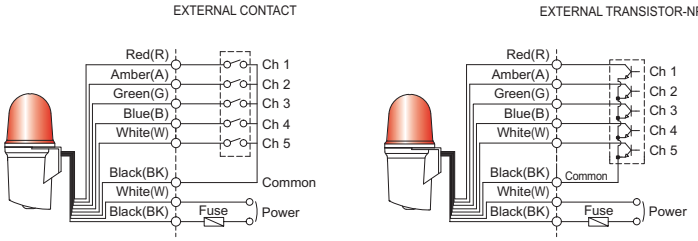
Technical Diagram (Units : mm)

QAD100H/ QAD100BZ



Wiring Instructions

QAD100H-DC/AC



- External power line standard, UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard, UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- In case of 6 Bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played

※ Detailed instructions for multi-functional products are shown on page 28.
(Wiring Instructions substitutes for channel selection switch)

Ordering Specification

QAD100H	-	110/220	-	R
[Model number]		[Voltage]		[Color]
• QAD100H • QAD125H		• 12/24-DC12V-24V • 110/220-AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue

QAD series

Signal/ LED Warning Lights with High Volume Built-in Buzzer

IP65 | -30~+50°C | HORN 115dB | BUZZER 105dB | SD mp3 100dB | NPN | RoHS

- **6 Bit input, 5 sound tones for each group**
- **Binary input 30 sound tones output SD Card(MP3) support**



QAD125 series



QAD series buzzer and electric sound is rich and clear because the RESONANCE CHAMBER amplifies the sound.

Do not supply power into the signal line. Product may be damaged as a result

- Once powering on, signal light will work. However, the speaker will require additional wiring.

QAD125H Wall Mount Type LED Steady/ Flash & Electric Horn

• Built-in sound/MP3

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QAD125H	DC12V-24V	Max 1.055A	• Bit Input : 5Ch • Binary Input : 30Ch • Warning : Max 115dB • MP3 : Max 100dB	-	1.12kg	• R-Red • A-Amber • G-Green • B-Blue
	AC110V-220V	Max 0.360A			1.14kg	

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

QAD125BZ Wall Mount Type LED Steady/ Flash & Strong Buzzer

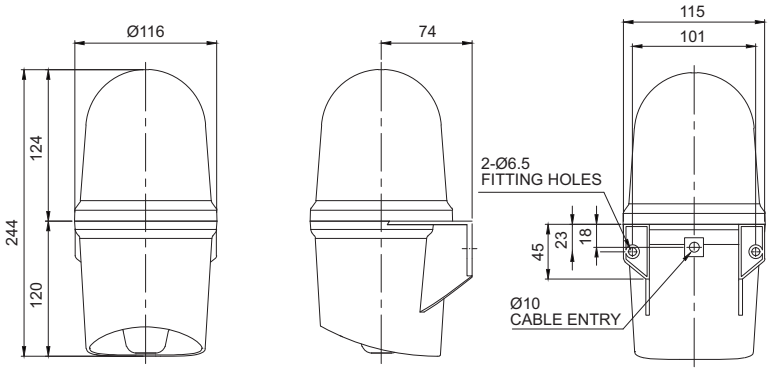
• Built-in strong buzzer

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QAD125BZ	DC12V	0.550A	• Buzzer Volume : Max 105dB	-	1.22kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.300A				
	AC110V-220V	Max 0.100A			1.27kg	

※ AC type model has a free-voltage range of 100V-240V.

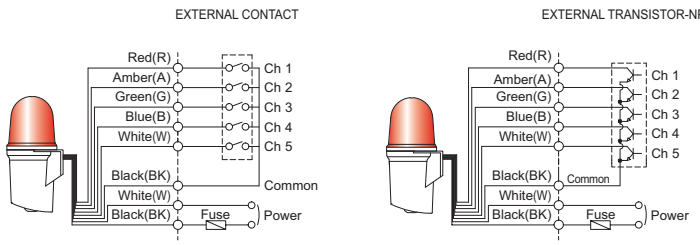
Technical Diagram (Units : mm)

QAD125H/ QAD125BZ



Wiring Instructions

QAD125H-DC/AC



- External power line standard, UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard, UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- In case of 6 Bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played

※ Detailed instructions for multi-functional products are shown on page 28.
(Wiring Instructions substitutes for channel selection switch)

Ordering Specification

QAD125BZ	-	24	-	R
[Model number]		[Voltage]		[Color]
• QAD100BZ • QAD125BZ		• 12-DC12V • 24-DC24V • 110/220-AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue

A new concept of using the horn cover as a light globe

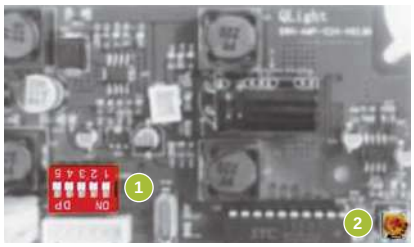


QWCD series is a patented product with an integrated horn and light globe.
(Patent registration : 10-1452447 horn having a light emitting part)

QWCD series	
QWCD35	Built-in standard sound
QWCD35SD	MP3(SD Card)
QWCD50	Built-in standard sound, large output sound
QWCD50SD	SD Card(MP3). Large output sound

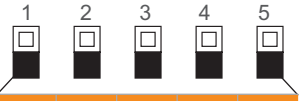
- By using the horn cover as a light globe, the size of the product has been reduced significantly
- The color of light can be selected from red, yellow, green, or blue
- Product has two models : the basic model with 31 built-in sounds, and an external sound (MP3) type model
- Includes seven different playback functions; one function is the continuous playback function which provides constant message notification
- There are 31 built-in sounds that can be played in various environments, and supports a Binary input method
- You can save and play up to 31 mp3 files using a external SD Card
- Can easily set up the sounds using a PC
- By making the horn cover with polycarbonate (PC) material, The product has excellent durability and weather resistance
- Can be used for heavy-duty, ship, or outdoor use which requires waterproof, dustproof structure (IP66)

Built-in sound type



1. Sound selection switch
2. Volume

The input method of built-in sound type

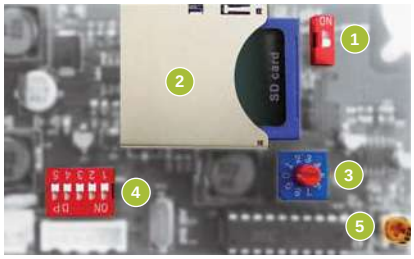


No.	1	2	3	4	5
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
:	:	:	:	:	:
31	1	1	1	1	1

Built-in sound type model supports Binary input mode which provides a selection of 31 different input combinations for five kinds of sounds.

You can only select 2 numbers with 1 switch; "0", "1". With 5 switches you can have 31 combinations. Selecting one sound from 5 switches is the Binary input method.

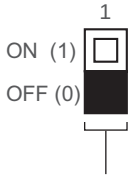
SD Card(MP3) type



1. Sound setting switch
2. MP3 playable SD Card
3. Play mode setting switch
4. Sound select switch
5. Volume

The sound selection method of SD Card type

Can easily select built-in sound or external sound(MP3) by using the sound selection switch.



The sound selection
0 : Select built-in sound
1 : Select SD Card

- 31 built-in special warning sounds
- Supports SD Card (MP3)
- Binary Input : 31Ch
- Bit Input : 5Ch (SD Card only)
- A multifunctional product that can play MP3 files using an SD Card
- Please refer to page 26 for detailed settings
- Built-in sound is set to #1 as default

QWCD series

LED Strobe Signal Light and Electric Horn Combinations

- **Qlight's exclusive innovative design - the horn cover emits light!**
- **Combination of 31 sound options built in and SD Card(MP3) option**





QWCD35 series



QWCD35 model applied in an automobile production plant environment.

Common Specifications(QWCD35/ QWCD35SD/ QWCD50/ QWCD50SD)

- Easy device customization with built in sound selection function, volume adjustment function and an SD Card slot for user inputted tones
- 31 available tones that can be selected for a variety of environments
- The user can select their own tones by inputting the MP3 file directly into the SD Card
- 31 pre-recorded tones available via binary input
- Suitable for use in environments that require a tight seal and superior dust protection rated IP66
- Flashing rate : 60-80 flashes/min(steady/flashing mode selection available in built in switch)
- Materials : Horn-PC, Body-PC+ABS
- Ambient operating temperature : -50°C to +60°C(Standard type)
  -20°C to +50°C(SD Card type)
- Protection Rating : IP66
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

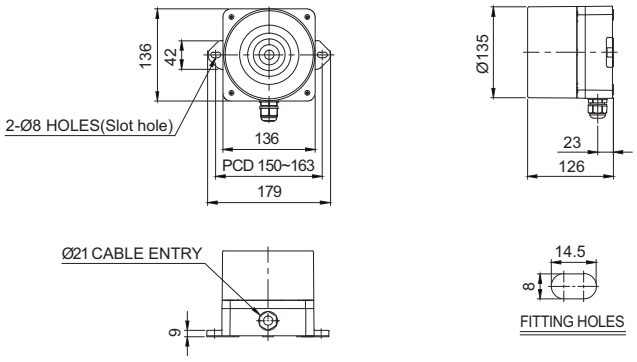
QWCD35 LED Strobe Signal Light and Electric Horn Combination

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QWCD35 Built-in standard sound	DC12V-24V	Max 1.30A	• Bit Input : 5Ch (SD Card) • Binary Input : 31Ch • Warning Sounds: 115dB • MP3 Messages : 113dB	CE DC Only	1.10kg	● R-Red ● A-Amber ● G-Green ● B-Blue
QWCD35SD MP3	AC110V-220V	Max 0.31A		UL DC Only	1.15kg	

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

QWCD35



Customization

- External signal line available for users to connect their own sound input (Model number : -LC)

Ordering Specification

QWCD35	-	110/220	-	R	-	LC
[Model number]		[Voltage]		[Color]		[sound selection]
• QWCD35 • QWCD35SD		• 12/24 -DC12V-24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue		• Standard -Built-in switch • LC -External contact

QWCD series

LED Strobe Signal Light and Electric Horn Combinations

IP66 | -30~+50°C | HORN | 123dB | SD mp3 | 118dB | NPN | RoHS

- **Qlight's exclusive innovative design - the horn cover emits light!**
- **Combination of 31 sound options built in and SD Card(MP3) option**





QWCD50 series

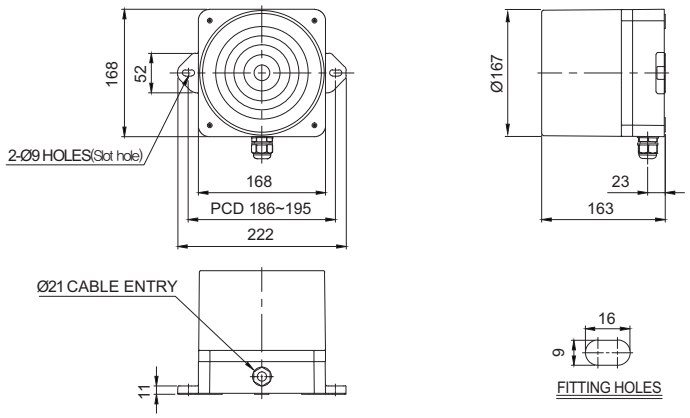
QWCD50 LED Strobe Light and Electric Horn Combination

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
QWCD50 Built-in standard sound	DC12V	6.4A	• Bit Input : 5Ch (SD Card) • Binary Input : 31Ch • Warning Sounds: 123dB • MP3 Messages : 118dB	CE DC Only	2.7kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	3.2A		UL DC Only	2.7kg	
QWCD50SD MP3	AC110V-220V	Max 0.600A			3.0kg	

※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

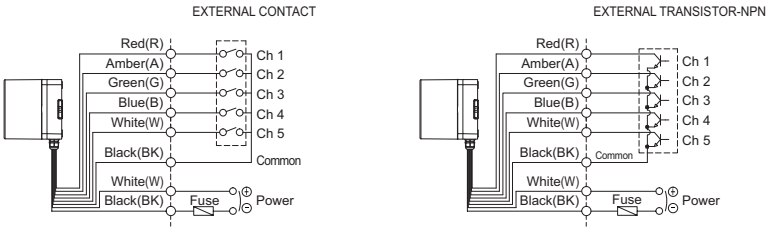
QWCD50



Wiring Instructions

- Standard specification : Use internal switches
- Customization : Use external contact

QWCD-DC/AC



- Wiring to external contact and transistor
- Wiring to transistor, use the NPN transistor
- Power line standard UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard UL1007 AWG22(0.3sq) 400mm
- DC type : Black output line is negative(-)
- Channel selection : Bit input, 5 sound tones for each group
- Binary input 31 sound tones output

* Please refer to Page 26 for set of channel input.
(If wiring is changed by channel selection switch)

Customization

- External sound selection line(Model number : -LC)

Ordering Specification

QWCD50	-	110/220	-	R	-	LC
[Model number]		[Voltage]		[Color]		[sound selection]
• QWCD50 • QWCD50SD		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue		• Standard -Built-in switch • LC -External contact

SJD series

Stackable Cube Tower Lights with Built-in Alarm

IP23 | -20~+50°C | HORN | 90dB | NPN



SJD

Common Specifications(SJD/ SJDL/ SJDS)

- Cube-shaped(95×95mm) stacked tower lights and audible alarm combinations
- Lamp can be selectable among bulb revolving, LED steady/flashing, xenon strobe depending on installation environment
- 5 Warning sounds, 5 Melodies, 5 Alarms, and 5 Customizable sounds available
- WV type : Input audio message needs to be provided to us by the customer prior to manufacturing
- Multiple stacked light segments conserves space
- Standard color arrangements are as below :
  1 Layer : ● R-Red
  2 Layers : ● R-Red ● G-Green
  3 Layers : ● R-Red ● A-Amber ● G-Green
- Materials : Lens-AS, Body-ABS, Reflector-Heat resistant ABS
- Protection rating : IP23

SJD Bulb Revolving Cube Tower Light

- Employs a special power transmission system that minimizes noise and wear
- Available in customized color arrangements
- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C

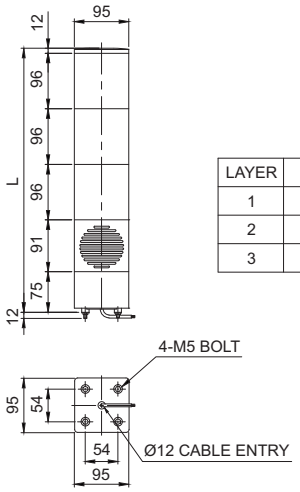
Model number	layer	Voltage	Current	Bulb			Sound Pattern and Volume	Certificates	Weight	Color
				Spec	Standard	Parts no				
SJD	1	DC12V	0.751A	12V5W	T16x35 15S	5	• WS-5 warning sounds : 90dB • WM-5 Melodies : 90dB • WA-5 Alarms : 80dB • WV-5 customizable sounds : 80dB	-	DC-1.41kg AC-1.79kg	● R-Red
		DC24V	0.521A	12V5W	T16x35 15S	6				
		AC110V	0.164A	12V5W	T16x35 15S	5				
		AC220V	0.082A	12V5W	T16x35 15S	5				
	2	DC12V	1.235A	12V5W	T16x35 15S	5			DC-1.65kg AC-2.04kg	● R-Red ● G-Green
		DC24V	0.831A	24V5W	T16x35 15S	6				
		AC110V	0.208A	12V5W	T16x35 15S	5				
		AC220V	0.104A	12V5W	T16x35 15S	5				
	3	DC12V	1.720A	12V5W	T16x35 15S	5			DC-1.90kg AC-2.29kg	● R-Red ● A-Amber ● G-Green
		DC24V	1.141A	24V5W	T16x35 15S	6				
		AC110V	0.191A	12V5W	T16x35 15S	5				
		AC220V	0.126A	12V5W	T16x35 15S	5				

※ Please refer to page 24 for detailed information about selectable sound patterns.

Technical Diagram

(Units : mm)

SJD/ SJDL/ SJDS



LAYER	L
1	274
2	370
3	466

SJD series

Stackable Cube Tower Lights with Built-in Alarm

IP23 | -30~+50°C | HORN | 90dB | NPN

A variety of pre-recorded sound patterns - warning sounds, melodies and alarms



SJDL/ SJDS

Do not apply a voltage to each signal line. It may cause damage to the product

- SJDL type can be wiring with external contact and transistor.
- Wiring to transistor, use the NPN transistor. Please wire properly based on technical diagram.
- Bulb type SJD and xenon lamp type can not be wiring with transistor.
- Please use external contact.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- External signal line standard : UL1007 AWG22(0.3sq) 400mm
- DC type : Black output line is negative(-)

Customization

- Customized color arrangements available

SJDL LED Steady/Flashing Tower Light

- Wide diffusion lens of 96mm height provides a powerful LED signal light
- Built-in switches for steady/flashing mode
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Layer	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
SJDL	1	DC12V	0.337A	• WS -5 Warning sounds : 90dB • WM -5 Melodies : 90dB • WA -5 Alarms : 85dB • WV - 5 Customizable sounds : 80dB	-	DC-1.63kg AC-1.63kg	● R-Red
		DC24V	0.326A				
		AC110V	0.124A				
		AC220V	0.062A				
	2	DC12V	0.488A			DC-1.80kg AC-1.80kg	● R-Red ● G-Green
		DC24V	0.442A				
		AC110V	0.140A				
		AC220V	0.070A				
	3	DC12V	0.600A			DC-2.04kg AC-2.04kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.557A				
		AC110V	0.155A				
		AC220V	0.077A				

※ Please refer to page 24 for detailed information about selectable sound patterns.

SJDS Xenon Lamp Strobe Tower Light

- Diffusion strong light offers long distance transmission of signal light
- Lamp connector fastening structure allows for convenient lamp replacement
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

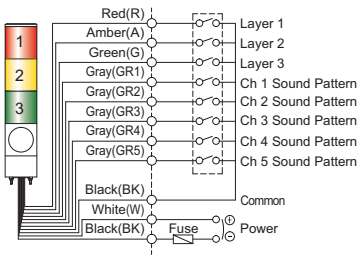
Model number	Layer	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
SJDS	1	DC12V	0.988A	• WS -5 Warning sounds : 90dB • WM -5 Melodies : 90dB • WA -5 Alarms : 85dB • WV - 5 Customizable sounds : 80dB	-	DC-1.25kg AC-1.66kg	● R-Red
		DC24V	0.600A				
		AC110V	0.195A				
		AC220V	0.137A				
	2	DC12V	1.171A			DC-1.45kg AC-1.84kg	● R-Red ● G-Green
		DC24V	0.988A				
		AC110V	0.328A				
		AC220V	0.244A				
	3	DC12V	2.433A			DC-1.64kg AC-2.03kg	● R-Red ● A-Amber ● G-Green
		DC24V	1.377A				
		AC110V	0.462A				
		AC220V	0.351A				

※ Please refer to page 24 for detailed information about selectable sound patterns.

Wiring Instructions

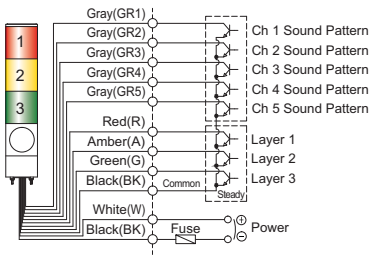
SJD/ SJDL/ SJDS-DC/AC

EXTERNAL CONTACT



SJDL-DC/AC

EXTERNAL TRANSISTOR-NPN



Ordering Specification

SJD	-	WA	-	3	-	220	-	RAG
[Model number]		[Sound selection]		[Layer]		[Voltage]		[Color]
• SJD • SJDL • SJDS		• WS-Warning • WM-Melody • WA-Alarm • WV-Customizable sound		• 1-1Layer • 2-2Layers • 3-3Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green

STD series

LED Steady/Flashing Tower light and Electric Horn Combinations

IP54 | -30~+50°C | HORN | 105dB | NPN | RoHS

A variety of pre-recorded sound patterns-warning sounds, melodies, and alarms



STD series

- STD series offers pre-recorded sounds
- For the WV(5 Customizable sounds) type, input audio messages needs to be provided by the customer prior to manufacturing



STDL is installed at Hi-Pass entrance on the expressway.

STDL LED Steady/Flashing Tower Light & Electric Horn

- LED steady/flashing mode
- Available in customized color arrangements
- Flashing rate : 60-80 flashes/min
- Ø80mm stackable light and electric horn combination provides both audible and visual signaling capability in one unit
- Can select the proper tone from a variety of built-in sound options to fit your application needs
- WV type : Input audio messages needs to be provided by the customer prior to manufacturing
- Multiple stacked light segments conserve space
- Standard color arrangements
  1 Layer : ● R-Red
  2 Layers : ● R-Red ● G-Green
  3 Layers : ● R-Red ● A-Amber ● G-Green
  4 Layers : ● R-Red ● A-Amber ● G-Green ● B-Blue
  5 Layers : ● R-Red ● A-Amber ● G-Green ● B-Blue ● W-Clear White
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature : -30°C to +50°C
- Protection ratings : IP54
- Certificates : CE Compliant
- Compliant with RoHS directive

Specifications

Model number	Layer	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
STDL Steady STDLF Steady/ Flashing	1	AC/DC12V	0.380A	• WS -5 Warning sounds : 105dB • WM -5 Melodies : 105dB • WA -5 Alarms : 103dB • WV -5 Customizable sounds : 95dB	CE DC24V Only	DC-0.80kg AC-1.39kg	● R-Red
		AC/DC24V	0.330A				
		AC110V	0.115A				
		AC220V	0.058A				
	2	AC/DC12V	0.490A			DC-0.91kg AC-1.36kg	● R-Red ● G-Green
		AC/DC24V	0.440A				
		AC110V	0.121A				
		AC220V	0.061A				
	3	AC/DC12V	0.600A			DC-1.05kg AC-1.49kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.550A				
		AC110V	0.127A				
		AC220V	0.064A				
	4	AC/DC12V	0.710A			DC-1.16kg AC-1.61kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.660A				
		AC110V	0.133A				
		AC220V	0.067A				
	5	AC/DC12V	0.820A			DC-1.30kg AC-1.74kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.770A				
		AC110V	0.139A				
		AC220V	0.070A				

※ Please refer to page 24 for detailed information about selectable sound patterns.

Customization

- Customized light sources and light mode

Model number	Lens Diameter	Lens Height	Light Mode	Tower Light Part Model
STD56EL(F)	Ø56mm	40mm	LED Steady/Flashing	ST56EL
STD56L(F)	Ø56mm	70mm	LED Steady/Flashing	ST56L
STDEL(F)	Ø80mm	40mm	LED Steady/Flashing	ST80EL

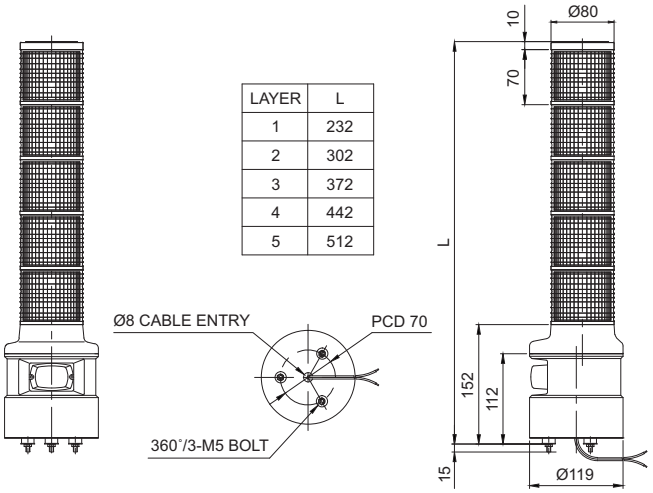
- Customized color arrangements available
- Wall mount brackets



Technical Diagram

(Units : mm)

STDL/ STDLF



LAYER	L
1	232
2	302
3	372
4	442
5	512

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- External signal line standard : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity(Non-polarity)

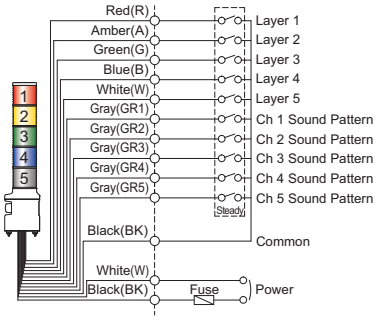
Do not supply power to each signal line. It may cause damage to the product

- STDL/ STDLF model wiring can be done with either external contact or external transistors.
- In case of wiring by using transistor, NPN transistor is needed and follow the wiring diagram on the right in order to wire properly.

Wiring Instructions

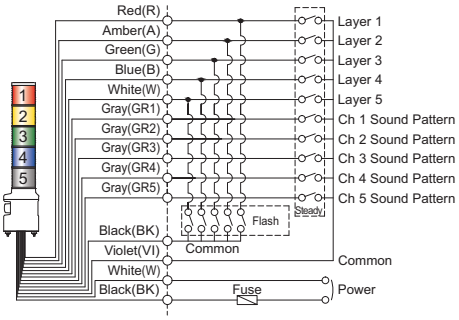
STDL-DC/AC (Steady)

EXTERNAL CONTACT



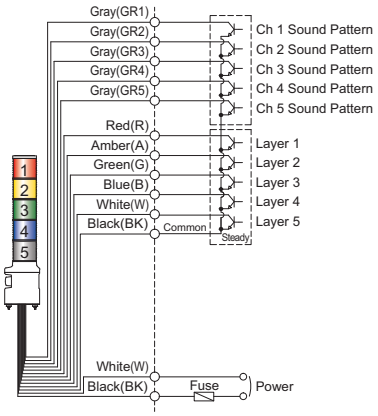
STDLF-DC/AC (Steady/Flashing)

EXTERNAL CONTACT



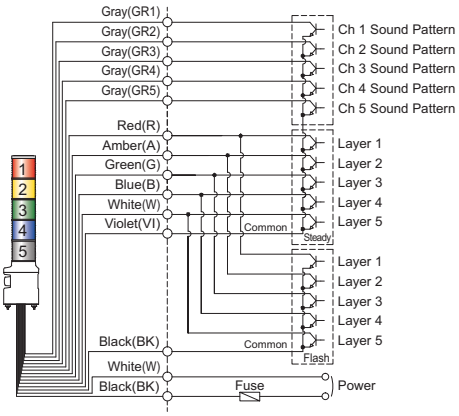
STDL-DC/AC (Steady)

EXTERNAL TRANSISTOR-NPN



STDLF-DC/AC (Steady/Flashing)

EXTERNAL TRANSISTOR-NPN



Ordering Specification

STDL	-	WA	-	3	-	220	-	RAG
[Model number]		[Sound selection]		[Layer]		[Voltage]		[Color]
• STDL • STDLF		• WS-Warning • WM-Melody • WA-Alarm • WV-Customizable sound		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

S100D series

Signal/ Warning Light and Electric Horn Combinations

IP54 | -20~+50℃ | -30~+50℃ | HORN | 105dB | NPN | RoHS

Various built-in sound tones of warning sounds, alarms and melodies



S100DLR



S100DL/ S100DS



S100D

Common Specifications(S100DLR/ S100DL/ S100DS/ S100D)

- Ø100mm signal/warning lights and electric horn combination provides both audible and visual signaling capability in one unit
- Can select the proper signaling effect from a variety of light sources and sound tones
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Protection rating : IP54
- Compliant with RoHS directive (S100DLR/ S100DL)

S100DLR LED Revolving Light & Electric Horn

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
S100DLR	DC12V	0.483A	• WS-5 Warning sounds : 105dB • WM-5 Melodies : 105dB • WA-5 Alarms : 103dB • WV-5 Customizable sounds : 95dB	-	0.89kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.327A			0.89kg	
	AC110V	0.120A			1.27kg	
	AC220V	0.060A			1.27kg	

S100DL LED Steady/Flashing Light & Electric Horn

- Flashing rate : 60-80 flashes/min
  (Built-in switch for selection between steady and flashing mode)
- Ambient operating temperature : -30°C to +50°C
- Certificates : CE Compliant

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
S100DL	DC12V	0.411A	• WS-5 Warning sounds : 105dB • WM-5 Melodies : 105dB • WA-5 Alarms : 103dB • WV-5 Customizable sounds : 95dB	CE	0.95kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.315A			0.95kg	
	AC110V	0.114A		-	1.16kg	
	AC220V	0.057A			1.16kg	

S100DS Xenon Lamp Strobe Light & Electric Horn

- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Bulb	Color
S100DS	DC12V	1.331A	• WS-5 Warning sounds : 105dB • WM-5 Melodies : 105dB • WA-5 Alarms : 103dB • WV-5 Customizable sounds : 95dB	-	0.76kg	48	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.899A			0.76kg		
	AC110V	0.231A			1.21kg		
	AC220V	0.155A			1.21kg		

S100D Bulb Revolving Light & Electric Horn

- Revolving Speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C
- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Sound Pattern and Volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
S100D	DC12V	1.266A	12V10W	T16x35 15S	9	• WS-5 Warning sounds : 105dB	CE DC24V only	0.96kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.766A	24V10W	T16x35 15S	10	• WM-5 Melodies : 105dB		0.96kg	
	AC110V	0.187A	12V10W	T16x35 15S	9	• WA-5 Alarms : 103dB		1.38kg	
	AC220V	0.094A	12V10W	T16x35 15S	9	• WV-5 Customizable sounds : 95dB		1.38kg	

※ Please refer to Page24 for detailed specification of sound tones.

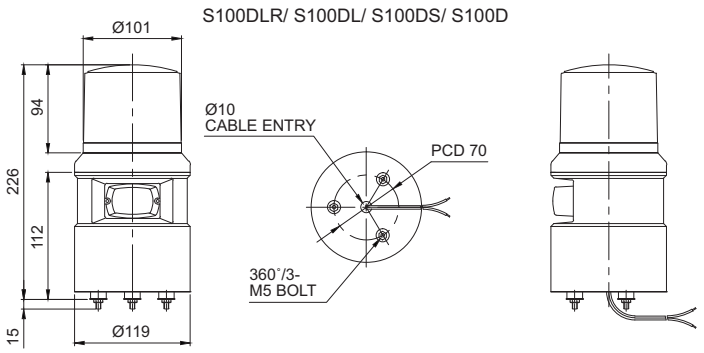


- S100D series come with prerecorded sounds.
- For WV(5Customized sounds)type, Input audio message needs to be provide by the customer prior to manufacturing.
- S100DL model wiring can be done with either external transistor wiring.
- In case of wiring by using transistor, NPN transistor is needed and follow the wiring diagram on the right in order to wire properly.

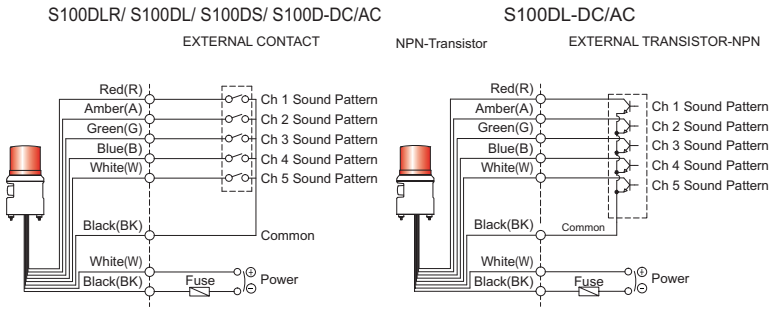


S100D applied to a metallic mold machine.

Technical Diagram (Units : mm)



Wiring Instructions



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- External signal line standard : UL1007 AWG22(03sq) 400mm
- DC type : Black output line is negative(-)

Do not apply voltage to each signal line. It may cause damage to the product.

By default the warning light is turned on when the power is supplied, the voice/ alarm output is powered on by a separate connection. Please wire properly.

Ordering Specification

S100D	-	WA	-	220	-	R
[Model number]		[Sound]		[Voltage]		[Color]
• S100DLR • S100DL • S100DS • S100D		• WS-Warning • WM-Melody • WA-Alarm • WV-Customizable sound		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

S125D series

Signal/ Warning Light and Electric Horn Combinations

IP54 | -20~+50℃ | -30~+50℃ | HORN | 105dB | NPN | RoHS

Various built-in sound tones of Warning sounds, Alarms and Melodies



S125DLR



S125DL/ S125DS



S125D

Common Specifications(S125DLR/ S125DL/ S125DS/ S125D)

- Ø125mm signal/ warning light and electric horn combinations provides both audible and visual signaling capability in one unit
- Can select the proper signaling from a variety of light source and sound tone
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Protection rating : IP54
- Compliant with RoHS directive (S125DLR/ S125DL)

S125DLR LED Revolving Light & Electric Horn

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
S125DLR	DC12V	0.483A	• WS-5 Warning sounds : 105dB • WM-5 Melodies : 105dB • WA-5 Alarms : 103dB • WV-5 Customizable sounds : 95dB	-	0.92kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.327A			0.92kg	
	AC110V	0.120A			1.29kg	
	AC220V	0.060A			1.29kg	

S125DL LED Steady/Flashing Light & Electric Horn

- Flashing rate : 60-80 flashes/min
  (Built-in switch for selection between steady and flashing mode)
- Ambient operating temperature : -30°C to +50°C
- Certificates : CE(DC24V) Compliant

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
S125DL	DC12V	0.517A	• WS-5 Warning sounds : 105dB • WM-5 Melodies : 105dB • WA-5 Alarms : 103dB • WV-5 Customizable sounds : 95dB	-	0.76kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.435A			0.76kg	
	AC110V	0.123A			1.16kg	
	AC220V	0.062A			1.16kg	

S125DS Xenon Lamp Strobe Light & Electric Horn

- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Bulb	Color
S125DS	DC12V	1.331A	• WS-5 Warning sounds : 105dB • WM-5 Melodies : 105dB • WA-5 Alarms : 103dB • WV-5 Customizable sounds : 95dB	-	0.78kg	48	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.899A			0.78kg		
	AC110V	0.231A			1.23kg		
	AC220V	0.155A			1.23kg		

S125D Bulb Revolving Light & Electric Horn

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to +50°C
- Certificates : CE Compliant

Model number	Voltage	Current	Bulb			Sound Pattern and Volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
S125D	DC12V	1.266A	12V10W	T16x35 15S	9	• WS-5 Warning sounds : 105dB	CE DC24V only	1.00kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.766A	24V10W	T16x35 15S	10	• WM-5 Melodies : 105dB		1.00kg	
	AC110V	0.187A	12V10W	T16x35 15S	9	• WA-5 Alarms : 103dB		1.41kg	
	AC220V	0.094A	12V10W	T16x35 15S	9	• WV-5 Customizable sounds : 95dB		1.41kg	

※ Please refer to Page24 for detailed specification of sound tones.

S125D series

Signal/ Warning Light and Electric Horn Combinations



- S125D series comes with prerecorded sounds.
- For WV(5Customized Sounds)type, Input audio message needs to be provide by the customer prior to manufacturing.
- S125DL model wiring can be done with either external contact or external transistors.
- In case of wiring by using transistor, NPN transistor is needed and follow the wiring diagram on the right in order to wire properly.

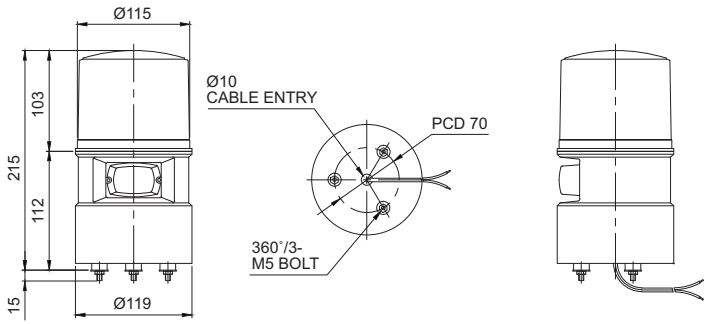


S125D is applied to a large press machine control panel.

Technical Diagram

(Units : mm)

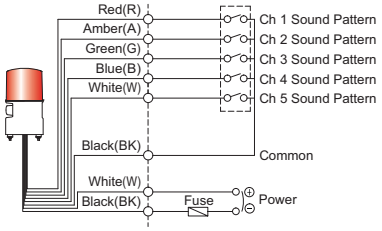
S125DLR/ S125DL/ S125DS/ S125D



Wiring Instructions

S125DLR/ S125DL/ S125DS/ S125D-DC/AC

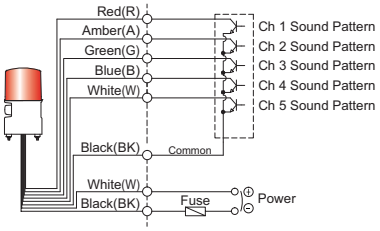
EXTERNAL CONTACT



S125DL-DC/AC

NPN-Transistor

EXTERNAL TRANSISTOR-NPN



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- External signal line standard : UL1007 AWG22(03sq) 400mm
- DC type : Black output line is Negative(-)

Do not apply voltage to each signal line. It may cause damage to the product.

By default the warning light is turned on when the power is supplied, the voice/ alarm output is powered on by a separate connection. Please wire properly.

Ordering Specification

S125D	-	WA	-	220	-	R
[Model number]		[Sound selection]		[Voltage]		[Color]
• S125DLR • S125DL • S125DS • S125D		• WS-Warning • WM-Melody • WA-Alarm • WV-Customizable sound		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

Warning lights with electric horn supports 30 prerecorded, 30 user defined sound tones(MP3)

- 6 Bit input, 5 sound tones for each group
- Binary input 30 sound tones output
- SD Card(MP3) support

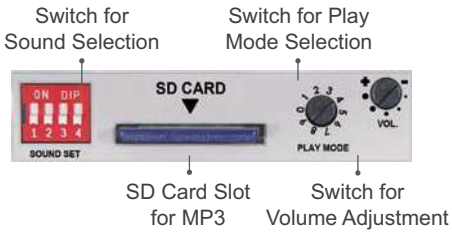


• Sound Tone Selection & Volume Control

STND series is a combination of warning light and signal horn that allows sound tone selection and volume control through a built-in control panel. In addition, it supports MP3 through an SD Card.

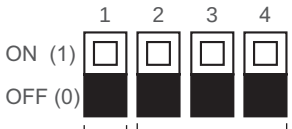
Multifunctional Type

• Features



• Sound Setup Switch

You can select between pre-recorded sound mode and SD Card sound (MP3) mode with the SOUND selection switch.



Group Choice in Bit Input Mode

001 : WS (5 Warning sounds)
010 : WP
(5 special warning sounds 1st group)
011 : WM (5 Melodies)
100 : WA (5 Alarms)
101 : WO
(5 special warning sounds 2nd group)
110 : WN
(5 special warning sounds 3rd group)

Sound Selection
0 : Built-in sound
1 : SD Card(MP3)

- Built-in sounds(5WS, 5WP, 5WM, 5WA, 5WO and 5WN)
- Support SD Card(MP3)
- Binary Input : 30Ch
- Bit input : 5Ch(6 groups)
- Support MP3 format through SD Card
- Detailed instructions for multi-functional products are shown on page 28

Common Specifications(STNDL/ STND100/ STND125)

- Combination of warning light and horn allows transmission of both visual and audible signals together
- Appropriate sound tones can be chosen depending on the various working environments among the various type of available sound tones
- Sound tone selector and volume controller in front of the device allows convenient use
- SD Card type allows user defined sound tone
- Built-in 30 sound tones, support binary and bit input modes
- Bit input mode consists of 5 sound types with 6 groups. Choose one of the groups to play 5 sounds from that group.(MP3 is separate from the 6 groups)
- Materials : Lens-AS, Housing-ABS, Reflector-Heat resistant ABS
- Ambient operating temperature
  -20°C to +50°C : STND100LR, STND100R, STND125LR, STND125R
  -30°C to +50°C : STNDL, STND100L, STND125L
- Protection rating : IP54

Built-in sounds 30

Multi-functional product has 30 built-in sound tones

Sound	Category	Ch	Sound Tone
WS	5 Warning sounds	Ch1	Fire.A-ANG
		Ch2	Emergency WA-U(Yelp)
		Ch3	Ambulance PI-PO(Hi- low)
		Ch4	Machinery Fault
		Ch5	Form Alarm
WP	5 special warning sounds (1st group)	Ch1	Fire.A-ANG
		Ch2	Abandon Alarm
		Ch3	Machinery Fault
		Ch4	High Expansion
		Ch5	7 Short PI. / 1 Long
WM	5 Melodies	Ch1	Sweet Home
		Ch2	For Elise
		Ch3	Cuckoo's Waltz
		Ch4	Piano Sonata
		Ch5	Turkish March

Sound	Category	Ch	Sound Tone
WA	5 Alarms	Ch1	Beep Intermittent
		Ch2	Door Chime
		Ch3	Phone Ring
		Ch4	PI.PI.PI Short
		Ch5	Tripping Beat
WO	5 special warning sounds (2nd group)	Ch1	Phone Ring
		Ch2	Police
		Ch3	Emergency
		Ch4	Phone Ring 2
		Ch5	911 siren
WN	5 special warning sounds (3rd group)	Ch1	Do-ong Do-ong
		Ch2	Di- Di-
		Ch3	PI.PI.PI long
		Ch4	Li long Li long
		Ch5	Siren

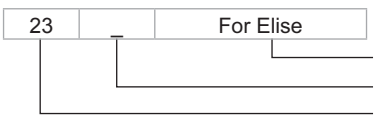
User-defined sound (MP3)

User-defined sound(MP3) type

Customer can create a playlist and grouping conveniently through PC. Product supports up to 32Gbyte. SD Card is an optional item.

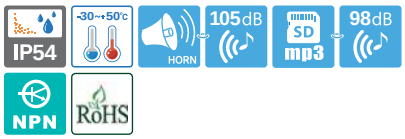
*SD Card needs to be purchased.

MP3 file naming



STND series

Multifunctional Signal/ Warning Lights with Built-in Buzzer





STND series

STNDL LED Steady/Flashing Lights & Electric Horn

- Lens colors are interchangeable
- Certificates : CE Compliant
- Compliant with RoHS directive

Model number	layer	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
STNDL Steady STNDLF Steady/ Flashing	1	DC12V	0.610A	• WS-Warning sound • WP-Special warning sound 1st group • WM-Melody • WA-Alarm • WO-Special warning sound 2nd group • WN-Special warning sound 3rd group • SD Card-MP3 Volume : 105dB • Bit input : 5Ch • Binary Input : 30Ch • Warning sound : 105dB • MP3 : 98dB	CE DC Only	DC-1.19kg AC-1.58kg	• R-Red
		DC24V	0.330A				
		AC110V	0.154A				
		AC220V	0.087A				
	2	DC12V	0.770A			DC-1.43kg AC-1.82kg	• R-Red • G-Green
		DC24V	0.410A				
		AC110V	0.162A				
		AC220V	0.092A				
	3	DC12V	0.930A			DC-1.67kg AC-2.06kg	• R-Red • A-Amber • G-Green
		DC24V	0.490A				
		AC110V	0.171A				
		AC220V	0.096A				
	4	DC12V	1.090A			DC-1.91kg AC-2.30kg	• R-Red • A-Amber • G-Green • B-Blue
		DC24V	0.570A				
		AC110V	0.182A				
		AC220V	0.102A				
	5	DC12V	1.250A			DC-2.15kg AC-2.54kg	• R-Red • A-Amber • G-Green • B-Blue • W-White
		DC24V	0.650A				
		AC110V	1.078A				
		AC220V	0.520A				

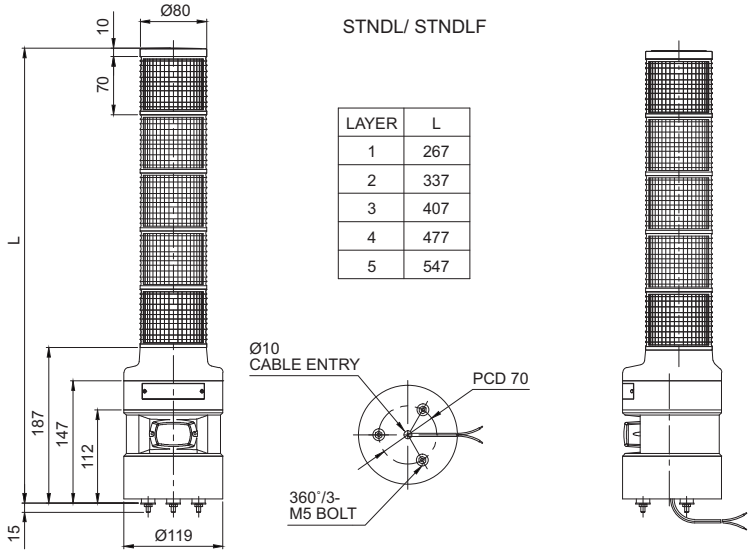




STND series has a front control panel for convinient sound signal control.

Technical Diagram

(Units : mm)



LAYER	L
1	267
2	337
3	407
4	477
5	547

Wiring Instructions

- External power line standard, UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard, UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity

※ Please refer to page143 for detailed wiring information.

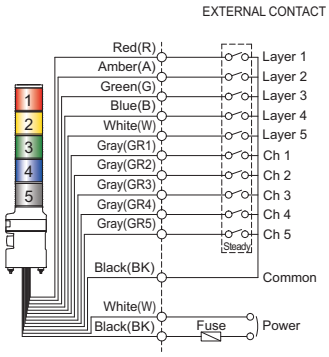
Ordering Specification

STNDL	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• STNDL • STNDLF		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

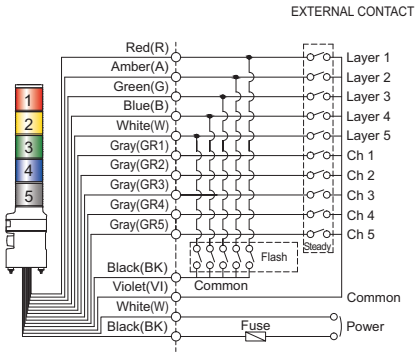
Wiring Instructions

External contact

STNDL-DC/AC (Steady)

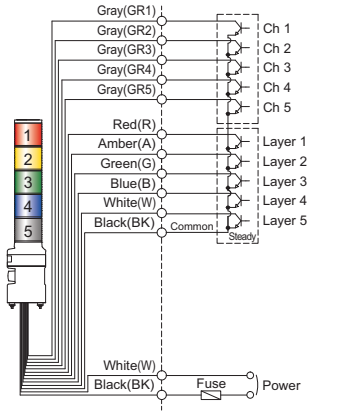


STNDLF-DC/AC (Steady/Flashing)

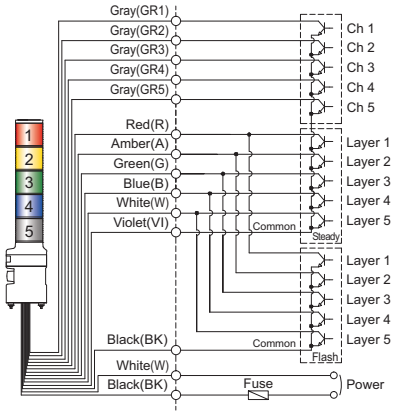


Transistor

STNDL-DC/AC (Steady)



STNDLF-DC/AC (Steady/Flashing)



- Product can be wired regardless of polarity.
- In case of Bit input, 5 sound tones can be played. For Binary input, 30 sound tones can be played.

※ Please refer to page28 for detailed channel input instruction. (Wiring Instructions substitutes for channel selection switch)

Do not apply power into each signal line. Product may be damaged

- NPN transistor(non-external contact control) can be enabled by using the flashing common line for the light source.
- Each unit's light source and signal sound do not operate identically even though multiple units are working at the same time.
- Do not short-circuit between steady common and flash common. Signal light won't work properly.

STND series

Multifunctional Signal/ Warning Lights with Built-in Buzzer

- 6 Bit input, 5 sound tones for each group
- Binary input 30 sound tones output
- SD Card(MP3) support



STND100LR



STND100L



STND100R

STND100LR LED Revolving Signal Light & Electric Horn Combination

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120-140RPM
- Compliant with RoHS directive

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
STND100LR	DC12V	0.880A	• Bit input : 5Ch • Binary Input : 30Ch • Warning sound : 105dB • MP3 : 98dB	-	1.40kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.520A			1.40kg	
	AC110V	0.180A			1.62kg	
	AC220V	0.110A			1.62kg	

STND100L LED Steady/Flashing Signal Light & Electric Horn Combination

- Excellent visibility that employs a special scattering lens
- Flashing rate : 60-80 flashes/min(Built-in switch for selection between steady and flashing mode)
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
STND100L	DC12V	0.750A	• Bit input : 5Ch • Binary Input : 30Ch • Warning sound : 105dB • MP3 : 98dB	CE DC Only	1.37kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.450A			1.37kg	
	AC110V	0.158A		UL DC24V Only	1.78kg	
	AC220V	0.090A			1.78kg	

STND100R Bulb Revolving Signal Light & Electric Horn Combination

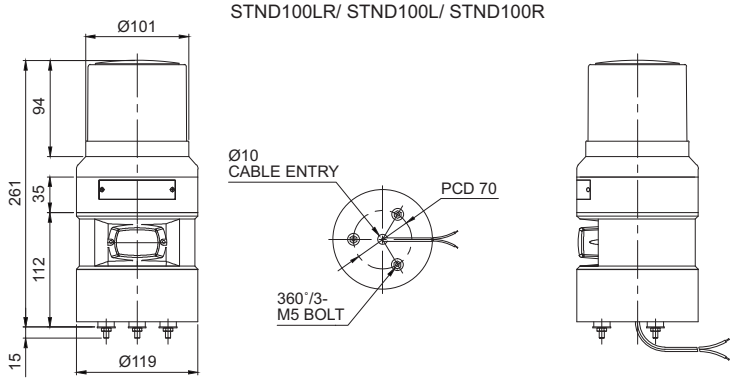
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Sound Pattern and Volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
STND100R	DC12V	1.420A	12V10W	T16x35 15S	9	• Bit Input : 5Ch • Binary Input : 30Ch • Warning sound:105dB • MP3:98dB	-	1.57kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.820A	24V10W	T16x35 15S	10			1.57kg	
	AC110V	0.230A	12V10W	T16x35 15S	9			1.82kg	
	AC220V	0.130A	12V10W	T16x35 15S	9			1.82kg	

Technical Diagram

(Units : mm)

STND100LR/ STND100L/ STND100R



Ordering Specification

STND100LR	-	24	-	R
[Model number]		[Voltage]		[Color]
• STND100LR • STND100L • STND100R		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

STND series

Multifunctional Signal/ Warning Lights with Built-in Buzzer

- **6 Bit input, 5 sound tones for each group**
- **Binary input 30 sound tones output**
- **SD Card(MP3) support**



STND125LR



STND125L



STND125R

STND125LR LED Revolving Signal Light & Electric Horn Combination

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120-140RPM
- Compliant with RoHS directive

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
STND125LR	DC12V	0.880A	• Bit input : 5Ch • Binary Input : 30Ch • Warning sound : 105dB • MP3 : 98dB	-	1.35kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.520A			1.35kg	
	AC110V	0.180A			1.73kg	
	AC220V	0.110A			1.73kg	

STND125L LED Steady/Flashing Signal Light & Electric Horn Combination

- Excellent visibility that employs a special scattering lens
- Flashing rate : 60-80 flashes/min(Built-in switch for selection between steady and flashing mode)
- Certificates : CE Compliant
- Compliant with RoHS directive

Model number	Voltage	Current	Sound Pattern and Volume	Certificates	Weight	Color
STND125L	DC12V	0.750A	• Bit input : 5Ch • Binary Input : 30Ch • Warning sound : 105dB • MP3 : 98dB	CE DC Only	1.32kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.450A			1.32kg	
	AC110V	0.158A			1.65kg	
	AC220V	0.090A			1.65kg	

STND125R Bulb Revolving Signal Light & Electric Horn Combination

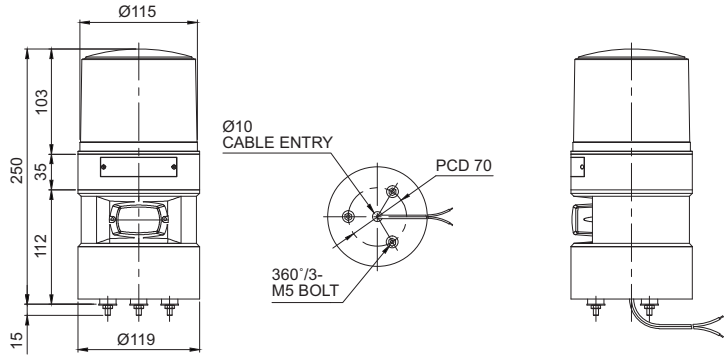
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Sound Pattern and Volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
STND125R	DC12V	1.420A	12V10W	T16x35 15S	9	• Bit Input : 5Ch • Binary Input : 30Ch • Warning sound:105dB • MP3:98dB	-	1.27kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.820A	24V10W	T16x35 15S	10			1.27kg	
	AC110V	0.230A	12V10W	T16x35 15S	9			1.62kg	
	AC220V	0.130A	12V10W	T16x35 15S	9			1.62kg	

Technical Diagram

(Units : mm)

STND125LR/ STND125L/ STND125R



Ordering Specification

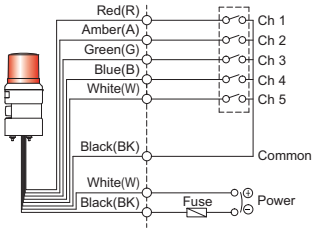
STND125LR	-	24	-	R
[Model number]		[Voltage]		[Color]
• STND125LR • STND125L • STND125R		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

Wiring Instructions



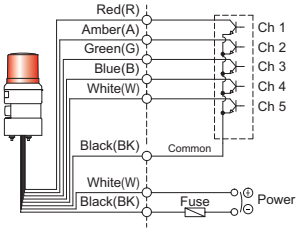
STND100R/STND100L/STND100LR/-DC/AC

EXTERNAL CONTACT



STND100DL-DC/AC

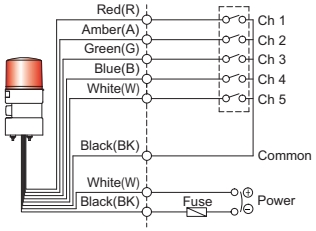
NPN-Transistor EXTERNAL TRANSISTOR-NPN





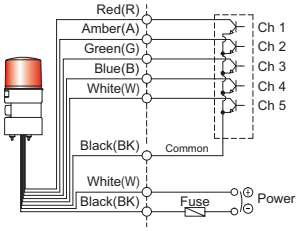
STND125R/STND125L/STND125LR/-DC/AC

EXTERNAL CONTACT



STND125DL-DC/AC

NPN-Transistor EXTERNAL TRANSISTOR-NPN



• In case of 6 Bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played.

※ Detailed instructions for multi-functional products are shown on page 28. (Wiring Instructions substitutes for channel selection switch)

Do not apply power into each signal line. Product may be damaged

• NPN transistor(non-external contact control) can be enabled by using the flashing common line for the light source.
• Each unit's light source and signal sound do not operate identically even though multiple units are working at the same time.
• Do not short-circuit between steady common and flash common. Signal light won't work properly.

TOTAL CATALOGUE

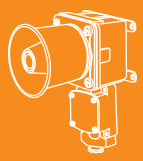
Signaling Products for Vessels and Heavy Industry Applications

INNOVATION IN ALARM & SIGNAL



SH1





SEWN30T



SHD





QA70HLS



SEHN50



Technical information 148

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Vibration and Shock of Heavy-Duty Products

Heavy-duty products must be tested by strict standards to withstand heavy vibration and shock environments.





Vibration Standard

- Test is conducted in 3 directions X, Y, Z, at 15g acceleration, frequency band 10Hz-200Hz (1.0 octave/ min), and 10mm maximum amplitude for four hours in Z direction and two hours in the X, Y direction. The test should be conducted for a total 8 hours.
  There should be no cracks on the exterior of the product or breakage, separation of components after the test, and should operate normally for two hours at its rated voltage.

Shock Standard

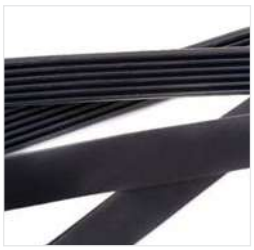
- Test is conducted in 3 directions X, Y, Z, at 100g impact acceleration for a 11ms duration.
  There should be no cracks on the exterior of the product or breakage, separation of components after the test, and should operate normally for two hours at its rated voltage.

Material Characteristics

Vessels and heavy-duty products require vibration, shock and corrosion resistant materials





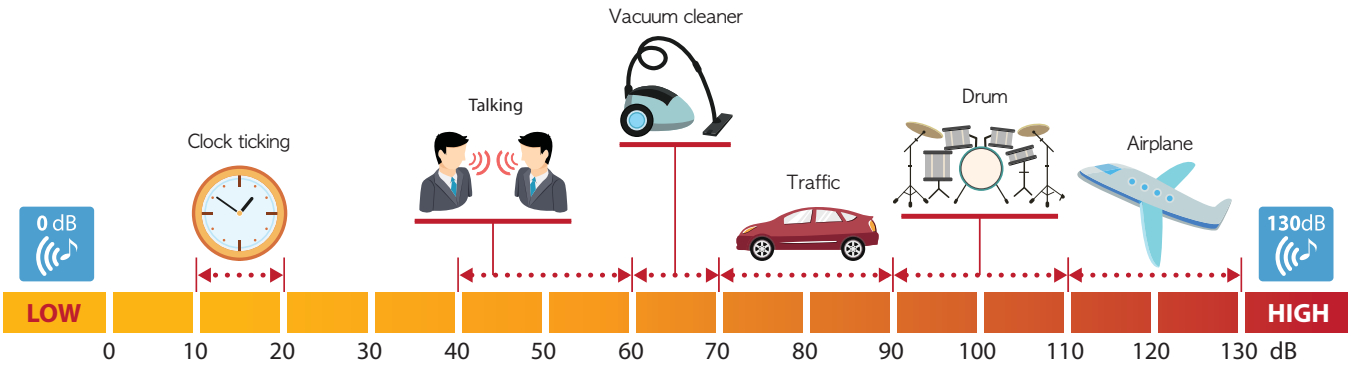


The characteristics of the materials that are mainly used in Qlight products

Material	Abbreviation	Characteristics
ABS resin	ABS	Has opaque gloss on the surface and has excellent shock resistance mainly used on exterior parts use of electrical and electronic components
Polycarbonate	PC	Has a high-strength and high-tensile chemical structure, with great electrical insulation and transparency, Mainly used on components that need impact resistance For example, transparent covers for car parts that requires transparency, and small electrical and electronic components, etc.
Acrylic	PMMA	Has a light transmittance over 90% with a high transparency, and has excellent chemical resistance to the external environment Mainly used for lens covers of interior lighting, and used for the replacement of glass in automobiles, aircraft, and ships
Aluminum	Al	Lightweight and durable, widely used throughout industry for its oxidation resistance Low density, low cost, and corrosion resistance- widely used in aerospace, transportation, architecture, cryogenic, and harsh environments
Bronze	BRASS	Bronze is an alloy of copper and tin. It has greater castability and abrasion resistance Mainly used in arts and crafts, valves, ship plates, statues, springs that require elasticity, parts of machinery, bearing materials, electrical, semiconductor materials
steel use stainless	SUS	The price is expensive compared to ordinary steel but has better corrosion resistance and there is no need for additional surface treatment Mainly used as external parts
Silicon rubber	Q(silicon)	For its cold resistance, heat-resistant, oil resistant, non-toxic, chemical resistance. It is mainly used in defense and aerospace industries, automotive, food containers, etc.
Nitrile rubber	NBR	Excellent resistance to high temperature and lubricant used mainly in oil sealing, gaskets, and oil hoses

Examples of Everyday Noise

In order to transmit sound effectively in noisy environments, products require a sound signaling device with a high volume. The volume of the signaling devices compared with the noise of everyday life is shown below.



Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications








Model number(Series)		QA70HLS	QA100HLS	QA115HLS	QA115HLSP	QA125HLS	QA125HLSP
Voltage		DC12V-24V	DC12V-24V	DC12V-24V	DC12V-24V	DC12V-24V	DC12V-24V
Dimension (mm)	Diameter	Ø72	Ø101	Ø107(Lens) Ø150(Housing)	Ø117	Ø123	Ø123
	Height	108	113	112	270	125	321
	Depth						
Materials		Lens-PC Housing-ABS+GF	Lens-PC Housing-ABS	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving						
	LED Revolving						
	LED Steady/Flashing						
	LED Strobe	•	•	•	•	•	•
	LED Simulated revolving						
	xenon Strobe						
Mounting type		Self stand	Self stand	Self stand	Pole mount	Self stand	Pole mount
Cable entry							
Protection rating		IP66	IP66	IP66	IP66	IP66	IP66
Certificates		-	CE	-	-	-	-
Customization							
Page		P154	P154	P155	P155	P156	P156







Model number(Series)		QA140HLSP	SH1	SH1P	SH1T	SH1TP
Voltage		DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø140	Ø119(Lens)	Ø135(Cage)	Ø119(Lens)	Ø135(Cage)
	Height	325	168	178	168	178
	Depth	-	-	-	234(Length)	234(Length)
Materials		Lens-PC Housing-PC	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing					
	Bulb Revolving		•	•	•	•
	LED Revolving		•	•	•	•
	LED Steady/Flashing		•	•	•	•
	LED Strobe	•				
	LED Simulated revolving					
	xenon Strobe		•	•	•	•
Mounting type		Pole mount	Self stand	Self stand	Self stand	Self stand
Cable entry		-	1/2"PF	1/2"PF	1/2"PF	1/2"PF
Protection rating		IP66	IP66	IP66	IP66	IP66
Certificates		CE, E11	KIMM, ABS, CCS, CE	KIMM, ABS, CCS, CE	CE	CE
Customization		-	Built-in cable gland, Cable entry : 3/4"PF	Built-in cable gland, Cable entry : 3/4"PF	Built-in cable gland, 2 ways terminal box, cable entry : 3/4"PF	Built-in cable gland, 2 ways terminal box, cable entry : 3/4"PF
Page		P157-158	P159-165	P159-165	P159-165	P159-165

Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications








Model number(Series)		SH2	SH2P	SH2T	SH2TP	SSLW	SSLM
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø138(Lens)	Ø158(Cage)	Ø138(Lens)	Ø158(Cage)	Ø93	Ø93
	Height	198	212	198	212	180-615	180-615
	Depth	-	-	250(Length)	250(Length)	43	43
Materials		Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving	●	●	●	●		
	LED Revolving	●	●	●	●		
	LED Steady/Flashing	●	●	●	●	●(Steady)	●(Steady)
	LED Strobe						
	LED Simulated revolving						
	xenon Strobe	●	●	●	●		
Mounting type		Self stand	Self stand	Self stand	Self stand	Wall mount	Wall mount
Cable entry		1/2″PF	1/2″PF	1/2″PF	1/2″PF	M12-5PIN connector	M12-5PIN connector
Protection rating		IP66	IP66	IP66	IP66	IP68	IP68
Certificates		KIMM, ABS, CE	KIMM, ABS, CE	CE	CE	-	-
Customization		Built-in cable gland, Cable entry : 3/4″PF, Brass housing	Built-in cable gland, Cable entry : 3/4″PF, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, Brass housing	C10 cable	C10 cable
Page		P159-165	P159-165	P159-165	P159-165	P181	P181








Model number(Series)		SED	SEDP	SD	SDP	SMD	SMDP
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø119(Lens)	Ø135(Cage)	Ø138(Lens)	Ø158(Cage)	Ø138(Lens)	Ø158(Cage)
	Height	380	390	410	424	462	476
	Depth	175	175	175	175	210	210
Materials		Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving	●	●	●	●	●	●
	LED Revolving	●	●	●	●	●	●
	LED Steady/Flashing	●	●	●	●	●	●
	LED Strobe						
	LED Simulated revolving						
	xenon Strobe	●	●	●	●	●	●
Sound pattern / dB	Hi buzzer						
	15 signal sounds	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 120dB at 1m	Max 120dB at 1m
	Voice signal	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 115dB at 1m	Max 115dB at 1m
	30 signal sounds						
	31 signal sounds						
	MP3						
Mounting type		Wall mount	Wall mount	Wall mount	Wall mount	Wall mount	Wall mount
Cable entry		1/2″PF	1/2″PF	1/2″PF	1/2″PF	1/2″PF	1/2″PF
Protection rating		IP66	IP66	IP66	IP66	IP66	IP66
Certificates		CE, KIMM, KR, CCS, ABS	CE, KIMM, KR, CCS, ABS	CE, KR, KIMM, LR, ABS	CE, KR, KIMM, LR, ABS	-	-
Customization		Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4″PF, External signal sound line, Brass housing
Transistor		NPN type	NPN type	NPN type	NPN type	NPN type	NPN type
Page		P175	P175	P176	P176	P177	P177

Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications








Model number(Series)		SCDF	SCDW	SHD	SHDP	SHD2	SHD2P
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø140(Cage)	Ø140(Cage)	Ø119(Lens)	Ø135(Cage)	Ø119(Lens)	Ø135(Cage)
	Height	322	313	227	237	227	237
	Depth	167(Length)	177	255(Length)	255(Length)	343(Length)	343(Length)
Materials		Lens-PC Housing-PC+GF	Lens-PC Housing-PC+GF	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al	Lens-PC Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving	•	•	•	•	•	•
	LED Revolving	•	•	•	•	•	•
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
	xenon Strobe	•	•	•	•	•	•
Sound pattern / dB	Hi buzzer						
	15 signal sounds	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 118dB at 1m	Max 118dB×2 at 1m	Max 118dB×2 at 1m
	Voice signal	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 113dB at 1m	Max 113dB×2 at 1m	Max 113dB×2 at 1m
	30 signal sounds						
	31 signal sounds						
	MP3						
Mounting type		Self mount	Wall mount	Self mount	Self mount	Self mount	Self mount
Cable entry		1/2"PF	1/2"PF	1/2"PF	1/2"PF	1/2"PF	1/2"PF
Protection rating		IP66	IP66	IP66	IP66	IP66	IP66
Certificates		KIMM, KR, CE	KIMM, KR, CE	KIMM, ABS, CE	KIMM, ABS, CE	KIMM, ABS	KIMM, ABS
Customization		Built-in cable gland, Cable entry : 3/4"PF, External signal sound line	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing
Transistor		NPN Type	NPN Type	NPN Type	NPN Type	NPN Type	NPN Type
Page		P170-172	P170-172	P166-169	P166-169	P166-169	P166-169




Model number(Series)		QWCD35	QWCD50
Voltage		DC12V-DC24V AC110V-220V	DC12V, DC24V AC110V-220V
Dimension (mm)	Diameter	136×179	168×222
	Height		
	Depth	126	163
Materials		Horn-PC Housing-PC+ABS	Horn-PC Housing-PC+ABS
Light source & Operation	Bulb Steady/Flashing		
	Bulb Revolving		
	LED Revolving		
	LED Steady/Flashing		
	LED Strobe	•	•
	LED Simulated revolving		
	xenon Strobe		
Sound pattern / dB	Hi buzzer		
	15 signal sounds		
	Voice signal		
	30 signal sounds		
	31 signal sounds	Max 115dB at 1m	Max 123dB at 1m
	MP3	Max 113dB at 1m	Max 118dB at 1m
Mounting type		Wall Mount	Wall Mount
Cable entry		Ø21	Ø21
Protection rating		IP66	IP66
Certificates		CE, UL	CE, UL
Customization		External signal sound line	External signal sound line
Transistor		NPN Type	NPN Type
Page		P131	P132

Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications








Model number(Series)		QWH35	QWH50	SN	SEHN25	SEHN50	SEWN30E
Voltage		DC12V-DC24V AC110V-220V	DC12V, DC24V AC110V-220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	136×179	168×222	Ø119(Horn)	Ø158(Horn)	Ø167(Horn)	Ø120(Horn)
	Height						
	Depth	126	163	167(Length)	238(Length)	242(Length)	175
Materials		Horn-PC Housing-PC +ABS	Horn-PC Housing-PC +ABS	Housing-Steel	Housing-Steel	Housing-Steel	Housing-Al Horn Housing-PC
Sound pattern / dB	15 signal sounds			Max 105dB at 1m	Max 115dB at 1m	Max 120dB at 1m	Max 118dB at 1m
	Voice signal			Max 95dB at 1m	Max 108dB at 1m	Max 115dB at 1m	Max 113dB at 1m
	30 signal sounds						
	31 signal sounds	Max 115dB at 1m	Max 123dB at 1m				
	MP3	Max 113dB at 1m	Max 118dB at 1m				
Mounting type		Wall mount	Wall mount	Self stand	Self stand	Self stand	Wall mount
Cable entry		Ø21	Ø21	Ø10	Ø21	Ø21	1/2"PF
Protection rating		IP66	IP66	IP55	IP55	IP55	IP56
Certificates		CE	CE	KIMM	KIMM	KIMM	KIMM, ABS, CCS, CE
Customization		-	-	External signal sound line	External signal sound line	External signal sound line	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing
Transistor		NPN type	NPN type	NPN type	NPN type	NPN type	NPN type
Page		P183-184	P183-184	P185	P185	P186	P188








Model number(Series)		SEWN30L	SEWN30T	SEWN50E	SEWN50L	SEWN50T	SHDN30
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø120(Horn)	Ø120(Horn)	Ø172(Horn)	Ø172(Horn)	Ø172(Horn)	Ø120(Horn)
	Height	-	223	-	-	272	134
	Depth	170(Length)	175	208	203(Length)	208	335(Length)
Materials		Housing-Al Horn Housing-PC	Housing-Al Horn Housing-PC	Housing-Al Horn Housing-SUS316L	Housing-Al Horn Housing-SUS316L	Housing-Al Horn Housing-SUS316L	Housing-Al Horn Housing-PC
Sound pattern / dB	15 signal sounds	Max 118dB at 1m	Max 118dB at 1m	Max 120dB at 1m	Max 120dB at 1m	Max 120dB at 1m	Max 118dB at 1m×2
	Voice signal	Max 113dB at 1m	Max 113dB at 1m	Max 115dB at 1m	Max 115dB at 1m	Max 115dB at 1m	Max 113dB at 1m×2
	30 signal sounds						
	31 signal sounds						
	MP3						
Mounting type		Self stand	Wall mount	Wall mount	Self stand	Wall mount	Self stand
Cable entry		1/2"PF	1/2"PF	1/2"PF	1/2"PF	1/2"PF	1/2"PF
Protection rating		IP56	IP56	IP56	IP56	IP56	IP56
Certificates		CE	CE	CE, KIMM, ABS	CE	CE	-
Customization		Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, Cable entry : 3/4"PF, External signal sound line, Brass housing	Built-in cable gland, 2 ways terminal box, Cable entry : 3/4"PF, External signal sound line, Brass housing	External signal sound line, Cable entry : 3/4"PF
Transistor		NPN Type	NPN Type	NPN Type	NPN Type	NPN Type	NPN Type
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Model number(Series)		SM30	SM40	SM200	SM400	SAB130	SAB200
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø77	Ø128	Ø143	Ø165	Ø130(Bell)	Ø200(Bell)
	Height	-	-	-	-	238	269
	Depth	82(Length)	162(Length)	231(Length)	284(Length)	107	107
Materials		Housing-Steel	Housing-ABS	Housing-Steel	Housing-Steel	Bell-Steel Housing-ABS	Bell-Steel Housing-ABS
Volume		Max 110dB at 1m	Max 116dB at 1m	Max 120dB at 1m	Max 123dB at 1m	Max 95dB at 1m	Max 95dB at 1m
Mounting type		Self stand	Self stand	Self stand	Self stand	Wall mount	Wall mount
Cable entry		Ø22	Ø22	Ø9	Ø22	Ø26	Ø26
Protection rating		IP44	IP44	IP44	IP44	IP56	IP56
Certificates		-	-	CE	-	-	-
Customization		-	-	-	-	2 ways cable entries	2 ways cable entries
Page		P192	P192	P193	P193	P194	P1924

Product Specification List for Vessels and Heavy-Duty Equipment/ Industrial Applications





Model number(Series)		SC1	SC2	SC3			
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V			
Dimension (mm)	Diameter	150(Width)	174(Width)	244(Width)			
	Height	287	312	381			
	Depth	200	232	292			
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-PC Housing-Al			
Light source & Operation	Bulb Steady/Flashing	•	•	•			
	Bulb Revolving	•	•	•			
	LED Revolving	•	•	•			
	LED Steady/Flashing	•	•	•			
	LED Strobe	•	•	•			
	LED Simulated revolving	•	•	•			
	xenon Strobe	•	•	•			
Sound pattern / dB	Hi buzzer						
	15 signal sounds	Max 108dB at 1m	Max 115dB at 1m	Max 120dB at 1m			
	Voice signal	Max 98dB at 1m	Max 108dB at 1m	Max 115dB at 1m			
	30 signal sounds						
	31 signal sounds						
	MP3						
Mounting type		Wall mount	Wall mount	Wall mount			
Cable entry		-	-	1/2"PF			
Protection rating		IP44	IP44	IP56			
Certificates							
Customization							
Page		P179	P179	P180			






Model number(Series)		SANA200	SANA400	SANA700	QEB
Voltage		DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø146(Horn)	Ø110(Horn)	Ø101(Horn)	120×120
	Height	222	222	222	-
	Depth	333	193	144	119
Materials		Horn-PC Solenoid Box-ABS	Horn-PC Solenoid Box-ABS	Horn-PC Solenoid Box-ABS	Housing, Cover-Al
Volume		Max 130dB at 1m	Max 130dB at 1m	Max 130dB at 1m	-
Mounting type		Wall mount	Wall mount	Wall mount	Wall mount
Cable entry		20C, 10C nipple(Air)	20C, 10C nipple(Air)	20C, 10C nipple(Air)	1/2"NPT, 10C nipple(Air)
Protection rating		IP56	IP56	IP56	IP66
Certificates		KIMM	KIMM	KIMM	KIMM
Customization		Separate design between horn and solenoid box, Non return valve, Built-in Y filter	Separate design between horn and solenoid box Non return valve, Built-in Y filter	Separate design between horn and solenoid box, Non return valve, Built-in Y filter	Built-in Ex-Proof cable gland, 2 ways entries, Cable entry : 3/4"NPT
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QA70HLS/ QA100HLS

LED Strobe Warning Lights for Heavy-Duty Equipment

IP66 -30~+50°C

QA70HLS-Ø70mm
QA100HLS-Ø100mm



QA70HLS



QA100HLS



Common Specifications(QA70HLS/ QA100HLS)

- Uses Qlight's original high brightness LED diffusion system that allows for operation outdoors in intense sunlight conditions
- Excellent vibration and shock resistant structure for superior durability
- Fully enclosed structure that can withstand storm and severe dust environments (IP66)
- Materials : Lens-PC, Housing-ABS+GF(for QA70HLS)/ ABS(for QA100HLS)
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP66
- Vibration resistant and shock-proof : can withstand 15g of vibration and 100g of shock

QA70HLS LED Strobe Warning Light

- Mountable with two bolts on the main structure of the warning light for convenient assembly
- Suitable for small agricultural machines
- Flashing rate : 45-55 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA70HLS	DC12V-24V	Max 0.620A	-	0.23kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

QA100HLS LED Strobe Warning Light

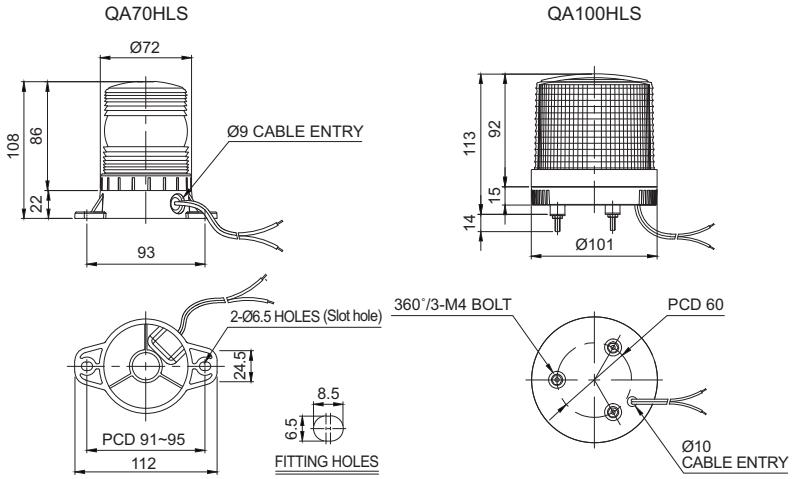
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA100HLS	DC12V-24V	Max 1.200A	CE	0.39kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

Technical Diagram

(Units : mm)



Wiring Instructions

- QA70HLS Model : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
- QA100HLS Model : External power line standard KSC3304 (0.85sq)×2C 400mm
- Both models can be wired regardless of polarity

Ordering Specification

QA100HLS	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• QA70HLS • QA100HLS		• 12/24-DC12V-24V		● R-Red ● A-Amber

QA115HLS series

LED Strobe Warning Lights for Heavy-Duty Equipment

IP66 -30~+50°C

QA115HLS-Ø115mm
QA115HLSP-Ø115mm

Applies Qlight's exclusive patented light diffusion system



QA115HLS



QA115HLSP

Common Specifications(QA115HLS/ QA125HLS)

LED Strobe warning lights for heavy-duty equipment applications, featuring superior luminous efficiency with Qlight's exclusive light diffusion system

- Ability to compensate for signal attenuation phenomenon that occurs during daytime operation with a powerful xenon lamp.
- Can select between pole mount and direct mount type to fit your application needs
- Materials : Lens-PC, Housing-PC
- Ambient operation temperature : -30°C to +50°C
- Protection rating : IP66
- Vibration resistant and shock-proof : Can withstand 15g of vibration and 100g of shock

QA115HLS/ QA115HLSP LED Strobe Warning Lights

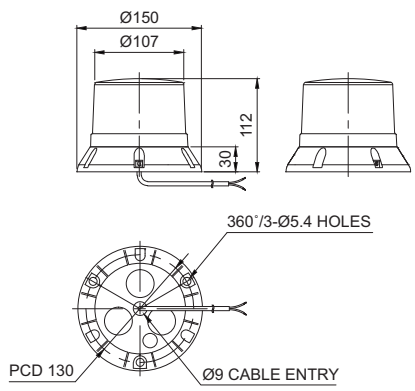
- Pole mount type model consists of a shock-proof rubber body; this feature provides excellent durability to vibration and shock
- Flashing rate : 45-55 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA115HLS	DC12V-24V	Max 0.730A	-	1.06kg	● R-Red
QA115HLSP				1.22kg	● A-Amber

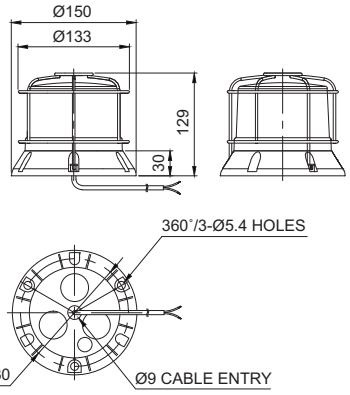
※ DC type model has a free-voltage range of 10V-30V.

Technical Diagram (Units : mm)

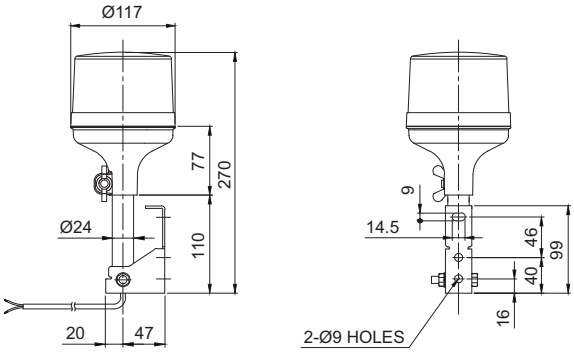
QA115HLS



QA115HLS-P



QA115HLSP



Ordering Specification

QA115HLSP	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• QA115HLS • QA115HLSP		• 12/24 -DC12V-24V		● R-Red ● A-Amber

Wiring Instructions

- External power line standard : UL2464 18AWG×2C 400mm
- Product can be wired regardless of polarity

Customization

- User selected connector type available upon request
- Built-in protection cage (QA115HLS-P)

QA125HLS series

LED Strobe Warning Lights for Heavy-Duty Equipment

IP66 -30~+50℃

QA125HLS-Ø125mm
QA125HLSP-Ø125mm



QA125HLS



QA125HLSP

QA125HLS LED Strobe Warning Light

• Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
QA125HLS	DC12V-24V	Max 1.650A	-	0.55kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

QA125HLSP LED Strobe Warning Light

• Flashing rate : 60-80 flashes/min

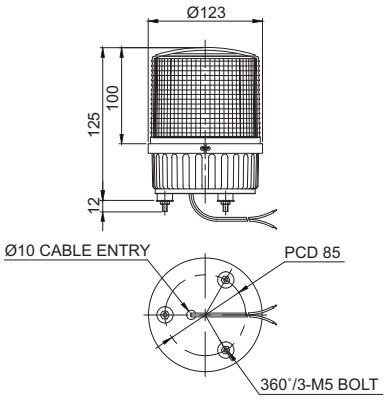
Model number	Voltage	Current	Certificates	Weight	Color
QA125HLSP	DC12V-24V	Max 1.650A	-	1.00kg	● R-Red ● A-Amber

※ DC type model has a free-voltage range of 10V-30V.

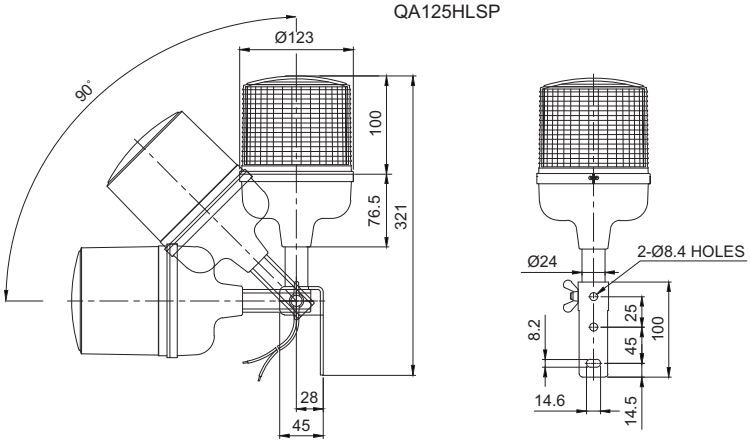
Technical Diagram

(Units : mm)

QA125HLS



QA125HLSP



Wiring Instructions

• External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• Product can be wired regardless of polarity

Ordering Specification

QA125HLS	-	12/24	-	R
[Model number]		[Voltage]		[Color]
• QA125HLS • QA125HLSP		• 12/24-DC12V-24V		● R-Red ● A-Amber

- **Ø140mm high-intensity LED strobe warning lights for heavy-duty equipment**
- **Applies Qlight's exclusive patented diffusion lens and reflector system to maximize its light output**



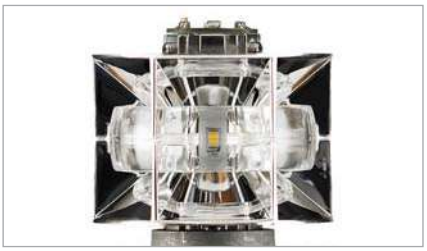
QA140HLSP

Common Specifications(QA140HLSP/ QA140DLSP)

- Applies a special built-in filter to compensate for shortcomings of the LED warning light when attenuation to sunlight in bright outdoor environments occur
- Wide angle filter provides excellent visibility from top to bottom
- Vibration resistant and shock-proof : Can withstand 15g of vibration and 100g of shock
- Pole mount type
- Equipped with angel-adjustable bracket
- Flashing rate : 60-80 flashes/min
- Materials : Housing-PC, Diffusion lens-PC, Lens-PC, Reflector-Heat resistant ABS, Bracket-SUS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP66
- Designed for heavy equipment applications
- Certificates : CE Compliant, E11
- Compliant with RoHS directive

Superior light output through the Qlight's exclusive diffusion lens and reflector

The inner ring-shaped diffusion lens is specially designed to help minimize the loss of light output. The inner diffusion lens and reflector structure allows for light to be spread both horizontally and vertically for accurate signal light transmission.



Standard Model



High Brightness Model

Ensuring visibility with wide angle light output

To compliment the drawbacks of a typical one directional LED, The patented light emitting structure is designed to secure a wide viewing angel. Thus, eliminating potential disadvantages of mounting a typical LED at a higher position. It's design allows for easy visibility at close ranges and high mounting positions.



QA140HLSP series

LED Strobe Warning Lights for Heavy-Duty Equipment

IP66 | -30~+50℃ | RoHS



Excellent durability and shockproof by using high hardness PC material for the lens.



Bendable pole structure prevents damage from external impact.

Vibration resistant, shock-proof, dustproof, and waterproof products

Durable and enclosed product structure was produced for direct exposure to the environments of heavy equipment such as vibration and shock, dust and water.

Bendable pole structure prevents damage from external impact

Pole mount product is designed to prevented damage from external impact by bending in the opposite direction when impact occurs.

QA140HLSP LED Strobe Warning Light

Model number	Brightness type	Brightness	Voltage	Current	Certificates	Weight	Color
QA140HLSP	Standard	110Lux	DC12V	0.820A	CE DC24V Only	1.16kg	● R-Red ● A-Amber
			DC24V	0.600A	E11		

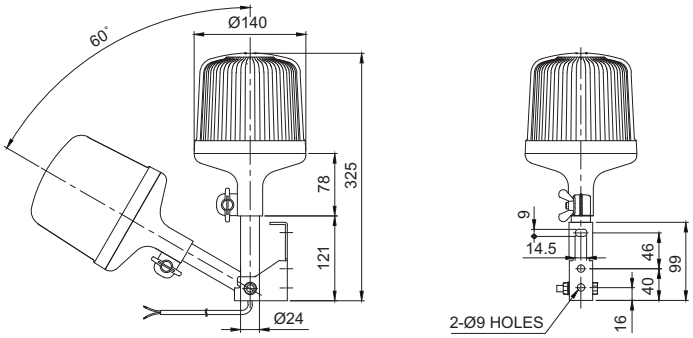
QA140DLSP LED Strobe Warning Light

Model number	Brightness type	Brightness	Voltage	Current	Certificates	Weight	Color
QA140DLSP	High brightness	170Lux	DC12V	1.640A	-	1.18kg	● R-Red ● A-Amber
			DC24V	1.040A			

Technical Diagram

(Units : mm)

QA140HLSP



Wiring Instructions

- External power line standard : KSC3304 0.85sq×2C 400mm
- Product can be wired regardless of polarity

Customization

- Connector type wiring products

Ordering Specification

QA140HLSP	-	12	-	R
[Model number]		[Voltage]		[Color]
• QA140HLSP • QA140DLSP		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber

Superior durability with fully enclosed structure and corrosion resistance, suitable for vessels and heavy industry applications

- **SH1 series-Ø125mm**
- **SH2 series-Ø150mm**

Common Specifications

- Aluminum housing and polycarbonate lens material provides excellent impact resistance under seismic conditions
- Excellent hermetic structure that blocks water and dust
- Can select a variety of light sources (Bulb, LED, and xenon) for your application needs and environmental conditions
- Terminals located inside the terminal box or product
- Cable entry : 1/2″PF
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector for LED type-PC/ Reflector for bulb type-Heat resistant ABS
- Housing standard color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

■ A Variety of Selectable Light Source and Function Combinations

You can select from a variety of light sources for your work environment, condition, and purpose. Basic specifications are as follows :

- LED revolving type
- LED steady/flashing type
- xenon lamp strobe type
- Bulb revolving type

User-selected LED strobe type and LED simulated revolving type are available upon request.



1 Lenses

- Utilizes a strong and durable polycarbonate material with excellent shock and vibration resistance
- The lens surface has two types depending on the light source function-Light diffusion type and light transmission type

Light transmission type		LED revolving type Bulb revolving type	SH( )LR SH( )
Light diffusion type		LED steady/flashing type xenon lamp strobe type	SH( )L/LF SH( )S

2 Protection cage

- The durable protection cage is made of corrosion resistant stainless steel that prevents damage to the lens from external contact
- Materials : SUS316L

3 Housing

- The special aluminum body housing features superior durability
- The housing is corrosion resistant from a special anodized surface treatment process
- Materials : Al

4 Fully enclosed structure

- The tightly sealed warning light structure is waterproof and dustproof
- Protection rating : IP66

5 Terminal box

- Terminal box is located on the side of housing for easy wiring
- Materials : Al

6 Brackets

- Stainless steel mounting bracket is conveniently attached to the outer surface of the product
- Materials : SUS

SH1/SH2 series Product Categories



Standard model
- Protection cage or terminal box not attached
- Terminals located inside the housing
- Use in environments that has low probability of damage to the lens due to external forces
- SH1/SH2 series is available in this model



Terminal box mounted type
- Equipped with a terminal box for easy wiring
- Terminal box enables easy wiring
- Use in environments that has low probability of damage to the lens due to external forces
- SH1T( )/ SH2T( ) is available in this model



Protection cage mounted type
- Equipped with a Protection cage
- Terminals located inside the housing
- Damage to the lens from external forces can be prevented with protection cage
- SH1( )P/SH2( )P is available in this model



Terminal box and protection cage mounted type
- Equipped with a protection cage and a terminal box
- Terminal box enables easy wiring
- Damage to the lens from external forces can be prevented with protection cage
- SH1T( )P/ SH2T( )P is available in this model

SH1LR/ SH2LR series

Heavy-Duty LED Revolving Warning Lights for Vessels and Heavy Industry Applications

IP66 -20~+50℃

- **SH1LR-Ø125mm**
- **SH2LR-Ø150mm**



SH1LR



SH2LRP

SH1LR/SH2LR models are equipped with flexible connector, and SH1TLR/ SH2TLR models are equipped with 15C nipple at cable entry.



Flexible connector



15C nipple

Common Specifications(SH1L/ SH2L)

- Features high visibility in all directions with special concentrated LED light structure and multi side reflector
- Revolving speed : 120-140RPM
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector for LED : PC
- Ambient operation temperature : -20°C to +50°C
- Cable entry : 1/2″PF
- Housing standard color : MUNSELL No.7.5BG 7/2
- Protection rating : IP66

SH1LR LED Revolving Warning Light

- Certificates : KIMM, ABS, CCS

Model number	Voltage	Current	Certificates	Color
• SH1LR Standard type • SH1LRP Protection cage type • SH1TLR Terminal box type • SH1TLRP Protection cage and terminal box type	DC12V	0.422A	KIMM ABS CCS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.266A		
	AC110V	0.082A		
	AC220V	0.041A		

SH2LR LED Revolving Warning Light

- Certificates : KIMM, ABS

Model number	Voltage	Current	Certificates	Color
• SH2LR Standard type • SH2LRP Protection cage type • SH2TLR Terminal box type • SH2TLRP Protection cage and terminal box type	DC12V	0.422A	KIMM ABS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.266A		
	AC110V	0.082A		
	AC220V	0.041A		

SH1LR/SH2LR LED Reflector Warning Lights Specification Category and Products Weight Chart

Type	SH1 series		SH2 series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1LR (1.64kg)		SH2LR (1.69kg)
Built-in protection cage		SH1LRP (1.89kg)		SH2LRP (1.98kg)
Built-in terminal box		SH1TLR (2.10kg)		SH2TLR (2.15kg)
Built-in protection cage &Terminal box		SH1TLRP (2.35kg)		SH2TLRP (2.44kg)

※ Product weight is based on AC type.

Ordering Specification

SH1LR	-	12	-	R
[Model number]		[Voltage]		[Color]
• SH1LR • SH1LRP • SH1TLR • SH1TLRP • SH2LR • SH2LRP • SH2TLR • SH2TLRP		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SH1L/ SH2L series

Heavy-Duty Steady/ Flash Signal Lights for Vessels and Heavy Industry Applications

IP66 -30~+50℃

- **SH1L-Ø125mm**
- **SH2L-Ø150mm**



SH1LP



SH2TLP

SH1L/SH2L models are equipped with flexible connector, and SH1TL/SH2TL models are equipped with 15C nipple at cable entry.



Flexible connector



15C nipple

Common Specifications(SH1L/ SH2L)

- Uniform and clear light diffusion with multi layered LED light distribution reflector
- Built-in switch for selection between steady and flashing mode
- Flashing rate : 60-80 flashes/min
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector- Heat resistant ABS
- Ambient operation temperature : -30°C to +50°C
- Cable entry : 1/2″PF
- Protection rating : IP66

SH1L LED Steady/Flashing Signal Light

- Certificates : KIMM, ABS, CCS

Model number	Voltage	Current	Certificates	Color
• SH1L Standard type • SH1LP Protection cage type • SH1TL Terminal box type • SH1TLP Protection cage and terminal box type	DC12V	0.300A	KIMM ABS CCS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.200A		
	AC110V	0.060A		
	AC220V	0.030A		

SH2L LED Steady/Flashing Signal Light

- Certificates : KIMM, ABS

Model number	Voltage	Current	Certificates	Color
• SH2L Standard type • SH2LP Protection cage type • SH2TL Terminal box type • SH2TLP Protection cage and terminal box type	DC12V	0.300A	KIMM ABS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.200A		
	AC110V	0.060A		
	AC220V	0.030A		

SH1L/SH2L LED Steady/Flashing Signal Lights Specification Category and Products Weight Chart

Type	SH1 series		SH2 series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1L (1.49kg)		SH2L (1.57kg)
Built-in protection cage		SH1LP (1.74kg)		SH2LP (1.86kg)
Built-in terminal box		SH1TL (1.95kg)		SH2TL (2.03kg)
Built-in protection cage &Terminal box		SH1TLP (2.20kg)		SH2TLP (2.32kg)

※ Product weight is based on AC type.

Ordering Specification

SH2L	-	220	-	R
[Model number]		[Voltage]		[Color]
• SH1L • SH1LP • SH1TL • SH1TLP • SH2L • SH2LP • SH2TL • SH2TLP		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SH1S/ SH2S series

Heavy-Duty Xenon Lamp Strobe Signal Lights for Vessels and Heavy Industry Applications

IP66 -30~+50℃

- **SH1S-Ø125mm**
- **SH2S-Ø150mm**



SH1S



SH2TS

SH1S/SH2S models are equipped with flexible connector, and SH1TS/SH2TS models are equipped with 15C nipple at cable entry.



Flexible connector



15C nipple

Common Specifications(SH1S/ SH2S)

- Convenient lamp change with connector type connection structure
- Flashing rate : 60-80 flashes/min
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L
- Ambient operation temperature : -30°C to +50°C
- Cable entry : 1/2"PF
- Protection rating : IP66

SH1S Xenon Lamp Strobe Signal Light

- Certificates : KIMM, ABS, CCS

Model number	Voltage	Current	Bulb			Certificates	Color
			Spec	Standard	Parts no		
• SH1S Standard type • SH1SP Protection cage type • SH1TS Terminal box type • SH1TSP Protection cage and terminal box type	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	KIMM ABS CCS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.616A					
	AC110V	0.133A					
	AC220V	0.106A					

SH2S Xenon Lamp Strobe Signal Light

- Certificates : KIMM, ABS

Model number	Voltage	Current	Bulb			Certificates	Color
			Spec	Standard	Parts no		
• SH2S Standard type • SH2SP Protection cage type • SH2TS Terminal box type • SH2TSP Protection cage and terminal box type	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U type	48	KIMM ABS	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.616A					
	AC110V	0.133A					
	AC220V	0.106A					

SH1S/SH2S Xenon Strobe Signal Lights Specification Category and Products Weight Chart

Type	SH1S series		SH2S series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1S (1.11 kg)		SH2S (1.19 kg)
Built-in protection cage		SH1SP (1.36 kg)		SH2SP (1.48 kg)
Built-in terminal box		SH1TS (1.57 kg)		SH2TS (1.65 kg)
Built-in protection cage &Terminal box		SH1TSP (1.82 kg)		SH2TSP (1.94 kg)

※ Product weight is based on AC type.

Ordering Specification

SH1S	-	12	-	R
[Model number]		[Voltage]		[Color]
• SH1S • SH1SP • SH1TS • SH1TSP • SH2S • SH2SP • SH2TS • SH2TSP		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SH1/SH2 series

Heavy-Duty Bulb Revolving Signal Light for Vessels and Heavy Industry Applications

IP66 -20~+50℃

- **SH1-Ø125mm**
- **SH2-Ø150mm**



SH1



SH2T

SH1/SH2 models are equipped with flexible connector, and SH1T/SH2T models are equipped with 15C nipple at cable entry.



Flexible connector



15C nipple

Common Specifications(SH1/ SH2)

- Excellent light diffusion effect with multi faced reflector
- Adopts a special power transmission system that reduces noise and wear
- Revolving speed : 120-140RPM
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC
- Ambient operation temperature : -20°C to +50°C
- Cable entry : 1/2″PF
- Protection rating : IP66

SH1 Bulb Revolving Warning Light

- Certificates : KIMM, ABS, CCS, CE

Model number	Voltage	Current	Bulb			Certificates	Color
			Spec	Standard	Parts no		
• SH1 Standard type • SH1P Protection cage type • SH1T Terminal box type • SH1TP Protection cage and terminal box type	DC12V	1.544A	12V15W	G23 15S	17	KIMM ABS CCS CE DC24V Only	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		
	AC110V	0.204A	12V15W	G23 15S	17		
	AC220V	0.102A	12V15W	G23 15S	17		

SH2 Bulb Revolving Warning Light

- Certificates : KIMM, ABS, CE

Model number	Voltage	Current	Bulb			Certificates	Color
			Spec	Standard	Parts no		
• SH2 Standard type • SH2P Protection cage type • SH2T Terminal box type • SH2TP Protection cage and terminal box type	DC12V	1.544A	12V15W	G23 15S	17	KIMM ABS CE DC24V Only	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		
	AC110V	0.204A	12V15W	G23 15S	17		
	AC220V	0.102A	12V15W	G23 15S	17		

SH1/SH2 Bulb Revolving Warning Lights Specification Category and Products Weight Chart

Type	SH1 series		SH2 series	
Lens diameter	Ø125mm		Ø150mm	
Standard		SH1 (1.61kg)		SH2 (1.77kg)
Built-in protection cage		SH1P (1.86kg)		SH2P (2.06kg)
Built-in terminal box		SH1T (2.07kg)		SH2T (2.23kg)
Built-in protection cage &Terminal box		SH1TP (2.32kg)		SH2TP (2.52kg)

※ Product weight is based on AC type.

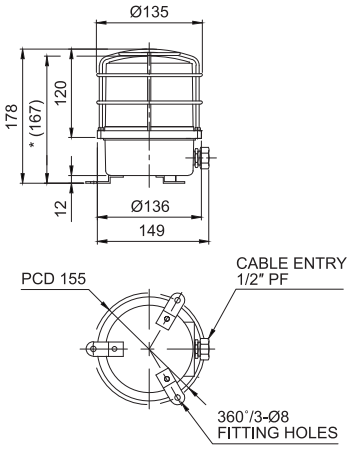
Ordering Specification

SH1T	-	220	-	R
[Model number]		[Voltage]		[Color]
• SH1 • SH1P • SH1T • SH1TP • SH2 • SH2P • SH2T • SH2TP		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

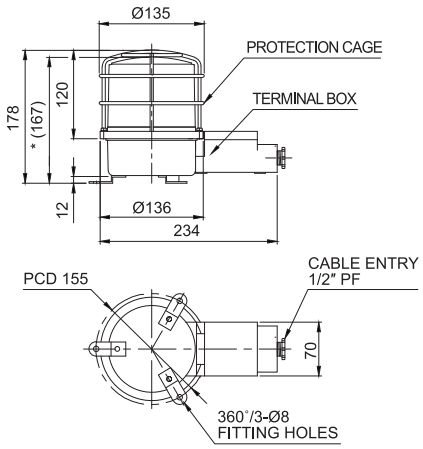


Technical Diagram (Units : mm)

SH1LRP/ SH1LP/ SH1SP/ SH1P



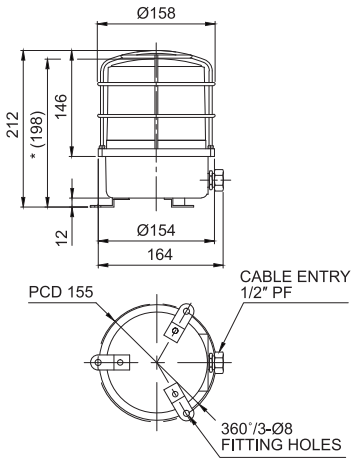
SH1TLRP/ SH1TLP/ SH1TSP/ SH1TP



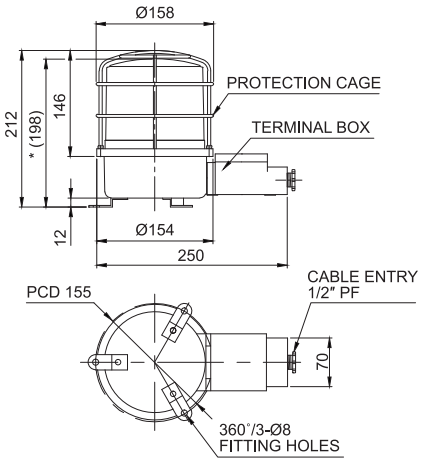
※ *(167) represents SH1LR/ SH1L/ SH1S/ SH1, SH1TLR/ SH1TL/ SH1TS/ SH1T size without protection cage.



SH2LRP/ SH2LP/ SH2SP/ SH2P



SH2TLRP/ SH2TLP/ SH2TSP/ SH2TP



※ *(198)represents SH2LR/ SH2L/ SH2S/ SH2, SH2TLR/ SH2TL/ SH2TS/ SH2T size without protection cage.

Customization

- 3/4″PF cable entry
  Standard cable entry is 1/2″PF
  3/4″PF is customization

- Built-in cable gland type
  Flexible connector is equipped to the standard cable entry

- Brass housing product
  SH2 series brass housing provides products with excellent corrosion resistance as customization

※ Color will be MUNSELL No. 7.5BG 7/2 when Released.

- 2T type has 2 cable entries in the terminal box
  2 cable entries terminal box is a customized add-on, please refer to the technical diagram on page165



Built-in cable gland type



Brass housing product

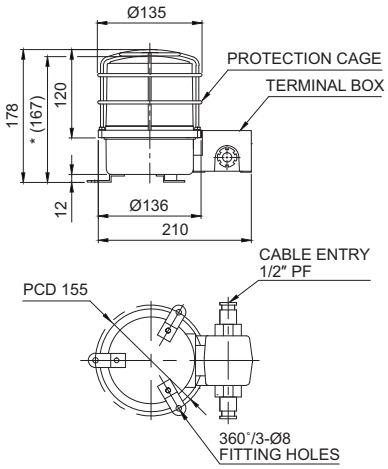


2 cable entries
terminal box model



Technical Diagram for 2T Type Cable Entries (Units : mm)

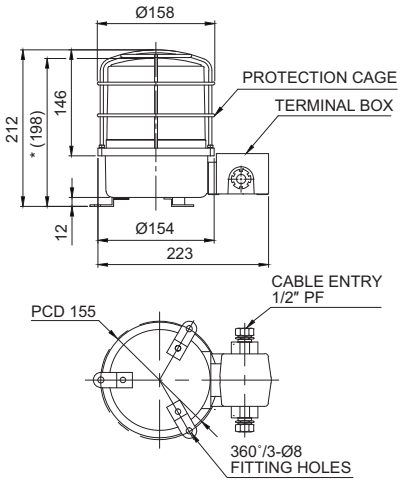
SH1LR-2TP/ SH1L-2TP/ SH1S-2TP/ SH1-2TP



※ *(167) represents SH1LR-2T/ SH1L-2T/ SH1S-2T/ SH1-2T size without protection cage.



SH2LR-2TP/ SH2L-2TP/ SH2S-2TP/ SH2-2TP



※ *(198) represents SH2LR-2T/ SH2L-2T/ SH2S-2T/ SH2-2T size without protection cage.

Warning light and electric horn combinations with excellent durability and perfectly enclosed structure, designed for vessels and heavy industry applications



■ A variety of selectable light source and function combinations

You can select from a variety of light sources for your the work environment, conditions, and purpose. Basic specifications are as follows :

- LED revolving type
- LED steady/flashing type
- Xenon lamp strobe type
- Bulb revolving type

User-selected LED strobe type and LED simulated revolving type are available upon request.

1 A variety of selectable warning sounds and sound messages

You can convey specific information with a variety of 20 warning sounds and voice messages.

Sound	Pattern	Ch	Sound Tone
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion
WP	5 Special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short PI. / 1 Long
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat
WV	5 Customizable sound messages	Ch1 - Ch5	Customized sound tones

· SHD series - Single electric horn type
· SHD2 series - Dual-facing electric horn type

Common Specifications

- Warning light and electric horn combination models for vessels and heavy industries applications
- Aluminum housing and polycarbonate lens material provides excellent durability under seismic conditions
- Excellent hermetic structure that blocks water and dust
- Superior impact and shock resistance
- You can select a variety of sound and light sources(bulb, LED and xenon)
- Equipped with a wire guard
- Terminal box located inside the housing
- Can adjust sound volume and select sound pattern with the switches built inside the products
- Cable entry : 1/2″PF
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC, Multi-tiered reflector-Heat resistance ABS
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66
- Certificates : KIMM, ABS, CE Compliant

2 Lens

- Polycarbonate lens material provides excellent impact resistance

3 Protection cage

- The durable wire guard is made of corrosion resistant stainless steel that prevents damage to the lens from external contact
- Materials : SUS316L

4 Housing

- The special aluminum body housing features superior durability
- The housing is corrosion resistant from a special anodized surface treatment process
- Materials : Al

5 Fully enclosed structure

- The tightly sealed warning light structure is waterproof and dustproof
- Protection rating : IP66

SHD series Product Category Chart

SHD series		Light Source and Function	SHD2 series	
Standard Type	Protection Cage Equipped Type		Standard Type	Protection Cage Equipped Type
SHDLR	SHDLRP	LED revolving type	SHD2LR	SHD2LRP
SHDL	SHDLP	LED steady/ flashing type	SHD2L	SHD2LP
SHDS	SHDSP	Xenon lamp strobe type	SHD2S	SHD2SP
SHD	SHDP	Bulb revolving type	SHD2	SHD2P

SHD/ SHD2 series

Heavy-Duty Warning/ Signal Lights and Electric Horn for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

- **SHD series**
  -Single Electric Horn
- **SHD2 series**
  -Dual Electric Horn



SHDLR



SHD2LR



SHDLP **SHD2LP**



SHD2L used in KTX tunnels for an evacuation alarm warning light system.

SHDLR/ SHDLRP LED Revolving Warning Light & Electric Horn Combination

- Features high visibility in all directions with special concentrated LED light structure and multi side reflector
- Revolving speed : 120-140RPM
- Ambient operation temperature : -20°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHDLR SHDLRP	DC12V	2.633A	• WS -5 Warning sounds : 118dB • WP -5 Special warning sounds : 118dB • WM -5 Melodies : 118dB • WA -5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS	• SHDLR DC-3.21kg AC-3.91kg • SHDLRP DC-3.46kg AC-4.16kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SHD2LR/ SHD2LRP LED Revolving Warning Light & Dual Electric Horn Combination

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHD2LR SHD2LRP	DC12V	4.844A	• WS -5 Warning sounds : 118dB×2 • WP -5 Special warning sounds : 118dB×2 • WM -5 Melodies : 118dB×2 • WA -5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2LR DC-4.26kg AC-4.97kg • SHD2LRP DC-4.51kg AC-5.22kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.255A				
	AC110V	0.535A				
	AC220V	0.267A				

SHDL/ SHDLP LED Steady/Flashing Warning Light & Electric Horn Combination

- Uniform and clear light diffusion with multi layered LED light distribution reflector
- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operation temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHDL SHDLP	DC12V	2.511A	• WS -5 Warning sounds : 118dB • WP -5 Special warning sounds : 118dB • WM -5 Melodies : 118dB • WA -5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS	• SHDL DC-3.02kg AC-3.39kg • SHDLP DC-3.27kg AC-3.64kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SHD2L/ SHD2LP LED Steady/Flashing Warning Light & Dual Electric Horn Combination

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SHD2L SHD2LP	DC12V	4.722A	• WS -5 Warning sounds : 118dB×2 • WP -5 Special warning sounds : 118dB×2 • WM -5 Melodies : 118dB×2 • WA -5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2L DC-4.07kg AC-4.45kg • SHD2LP DC-4.32kg AC-4.70kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.188A				
	AC110V	0.513A				
	AC220V	0.256A				

SHD/ SHD2 series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

- **SHD series**
  -Single Electric Horn
- **SHD2 series**
  -Dual Electric Horn



SHDS



SHD2S



SHD **SHD2P**

SHD/SHD2 series are equipped with flexible connector at cable entry. Cable gland is an optional item.



Flexible connector



Cable gland

SHDS/ SHDSP Xenon Lamp Strobe Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Bulb Parts no	Sound pattern and volume	Certificates	Weight	Color
SHDS SHDSP	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS CE DC Only	• SHDS DC-3.05kg AC-3.38kg • SHDSP DC-3.3kg AC-3.6kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SHD2S/ SHD2SP Xenon Lamp Strobe Warning Light and Dual Electric Horn Combination

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Bulb Parts no	Sound pattern and volume	Certificates	Weight	Color
SHD2S SHD2SP	DC12V	5.144A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB×2 • WP -5 Special warning sounds :118dB×2 • WM-5 Melodies : 118dB×2 • WA-5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2S DC-4.11kg AC-4.44kg • SHD2SP DC-4.36kg AC-4.69kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.377A							
	AC110V	0.586A							
	AC220V	0.333A							

SHD/ SHDP Bulb Revolving Warning light and Electric Horn Combination

- Revolving speed : 120 - 140RPM
- Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Bulb Parts no	Sound pattern and volume	Certificates	Weight	Color
SHD SHDP	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS CE DC24V only	• SHD DC-3.18kg AC-3.89kg • SHDP DC-3.43kg AC-4.14kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

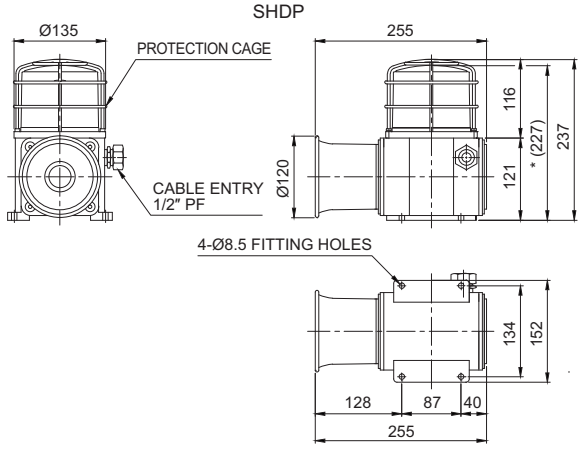
SHD2/ SHD2P Bulb Revolving Warning light and Dual Electric Horn Combination

Model number	Voltage	Current	Bulb Spec	Bulb Standard	Bulb Parts no	Sound pattern and volume	Certificates	Weight	Color
SHD2 SHD2P	DC12V	5.966A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB×2 • WP -5 Special warning sounds :118dB×2 • WM-5 Melodies : 118dB×2 • WA-5 Alarms : 116dB×2 • WV -5 Customizable voices : 113dB×2	KIMM ABS	• SHD2 DC-4.23kg AC-4.95kg • SHD2P DC-4.48kg AC-5.20kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	2.755A	24V15W	G23 15S	18				
	AC110V	0.648A	12V15W	G23 15S	17				
	AC220V	0.324A	12V15W	G23 15S	17				

Technical Diagram

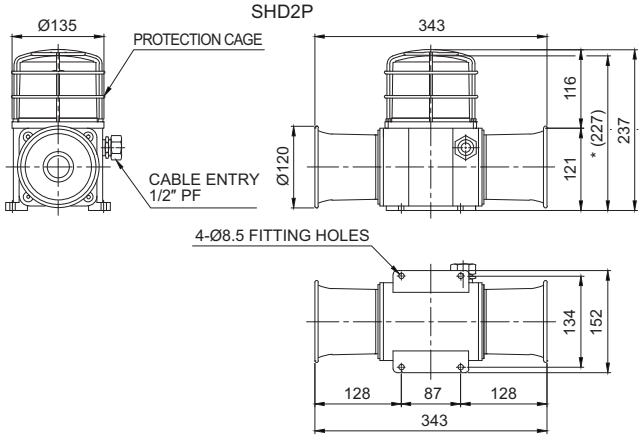
(Units : mm)

SHDP



※ *(227) represents SHD size without protection cage.

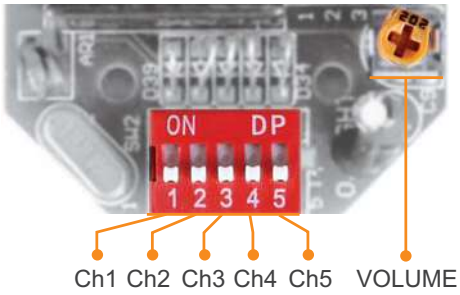
SHD2P



※ *(227) represents SHD2 size without protection cage.

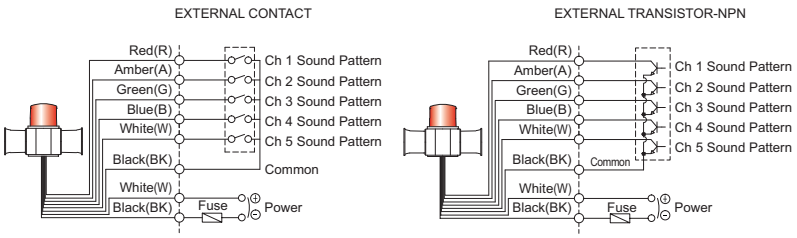
Sound Selection Instructions and Wiring

• Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.



• Customization : External contact(LC)

SHD SERIES-DC/AC
SHD2 SERIES-DC/AC



Customization

• Customized cable entry(3/4″PF) available(Standard : 1/2″PF)
• Cable gland type
• Customized external sound line type available : SHD/SHD2 series have built-in switch for sound tone selection

■ Sound tones for standard model

Sound	Built-in sound	Ch	Sound tone
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion
WP	5 Special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short PI. / 1 Long

Sound	Built-in sound	Ch	Sound tone
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat
WV	5 Customizable Voices	Ch1-Ch5	Customized sound

※ Standard model has 5 warning sounds(WS), 5 special warning sounds(WP), 5 melodies(WM), 5 alarms(WA) and 5 customizable voices(WV).

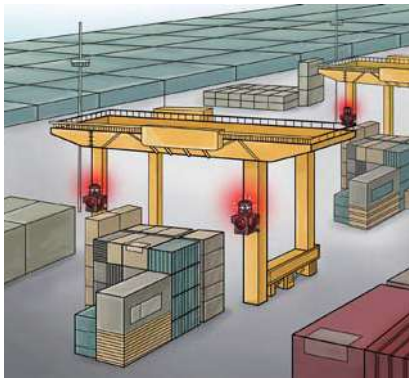
Ordering Specification

SHD2L	-	WA	-	24	-	R
[Model number]		[Sound]		[Voltage]		[Color]
• SHDLR • SHDLRP • SHD2LR • SHD2LRP • SHDL • SHDLP • SHD2L • SHD2LP • SHDS • SHDSP • SHD2S • SHD2SP • SHD • SHDP • SHD2 • SHD2P		• WS-Warning sounds • WP-Special warning sounds • WM-Melodies • WA-Alarms • WV-Customizable voices		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

Light weight warning light and electric horn combinations with polycarbonate housing for vessels and heavy industry applications

- **SCDF series**
  - Self stand type
- **SCDW series**
  - Wall mount type





Common Specifications(SCDF/SCDW)

- Warning light and electric horn combinations for vessels and heavy industrial applications
- Light weight model with special polycarbonate (PC+GF) housing
- Excellent hermetic structure that blocks water and dust
- Superior impact and shock resistance
- Prevents damage from external contact with recessed horn structure, high volume output possible with the extended length of the horn housing
- Easy wiring and sound control with the terminal box attached on the side of housing
- Standard model comes with a protection cage equipped
- Can select a variety of light sources and sound pattern combinations
- Detachable mounting bracket structure enables product to be either self stand type or wall mount type
- Can adjust sound volume and select sound pattern with the switches built inside the units
- Materials : Lens-PC, Housing-PC+GF, Protection cage-SUS316L, Reflector-PC, Multi-tiered reflector-Heat resistance ABS
- Cable entry : 1/2″PF
- Ambient operating temperature
  -20°C to +50°C : SCDFLR, SCDWLR, SCDF, SCDW
  -30°C to +50°C : SCDFL, SCDWL, SCDFS, SCDWS
- Protection rating : IP66
- Certificates : KIMM, KR, CE Compliant
- Mountings : Available in self stand type and wall mount type

SCD series Product Category Chart

	LED revolving type	LED steady/ flashing type	xenon lamp strobe type	Bulb revolving type
Self stand type	SCDFLR 	SCDFL 	SCDFS 	SCDF 
Well mount type	SCDWLR 	SCDWL 	SCDWS 	SCDW 

Easy control of the audible sound since the sound control board is located separately from the main board







Easy wire configuration possible with terminal box located on the side of the housing

Recessed horn structure protects it from damage by external forces

Detachable mounting bracket structure enables product to be either self stand type or wall mount type

SCD series

Warning Light and Electric Horn Combinations for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

- **SCDF series**
  - Self stand type
- **SCDW series**
  - Wall mount type



SCDWLR

SCDFLR



SCDWL / SCDWS



SCDFL / SCDFS



SCDW



SCDF

SCDF/SCDW series are equipped with flexible connector at cable entry. Cable gland is an optional item.



Flexible connector



Cable gland

SCDFLR/ SCDWLR LED Revolving Warning Light and Electric Horn Combination

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120 - 140RPM
- Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SCDFLR SCDWLR	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	KR	• SCDFLR DC-2.60kg AC-3.50kg • SCDWLR DC-2.70kg AC-3.45kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SCDFL/ SCDWL LED Steady/Flashing Warning Light and Electric Horn Combination

- Multi layer LED reflect system emits clear and uniform level of signal lights throughout the lens
- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SCDFL SCDWL	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	KR	• SCDFL DC-2.42kg AC-3.46kg • SCDWL DC-2.52kg AC-3.27kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SCDFS/ SCDWS Xenon Lamp Strobe Warning Light and Electric Horn Combination

- Convenient lamp exchange by adopting connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SCDFS SCDWS	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KR	• SCDF DC-2.46kg AC-2.85kg • SCDW DC-2.46kg AC-3.85kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SCDF/ SCDW Bulb Revolving Warning Light and Electric Horn Combination

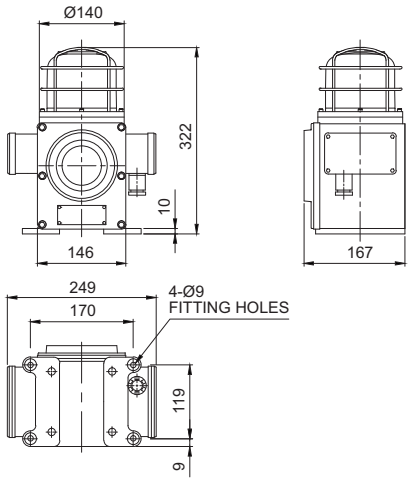
- Multi layer reflector system provides excellent signal light diffusing effect
- Revolving speed : 120 - 140RPM
- Ambient operating temperature : -20°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SCDF SCDW	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM KR CE DC24V only	• SCDF DC-2.58kg AC-3.60kg • SCDW DC-2.68kg AC-3.43kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

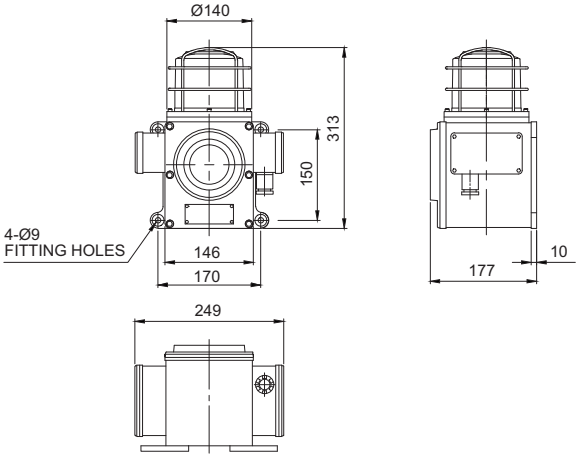
Technical Diagram

(Units : mm)

SCDFLR/ SCDFL/ SCDFS/ SCDF

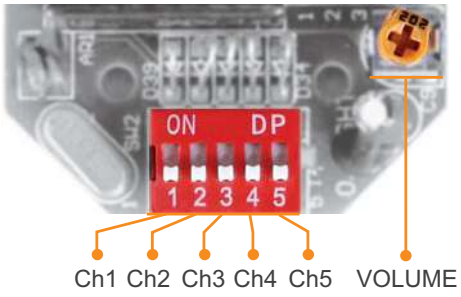


SCDWLR/ SCDWL/ SCDWS/ SCDW



Sound Selection Instructions and Wiring

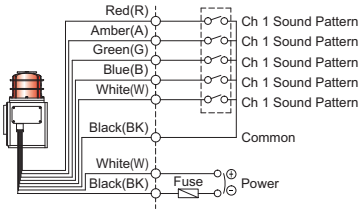
- Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.



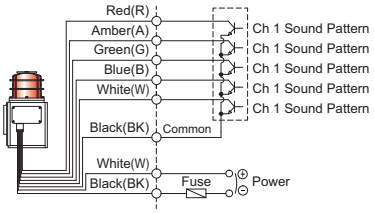
- Customization : External contact(LC)

SCDW SERIES-DC/AC
SCDF SERIES-DC/AC

EXTERNAL CONTACT



EXTERNAL TRANSISTOR-NPN



Customization

- Customized cable entry(3/4″PF) available(Standard : 1/2″PF)
- Customized external sound line type available : SCD series has built-in switch for sound tone selection
- Customized wiring available to select the sound tone via external contact or transistor wiring type(Model number : -LC)
- Cable gland type

Ordering Specification

SCDW	-	WA	-	24	-	R
[Model number]		[Sound]		[Voltage]		[Color]
• SCDFLR • SCDFL • SCDFS • SCDF • SCDWLR • SCDWL • SCDWS • SCDW		• WS-Warning sounds • WP-Special warning sounds • WM-Melodies • WA-Alarms • WV-Customizable voices		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

Wall mount warning light and electric horn combinations featuring superior durability, tight seal, and corrosion resistance, designed for vessels and heavy Industrial applications

- **SED series**
  - 125mm warning light & electric horn with Max 118dB sound output
- **SD series**
  - 150mm warning light & electric horn with Max 118dB sound output
- **SMD series**
  - 150mm warning light & electric horn with Max 120dB sound output



1 Lens

Utilizes a strong and durable polycarbonate material with excellent shock and vibration resistance.

The lens surface has two types according to the light source type and function-light diffusion type and light transmission type.

Light transmission type		LED revolving type(SEDLR) Bulb revolving type(SED)
Light diffusion type		LED steady/flashing type(SEDL/LF) Xenon lamp strobe type(SEDS)

2 Protection cage

- The durable protection cage is made of corrosion resistant stainless steel that prevents damage to the lens from external contact
- Materials : SUS316L

Common Specifications

- Wall mount warning light and electric horn combinations for vessels and heavy industrial applications
- Aluminum housing and polycarbonate lens material provides excellent impact and shock resistance
- Excellent hermetic structure that block water and dust
- Can select a variety of light source(bulb, LED, xenon lamp) and sound pattern combination
- Attached terminal box enables easy wiring
- Can adjust sound volume and select sound pattern with the switches built inside the products
- Cable entry : 1/2″PF
- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC, Multi-tiered reflector-Heat resistance ABS
- Standard housing color : MUNSELL No. 7.5GBG 7/2
- Protection rating : IP66

■ A variety of selectable light source and function combinations

You can select from a variety of light sources for your work environment, condition, and purpose. Basic specifications are as follows :

- LED Revolving Type
- LED Steady/Flashing Type
- Xenon Lamp Strobe Type
- Bulb Revolving Type

User-selected LED strobe type and LED stimulated revolving type are available upon request.

3 A variety of selectable warning sounds and sound massages

You can convey specific information with a variety of 20 warning sounds and voice messages.

Sound	Pattern	Ch	Sound Tone
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency WA-U(Yelp) Ambulance PI-PO(Hi-low) Machinery Fault High Expansion
WP	5 Special warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Abandon Alarm Machinery Fault High Expansion 7 Short PI. / 1 Long
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat
WV	5 Customizable sound messages	Ch1-Ch5	Customized sound tones

4 Housing

- The special aluminum housing features superior durability
- The housing is corrosion resistant from a special anodized surface treatment process
- Materials : Al

5 Fully enclosed structure

- The tightly sealed warning light structure is waterproof and dustproof
- Protection rating : IP66

6 Terminal Box

- Terminal box is located at the bottom of the product for easy wiring
- Materials : Al

SED/ SD/ SMD series Information



Standard type

- No protection cage is provided
- Recommended for the places where the lens is not damaged by external contact
- Model lists : SED/ SD/ SMD



Protection cage type

- Provided with protection cage
- Lens can be protected from the damage by external contact
- Model lists : SEDP/ SDP/ SMDP

SED/ SD/ SMD series References

	SED series		SD series		SMD series	
Diameter / dB	Ø125mm / Max 118dB at 1m		Ø150mm / Max 118dB at 1m		Ø150mm / Max 120dB at 1m	
Materials	Lens - PC, Housing - Al, Protection cage-SUS316L, Reflector - PC/ Heat resistant ABS					
Protection rating	IP66					
Certificates	KIMM/ CCS/ KR/ CE		KIMM/ ABS/ LR/ KR/ CE			
Cable entry	Standard : 1/2″PF (Customized cable entry available : 3/4″PF)					
Mounting	Wall mounting					
	Standard	With protection cage	Standard	With protection cage	Standard	With protection cage
LED revolving	 SEDLR	 SEDLRP	 SDLR	 SDLRP	 SMDLR	 SMDLRP
LED steady/flashing	 SEDL	 SEDLP	 SDL	 SDLP	 SMDL	 SMDLP
Xenon lamp strobe	 SEDS	 SEDSP	 SDS	 SDSP	 SMDS	 SMDSP
Bulb revolving	 SED	 SEDP	 SD	 SDP	 SMD	 SMDP

SED series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

Ø125mm signal light and 118dB electric horn combination



SEDLR



SEDLP/ SEDSP



SED

Common Specifications(SEDLR/ SEDL/ SEDS/ SED)

- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC/ Heat resistant ABS
- Cable entry : 1/2"PF
- Housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

SEDLR/ SEDLRP LED Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SEDLR SEDLRP	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	-	• SEDLR DC-3.09kg AC-3.86kg • SEDLRP DC-3.34kg AC-4.11kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SEDL/ SEDLP LED Steady/Flashing Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SEDL SEDLP	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	KR	• SEDL DC-2.96kg AC-3.38kg • SEDLP DC-3.21kg AC-3.63kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SEDS/ SEDSP Xenon Lamp Strobe Warning Light and Electric Horn Combination

- Convenient lamp exchange by adopting a connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SEDS SEDSP	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	-	• SEDS DC-3.01kg AC-3.40kg • SEDSP DC-3.26kg AC-3.65kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SED/ SEDP Bulb Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SED SEDP	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS KR CCS CE DC24V only	• SED DC-3.17kg AC-3.94kg • SEDP DC-3.42kg AC-4.19kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

SD series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 118dB | NPN

Ø150mm signal light and 118dB electric horn combination



SDLR



SDL/ SDS



SD

Common Specifications(SDLR/ SDL/ SDS/ SD)

- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC/Heat resistant ABS
- Cable entry : 1/2″PF
- Housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

SDLR/ SDLRP LED Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SDLR SDLRP	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	®	• SDLR DC-3.36kg AC-4.13kg • SDLRP DC-3.65kg AC-4.42kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.288A				
	AC110V	0.308A				
	AC220V	0.154A				

SDL/ SDLP LED Steady/Flashing Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SDL SDLP	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV-5 Customizable voices : 113dB	®	• SDL DC-3.22kg AC-3.64kg • SDLP DC-3.51kg AC-3.93kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.222A				
	AC110V	0.286A				
	AC220V	0.143A				

SDS/ SDSP Xenon Lamp Strobe Warning Light and Electric Horn Combination

- Convenient lamp exchange by adopting a connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SDS SDSP	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	®	• SDS DC-3.28kg AC-3.66kg • SDSP DC-3.57kg AC-3.95kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.411A							
	AC110V	0.360A							
	AC220V	0.220A							

SD/ SDP Bulb Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SD SDP	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 116dB • WV -5 Customizable voices : 113dB	KIMM ABS ® KR CE DC24V only	• SD DC-3.43kg AC-4.21kg • SDP DC-3.72kg AC-4.50kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.788A	24V15W	G23 15S	18				
	AC110V	0.422A	12V15W	G23 15S	17				
	AC220V	0.211A	12V15W	G23 15S	17				

SMD series

Warning Lights and Electric Horns for Vessels and Heavy Industry Applications

IP66 | -20~+50℃ | -30~+50℃ | HORN | 120dB | NPN

Ø150mm signal light and 120dB electric horn combination



SMDLR



SMDLP/SMDSP



SMDP

Common Specifications(SMDLR/ SMDL/ SMDS/ SMD)

- Materials : Lens-PC, Housing-Al, Protection cage-SUS316L, Reflector-PC/ Heat resistant ABS
- Cable entry : 1/2"PF
- Housing color : MUNSELL No. 7.5BG 7/2
- Protection rating : IP66

SMDLR/ SMDLRP LED Revolving Warning Light and Electric Horn Combination

- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SMDLR SMDLRP	DC12V	2.522A	• WS-5 Warning sounds : 120dB • WP-5 Special warning sounds : 120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV-5 Customizable voices : 115dB	-	• SMDLR DC-5.91kg AC-6.68kg • SMDLRP DC-6.20kg AC-6.97kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.322A				
	AC110V	0.326A				
	AC220V	0.163A				

SMDL/ SMDLP LED Steady/Flashing Warning Light and Electric Horn Combination

- Flashing rate : 60-80 flashes/min(Built-in steady/flashing selection switch)
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SMDL/ SMDLP	DC12V	2.400A	• WS-5 Warning sounds : 120dB • WP-5 Special warning sounds : 120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV-5 Customizable voices : 115dB	-	·SMDL DC-5.77kg AC-6.19kg ·SMDLP DC-6.06kg AC-6.48kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.255A				
	AC110V	0.304A				
	AC220V	0.152A				

SMDS/ SMDSP Xenon Lamp and Electric Horn Combination

- Convenient lamp exchange by adopting connector type lamp installation
- Flashing rate : 60-80 flashes/min
- Ambient operating temperature : -30°C to +50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SMDS SMDSP	DC12V	2.822A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :120dB • WP -5 Special warning sounds :120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV -5 Customizable voices : 115dB	-	·SMDS DC-5.83kg AC-6.21kg ·SMDSP DC-6.12kg AC-6.50kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.444A							
	AC110V	0.377A							
	AC220V	0.228A							

SMD/ SMDP Bulb Revolving Warning Light and Electric Horn Combination

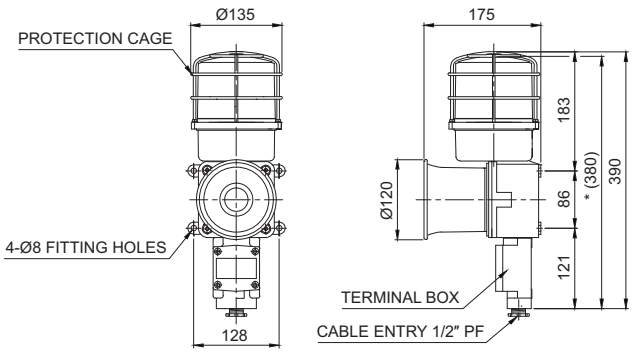
- Revolving speed : 120-140RPM
- Ambient operating temperature : -20°C to + 50°C

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SMD SMDP	DC12V	3.644A	12V15W	G23 15S	17	• WS-5 Warning sounds :120dB • WP -5 Special warning sounds :120dB • WM-5 Melodies : 120dB • WA-5 Alarms : 118dB • WV -5 Customizable voices : 115dB	-	·SMD DC-5.98kg AC-6.76kg ·SMDP DC-6.27kg AC-7.05kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.822A	24V15W	G23 15S	18				
	AC110V	0.448A	12V15W	G23 15S	17				
	AC220V	0.224A	12V15W	G23 15S	17				

Technical Diagram

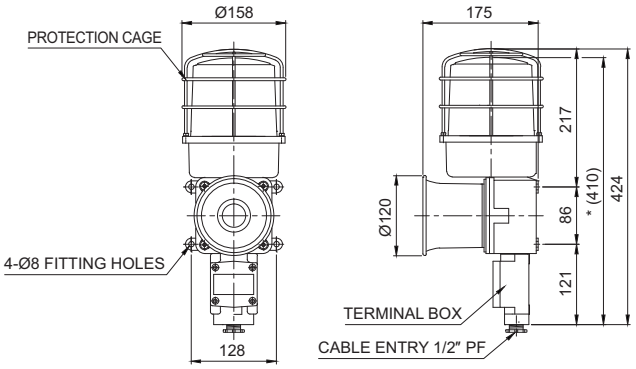
(Units : mm)

SEDLRP/ SEDLP/ SEDSP/ SEDP



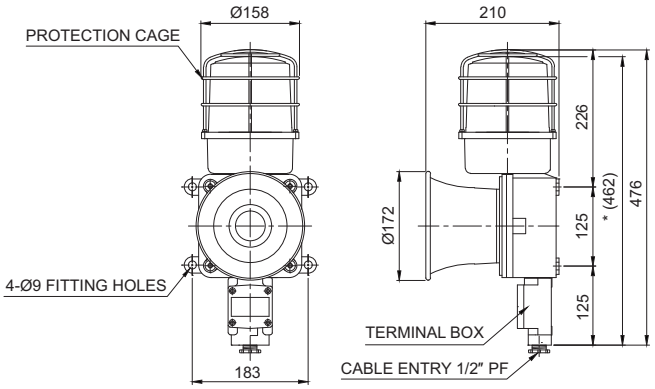
※ *(380)represents SEDLR/ SEDL/ SEDS/ SED size without protection cage.

SDLRP/ SDLP/ SDSP/ SDP



※ *(410)represents SDLR/ SDL/ SDS/ SD size without protection cage.

SMDLRP/ SMDLP/ SMDSP/ SMDP



※ *(462) represents SMDLR/ SMDL/ SMDS/ SMD size without protection cage.

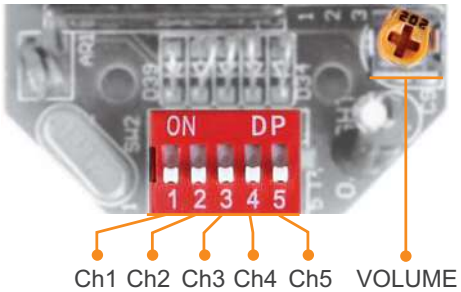
Customization

- Cable gland type
- Customized cable entry(3/4″PF) available(Standard : 1/2″PF)
- Customized external sound line type available : SED/SD/SMD series have built-in switch for sound tone selection
  Customized wiring in case of external contact or transistor wiring type as sound tone selector (Model number : -LC)
- Brass housing
  Brass housing for SD/ SMD series are optionally provided which has excellent anti-corrosive properties

※ Color will be MUNSELL No. 7.5BG 7/2 when released.

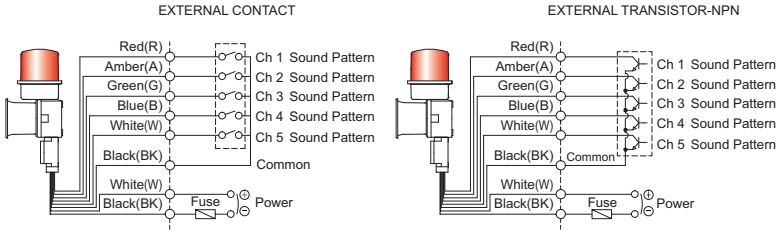
Sound Selection Instructions and Wiring

- Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.



- Customization : External contact(LC)

SED SERIES-DC/AC
SD SERIES-DC/AC
SMD SERIES-DC/AC



Ordering Specification

SEDLR	-	WA	-	24	-	R
[Model number]		[Sound]		[Voltage]		[Color]
• SEDLR • SEDLRP • SEDL • SEDLP • SEDS • SEDSP • SED • SEDP • SDLR • SDLRP • SDL • SDLP • SDS • SDSP • SD • SDP • SMDLR • SMDLRP • SMDL • SMDLP • SMDS • SMDSP • SMD • SMDP		• WS-Warning sounds • WP-Special warning sounds • WM-Melodies • WA-Alarms • WV-Customizable voices		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SC series

Warning Light & Electric Horn Combinations

IP44 | -20~+50°C | HORN | 108dB | 115dB

SC series can combine all of our warning light and electric horn products into a single combination model depending on your specific needs



SC1

SC1

The budget model of small-sized warning light and electric horn combinations

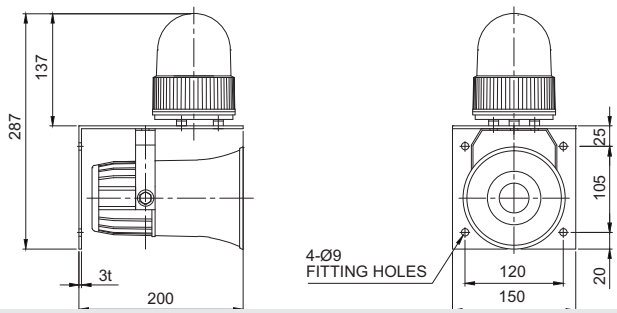
• Protection rating : IP44

Specification for Standard Model

• Standard combination includes S100R products combination with SRN (same as pictured to the left)

Technical Diagram (Units : mm)

SC1



Customization

• Warning light : Select one from S100 series(Please refer to page 69-75) for the combination
• Electric horn : Select one from SN, SRN, SEN15/ 25(Please refer to page 415-416) for the combination



SC2

SC2

Most commonly used standard-sized warning light and electric horn combination model

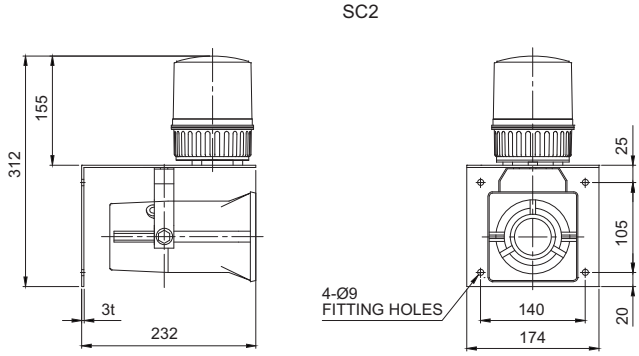
• Protection rating : IP44

Specification for Standard Model

• Standard combination includes S125U products combined with the SEN15 (Same as pictured to the left)

Technical Diagram (Units : mm)

SC2



Customization

• Warning light : Select one from S125 series(Please refer to page 76-82) for the combination
• Electric horn : Select one from SN, SRN, SEN15/ 25(Please refer to page 415-416) for the combination

IP56 | -20~+50℃ | HORN | 118dB | 120dB



SC3

SC3

Waterproof, dustproof type warning light and electric horn combinations

• Protection rating : IP56

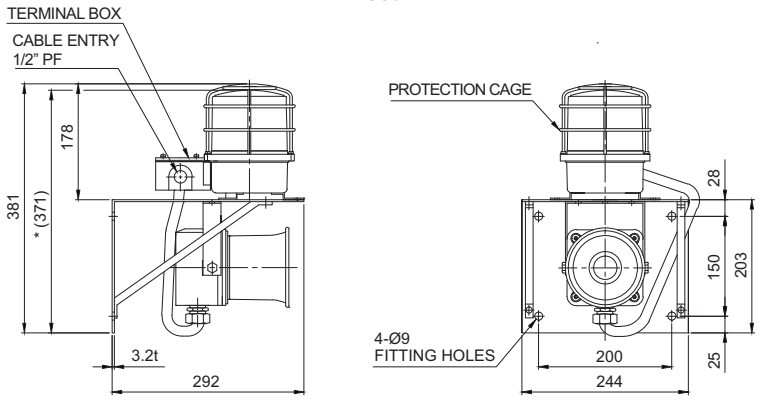
Common Specifications

• Combination of SH1-2T and signal horn SEWN30L(Same as pictured to the left)

Technical Diagram

(Units : mm)

SC3



※ *(371) represents SC3 size without protection cage.

Customization

• Warning light : Select between models SH1P-2T and SH2P-2T series
(Please refer to page 159-165)
• Electric horn : Choose one model among SEWN30L/50L, SEHN25 and SEHN50
(Please refer to page 185-190)
• Stainless steel bracket

Standard Model Number

SC1	-	220	-	R
[Model number]		[Voltage]		[Color]
• SC1 (S100R+SRN) • SC2 (S125U+SEN15) • SC3 (SH1P-2T+SEWN30L)		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

Ordering Specification

SC3	- (	SH1P-2T	-	R	+	SEWN30L	-	WS	) -	220
[Model number]		[Light type]		[Color]		[Horn type]		[Sound]		[Voltage]
• SC1 • SC2 • SC3		• Select 1 model among S100 series • Select 1 model among S125 series • Select 1 model among SH1P-2T and SH2P-2T series		• R-Red • A-Amber • G-Green • B-Blue		• Select 1 model among SN, SRN and SEN15/25 • Select 1 model among SRN and SEN15/25 • Select 1 model among SEWN30L/ 50L and SEHN25/50		• WS -Warning sounds • WP -Special warning sounds • WM -Melodies • WA -Alarms • WV -Customizable voices		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V

※ Light sources can be selected among LED revolving, LED steady/flashing, xenon strobe and bulb revolving type.

SSL series

LED Signal Lights for Container Spreaders

IP68 -30~+60℃

Provides excellent durability to extreme vibration and shock

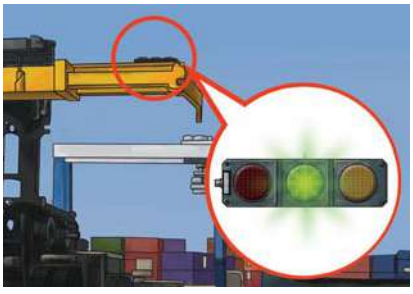
Suitable for container spreader, harbor loading equipment, and outdoor conveyor applications



SSL100W/ SSL200W
SSL300W/ SSL400W



SSL100M/ SSL200M
SSL300M/ SSL400M



SSL LED Steady Signal Lights for Container Spreaders

- Special anti-reflective lens applied to avoid mistaking the reflected sun light as a signal light (W type)
- M type has excellent visibility from a distance with clear and distinctive layer colors
- Superior durability in extreme vibration and shock thanks to a molded assembly process instead of conventional bolt fastened assembly method
- Customized color arrangement available(Lens color configuration is initiated from the side of cable entry)
- Materials : Housing-Al, Lens-PC
- Protection rating : IP68 (IEC60529)

Specification

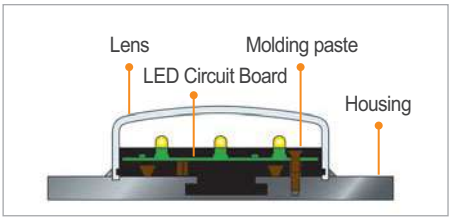
Model number	Voltage	Current	Certificates	Weight	Cable entry	Color
SSL100	DC12V	0.280A	-	1.80kg	M12-5PIN C10-Cable (Customization)	● R-Red
	DC24V	0.151A		1.80kg		
	AC110V	0.040A		1.85kg		
	AC220V	0.040A		1.85kg		
SSL200	DC12V	0.560A		2.15kg		● R-Red ● G-Green
	DC24V	0.302A		2.15kg		
	AC110V	0.080A		2.20kg		
	AC220V	0.080A		2.20kg		
SSL300	DC12V	0.840A		2.50kg		● R-Red ● A-Amber ● G-Green
	DC24V	0.453A		2.50kg		
	AC110V	0.120A		2.55kg		
	AC220V	0.120A		2.55kg		
SSL400	DC12V	1.120A		2.95kg		● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.604A		2.95kg		
	AC110V	0.160A		3.00kg		
	AC220V	0.160A		3.00kg		

SSL series Vibration and Shock Test Conditions

Axial direction	Direction X	Direction Y	Direction Z
Vibration test conditions	10-38 Hz, 3.5mm 38-500 Hz, 20g 1 oct/min, 2 hours	10-38 Hz, 3.5mm 38-500 Hz, 20g 1 oct/min, 2 hours	10-38 Hz, 3.5mm 38-500 Hz, 20g 1 oct/min, 2 hours
Shock test conditions	50g 6 ms ±1000 shocks	50g 6 ms ±1000 shocks	50g 6 ms ±1000 shocks

Ordering Specification

SSL100W	-	24	-	R
[Model number]		[Voltage]		[Color]
• SSL100W • SSL100M • SSL200W • SSL200M • SSL300W • SSL300M • SSL400W • SSL400M		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue



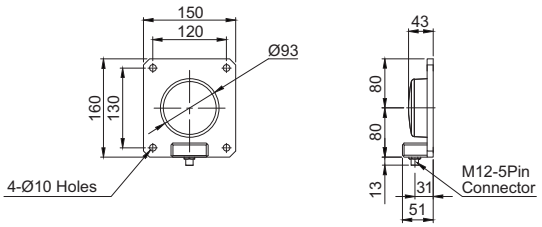
Cross-section of lens structure

SSL series has high resistance to vibration and shock by sealing the housing, lens, and LED circuit board together with epoxy mold compound.

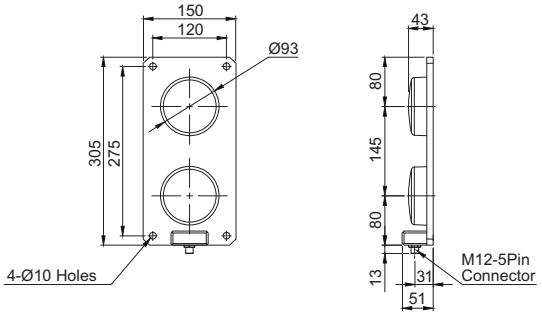
(Units : mm)

Technical Diagram

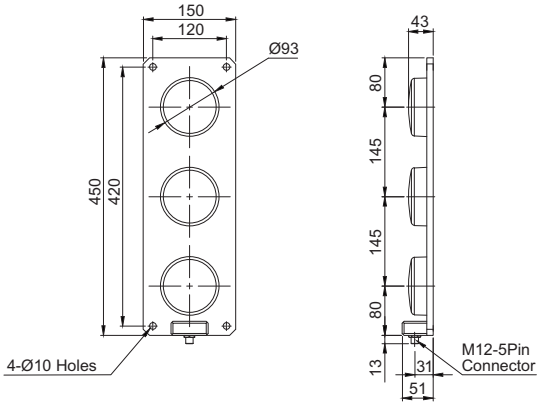
SSL100W/ SSL100M



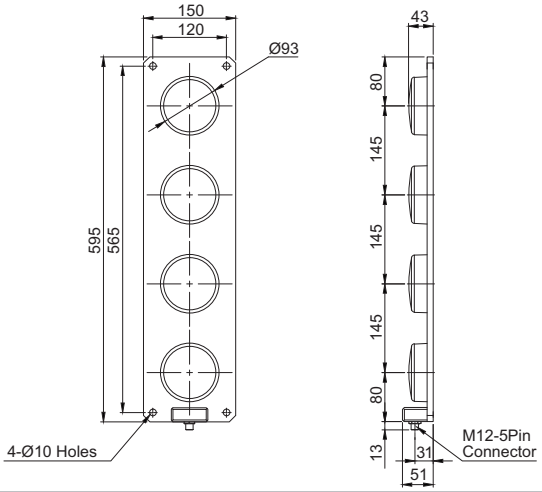
SSL200W/ SSL200M



SSL300W/ SSL300M

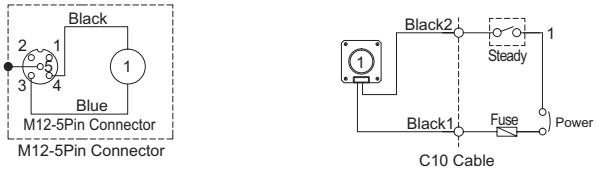


SSL400W/ SSL400M



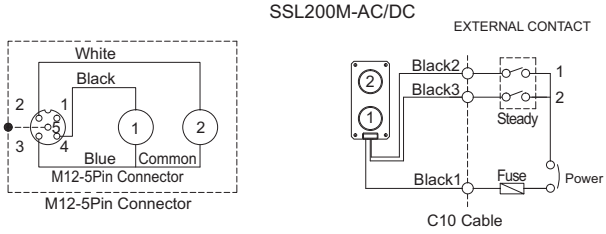
Wiring Instructions(External Contact)

SSL100W-AC/DC
SSL100M-AC/DC



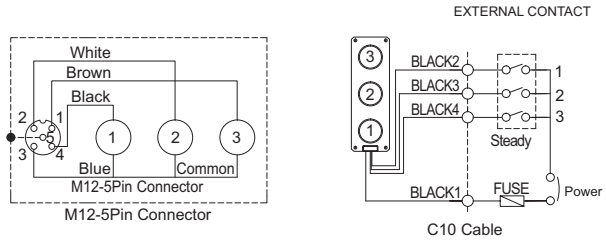
- **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no.3 or 4 regardless of polarity
- **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

SSL200W-AC/DC
SSL200M-AC/DC



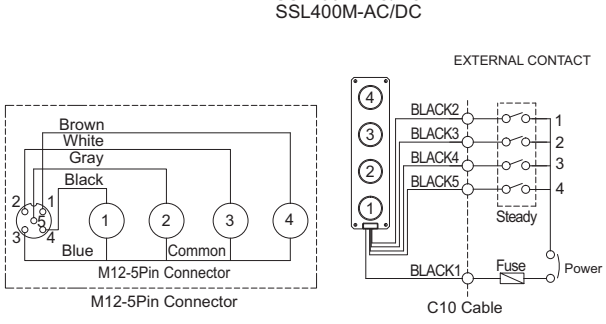
- **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no.3 or 1, 4 regardless of polarity
- **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

SSL300W-AC/DC
SSL300M-AC/DC



- **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no.3 or 1, 2, 4 regardless of polarity
- **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

SSL400W-AC/DC
SSL400M-AC/DC



- **M12-5PIN connector type**
  Pin no. 3 is common, however equipped built-in Bridge circuit, power line can be wired to Pin no. 3 and pin no. 1, 2, 4, 5 regardless of polarity
- **C10 CABLE TREADING TYPE**
  Treading power line, signal line standard : 7G×0.5mm² 600V/80°C I WIRE 1,000mm treading

Wall mount electric horn that offers 31 pre-recorded warning sounds and 30 user selected sound messages

- Bit input offers 5 channels with 6 sound outputs
- Binary input offers 31 sound outputs and SD Card (MP3) combination



• Sound Selection and Volume Adjustment Instructions

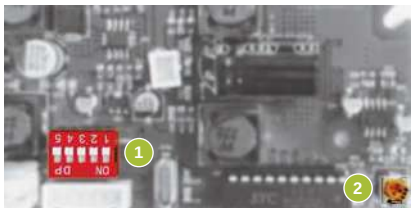
QWH series has control switches inside the unit for sound selection and volume adjustment. You can play customized sound message(MP3) with SD Card.

QWH series Product Category	
QWH35	Standard pre-recorded sound type
QWH35SD	SD Card(MP3) type
QWH50	Standard pre-recorded sound type with high volume output
QWH50SD	SD Card (MP3)type with high volume output

Common Specifications(QWH35/ QWH35SD/ QWH50/ QWH50SD)

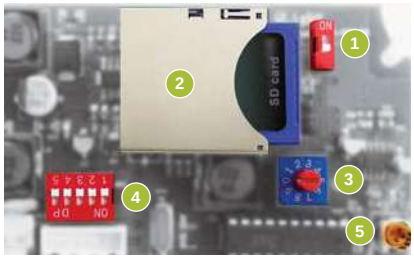
- Signal fit for the specific environment and condition.
- Options to select between 31 special warning sounds included in the pre-recorded sound type and SD Card(MP3) type
- Volume adjustment and sound selection switches located inside the unit. SD Card in the unit offers convenient operation.
- SD Card type allows the user to input the proper voice messages for specific operating conditions.
- The SD Card type 31 Special alarms built in which includes the voice alert from the SD Card (MP3). 31 special warning sounds are built both in pre-recorded sound type and SD Card type
- Offers both Binary and Bit input mode options (only the SD Card type has the bit input)
- Tightly sealed structure that blocks water and dust with IP66 protection rating suitable for outdoor installation
- Cable entry : PG 13.5
- Materials : Horn-PC, Housing-PC+ABS
- Ambient operating temperature : -30°C to +50°C(Standard type)
  -30°C to +50°C(SD Card type)
- Protection rating : IP66
- Certificates : CE Compliant
- Compliant with RoHS directive

Pre-recorded sound type



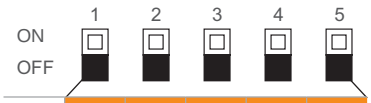
1. Switch for channel selection
2. Switch for volume adjustment

SD Card (MP3) type



1. Switch for sound pattern selection
2. SD Card slot for MP3
3. Switch for play mode selection
4. Switch for channel selection
5. Switch for volume adjustment

The input method of built-in sound type



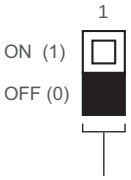
No.	1	2	3	4	5
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
:	:	:	:	:	:
31	1	1	1	1	1

Select from 31 pre-recorded output sound options by using a combination of the 5 channel input switches.

The binary input method allows you to express each of the 31 alarm sound signals with a "0"or "1"by switching the 5 channels on and off as shown in the table.

Sound selection instruction for SD Card type

You can select between pre-recorded sound mode and SD Card sound (MP3) mode with the SOUND selection switch.



Selection between pre-recorded sound mode and SD Card sound mode
0 : pre-recorded sound mode
1 : SD Card sound mode

- 31 built-in alarm sounds and special sound
- Supports SD Cards for external sound (MP3)
- Binary Input : 31Ch
- Bit Input : 5Ch(SD Card only)
- A versatile product that can play MP3 files via the SD card
- For detailed setup instructions, please see page 24 for the special beep-type products.
- Channel 1 is set as the factory default

QWH series

Wall Mount Electric Horn with Pre-recorded Special Warning Sound

IP66 | -30~+50°C | HORN | 115dB | 123dB | SD mp3 | 113dB | 118dB | NPN | RoHS

115dB



QWH35 series

123dB



QWH50 series

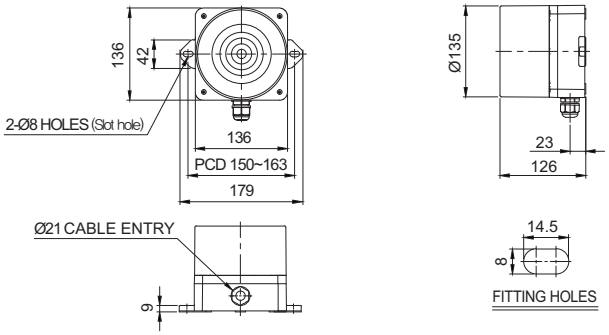
QWH35 Wall Mount Electric Horn MP3(SD Card) with Pre-recorded Special Warning Sound

Model number	Voltage	Current	Volume	Binary input/ Channels	Certificates	Weight
QWH35	DC12V-24V AC110V-220V	Max 0.800A Max 0.290A	• Special warning sound : 115dB • MP3 sound : 113dB	Binary Input : 31Ch	CE DC Only	0.9kg
QWH35SD				Bit Input : 5Ch (SD Card only) Binary Input : 31Ch		

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

QWH35



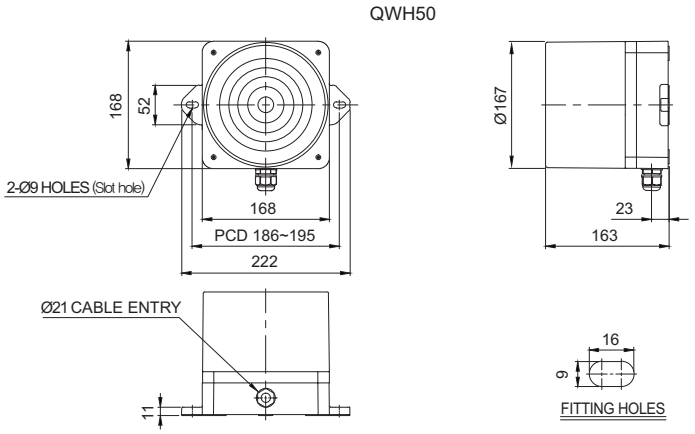
QWH50 Wall Mount Electric Horn MP3(SD Card) with Pre-recorded Special Warning Sounds

Model number	Voltage	Current	Volume	Binary input /Channels	Certificates	Weight
QWH50	DC12V DC24V AC110V-220V	Max 5.800A Max 0.600A	• Special warning sound : 123dB • MP3 sound : 118dB	Binary Input : 31Ch	CE DC Only	2.7kg
QWH50SD				Bit Input : 5Ch (SD Card only) Binary Input : 31Ch		

※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

QWH50

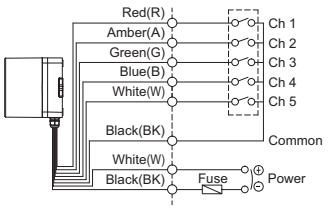


Sound Selection and Wiring Instructions

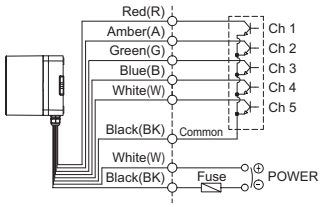
- Standard : Internal switch
- Customization : External contact(LC)

QWH35/ QWH50-DC/AC

EXTERNAL CONTACT



EXTERNAL TRANSISTOR-NPN



- Channel selection, 5 sounds available with Bit input and 31 sound available with Binary input
- DC type : Black line is negative(-)

※ Please refer to page 26 for channel input. (Wiring Instructions is changed to channel selection switches)

Customization

- External threading of sound selection signal line (Model number : -LC)

Ordering Specification

QWH50	-	110/220	-	LC
[Model number]		[Voltage]		[Sound selection]
• QWH35 • QWH35SD		• 12/24-DC12V-24V • 110/220-AC110V-220V		• Standard -Built-in Switch • LC -External contact
• QWH50 • QWH50SD		• 12-DC12V • 24-DC24V • 110/220-AC110V-220V		

SN/SEHN25

Electric Horns for Vessels and Heavy Industrial Applications

IP55 | -25~+50°C | HORN | 105dB | 115dB | NPN

Steel Housing

105dB



SN

115dB



SEHN25

Common Specifications(SN/ SEHN25/ SEHN50)

- Steel housing provides excellent vibration and shock resistance under seismic conditions
- A variety of sound selections between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
- Can adjust sound volume with the switch built inside the unit
- Materials : Housing-Steel, Horn housing -Steel
- Housing standard color : Red
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP55, Suitable for outdoor installation
- Certificates : KIMM Compliant

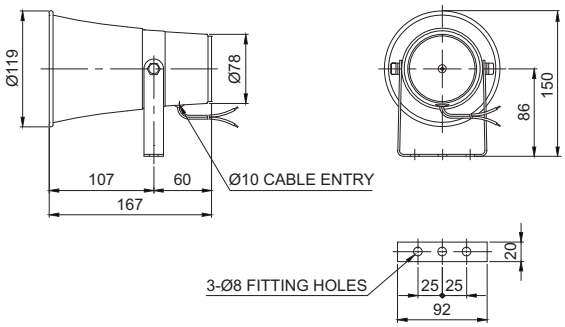
SN Max 105dB, Self Stand Type

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SN	WS	5 Warning sounds	105dB	DC12V / 0.266A DC24V / 0.211A AC110V / 0.062A AC220V / 0.031A	KIMM	DC-0.91kg AC-1.06kg
	WM	5 Melodies	105dB			
	WA	5 Alarms	103dB			
	WV	5 Customizable sounds	95dB			

※ Please refer to page 24 for detailed information about selectable sound patterns.

Technical Diagram (Units : mm)

SN



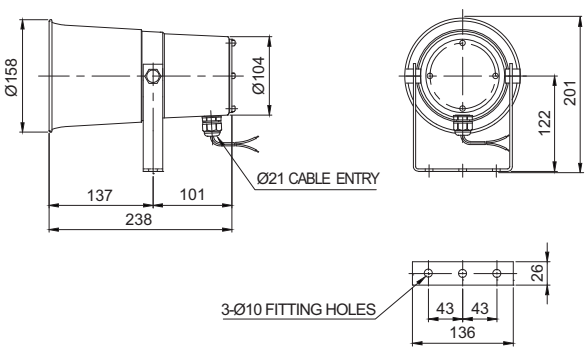
SEHN25 Max 115dB, Self Stand Type

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SEHN25	WS	5 Warning sounds	115dB	DC12V / 2.211A DC24V / 1.022A AC110V / 0.226A AC220V / 0.113A	KIMM	DC-2.26kg AC-2.48kg
	WM	5 Melodies	115dB			
	WA	5 Alarms	113dB			
	WV	5 Customizable sounds	108dB			

※ Please refer to page 24 for detailed information about selectable sound patterns.

Technical Diagram (Units : mm)

SEHN25



SEHN50

Electric Horns for Vessels and Heavy Industrial Applications

IP55 | -25~+50℃ | HORN | 120dB | NPN

Steel Housing

120dB



SEHN50

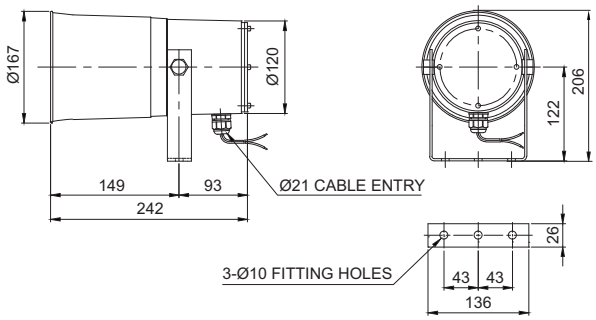
SEHN50 Max 120dB, Self Stand Type

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SEHN50	WS	5 Warning sounds	120dB	DC12V / 2.440A DC24V / 1.186A AC110V / 0.244A AC220V / 0.122A	KIMM	DC-2.67kg AC-3.30kg
	WM	5 Melodies	120dB			
	WA	5 Alarms	118dB			
	WV	5 Customizable sounds	115dB			

※ Please refer to page 24 for detailed information about selectable sound patterns.

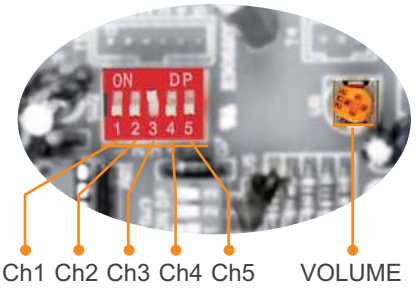
Technical Diagram (Units : mm)

SEHN50



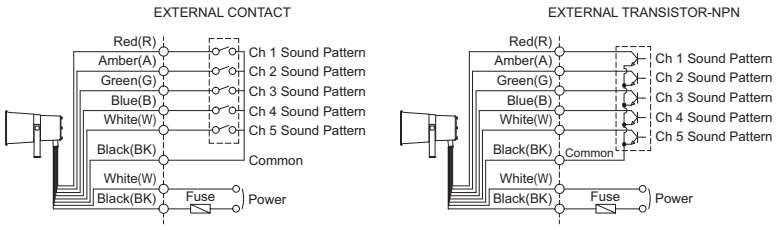
Sound Selection and Wiring Instructions

- Standard : Internal switch
- When each channel dip switch is on, a related sound will be played



- Customization : External contact(LC)

SN/ SEHN25/ SEHN50-DC/AC



- External power line standard : VCTF(0.75sq)×2C 400mm
- LC type signal line standard : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity

Customization

- You can select the audible sound pattern using external contacts or transistor with a customized external sound line. (Model number : -LC)

Ordering Specification

SEHN25	-	WA	-	220	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]
• SN • SEHN25 • SEHN50		• WS-Warning • WM-Melody • WA-Alarm • WV-Customizable sound		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• Standard -Built-in switch • LC -External contact

Electric horns for vessels and heavy industrial applications featuring excellent sealing, corrosion resistance, and durability

Can select from wall mount type, self stand type, and terminal box type for your various application needs

SEWN30 - Max 118dB
SEWN50 - Max 120dB

Aluminum housing

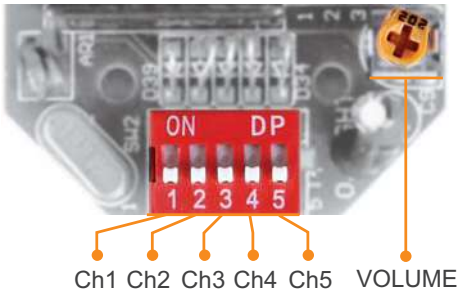


Common Specifications(SEWN30/ SEWN50)

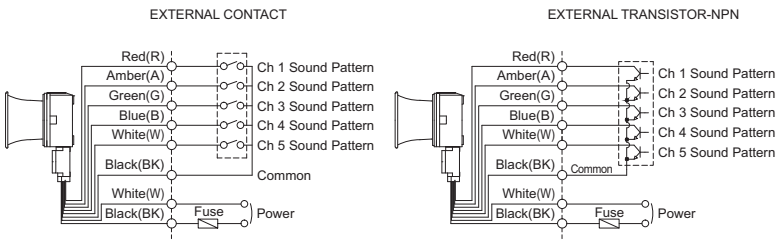
- Electric horn with tightly sealed structure has excellent durability. Suitable for vessels, steel industry, and outdoor plant applications
- Can select between a variety of mounting options (wall mount type, self stand type, and terminal box type)
- Aluminum housing provides excellent durability
- A variety of sound selection between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
- Can adjust sound volume with the dial built inside the unit
- Terminals located inside the terminal box or product
- Cable entry : 1/2″PF
- Materials : Housing-Al, Horn housing-PC/ SUS316L
- Standard Housing color : MUNSELL No. 7.5BG 7/2
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP56, Suitable for outdoor installation
- Certificates : KIMM, ABS, CCS, CE Compliant

Sound Selection and Wiring Instructions

- Standard type : Select sound using the switch inside the unit. When you turn on the dip switch for each channel the sound is turned on.
- Customized type : Select sound using the external contact(LC) You can select the audible sound pattern using external contacts or transistor with a customized external sound line(Model number : -LC)
- Product can be wired regardless of polarity



SEWN30 SERIES-DC/AC
SEWN50 SERIES-DC/AC



SEWN30 series

Electric Horns for Vessels and Heavy Industries Applications

IP56 | -30~+50°C | HORN | 118dB | NPN

SEWN30 series Max 118dB

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SEWN30E -Wall mount SEWN30L -Self stand SEWN30T -Wall mount with terminal box	WS	5 Warning sounds	118dB	DC12V / 2.211A DC24V / 1.022A AC110V / 0.226A AC220V / 0.113A	KIMM CCS ABS CE DC24V only	SEWN30E DC-1.76kg AC-2.11kg SEWN30L AC-1.74kg AC-2.13kg SEWN30T DC-2.23kg AC-2.58kg
	WP	5 Special warning sounds	118dB			
	WM	5 Melodies	118dB			
	WA	5 Alarms	116dB			
	WV	5 Customizable sounds	113dB			

※ Please refer to page 24 for detailed information about selectable sound patterns.



SEWN30E



SEWN30L



SEWN30T

- SEWN30E/ SEWN30L model uses flexible connector at cable entry and SEWN30T model use 15C nipple at cable entry.
- Cable gland is customizable



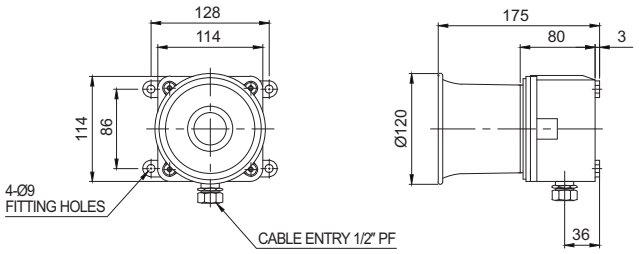
Flexible connector



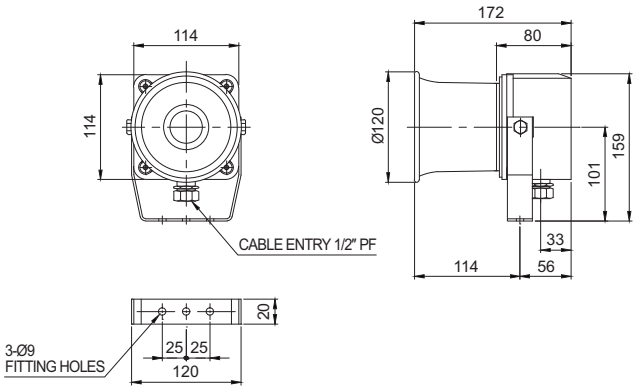
15C nipple

Technical Diagram (Units : mm)

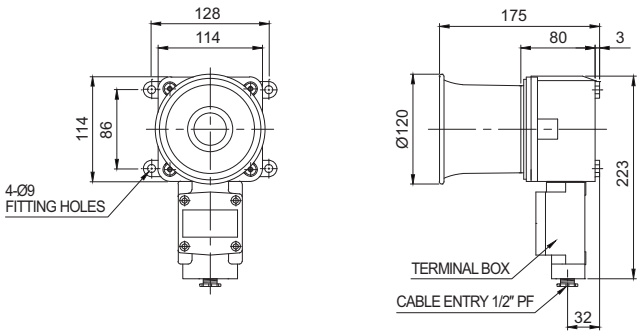
SEWN30E



SEWN30L



SEWN30T

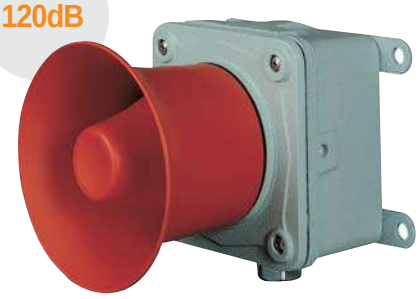


SEWN50 series

Electric Horns for Vessels and Heavy Industries Applications

IP56 | -30~+50°C | HORN | 120dB | NPN

120dB



SEWN50E



SEWN50L



SEWN50T

- SEWN50E/ SEWN50L model uses flexible connector at cable entry and SEWN50T model uses 15C nipple at cable entry.
- Cable gland is customizable



Flexible connector



15C nipple

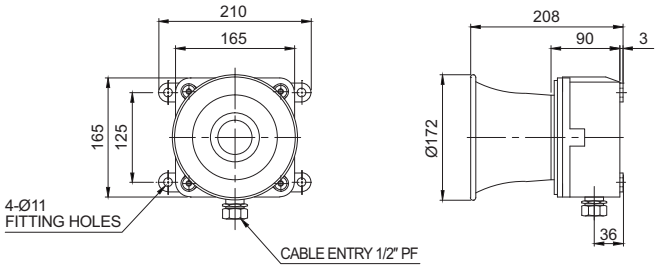
SEWN50 series Max 120dB

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SEWN50E -Wall mount SEWN50L -Self stand SEWN50T -Wall mount with terminal box	WS	5 Warning sounds	120dB	DC12V / 2.440A DC24V / 1.186A AC110V / 0.244A AC220V / 0.122A	KIMM CE DC24V only	SEWN50E DC-4.22kg AC-4.52kg SEWN50L AC-4.20kg AC-4.50kg SEWN50T DC-4.65kg AC-4.95kg
	WP	5 Special warning sounds	120dB			
	WM	5 Melodies	120dB			
	WA	5 Alarms	118dB			
	WV	5 Customizable sounds	115dB			

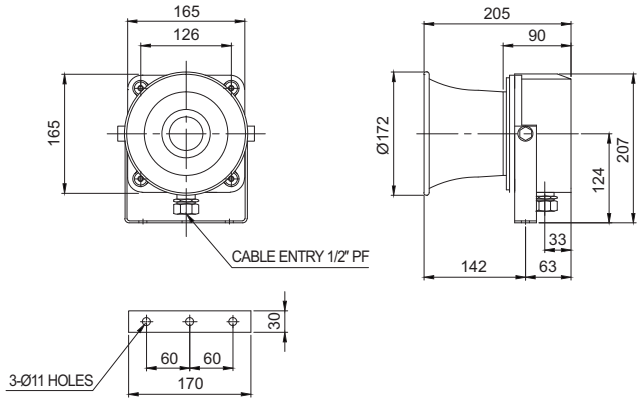
※ Please refer to page 24 for detailed information about selectable sound patterns.

Technical Diagram (Units : mm)

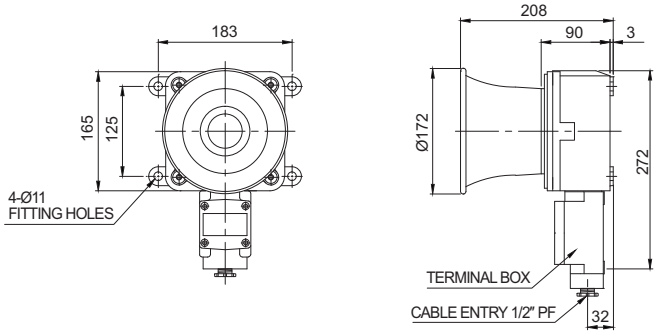
SEWN50E



SEWN50L



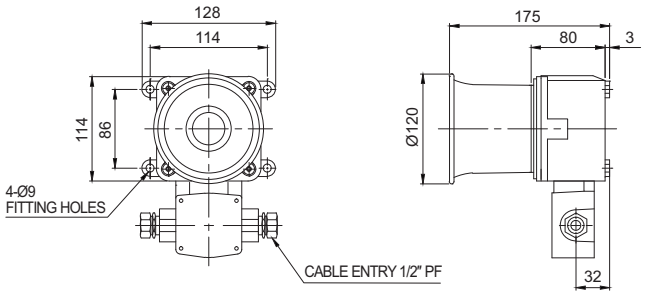
SEWN50T



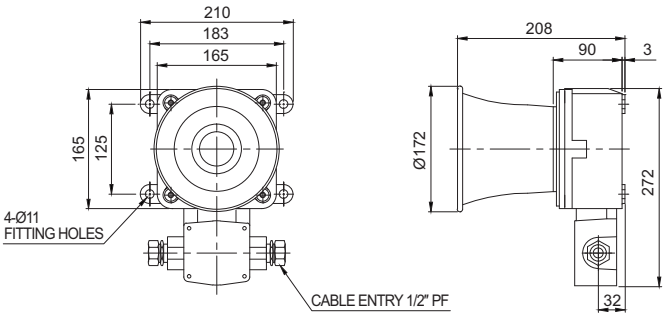


2 Cable Entry Terminal Box Type Technical Diagram (Units : mm)

SEWN30-2T



SEWN50-2T



Customization

- Cable gland available
- 3/4″PF cable entry (Standard : 1/2″PF)
- 2 cable entries terminal box :
  Customized terminal box available with two cable entries in opposite directions
  (Model number : SEWN30-2T, SEWN50-2T)
- Brass housing product :
  Brass housing products provide improved corrosion resistance.

※ Color will be MUNSELL No. 7.5BG 7/2 when released.

- External threading of sound line (Model number : -LC)



Brass housing product

Ordering Specification

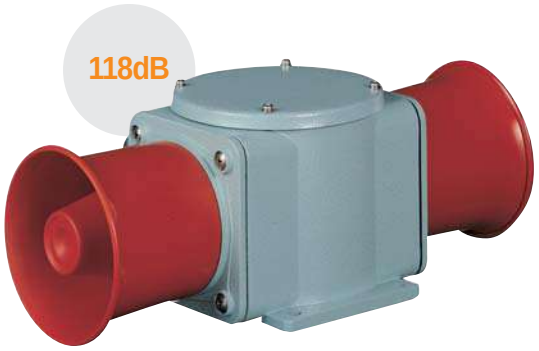
SEWN30T	-	WS	-	220	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]
• SEWN30E • SEWN30L • SEWN30T • SEWN50E • SEWN50L • SEWN50T		• WS-Warning • WP-Special warning sounds • WM-Melody • WA-Alarm • WV-Customizable sound		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• Standard -Built-in switch • LC -External contact

SHDN series

Dual-Facing Electric Horns for Vessels and Heavy Industry Applications

IP56 | -30~+50°C | HORN | 118dB | NPN

Aluminum housing



SHDN30

SHDN30 Max 118dB×2 Direct Mount Type

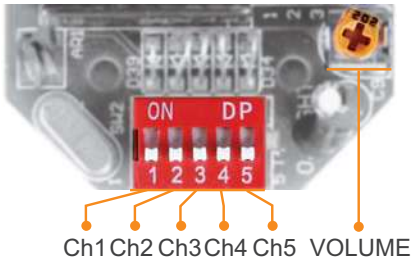
- Electric horn with tightly sealed structure and excellent durability, suitable for vessels, steel industry, and outdoor plant applications
- Aluminum housing provides excellent durability
- A variety of sound selection between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
- Terminals located inside the terminal box or product
- Cable entry : 1/2″PF
- Materials : Housing-Al, Horn housing-PC
- Can adjust sound volume with the switch built inside the unit
- Standard Housing color : MUNSELL No. 7.5BG 7/2
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP56, Suitable for outdoor installation

Model number	Sound pattern		Volume	Voltage / Current	Certificates	Weight
SHDN30	WS	5 Warning sounds	118dB×2	DC12V / 4.422A DC24V / 2.044A AC110V / 0.453A AC220V / 0.226A	-	DC-3.49kg AC-4.21kg
	WP	5 Special warning sounds	118dB×2			
	WM	5 Melodies	118dB×2			
	WA	5 Alarms	116dB×2			
	WV	5 Customizable sounds	113dB×2			

※ Please refer to page 24 for detailed information about selectable sound patterns.

Sound Selection Instructions

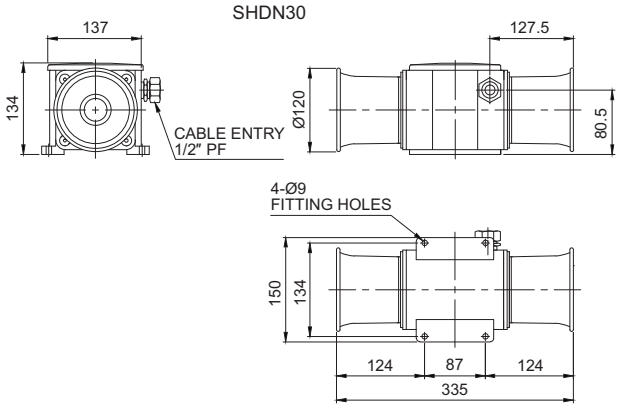
- Standard Type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, the designated sound will be played.



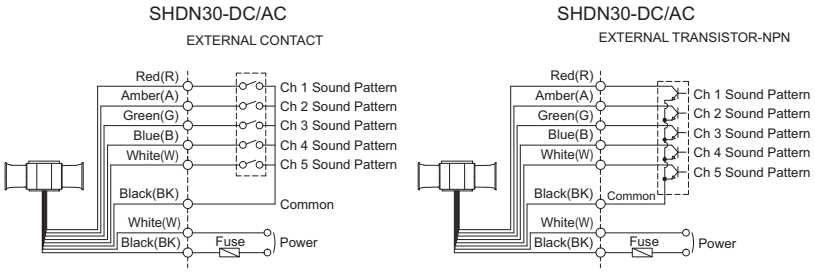
- Customized type : Select using the external contact(LC)
  You can select the audible sound pattern using external contacts or transistor with a customized external sound line (Model number : -LC)
- Product can be wired regardless of polarity

Technical Diagram

(Units : mm)



Wiring Instructions



Customization

- Customized cable entry(3/4″PF) available
- Customized external sound line type available

Ordering Specification

SHDN30	-	WP	-	110	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]
• SHDN30		• WS-Warning • WP-Special warning sounds • WM-Melody • WA-Alarm • WV-Customizable sound		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• Standard -Built-in switch • LC -External contact

SM series

Motor Sirens

IP44 | -25~+50°C | MOTOR | 110dB | 116dB

110dB



SM30

116dB



SM40

SM30 Miniature Motor Siren

- Ø80mm compact structure with 110dB sound output
- Motor RPM : 10,000RPM
- Materials : Steel
- Power consumption : 40W
- Protection rating : IP 44
- Housing standard color : Red
- Insulation resistance : 100MΩ(at 500 VDC)
- Ambient operation temperature : -25°C to +50°C

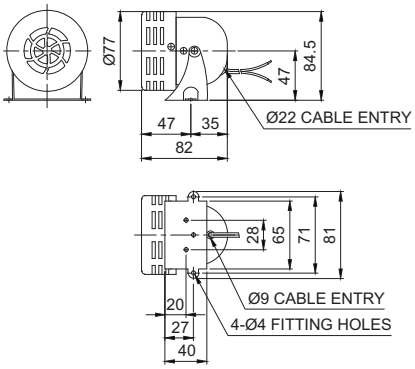
Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM30	110dB	DC12V	3.222A	-	0.22kg	10 min
		DC24V	1.779A		0.22kg	
		AC110V	1.333A		0.42kg	
		AC220V	1.000A		0.42kg	

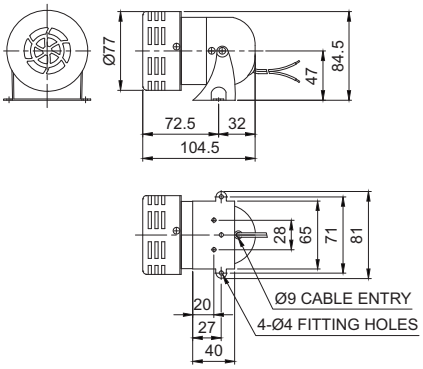
Technical Diagram

(Units : mm)

SM30-DC12/24



SM30-AC110/220



SM40 Miniature Motor Siren

- Ø100mm compact structure with 116dB sound output
- Motor RPM : 7,000RPM
- Materials : ABS
- Power consumption : 80W
- Protection rating : IP 44
- Housing standard color : Gray
- Insulation resistance : 100MΩ(at 500 VDC)
- Ambient operation temperature : -25°C to +50°C

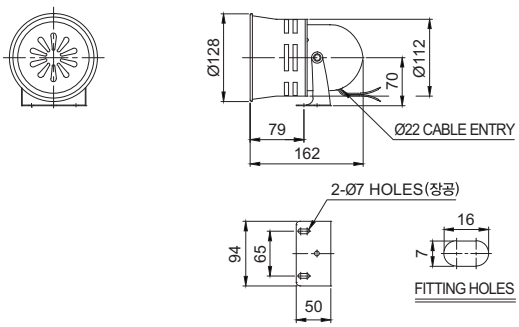
Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM40	116dB	DC12V	6.778A	-	0.53kg	10 min
		DC24V	3.666A		0.53kg	
		AC110V	1.000A		0.68kg	
		AC220V	0.722A		0.68kg	

Technical Diagram

(Units : mm)

SM40



Continuous operation rating time is 10 mins. Over 10 mins of continuous operation may cause motor damage. Please be careful.

Ordering Specification

SM30	-	24
[Model number]		[Voltage]
• SM30 • SM40		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V

SM series

Motor Sirens

IP44 | -25~+50℃ | MOTOR | 120dB | 123dB

120dB



SM200

123dB



SM400

SM200 120dB Heavy-Duty Motor Siren

- Excellent durability and high volume are suitable for noisy environment
- Motor RPM : 7,200RPM
- Housing standard color : Red
- Materials : Steel/Al
- Insulation resistance : 100MΩ(at 500 VDC)
- Ambient operation temperature : -25°C to +50°C
- Protection rating : IP 44
- Certificates : CE Compliant

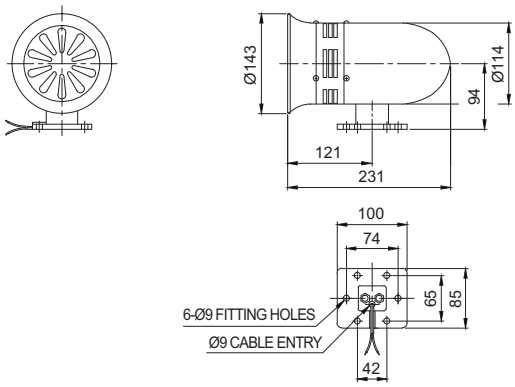
Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM200	120dB	DC24V	7.820A	CE	2.19kg	10 min
		AC110V	2.105A	-	2.55kg	
		AC220V	1.005A		2.55kg	

Technical Diagram

(Units : mm)

SM200



SM400 Sound 123dB Heavy-Duty Motor Siren

- 123dB high volume model suitable for long-distance audible signal in noisy environments
- Motor RPM : 7,600RPM
- Housing standard color : Red
- Materials : Steel/ABS
- Insulation resistance : 100MΩ(at 500 VDC)
- Ambient operation temperature : -25°C to +50°C
- Protection rating : IP 44

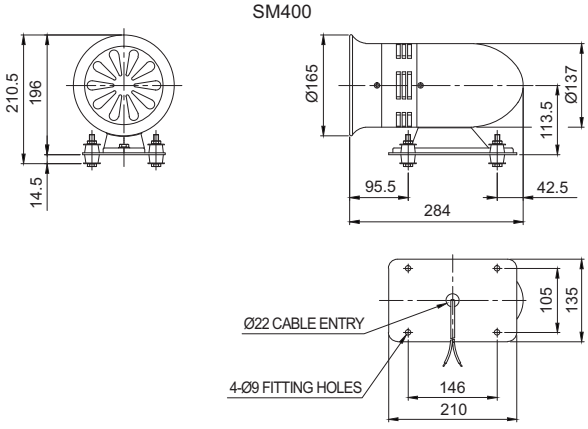
Specifications

Model number	Volume	Voltage	Current	Certificates	Weight	Rated time
SM400	123dB	DC24V	12.000A	-	3.19kg	3 min
		AC110V	6.300A		3.75kg	
		AC220V	3.800A		3.75kg	

Technical Diagram

(Units : mm)

SM400



Continuous operation rating time of SM400 is 3 mins. Over 3 mins of continuous operation may cause damage to the motor. Please be careful.

Ordering Specification

SM200	-	24
[Model number]		[Voltage]
• SM200 • SM400		• 24-DC24V • 110-AC110V • 220-AC220V

SAB series

Alarm Bells with Lamp Attached for Vessels and Heavy Industrial Applications

IP56 | -25~+50°C | BELL | 95dB

SAB130
-Bell housing Ø130mm

SAB200
-Bell housing Ø200mm



SAB130



SAB200

SAB130/ SAB200 Max 95dB

- Electric solenoid bell system provides excellent durability to vibration and shock for vessels and large facilities
- Special material for bell housing provides clear and crisp alarm sound
- Excellent vibration and shock resistant structure for superior durability
- Easy wiring and maintenance with terminal box attached
- Lamp attached provides visual signals
- Bell and lamp operation is synchronized. Each function can also operate separately
- Sound volume : Max 95dB at 1m
- Standard color : Housing-beige, Bell/ Lamp-Red
- Materials : Bell-Steel, Housing-ABS
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP56
- Cable entry : PG19

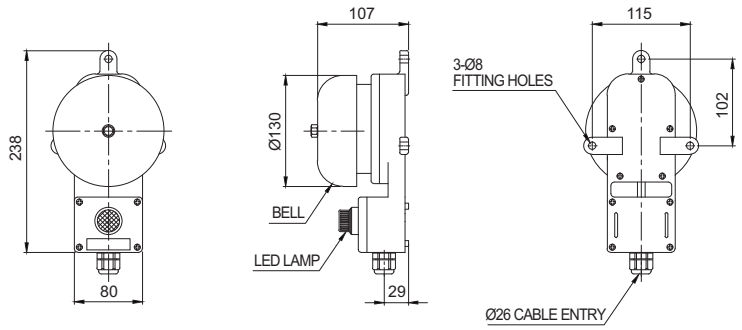
Specifications

Model number	Frequency	Volume	Bell diameter	Voltage	Current	Certificates	Weight	Bell/ Lamp color
SAB130	400-600Hz	95dB	130mm	DC24V	1.100A	-	1.88kg	● R-Red
				AC110V	0.350A			
SAB200			200mm	AC220V	0.300A		2.00kg	

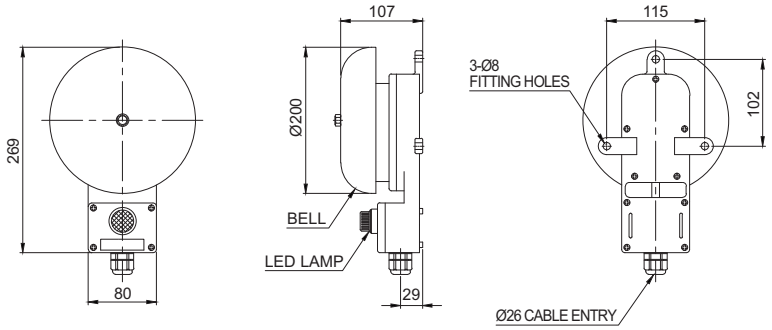
Technical Diagram

(Units : mm)

SAB130



SAB200



Customization

- Two way cable entries with PG19

Ordering Specification

SAB200	-	110	-	CG
[Model number]		[Voltage]		[Cable gland]
• SAB130 • SAB200		• 24-DC24V • 110-AC110V • 220-AC220V		• Standard -Back wiring type • CG -Built-in cable gland type

SANA series

Air Horns for Vessels and Heavy Industrial Applications

IP56 | -20~+60°C | HORN | 130dB

SANA200-200-300HZ
SANA400-400-600HZ
SANA700-700-800HZ



SANA200



SANA400

Common Specifications(SANA200/ SANA400/ SANA700)

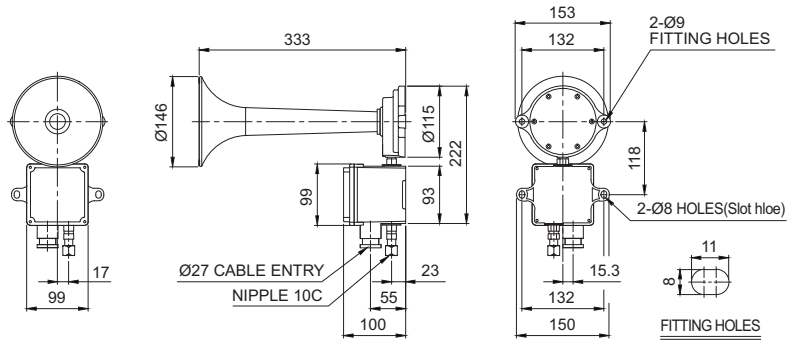
- High volume horn uses compressed air to power the high pitched sound made with the diaphragm
- Uses a special material which consumes a small quantity of compressed air and has long durability
- Suitable for applications like a large and noisy engine rooms, a phone alarm in a pump room, or as an emergency alarm
- Sound volume : Max 130dB at 1m
- Housing standard color : ● R-Red, ● B-Black, ● 7.5BG-MUNSELL No.7.5BG 7/2
- Materials : Horn-PC, Solenoid valve box-ABS
- Air pressure : 5-7kg/cm^2
- Ambient operation temperature : -20°C to +60°C
- Protection rating : IP 56
- Certificates : KIMM Compliant

Model number	Frequency	Volume	Certificates	Weight	Voltage	Current	Color
SANA200	200-300Hz	Max 130dB	KIMM	1.19kg	DC24V AC110V AC220V	0.448A	● R-Red ● BK-Black ● 7.5BG
SANA400	400-600Hz			1.13kg		0.111A	
SANA700	700-800Hz			1.07kg		0.055A	

SANA200 200-300Hz

Technical Diagram (Units : mm)

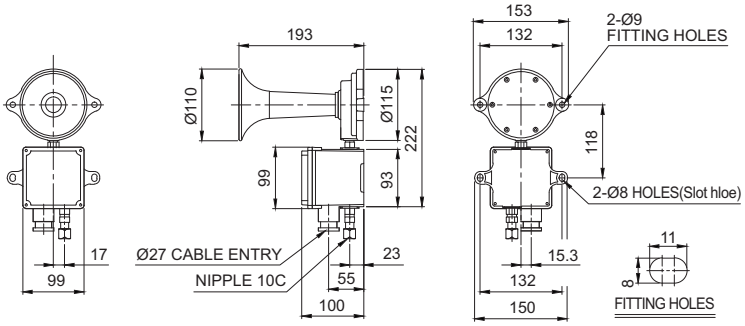
SANA200



SANA400 400-600Hz

Technical Diagram (Units : mm)

SANA400



SANA series

Air Horns for Vessels and Heavy Industrial Applications

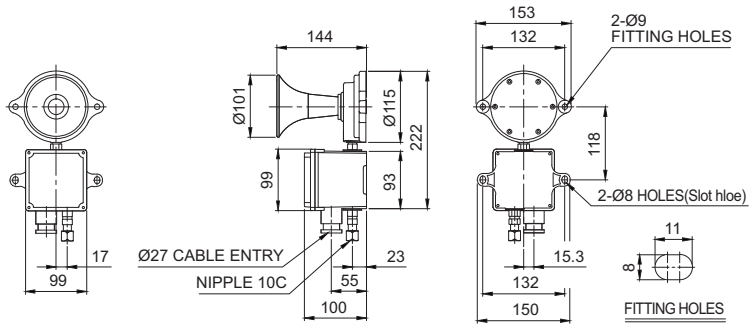


SANA700

SANA700 700-800Hz

Technical Diagram (Units : mm)

SANA700



Ordering Specification

SANA200	-	220	-	R
[Model number]		[Voltage]		[Color]
• SANA200 • SANA400 • SANA700		• 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • BK-Black • 7.5BG

Customization

- Horn and solenoid valve box available separately for individual installation
- Non return valve and Y filter installation



Non return valve



Y filter

QEB

Explosion Proof Solenoid Valve Box

IP66 -40~+60℃



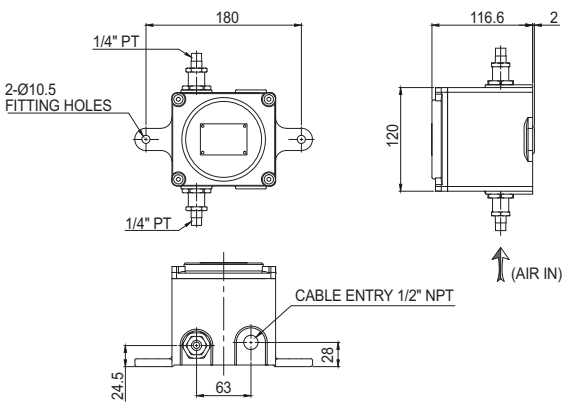
QEB

QEB Explosion Proof Solenoid Valve Box

- Materials : Housing, Cover-Al
- Ambient operation temperature : -40°C ≤ T_{amb} ≤ +60°C
- Protection rate : Ex d IIC T6, IP66
- Certificates : KIMM Compliant
- Left picture has a cable gland installed, explosion proof cable gland configuration is available as a customized option

Technical Diagram (Units : mm)

QEB



Ordering Specification

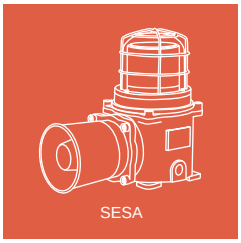
QEB	-	24
[Model number]		[Voltage]
• QEB		• 24-DC24V • 110-AC110V • 220-AC220V

TOTAL CATALOGUE

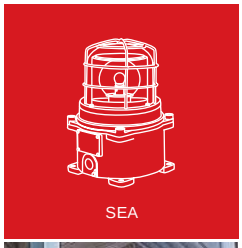
Explosion Proof Products

INNOVATION IN ALARM & SIGNAL

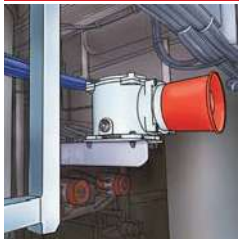


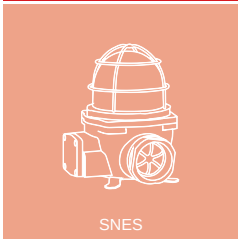
















Product applications 198

Technical data 199

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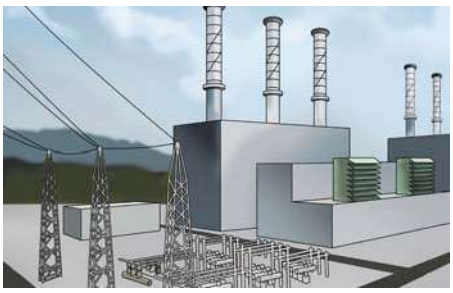
Product introductions 206

Explosion Proof Product Applications



Semiconductor Factory

Applied in a plumbing system for flammable materials used in the semiconductor manufacturing process



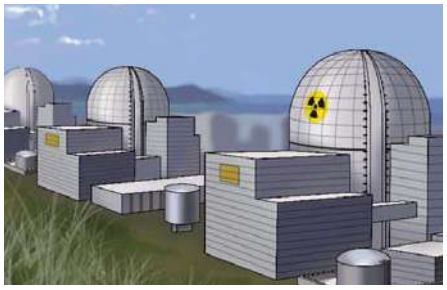
Power Plant

Applied in hazardous areas with possibilities of explosion cause by coal dust in thermal power plants



Petrochemical Plant

Applied in areas such as refineries where explosive materials are always present



Nuclear Power Plant

Applied in areas where explosive materials are always present such as pipes and ducts of a generator cooling system



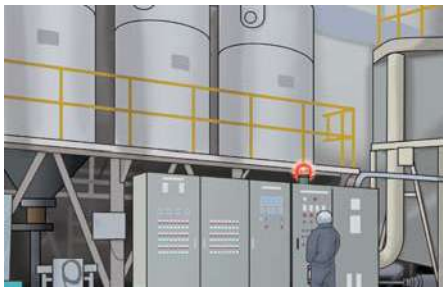
Oil Tanker

Applied in areas where explosive materials are always present such as ships carrying oil and gas



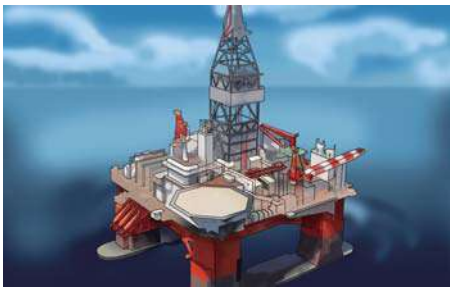
Electric Facilities

Applied in electrical equipment where flammable gas, vapor or dust exist



Flour Factory

Applied in danger zones where there is a possibility of explosion caused by grain dust



Off Shore Plant

Applied in mining equipment which produces or stores flammable materials such as oil and gas



Coal Mine

Applied in areas where hazardous materials such as coal dust is always present



Steel Industry

Applied in danger zones where hazardous materials such as gas is always present



Gas Station

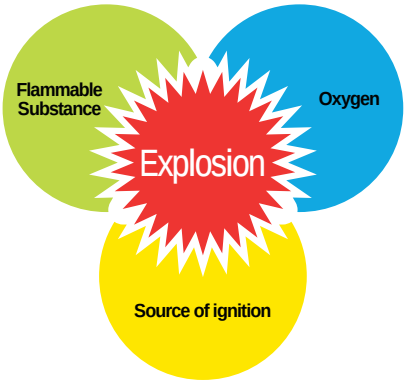
Applied in danger zones where flammable materials are stored



Metal Processing Industry

Applied in danger zones where explosive metal, dust, and flammable gas are always present

Explosion Proof Technical Data



Technical Data for Explosion Proof Products

- **3 elements of explosion**
  Flammable substance, ignition source, and oxygen are the 3 elements of an explosion. The explosion will occur when the three components are met. If one the three components does not exist the explosion will not occur.
- **What is explosion proof?**
  Preventing the combination of the 3 elements of explosion.
- **Explosion proof product**
  Typically, products will include electrical parts that can be an explosion ignition source. However, explosion proof products are designed to prevent spark/ ignition.

Explosion Proof Structure Classifications

The data indicated below are some of the classification specifications by structure type of the explosion proof products. Furthermore, there are mold explosion proof structure, charging explosion proof structure and special explosion proof structure. The explosion proof classification structure is separated depending on product application areas.

Flame Proof



Ex d Zone1, 2

All electrical circuits are enclosed in a house strong enough to contain any explosion or fire that may take place on the inside.

Purged/ Pressurized



Ex p Zone1, 2

Type of protection in which the protective inert gas inside the enclosure is maintained at a higher pressure than that of the surrounding atmosphere.

Increased Safety



Ex e Zone1, 2

Electrical circuits incorporates special measures to reduce the probability of excessive temperatures and the occurrence of arcs and sparks in normal service.

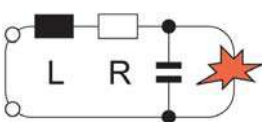
Non-Sparking



Ex n Zone2

Method of protection for electrical equipment designed so that it will not ignite the surrounding explosive atmosphere in normal operation and under certain fault conditions specifi ed in the standard.

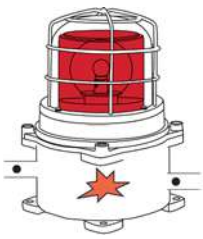
Intrinsic Safety



Ex i Zone 0, 1, 2

The electrical energy available in circuits and equipment, is limited to a level to low to ignite the most easily ignitable mixtures in a hazardous area.

Dust Explosion Proof



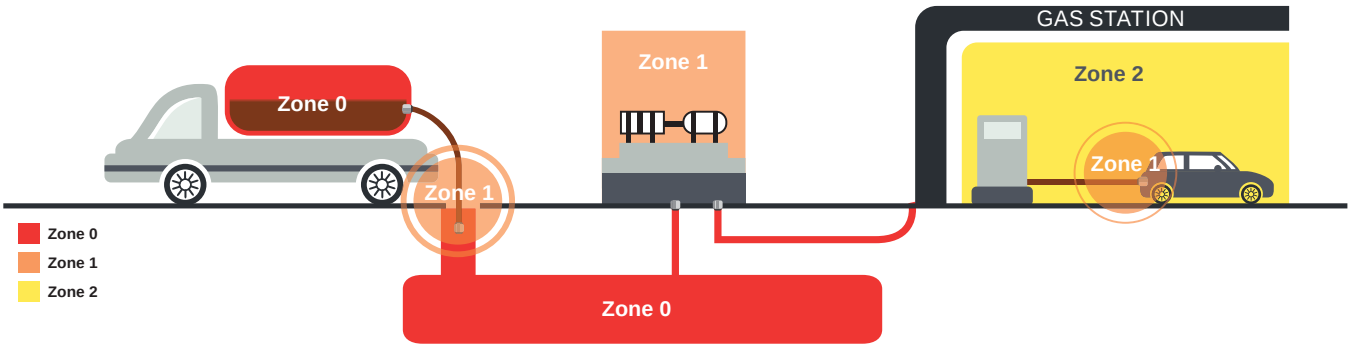
Ex td Zone 21, 22

The apparatus is enclosed in a manner that will exclude ignitable amounts of dusts and will not permit arcs, sparks or heat generated or liberated inside the enclosures to cause ignition of exterior dust accumulations on the enclosure or of atmospheric dust suspensions in the vicinity of the enclosure.

Technical Data of Explosion Proof

Hazardous Area Classification

Zone 0	Where ignitable concentrations of flammable gases, vapors, or liquids are present continuously or for long periods of time under normal operating conditions.
Zone 1	Where ignitable concentrations of flammable gases, vapors, or liquids are likely to exist under normal operating conditions.
Zone 2	Where ignitable concentrations of flammable gases, vapors, or liquids can occur for only a short period of time.
Zone 20	Where explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods or frequently.
Zone 21	Where explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur, occasionally, in normal operation.
Zone 22	Where explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.



<Areas classification example>

Condition	IEC	NEC500	JIS, KS
Continuous hazard (more than 1000 hours per year)	Zone 0 Zone 20(DUST)	Division 1	Zone 0
Intermittent hazard (10-1000 hours per year)	Zone 1 Zone 21(DUST)		Zone 1
Possible hazard (0.1-10 hours per year)	Zone 2 Zone 22(DUST)	Division 2	Zone 2

Models Available for Each Zone

Area Classification	Model
Zone 1	SNE, SEA, SE, SSEL, SESA, SEBA, SNES, SPNA, QEB, SBE130, SBE150, QEAL1, QEAL2, QTEX, QTEXB
Zone 2	SNE, SEA, SE, SSEL, SESA, SEBA, SNES, SPNA, QEB, SBE130, SBE150, QEAL1, QEAL2, QTEX, QTEXB, ST45ML-Ex, STB45ML-Ex

Technical Data of Explosion Proof

Classification by Group

Explosion proof equipment is classified as below depending on the risk characteristic of explosive gas.

EXPLOSION GROUP FLAMMABLE	FLAMMABLE SUBSTANCE	FLAMMABILITY
Ⅰ	Methane	
ⅡA	Acetone, Petrol, Methanol, Propane, Toluene	Low
ⅡB	Ethylene, City gas	High
ⅡC	Hydrogen, Acetylene, Carbon sulphide	Very High

Temperature Class Definition

The temperature class is defined as below depending on the surface temperature of the explosion proof equipment.

The range of Max imum surface temperature per temperature class	
The range of Max imum surface temperature	temperature class
300°C - 450°C	T1
200°C - 300°C	T2
135°C - 200°C	T3
100°C - 135°C	T4
85°C - 100°C	T5
Below 85°C	T6

The Ignition Class and Temperature of The Explosive Gas

1) If the temperature class gets higher from T1 to T6, the ignition temperature gets lower.
2) If the explosion group changes from Ⅰ to ⅡC, the explosion gets bigger.

	T1(G1)	T2(G2)	T3(G3)	T4(G4)	T5(G5)	T6(G6)
Ⅰ	Methane					
ⅡA	Acetone, Ethane Ethyl ethanoate Ammonia Benzol(Pure) Ethanoic acid Carbon oxide Methane, Methanol Propane, Toluene Acetic acid Ethyl acetate Ethyl chloride Carbon Monoxide Methylene Chloride Naphthalene, Phenol	Ethanol i-Amyl acetate n-Butane n-Butyl alcohol Ethyl alcohol Cyclohexane Acetic anhydride	Benzene Diesel fuel Aircraft fuel Heating oils n-Hexane Petroleum spirit - Gen Jet propulsion fuel Heating fuel DIN 51603	Acetaldehyde Ethyl ether		
ⅡB	Town gas Coal gas (lighting gas)	Ethylene Ethylene oxide	Ethylene Ethylene oxide	Ethyl ether		
ⅡC	Hydrogen	Ethine(Acetylene)				Carbon disulphide

Technical Data of Explosion Proof

Explosion Proof Marking

CE	2004	Ex ATEX	Ⅱ	2	G	Ex d	ⅡC	T6	Gb	IP66	- 40°C ≤ T_{amb} ≤ +60°C
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫

①	CE mark
②	Identification number of the notified body
③	Marking for equipment for use in explosive atmospheres.
④	Ⅰ: Mines Ⅱ: Surface industries
⑤	'1'=Zone 0, '2'=Zone 1, '3'=Zone 2
⑥	"M" = methane gas, 'G' = gas, 'D' = dust
⑦	Types of protection
⑧	Equipment groups
⑨	Temperature class
⑩	'Ga'=Zone 0, 'Gb'= Zone 1, 'Gc'=Zone 2
⑪	Protection rating(IP)
⑫	Ambient operating temperature

Area Classification

International Classification of Zones.

AREA CLASSIFICATION				
		Continuous hazard	Intermittent hazard	Possible hazard
IEC/ CENELEC		Zone 0 Zone 20(DUST)	Zone 1 Zone 21(DUST)	Zone 2 Zone 22(DUST)
USA	NEC505	Zone 0	Zone 1	Zone 2
	NEC500 CLASS Ⅰ (GAS) CLASS Ⅱ (DUST) CLASS Ⅲ (FIBERS)	DIVISION 1		DIVISION 2

Technical Data of Explosion Proof

The Temperature Classification

The temperature classification is based on the Max imum surface temperature of equipment.

The range of Max imum surface temperature per temperature class			
IEC/ EN/ NEC505		NEC500	
The range of Max imum surface temperature	Temperature class	The range of Max imum surface temperature	Temperature class
300°C - 450°C	T1	300°C - 450°C	T1
200°C - 300°C	T2	280°C - 300°C 260°C - 280°C 230°C - 260°C 215°C - 230°C 200°C - 215°C	T2 T2A T2B T2C T2D
135°C - 200°C	T3	180°C - 200°C 165°C - 180°C 160°C - 165°C 135°C - 160°C	T3 T3A T3B T3C
100°C - 135°C	T4	120°C - 135°C 100°C - 120°C	T4 TA
85°C - 100°C	T5	85°C - 100°C	T5
Below 85°C	T6	Below 85°C	T6

Classification by Group According to NEC500

Classification of flammable material according to NEC500.

CLASS/ GROUP		GAS
CLASS 1	GROUP A	Acetylene or Equal
	GROUP B	Hydrogen, Butadiene, Ethylene oxide, Propylene oxide, Acrolein
	GROUP C	Ethyl ether, Ethylene, Acetaldehyde, Allyl alcohol, N-Butyraldehyde, Carbon monoxide, Crontonaldehyde, Cyclopropane, Diethyl ether, Diethylamine, Epichlorohydrin, Ethylene, Ethylenimine, Hydrogen Sulfide, Morpholine, 2-Nitropropane tetrahydrofuran, Isoprene or Unsymmetrical dimethylhydrazine(UDMH)
	GROUP D	Acetic acid (glacial), Acetone, Acrylonitrile, Ammonia, Benzine, Butane, 1-Butanol (Butyl alcohol), 2-Butanol(Secondary butyl alcohol), N-Butyl acetate, Isobutyl Acetate, Di-Isobutylene, Ethane, Ethanol(Ethyl alcohol), Ethyl acetate, Ethyl acrylate(Inhibited), Ethylenediamine(Anhydrous), Ethylene dichloride, Gasoline, Heptanes, Hexanes, Isoprene, Isopropyl, Ether, Mesityl oxide, Methane(Natural gas), Methanol (Methyl alcohol), 3-Methyl-1-Butanol(ISOAmyl alcohol), Methyl ethyl ketone, Methyl, Isobutyl ketone, 2-Methyl-1-Propanol(Isobutyl alcohol), 2-Methyl-2-Propanol (Tertiary butyl alcohol), Petroleum naphtha, Pyridine, Octanes, Pentanes, 1-Pentanol(Army alcohol), Propane, 1-Propanol(Propyl alcohol), 2-Propanol (Isopropyl alcohol), Propylene, Styrene, Toluene, Vinyl acetate, Vinyl chloride or Xylenes
CLASS 2	GROUP E	Metal dusts, Aluminum, Magnesium
	GROUP F	Coal, Coke, Carbon black, Charcoal dust
	GROUP G	GROUP E or F, Including flour, Starch, Grain, Wood, Plastic, Chemicals

Explosion Proof Type Specification List








Model number(series)		ST45ML-Ex	QTEX	SNE	SE	SEA	SSEL
Voltage		AC/DC12V AC/DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø45	Ø144	Ø152(Cage)	Ø155(Cage)	Ø167(Cage)	154×154
	Height	114-278	472(Self stand) 457(Wall mount)	226	267	287	100
	Depth	-	155(Wall mount)	183(Length)	189(Length)	172(Length)	172(Length)
Materials		Lens-PC Housing-PC	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Brass	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving			●	●	●	
	LED Revolving			●	●	●	
	LED Steady/Flashing	●(Steady)	●	●	●	●	●(Steady)
	LED Strobe						
	LED Simulated revolving xenon Strobe			●	●	●	
Mount type		Self stand	Self stand, Wall mount	Self stand	Self stand	Self stand	Self stand
Cable entry		-	3/4" NPT	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT
Protection rating		IP54	IP66	IP66	IP66	IP66	IP66
Usage area		ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2
Certificates		NEPSI, KGS	IECEx	IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS	KIMM, ABS	IECEx, ATEX, NEPSI, KIMM, KOSHA, ABS, CCS, KR	KIMM, ABS
Explosion proof rating		Ex nR II T4, Ex nR II T6 (Layer 3 Only)	Ex d IIC T6 Gb (IECEx)	Ex d IIC T6 Gb (IECEx)	Ex d IIC T6 (KIMM)	Ex d IIC T6 Gb (IECEx)	Ex d IIC T6 (KIMM)
Customization		-	Explosion proof cable gland, 2 ways cable entry, Cable entry	Explosion proof cable gland, 2 ways cable entry, Cable entry : M20x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5
Transistors		NPN/ PNP Type	PNP Type	-	-	-	-
Page		P206	P208	P212-213	P216-217	P218-219	P223








Model number(series)		STB45ML-Ex	QTEXB	SNES	SESA	SEBA	SPNA
Voltage		AC/DC12V AC/DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø45	Ø144	Ø152(Cage)	Ø167(Cage)	Ø167(Cage)	Ø134(Horn)
	Height	153-317	472(Self stand) 457(Wall mount)	226	333	333	158
	Depth	-	155(Wall mount)	183(Length)	327(Length)	240(Length)	327(Length)
Materials		Lens-PC Housing-PC	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al	Horn-SUS316L Housing-Al
Light source & Operation	Bulb Steady/Flashing						
	Bulb Revolving			●	●	●	
	LED Revolving			●	●	●	
	LED Steady/Flashing	●(Steady)	●	●	●	●	
	LED Strobe						
	LED Simulated revolving xenon Strobe			●	●	●	
Sound Pattern / dB	1 tone Buzzer	Max 80dB at 1m	Max 80dB at 1m	Max 105dB at 1m			
	15 signal sounds				Max 118dB at 1m		Max 118dB at 1m
	Bell					Max 95dB at 1m	
	Voice signal				Max 113dB at 1m		Max 113dB at 1m
	30 signal sounds						
	31 signal sounds						
	MP3						
Mount type		Self stand	Self stand, Wall mount	Self stand	Self stand	Self stand	Self stand
Cable entry		-	3/4" NPT	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT
Protection rating		IP54	IP66	IP66	IP66	IP55	IP66
Usage area		ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2
Certificate		NEPSI, KGS	IECEx	IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS	IECEx, ATEX, NEPSI, KIMM, KOSHA, ABS, CCS, KR	KIMM, ABS, KR	IECEx, ATEX, NEPSI, KIMM, KOSHA, ABS, CCS, KR
Explosion proof rating		Ex nR II T4, Ex nR II T6 (Layer 3 Only)	Ex d IIC T6 Gb (IECEx)	Ex d IIC T6 Gb (IECEx)	Ex d IIC T6 Gb (IECEx)	Ex d IIC T6 (KIMM)	Ex d IIC T6 Gb (IECEx)
Customization		-	Explosion proof cable gland, 2 ways cable entry, Cable entry	Explosion proof cable gland, 2 ways cable entry, Cable entry : M20x1.5, 7 tone Buzzer	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5
Transistors		NPN/ PNP Type	PNP Type	-	NPN Type	-	NPN Type
Page		P207	P209	P214-215	P220-221	P222	P224

Explosion Proof Type Specification List






Model number(series)		QEAL1	QEAL2	SBE130	SBE150
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø152(Cage)	Ø167(Cage)	Ø120(Bell)	Ø150(Bell)
	Height	238	287	120	120
	Depth	183(Length)	172(Length)	138(Length)	138(Length)
Materials		Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al	Bell-Al Housing-Al	Bell-Al Housing-Al
Light source & Operation	Bulb Steady/Flashing				
	Bulb Revolving				
	LED Revolving				
	LED Steady/Flashing	●(Steady)	● (Flashing)		
	LED Strobe				
	LED Simulated revolving				
	xenon Strobe				
Sound Pattern / dB	1 tone Buzzer				
	15 signal sounds				
	Bell			Max. 95dB at 1m	Max. 95dB at 1m
	Voice signal				
	30 signal sounds				
	31 signal sounds				
	MP3				
Mount type		Self stand	Self stand	Self stand	Self stand
Cable entry		1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT
Protection rating		IP66	IP66	IP56	IP56
Usage area		ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2	ZONE 1, ZONE 2
Certificate		KOSHA	KOSHA	KIMM	KIMM
Explosion proof rating		Ex d ⅡC T4 (KOSHA)	Ex d ⅡC T4 (KOSHA)	Ex d ⅡC T6 (KIMM)	Ex d ⅡC T6 (KIMM)
Customization		Explosion proof cable gland, 2 ways cable entry, M20x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5
Transistors		-	-	-	-
Page		P245	P246	P225	P225



Model number(series)		QMFL-300-Ex-24
Voltage		DC24V
Power consumption		10W
Dimension (mm)	Length	290
	Width	38
	Height	64
Materials		Lens-Tempered glass Housing-Al
Lens color		Translucent
Lamp color		Cool daylight
Intensity of illumination(at 1m)		260Lux
Mounting		Mount bracket
Protection rating		IP67/ IP69K
Certificate		KC(KGS)
Explosion proof rating		Ex nR Ⅱ T6
Customization		
Page		P226

ST45ML-Ex

Non Sparking Explosion Proof LED Tower Lights

IP54 | -20~+50℃ | NPN | PNP

ST45ML-Ex
Standard Model

Non-sparking explosion proof LED tower lights suitable for use in zone 2 hazardous areas



ST45ML-Ex



Gas cabinets used in the semiconductor industry require constant supply of specialty gases and pressure to properly store the devices. Non-sparking explosion proof products (ST45ML-EX) must be used in these conditions.

Common Specifications(ST45ML-Ex/ STB45ML-Ex)

- Non- sparking explosion protected high-intensity LED steady tower lights
- Excellent distance visibility by using a special reflector to arrogate the light from the LED filament
- Reduced maintenance with use of long-lasting LED light source
- Lens and housing are made of polycarbonate with excellent durability, suitable for potentially hazardous and explosive environments
- Can be used for Zone 2 application with explosion proof rating of nR

※ Zone2 : Equipment is capable of operating under abnormal high risk environmental conditions for a short duration

- Materials : Lens-PC, Housing-PC, Mounting housing-Al
- Certificates : NEPSI, KCs(KGS)
- Explosion protection rating: Ex nR ⅡT4, Ex nR ⅡT6(Layer 3 Only)
- Protection rating : IP54
- Ambient operating temperature : -20°C ≤ T_{amb} ≤ +50°C

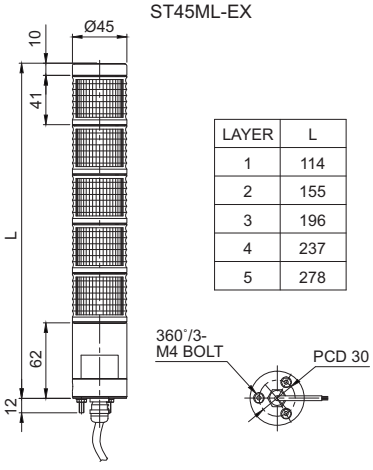
ST45ML-Ex Non-Sparking Explosion Proof LED Tower Light

Model number	Layer	Voltage	Current	Certificate	Weight	Color
ST45ML-Ex	1	AC/DC12V	0.024A	Ex NEPSI, KCs	0.19kg	● R-Red
		AC/DC24V	0.012A		0.19kg	
	2	AC/DC12V	0.048A		0.24kg	● R-Red ● G-Green
		AC/DC24V	0.024A		0.24kg	
	3	AC/DC12V	0.072A		0.29kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.036A		0.29kg	
	4	AC/DC12V	0.096A		0.32kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.048A		0.32kg	
	5	AC/DC12V	0.120A		0.36kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.060A		0.36kg	

Technical Diagram

(Units : mm)

ST45ML-EX



LAYER	L
1	114
2	155
3	196
4	237
5	278

STB45ML-Ex

Built-in Buzzer Non-Sparking Explosion Proof Tower Lights

IP54 | -20~+50°C | BUZZER | 80dB | NPN | PNP

STB45ML-Ex
Built-in buzzer type

Non-sparking explosion proof LED tower lights suitable for use in zone 2 hazardous areas



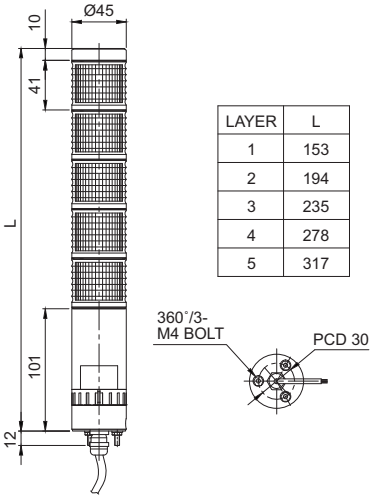
STB45ML-Ex



Sound volume adjustable by volume control lever

Technical Diagram (Units : mm)

STB45ML-EX



LAYER	L
1	153
2	194
3	235
4	278
5	317

STB45ML-Ex Built-in Buzzer Non-Sparking Explosion Proof Tower Lights

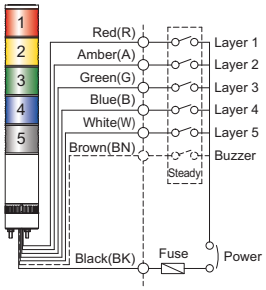
- Sound volume adjustable by volume control lever
- Sound volume : Max 80dB at 1m

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STB45ML-Ex	1	AC/DC12V	0.040A	Ex NEPSI, KCs	0.26kg	R-Red
		AC/DC24V	0.043A		0.26kg	
	2	AC/DC12V	0.064A		0.30kg	R-Red, G-Green
		AC/DC24V	0.055A		0.30kg	
	3	AC/DC12V	0.088A		0.34kg	R-Red, A-Amber, G-Green
		AC/DC24V	0.067A		0.34kg	
	4	AC/DC12V	0.112A		0.38kg	R-Red, A-Amber, G-Green, B-Blue
		AC/DC24V	0.079A		0.38kg	
	5	AC/DC12V	0.136A		0.42kg	R-Red, A-Amber, G-Green, B-Blue, W-White
		AC/DC24V	0.091A		0.42kg	

Wiring Instructions

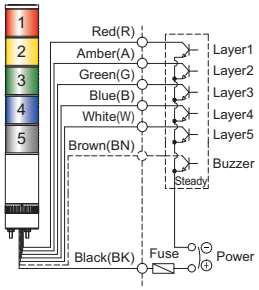
ST45ML-Ex-DC
STB45ML-Ex-DC

EXTERNAL CONTACT

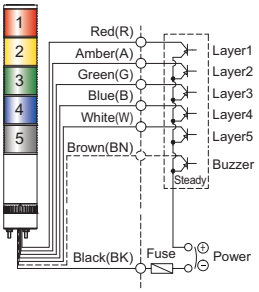


ST45ML-Ex-DC
STB45ML-Ex-DC

EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP



- External power line/ Signal line standard : UL2464 AWG22(0.3sq) 400mm

Ordering Specification

ST45ML-Ex	-	3	-	12	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST45ML-Ex • STB45ML-Ex		• 1-1layer • 2-2layers • 3-3layers • 4-4layers • 5-5layers		• 12-DC12V • 24-DC24V		• R-Red • A-Amber • G-Green • B-Blue • W-White

Cautions in use of explosion proof tower lights

Contact structure of an explosion proof product must be a qualified part we provide, please do not disassemble, assemble, modify or repair arbitrarily.

QTEX series

Explosion Proof LED Tower Lights Flame Proof Housing

IP66 | -40~+60℃ | PNP

QTEX - Standard model

Explosion proof LED tower lights with flame proof housing



QTEX
Direct mount type



QTEX
Wall mount type

Common Specifications(QTEX/ QTEXB)

- Explosion proof LED tower lights with Ex d ⅡC rating can be used in explosive gas environments
- Excellent distance visibility by using a special reflector to aggregate the light from the LED filament
- Ø80 LED tower light mounted inside the flame proof housing
- Aluminum housing provides excellent durability
- Long-lasting high intensity LED light source
- Terminal box located inside the housing for easy power wiring
- Direct mount type and wall mount type available depending on application needs.
- Flashing rate: 60-80 flashes/min
- Selectable between steady/flashing mode with proper wire arrangement
- Sound volume : Max 80dB at 1m(QTEXB Type)
- Lens colors arrangement : ●R-Red ●A-Amber ●G-Green ●B-Blue ●W-White
- Standard housing color : Silver
- Cable entry : 3/4″ NPT
- Materials : Lens-Tempered glass, Filter lens-AS, Housing-Al, Reflector-Heat resistant ABS
- Certificates : IECEx
- Protection rating : Ex d ⅡC T6 Gb, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

QTEX Explosion Proof LED Tower Lights with Flame Proof Housing

Model number	Layer	Voltage	Current	Certificate	Weight	Color
QTEX (Steady/ Flashing)	1	DC12V	0.080A	IECEx	4.01kg	● R-Red
		DC24V	0.040A		4.01kg	
		AC110V	0.046A		4.02kg	
		AC220V	0.023A		4.02kg	
	2	DC12V	0.160A		4.15kg	● R-Red ● G-Green
		DC24V	0.080A		4.15kg	
		AC110V	0.051A		4.16kg	
		AC220V	0.025A		4.16kg	
	3	DC12V	0.240A		4.31kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.120A		4.31kg	
		AC110V	0.057A		4.32kg	
		AC220V	0.028A		4.32kg	
	4	DC12V	0.320A		4.46kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		DC24V	0.160A		4.46kg	
		AC110V	0.064A		4.47kg	
		AC220V	0.032A		4.47kg	
	5	DC12V	0.400A		4.61kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		DC24V	0.200A		4.61kg	
		AC110V	0.071A		4.62kg	
		AC220V	0.035A		4.62kg	



Hazardous Area Classification

Zone 0 : Dangerous status
Ignitable concentrations of flammable gases or vapors which are present continuously or for long periods of time.

Zone 1 : Normal status
Ignitable concentrations of flammable gases or vapors which are likely to occur under normal operating conditions.

Zone 2 : Abnormal status or places
Ignitable concentrations of flammable gases or vapors which are not likely to occur under normal operating conditions and do so only for a short period of time.

IP66 | -40~+60℃ | BUZZER | 80dB | PNP

QTEXB - Built-in buzzer type



QTEXB
Direct mount type



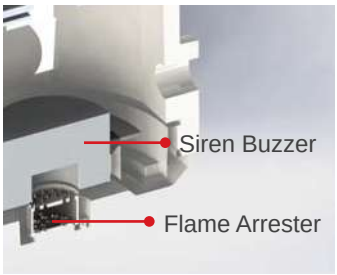
QTEXB
Wall mount type

QTEXB Built-in Siren Buzzer Type Explosion Proof LED Tower Lights with Flame Proof Housing

- Explosion proof LED tower lights with visual & audible signal that can be used in hazardous environments
- Sound tone & volume : Siren buzzer, Max 80dB at 1m

Model number	Layer	Voltage	Current	Certificate	Weight	Color
QTEXB (Steady/ Flashing)	1	DC12V	0.100A	IECEx	4.11kg	● R-Red
		DC24V	0.050A		4.11kg	
		AC110V	0.073A		4.12kg	
		AC220V	0.053A		4.12kg	
	2	DC12V	0180A		4.25kg	● R-Red ● G-Green
		DC24V	0.090A		4.25kg	
		AC110V	0.078A		4.26kg	
		AC220V	0.055A		4.26kg	
	3	DC12V	0.260A		4.41kg	● R-Red ● A-Amber ● G-Green
		DC24V	0.130A		4.41kg	
		AC110V	0.084A		4.42kg	
		AC220V	0.058A		4.42kg	
	4	DC12V	0.340A		4.56kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		DC24V	0.170A		4.56kg	
		AC110V	0.091A		4.57kg	
		AC220V	0.062A		4.57kg	
	5	DC12V	0.420A		4.71kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		DC24V	0.210A		4.71kg	
		AC110V	0.098A		4.72kg	
		AC220V	0.065A		4.72kg	

Explosion proof structure for buzzer model



What is a Flame Arrester?

A flame arrester(also called a deflagration arrester) functions by absorbing the heat from a flame front traveling at sub-sonic velocities, thus dropping the burning gas/air mixture below its auto-ignition temperature: consequently, the flame cannot survive. The heat is absorbed through channels (passages) designed into an element.

Customization

- Built-in explosion proof cable gland
- Two way cable entries

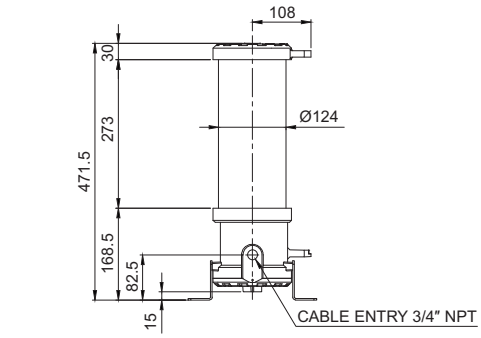
Ordering Specification

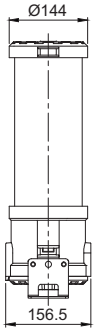
QTEX	-	3	-	12	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTEX • QTEXB		• 1-1layer • 2-2layers • 3-3layers • 4-4layers • 5-5layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

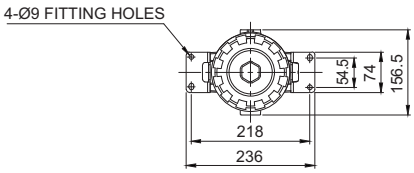
Technical Diagram

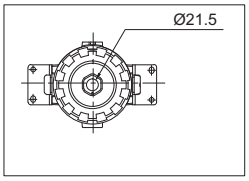
(Units : mm)



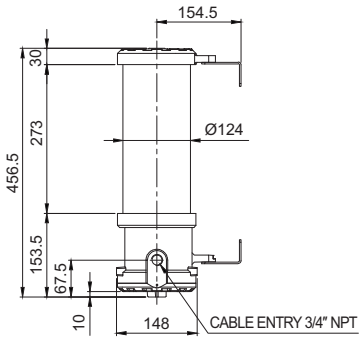


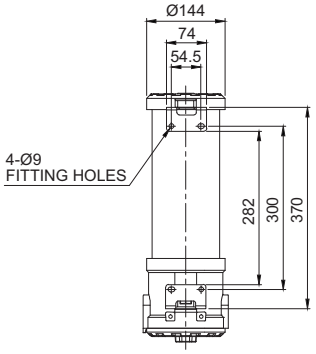


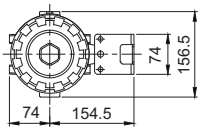


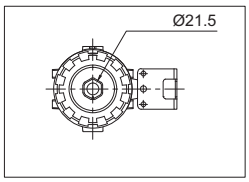










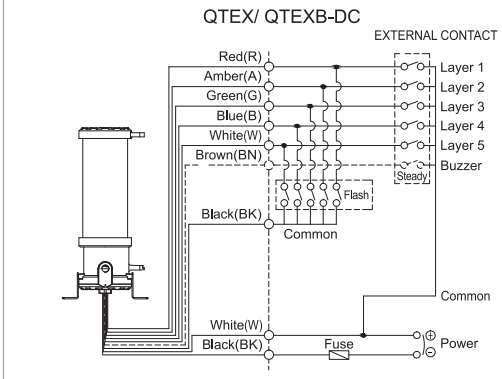
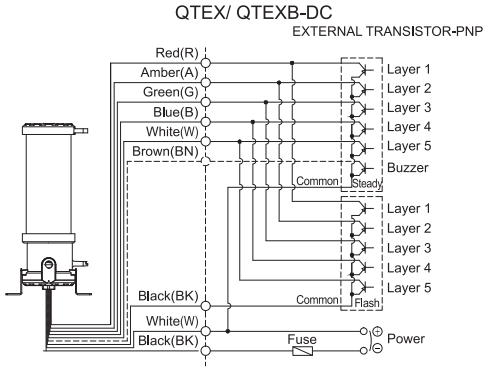
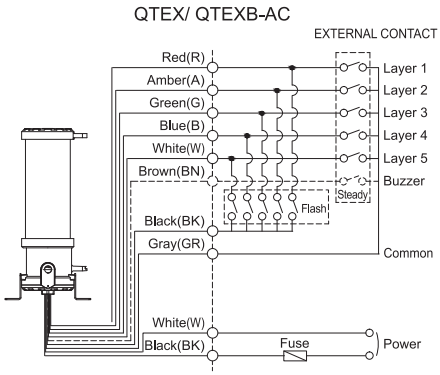
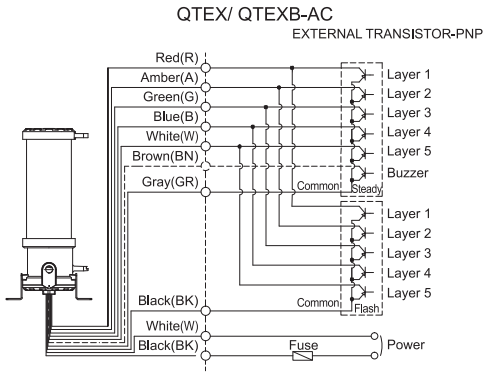


Cautions in using explosion proof tower lights

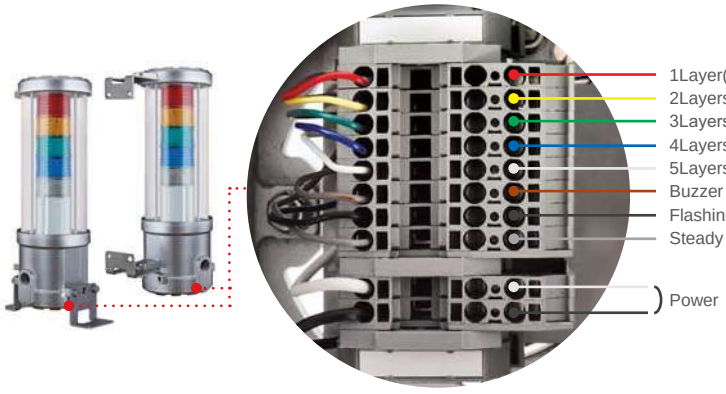
- Explosion proof products should be maintained by explosion proof regulation, please do not disassemble, assemble, modify or repair arbitrarily. In case disassembly is required for wiring or repair, structures such as the contact parts should maintain the same initial condition that we provided.
- Cable gland must be used in explosion proof certified products which satisfy the T6 temperature rating and IP66 protection rating.

Wiring Instructions

- QTEX/ QTEXB wiring with transistors and external contacts
- In case of wiring with transistors, please use PNP transistors and wiring exactly following below technical diagram

	External contacts type	Transistor type
DC steady/ flashing type		
AC steady/ flashing type		

Terminal Wiring Information



QTEX series consists of a blocked terminal which is convenient for internal wiring of the terminal box. Please refer to technical diagram for detailed Wiring Instructions.

SNE series

Ø130mm Explosion Proof Warning/ Signal Lights

IP66 -40~+60℃



SNELR



SNEL

Common Specifications(SNELR/ SNEL/ SNE-S/ SNE)

- Light weight and compact explosion proof warning lights with a variety of light source selections from bulb, LED, and xenon lamp
- Aluminum housing provides excellent durability
- Fully enclosed structure with protection rating of IP66
- Integrated housing and terminal box model
- Housing standard color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Inner lens-PC, Housing-Al, Protection cage-STS 316L, Reflector for LED type-PC/ Reflector for bulb type-Heat resistant ABS
- Certificates : IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS
- Protection rating :
  IECEx - Ex d ⅡC T6 Gb, IP66
  ATEX - Ⓔx Ⅱ 2G Ex d ⅡC T6, IP66
  NEPSI, KIMM, KOSHA - Ex d ⅡC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

SNELR LED Revolving Warning Light

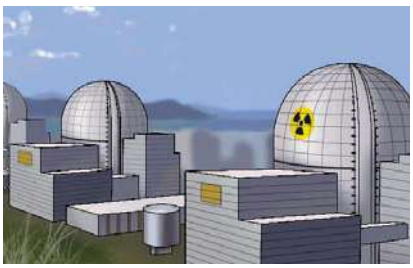
- Features high visibility in all directions with special concentrated LED light structure and multi side reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Certificates	Weight	Color
SNELR	DC12V	0.183A	IECEx, ATEX, NEPSI, KOSHA, CCS	3.15kg	R-Red, A-Amber, G-Green, B-Blue
	DC24V	0.127A		3.15kg	
	AC110V	0.035A		3.85kg	
	AC220V	0.017A		3.85kg	

SNEL LED Steady/ Flashing Signal Light

- Long-lasting high intensity LED light source
- Suitable for applications where bulb replacement is hard
- Built in switch for steady/flashing selection
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
SNEL	DC12V	0.123A	IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS	3.65kg	R-Red, A-Amber, G-Green, B-Blue
	DC24V	0.094A		3.65kg	
	AC110V	0.035A		4.30kg	
	AC220V	0.017A		4.30kg	



Flameproof warning/ indicator lights are applied in an areas where potentially explosive materials may linger. For example, from a pipe or duct in a coolant generator system in a nuclear power plant in the image above.

Customization

- Explosion proof cable gland attached type available (Standard type does not provide explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry (M20×1.5) available
- ATEX certified type
- IECEx certified type

SNE series

Ø130mm Explosion Proof Warning/ Signal Lights

IP66 -40~+60℃



SNE-S



SNE

SNE-S Xenon Lamp Strobe Signal Light

- Lamp connector fastening structure allows for convenient lamp replacement
- Excellent long-distance visibility with strong flashing signal diffusion
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SNE-S	DC12V	0.433A	200V -550V	EUB0641 -1A(G) U Type	48	IECEx ATEX NEPSI KIMM KOSHA CCS	3.60kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.216A					3.60kg	
	AC110V	0.076A					4.25kg	
	AC220V	0.081A					4.25kg	

SNE Bulb Revolving Warning Light

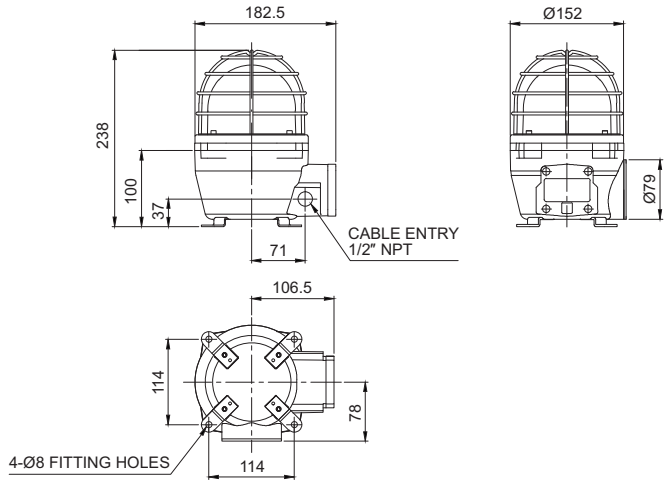
- Excellent signal light diffusion effect with multi-faced reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SNE	DC12V	1.155A	12V15W	G23 15S	17	IECEx ATEX NEPSI KIMM KOSHA CCS	3.25kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		3.25kg	
	AC110V	0.204A	12V15W	G23 15S	17		3.95kg	
	AC220V	0.102A	12V15W	G23 15S	17		3.95kg	

Technical Diagram

(Units : mm)

SNELR/ SNEL/ SNE-S/ SNE



Ordering Specification

SNE	-	220	-	R
[Model number]		[Voltage]		[Color]
• SNELR • SNEL • SNE-S • SNE		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

SNES series

Ø130mm Explosion Proof Warning/ Signal Lights with Siren Buzzer

IP66 | -40~+60°C | BUZZER | 105dB

Siren buzzer sound output of Max 105dB



SNESLR



SNESL



Flameproof warning/ signal lights applied in an areas where potentially explosive materials may linger as shown in the refinery image above.

Common Specifications(SNESLR/ SNESL/ SNES-S/ SNES)

- Light weight and compact explosion proof warning lights with a siren buzzer
- A variety of light source selections from bulb, LED, and xenon lamp
- Aluminum housing provides excellent durability
- Fully enclosed structure with protection rating of IP66
- Integrated housing and terminal box model
- Sound type and sound volume : Siren buzzer- Max 105dB at 1m/ 7 sounds buzzer, Max 95dB at 1m
- User selected built-in buzzer with 7 sound patterns available upon request
- Housing standard color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Inner lens-PC, housing-Al, Protection cage-STS 316L, Reflector for LED type-PC/ Reflector for bulb type-Heat resistant ABS
- Certificates : IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS
- Protection rating :
  IECEx - Ex d IIC T6 Gb, IP66
  ATEX - Ex II 2G Ex d IIC T6, IP66
  KOSHA - Ex d IIB+H2 T6
  NEPSI, KIMM - Ex d IIC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

SNESLR LED Revolving Warning Light with Siren Buzzer

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Sound pattern/ dB	Certificates	Weight	Color
SNESLR	DC12V	0.485A	• Warning sound(Buzzer) : 105dB • 7 sounds(Buzzer): 95dB	IECEx, ATEX, NEPSI, KOSHA, CCS	3.60kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.411A			3.60kg	
	AC110V	0.111A			4.30kg	
	AC220V	0.055A			4.30kg	

SNESL LED Steady/ Flashing Signal Light with Siren Buzzer

- Long-lasting high intensity LED light source
- Suitable for applications where bulb replacement is hard
- Built in switch for steady/flashing selection
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Sound pattern/ dB	Certificates	Weight	Color
SNESL	DC12V	0.432A	• Warning sound(Buzzer) : 105dB • 7 sounds(Buzzer): 95dB	IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS	3.65kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.377A			3.65kg	
	AC110V	0.111A			4.30kg	
	AC220V	0.055A			4.30kg	

Customization

- Explosion proof cable gland attached type available (Standard type does not come with explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry (M20×1.5) available
- ATEX certified type
- IECEx certified type
- Customized built-in buzzer type with 7 sound patterns available

SNES series

Ø130mm Explosion Proof Warning/ Signal Lights with Siren Buzzer

IP66 | -40~+60℃ | BUZZER | 105dB

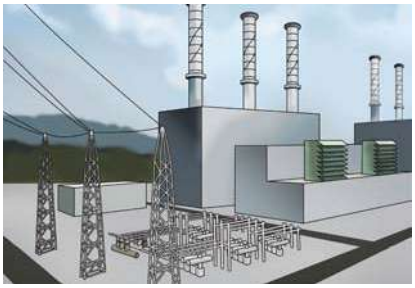
Siren buzzer sound output of Max 105dB



SNES-S



SNES



Flameproof warning/ signal lights applied in dust explosion areas such as coal dust shown in thermoelectric power plant image above.

SNES-S Xenon Strobe Signal Light with Siren Buzzer

- Lamp connector fastening structure allows for convenient lamp replacement
- Excellent long-distance visibility with strong flashing signal diffusion
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Sound pattern/dB	Certificates	Weight	Color
			Spec	Standard	Parts no				
SNES-S	DC12V	0.655A	200V -550V	EUB0641 -1A(G) U Type	48	• Warning sounds(Buzzer) : 105dB • 7 sounds(Buzzer) : 95dB	IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS	3.60kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	0.500A						3.60kg	
	AC110V	0.104A						4.25kg	
	AC220V	0.066A						4.25kg	

SNES Bulb Revolving Warning Light

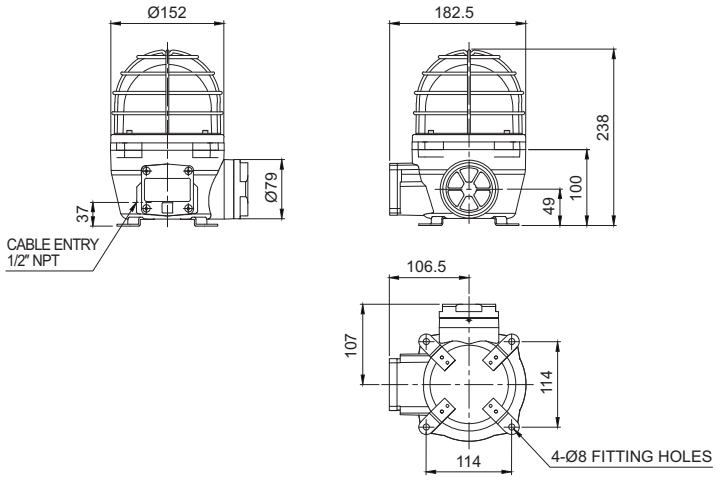
- Excellent signal light diffusion effect with multi-faced reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Sound pattern/dB	Certificates	Weight	Color
			Spec	Standard	Parts no				
SNES	DC12V	1.766A	12V15W	G23 15S	17	• Warning sounds(Buzzer) : 105dB • 7 sounds(Buzzer) : 95dB	IECEx, ATEX, NEPSI, KIMM, KOSHA, CCS	3.70kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.044A	24V15W	G23 15S	18			3.70kg	
	AC110V	0.288A	12V15W	G23 15S	17			4.40kg	
	AC220V	0.144A	12V15W	G23 15S	17			4.40kg	

Technical Diagram

(Units : mm)

SNESLR/ SNESL/ SNES-S/ SNES



Ordering Specification

SNES	-	220	-	R
[Model number]		[Voltage]		[Color]
• SNESLR • SNESL • SNES-S • SNES		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SE series

Brass Housing Explosion Proof Warning/ Signal Lights

IP66 -40~+60℃

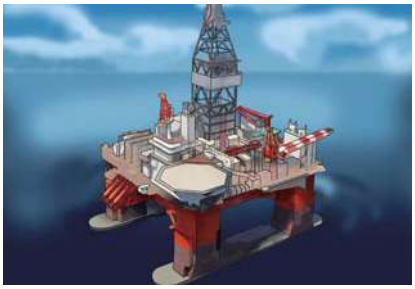
The brass housing product with excellent corrosion resistance



SELR



SEL



Flameproof warning/ signal lights applied in Oil/ Natural Gas offshore rigs where explosions can be ignited by mining, production, and storage as shown in the offshore rig image above.

Common Specifications(SELR/ SEL/ SE-S/ SE)

- Brass housing explosion proof warning lights with excellent corrosion resistant
- A variety of light source selections from bulb, LED, and xenon lamp
- Fully enclosed structure with protection rating of IP66
- Integrated housing and terminal box model
- Housing standard color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Inner lens-PC, Housing-Al, Protection cage-STS 316L, Reflector for LED type-PC/ Reflector for bulb type-Heat resistant ABS
- Certificates : KIMM, ABS
- Protection rating :
  KIMM-Ex d IIC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

SELR LED Revolving Warning Light

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Certificate	Weight	Color
SELR	DC12V	0.183A	KIMM / ABS	13.35kg	R-Red, A-Amber, G-Green, B-Blue
	DC24V	0.127A		13.35kg	
	AC110V	0.035A		13.91kg	
	AC220V	0.017A		13.91kg	

SEL LED Steady/ Flashing Signal Light

- Long-lasting high intensity LED light source
- Suitable for applications where bulb replacement is hard
- Built in switch for steady/flashing selection
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificate	Weight	Color
SEL	DC12V	0.123A	KIMM / ABS	13.29kg	R-Red, A-Amber, G-Green, B-Blue
	DC24V	0.094A		13.29kg	
	AC110V	0.035A		14.26kg	
	AC220V	0.017A		14.26kg	

Customization

- Explosion proof cable gland attached type available (Standard type does not provide explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5) available

SE series

Brass Housing Explosion Proof Warning/ Signal Lights

IP66 -40~+60℃



SE-S



SE

SE-S Xenon Strobe Signal Light

- Lamp connector fastening structure allows for convenient lamp replacement
- Excellent long-distance visibility with strong strobe signal diffusion
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SE-S	DC12V	0.433A	200V -550V	EUB0641 -1A(G) U Type	48	KIMM ABS	13.53kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.216A					13.53kg	
	AC110V	0.076A					13.51kg	
	AC220V	0.061A					13.51kg	

SE Bulb Revolving Warning Light

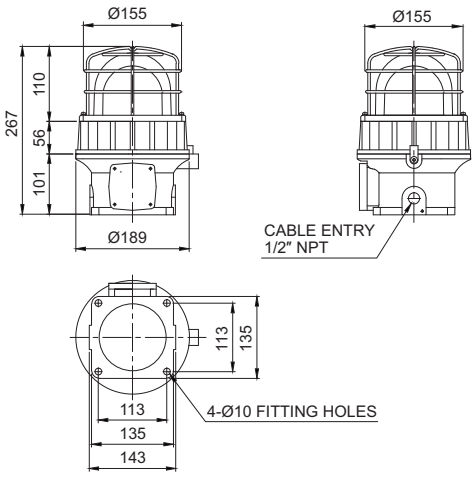
- Excellent signal light diffusion effect with multi-faced reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SE	DC12V	1.155A	12V15W	G23 15S	17	KIMM ABS	13.35kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		13.35kg	
	AC110V	0.204A	12V15W	G23 15S	17		13.91kg	
	AC220V	0.102A	12V15W	G23 15S	17		13.91kg	

Technical Diagram

(Units : mm)

SELR/ SEL/ SE-S/ SE



Ordering Specification

SE	-	220	-	R
[Model number]		[Voltage]		[Color]
• SELR • SEL • SE-S • SE		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

SEA series

Ø150mm Explosion Proof Warning/ Signal Lights

IP66 -40~+60℃



SEALR



SEAL



Flameproof warning/ signal lights applied in areas where combustible substances such as oil are carried in bulk on a vessel.

Common Specifications(SEALR/ SEAL/ SEAS/ SEA)

- Large explosion proof warning/ signal lights with excellent visibility for long distance
- A variety of light source selections from bulb, LED, and xenon lamp
- Aluminum housing provides excellent durability
- Fully enclosed structure with protection rating of IP66
- Integrated housing and terminal box model
- Housing standard color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Inner lens-PC, Housing-Al, Protection cage-STS 316L, Reflector for LED type-PC/ Reflector for bulb type-Heat resistant ABS
- Certificates : IECEx, ATEX, NEPSI, KIMM, KOSHA, ABS, CCS, KR
- Explosive protection rating :
  IECEx - Ex d ⅡC T6 Gb, IP66
  ATEX - ⟨Ex⟩ Ⅱ2G Ex d ⅡC T6, IP66
  NEPSI, KIMM, KOSHA - Ex d ⅡC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

SEALR LED Revolving Warning Light

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Certificates	Weight	Color
SEALR	DC12V	0.183A	IECEx ATEX	5.33kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.127A	NEPSI KIMM	5.33kg	
	AC110V	0.035A	KOSHA ABS	5.74kg	
	AC220V	0.017A	CCS KR	5.74kg	

SEAL LED Steady/ Flashing Signal Light

- Long-lasting high intensity LED light source
- Suitable for applications where bulb replacement is difficult
- Built in switch for steady/flashing selection
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificates	Weight	Color
SEAL	DC12V	0.182A	IECEx ATEX	4.87kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.163A	NEPSI KIMM	4.87kg	
	AC110V	0.044A	KOSHA ABS	5.25kg	
	AC220V	0.022A	CCS KR	5.25kg	

Customization

- Explosion proof cable gland attached type available (Standard type does not come with explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5, M25×1.5) available
- ATEX certified type
- IECEx certified type

SEA series

Ø150mm Explosion Proof Warning/ Signal Lights

IP66 -40~+60℃



SEAS



SEA

SEAS Xenon Lamp Strobe Signal Light

- Lamp connector fastening structure allows for convenient lamp replacement
- High efficiency strobe light offers excellent visibility for long distances
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SEAS	DC12V	1.001A	200V -550V	EUB0641 -1A(G) U Type	48	IECEx ATEX NEPSI KIMM KOSHA ABS CCS KR	5.39kg	R-Red A-Amber G-Green B-Blue
	DC24V	0.616A					5.39kg	
	AC110V	0.133A					5.35kg	
	AC220V	0.106A					5.35kg	

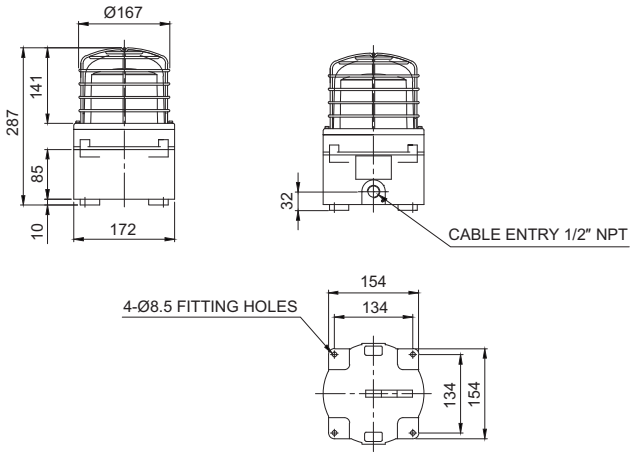
SEA Bulb Revolving Warning Light

- Excellent diffusion effect with special multifaceted reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Certificates	Weight	Color
			Spec	Standard	Parts no			
SEA	DC12V	1.155A	12V15W	G23 15S	17	IECEx ATEX NEPSI KIMM KOSHA ABS CCS KR	5.36kg	R-Red A-Amber G-Green B-Blue
	DC24V	0.766A	24V15W	G23 15S	18		5.36kg	
	AC110V	0.204A	12V15W	G23 15S	17		5.75kg	
	AC220V	0.102A	12V15W	G23 15S	17		5.75kg	

Technical Diagram (Units : mm)

SEALR/ SEAL/ SEAS/ SEA



Ordering Specification

SEA	-	220	-	R
[Model number]		[Voltage]		[Color]
• SEALR • SEAL • SEAS • SEA		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SESA series

Explosion Proof Warning/ Signal Light and Max 118dB Electric Horn Combinations

IP66 | -40~+60°C | HORN | 118dB | NPN

Explosion proof warning light and electric horn combinations with sound output of Max 118dB



SESALR



SESAL



SESAS

Common Specifications(SESALR/ SESAL/ SESAS/ SESA)

- Large explosion proof warning light and electric horn combinations
- A variety of light sources and sound selections to fit your sophisticated application needs
- Aluminum housing provides excellent durability
- Fully enclosed structure with protection rating of IP66
- Integrated housing and terminal box model
- Sound volume : Max 118dB at 1m(Volume adjustable)
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Filter-PC, Housing-Al, Protection cage-SUS316L, Reflector for LED type-PC/Reflector for bulb type-Heat resistant ABS
- Certificates : IECEx, ATEX, NEPSI, KIMM, KOSHA, ABS, CCS, KR
- Protection rating :
  IECEx - Ex d IIC T6 Gb, IP66
  ATEX - Ⓔx II2G Ex d IIC T6, IP66
  NEPSI, KIMM, KOSHA - Ex d IIC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

SESALR LED Revolving Warning Light and Electric Horn Combination

- Excellent omni-directional visibility with LED light collecting system and special multifaceted reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SESALR	DC12V	2.633A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 115dB • WV-5 Customizable voices : 113dB	IECEx ATEX NEPSI KIMM KOSHA ABS CCS KR	8.31kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.288A			8.31kg	
	AC110V	0.308A			7.92kg	
	AC220V	0.154A			7.92kg	

SESAL LED Steady/ Flashing Signal Light and Electric Horn Combination

- Long product lifetime with the application of a high intensity LED light source
- Suitable for locations where bulb replacement is inconvenient
- Built in switch for steady/flashing selection
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Sound pattern and volume	Certificates	Weight	Color
SESAL	DC12V	2.511A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 115dB • WV-5 Customizable voices : 113dB	IECEx ATEX NEPSI KIMM KOSHA ABS CCS KR	8.42kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.222A			8.42kg	
	AC110V	0.286A			9.02kg	
	AC220V	0.143A			9.02kg	

SESAS Xenon Lamp Strobe Signal Light and Electric Horn Combination

- Lamp connector fastening structure allows for convenient lamp replacement
- High efficiency strobe light offers excellent visibility for long distances
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SESAS	DC12V	2.933A	200V -550V	EUB0641 -1A(G) U Type	48	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 115dB • WV -5 Customizable voices : 113dB	IECEx ATEX NEPSI KIMM KOSHA ABS CCS KR	8.45kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.411A						8.45kg	
	AC110V	0.360A						8.86kg	
	AC220V	0.220A						8.86kg	

SESA series

Explosion Proof Warning/ Signal Light and Max 118dB Electric Horn Combinations

IP66 | -40~+60℃ | HORN | 118dB | NPN



SESA

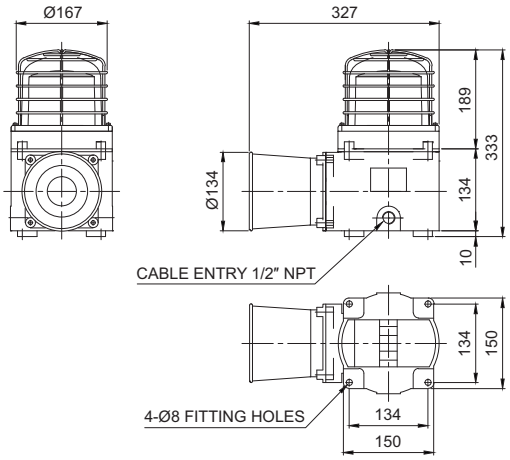
SESA Bulb Revolving Warning Light and Electric Horn Combinations

- Excellent diffusion effect with special multifaceted reflector
- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Sound pattern and volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SESA	DC12V	3.755A	12V15W	G23 15S	17	• WS-5 Warning sounds :118dB • WP -5 Special warning sounds :118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 115dB • WV -5 Customizable voices : 113dB	IECEx ATEX NEPSI KIMM KOSHA ABS CCS KR	8.57kg	• R-Red • A-Amber • G-Green • B-Blue
	DC24V	1.788A	24V15W	G23 15S	18			8.57kg	
	AC110V	0.422A	12V15W	G23 15S	17			9.27kg	
	AC220V	0.211A	12V15W	G23 15S	17			9.27kg	

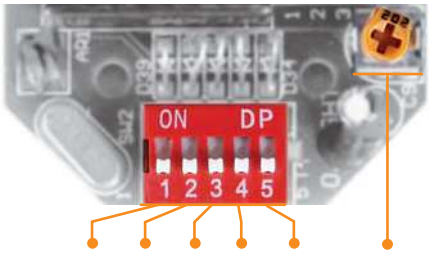
Technical Diagram (Units : mm)

SESALR/ SESAL/ SESAS/ SESA



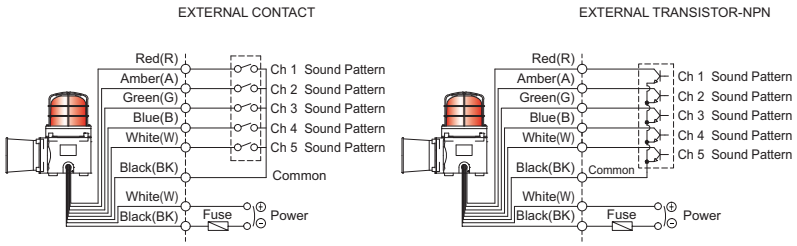
Sound Selection Instructions and Wiring

- Standard type : Select sound using the switch inside of the unit. When you turn on the dip switch for each channel, designated sound is played.



- Customization : External contact(LC)
  Customization of signal line threading can be choice between external contact and transistor which can be fit for control unit.

SESA SERIES-DC/AC



Customization

- Built-in explosion proof cable gland type
- 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5, M25×1.5) available
- ATEX compliant products
- IECEx compliant products

Ordering Specification

SESAS	-	WS	-	220	-	R
[Model number]		[Sound]		[Voltage]		[Color]
• SESALR • SESAL • SESAS • SESA		• WS-Warning sounds • WP-Special warning sounds • WM-Melodies • WA-Alarms • WV-Customizable sounds		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

SEBA series

Explosion Proof Warning/ Signal Lights and Alarm Bell Combinations

IP55 | -40~+60℃ | BELL | 95dB



SEBA



SEBAL/ SEBAS SEBALR

Common Specifications(SEBALR/ SEBAL/ SEBAS/ SEBA)

- Large explosion proof warning/ signal light and alarm bell combinations
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Filter-PC, housing-Al, Protection cage-SUS316L, Reflector-PC/ Reflector for bulb type-Heat resistant ABS
- Certificates : KIMM, ABS, KR
- Protection rating : Ex d ⅡC T6, IP55
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

SEBALR LED Revolving Warning Light and Alarm Bell

- Revolving speed : 120-140RPM

Model number	Voltage	Current	Volume	Certificates	Weight	Color
SEBALR	DC12V	0.230A	95dB	KIMM	7.20kg	R-Red
	DC24V	0.172A		ABS	7.20kg	A-Amber
	AC110V	0.122A		KR	7.92kg	G-Green
	AC220V	0.061A			7.92kg	B-Blue

SEBAL LED Steady/ Flashing Signal Light and Alarm Bell

- Flashing rate : 60-80 flashes/min(Built in switch for steady/flashing selection)

Model number	Voltage	Current	Volume	Certificates	Weight	Color
SEBAL	DC12V	0.232A	95dB	KIMM	7. 25kg	R-Red
	DC24V	0.213A		ABS	7.25kg	A-Amber
	AC110V	0.131A		KR	7.99kg	G-Green
	AC220V	0.065A			7.99kg	B-Blue

SEBAS Xenon Strobe signal Light and Alarm Bell

- Lamp connector fastening structure allows for convenient lamp replacement
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Bulb			Volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SEBAS	DC12V	1.051A	200V -550V	EUB0641 -1A(G) U Type	48	95dB	KIMM	7.24kg	R-Red
	DC24V	0.666A					ABS	7.24kg	A-Amber
	AC110V	0.222A					KR	7.67kg	G-Green
	AC220V	0.150A						7.67kg	B-Blue

SEBA Bulb Revolving Warning Light and Alarm Bell

- Revolving speed : 120-140RPM

Model number	Voltage	Current	Bulb			Volume	Certificates	Weight	Color
			Spec	Standard	Parts no				
SEBA	DC12V	1.591A	12V15W	G23 15S	17	95dB	KIMM	7.37kg	R-Red
	DC24V	0.811A	24V15W	G23 15S	18		ABS	7.37kg	A-Amber
	AC110V	0.291A	12V15W	G23 15S	17		KR	8.06kg	G-Green
	AC220V	0.145A	12V15W	G23 15S	17			8.06kg	B-Blue

Customization

- Built-in explosion proof cable gland type explosion proof gland cable are not equipped on standard model
- 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5, M25×1.5) available

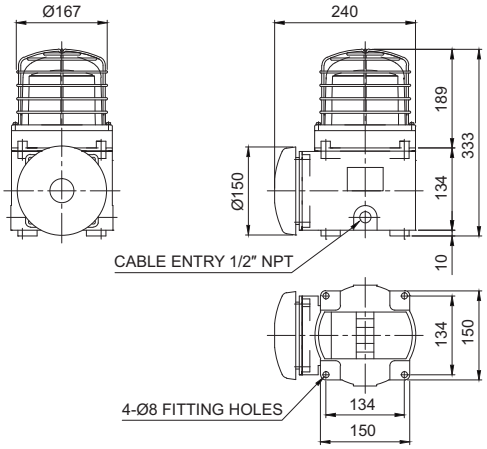
Ordering Specification

SEBA	-	220	-	R
[Model number]		[Voltage]		[Color]
• SEBALR • SEBAL • SEBAS • SEBA		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue

Technical Diagram

(Units : mm)

SEBALR/ SEBAL/ SEBAS/ SEBA



IP66 -40~+60℃



SSEL



SSEL Model applied in helideck

SSEL Explosion Proof LED Perimeter Light

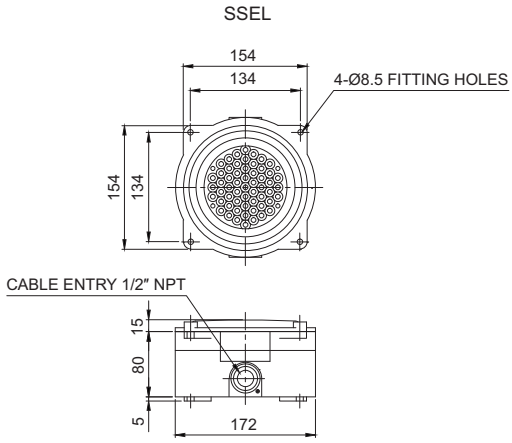
- Suitable for helideck and other dangerous areas that require a perimeter light
- Structure minimizing the projection of lens, can be protected from damage by external impact
- Product structure with 100mm height meets the IMD regulation condition
- Aluminum housing provides excellent durability
- Terminal for power wiring located inside of the housing
  Signal colors : ●R-Red ●A-Amber ●G-Green ●B-Blue
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Lens-Tempered glass, Housing–Al
- Certificates : KIMM, ABS
- Protection rating : Ex d ⅡC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

Specifications

Model number	Voltage	Current	Certificates	Weight	Color
SSEL	DC12V	0.466A	KIMM ABS	2.54kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	DC24V	0.255A		2.54kg	
	AC110V	0.040A		2.54kg	
	AC220V	0.040A		2.54kg	

Technical Diagram

(Units : mm)



Customization

- Explosion proof cable gland attached type available (Standard type does not provide explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry(3/4″ NPT, M20×1.5, M25×1.5) available

Ordering Specification

SSEL	-	220	-	R
[Model number]		[Voltage]		[Color]
• SSEL		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

SPNA

Explosion Proof Electric Horn

IP66 | -40~+60°C | HORN | 118dB | NPN



SPNA

SPNA Max 118dB Explosion Proof Electric Horn

- Explosion proof electric horn
- Various sound tones can be selected ; warning sound, alarm, melody
- Aluminum housing provides excellent durability
- Equipped terminal box for power line wiring in housing
- Sound volume : Max 118dB at 1m(Volume adjustable)
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Housing-Al, Protection cage-SUS316L
- Certificates : IECEx, ATEX, NEPSI, KIMM, KOSHA, ABS, CCS, KR
- Protection rating :
  IECEx - Ex d IIC T6 Gb, IP66
  ATEX - ⟨Ex⟩ II2G Ex d IIC T6, IP66
  NEPSI, KIMM, KOSHA - Ex d IIC T6, IP66
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

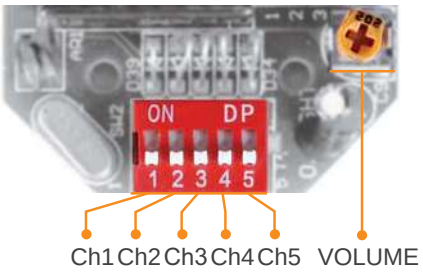
Specifications

Model number	Voltage	Current	Sound Pattern and Volume	Certificate	Weight
SPNA	DC12V	2.211A	• WS-5 Warning sounds : 118dB • WP-5 Special warning sounds : 118dB • WM-5 Melodies : 118dB • WA-5 Alarms : 115dB • WV-5 Customizable voices : 113dB	IECEx ATEX	6.09kg
	DC24V	1.022A		NEPSI KIMM	6.09kg
	AC110V	0.226A		KOSHA ABS	6.44kg
	AC220V	0.113A		CCS KR	6.44kg

※ Please refer to page 22 for detailed information about selectable sound patterns.

Sound Selection Instructions and Wiring

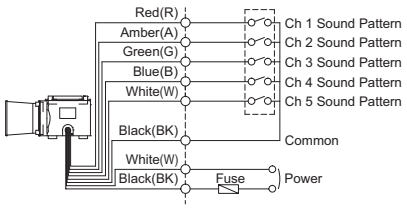
- Standard type : Select using the switch inside of the unit.
  When you turn on the dip switch for each channel, designated sound is being played.



- Customization : External contact(LC)
- In case of select sound between external contact and transistors, sound line is threading as customization when product released(LC).

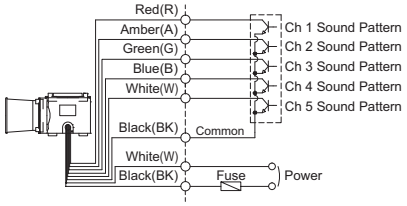
SPNA-DC/AC

EXTERNAL CONTACT



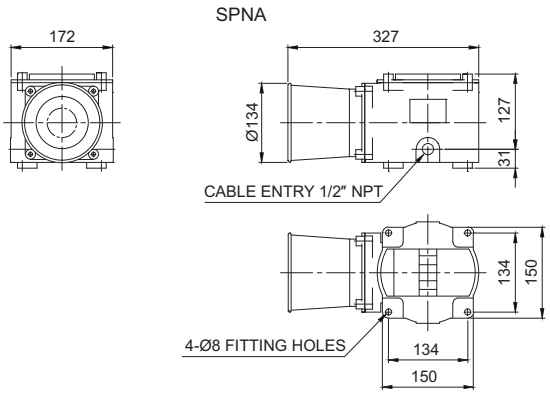
SPNA-DC/AC

EXTERNAL TRANSISTOR-NPN



Technical Diagram

(Units : mm)



Customization

- Built-in explosion proof cable gland type
- 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5, M25×1.5) available
- ATEX compliant products
- IECEx compliant products

Ordering Specification

SPNA	-	WM	-	220	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]
• SPNA		• WS-Warning sounds • WP-Special warning sounds • WM-Melodies • WA-Alarms • WV-Customizable sounds		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• Standard -Built-in switch • LC -External contact

SBE series

Explosion Proof Alarm Bell

IP56 | -40~+60°C | BELL | 95dB



SBE130



SBE150

SBE130/ SBE150 Max 95dB Explosion Proof Alarm Bell

- Explosion proof alarm bell for audible signal in dangerous area
- Adopts special solenoid bell structure, suitable in vessels which encounter serious vibration and impact or outdoor plants application
- Fully enclosed structure with protection rating of IP56
- Sound volume : Max 95dB at 1m
- Standard housing color : MUNSELL No. 7.5BG 7/2
- Cable entry : 1/2″ NPT
- Materials : Housing-Al, Bell-Al
- Certificates : KIMM
- Protection rating: Ex d IIC T6, IP56
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

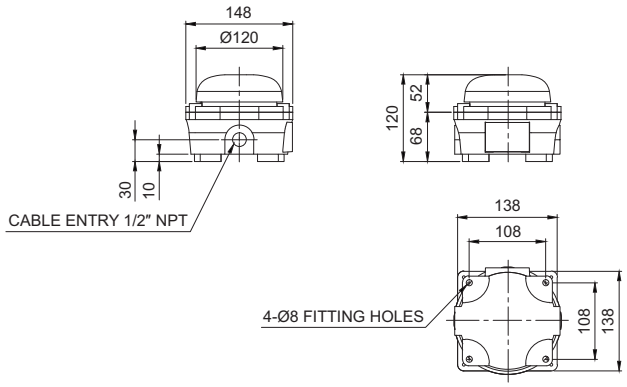
Specifications

Model number	Frequency	Volume	Bell diameter	Voltage	Current	Certificate	Weight
SBE130	400Hz	95dB	120mm	DC24V	0.044A	KIMM	2.27kg
				AC110V	0.044A		
SBE150	600Hz		150mm	AC220V	0.022A		2.52kg

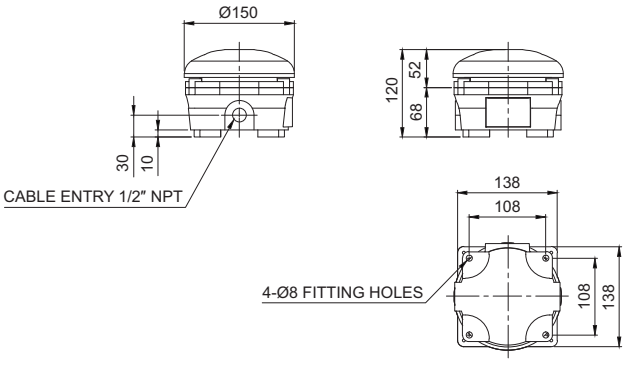
Technical Diagram

(Units : mm)

SBE 130



SBE 150



Customization

- Built-in explosion proof cable gland type
- 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5, M25×1.5) available

Ordering Specification

SBE130	-	220
[Model number]		[Voltage]
• SBE130 • SBE150		• 24-DC24V • 110-AC110V • 220-AC220V

QMFL-300-Ex-24

Non Sparking LED work light

IP67 IP69K -40~+60℃



QMFL-300-Ex-24 Non Sparking LED work light

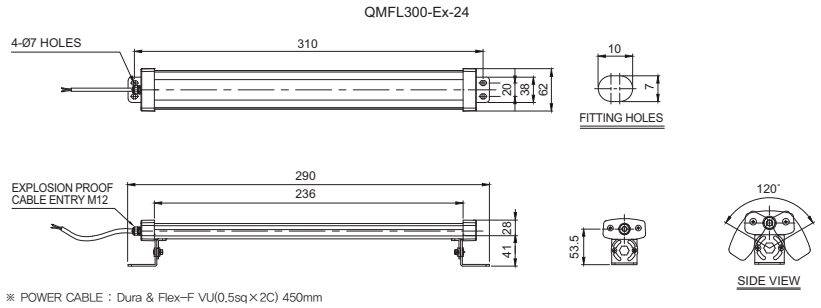
- Water, vibration and oil resistant LED work lights with non sparking ex-proof feature
- Special epoxy sealed structure provides excellent oil resistance
- Aluminum housing and tempered glass improves durability and stability in hazardous areas(Explosive zone)
- Can be used for Zone 2 application with explosion proof rating of nR
- Materials : Housing-Al, Side cover-Al, Lens-Tempered glass, Bracket-SPC1
- Certificates : KC(KGS)
- Protection rating: Ex nR ⅡT6, IP67/ IP69K
- Ambient operating temperature : -40°C ≤ T_{amb} ≤ +60°C

Specifications

Optics Specifications		
Model		QMFL-300-Ex-24
Lens color		Translucent
Light color(Standard)		Cool daylight
Color temperature(Standard)		6,000-7,000K
Luminous flux	DC	510lm
Illumination (at 1m)	DC	260Lux
Specifications		
Rated voltage		DC24V
Rage of operation voltage		DC21.5V-26.5V
Current		0.410A
Power consumption		10W
Insulation resistance		Min. 100MΩ(500V DC mega ohm meter)
Withstanding voltage		DC : 500V AC, 60Hz, 1 minute
Operating temperature		-40°C - +60°C
Waterproof		IP67/ IP69K
Materials		Housing : Al, Side cover: Al, Lens: Tempered glass, Bracket: SPC-1
Certificates		
Weight(approx.)		0.79kg

Technical Diagram

(Units : mm)



※ POWER CABLE : Dura & Flex-F VU(0.5sq×2C) 450mm

Ordering Specification

QMFL	-	300	-	Ex	-	24
[Model number]		[Length]		[Ex-proof]		[Voltage]
• QMFL : Anti glare type		• 300 : 290mm		• Ex : Non sparking ex-proof type		• 24-DC24V

Cautions in use of explosion proof LED work lights

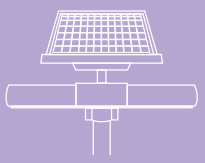
- Contact structure of an explosion proof product must be a qualified part we provide. Please do not disassemble, assemble, modify or repair arbitrarily.

TOTAL CATALOGUE

Warning Light Bars

INNOVATION IN ALARM & SIGNAL





ELR-SOL





QLV-1150





ELVS



Products specifications 228

Aerodynamic LED Light Bar Suitable for High Speed Emergency Vehicles

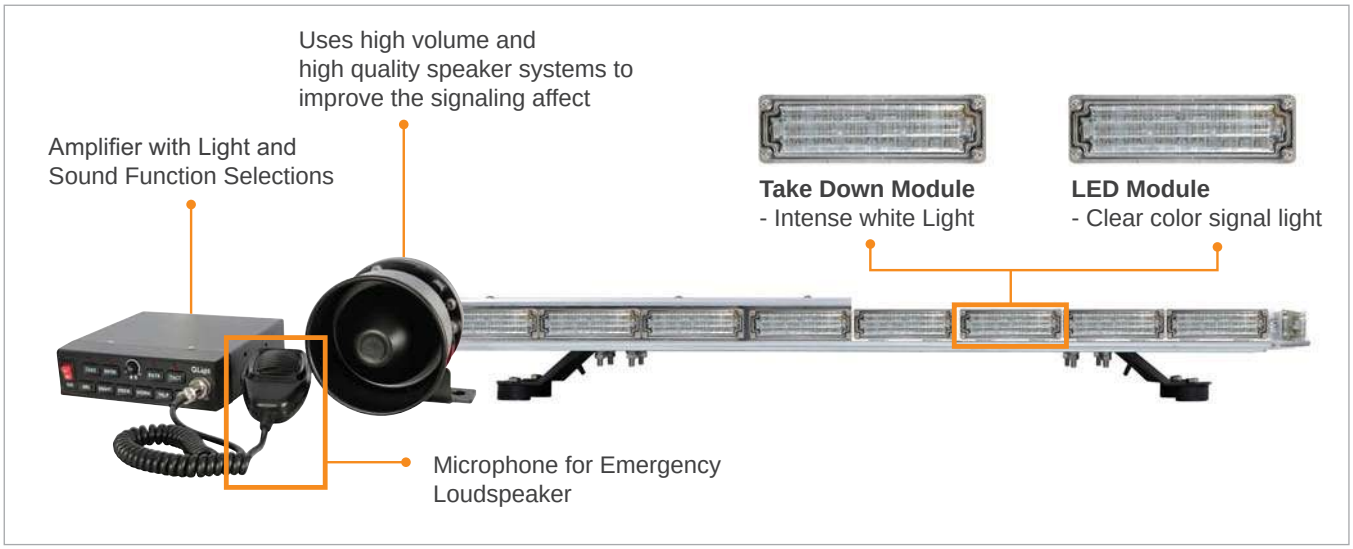
- Slim design
- Vivid & powerful signal



Common Specifications

- Compact and aerodynamic design minimizes air resistance in high speed vehicles
- Transparent polycarbonate outer and inner lens provides clear signal light transmission
- Strong mechanical strength, heat, and UV light resistance
- Excellent protection from vibration and impact with use of aluminum boards for both the top and bottom plates
- Internal heat discharges naturally because each LED module adopts an excellent heat dissipative structure
- QLV-SET includes amplifier that has a built-in one-touch switch for selection between signal sound and warning light
- QLV-SET includes a 100W high volume horn with clear warning sounds
- 1,250mm, 1,150mm and 885mm length models are also available
- Lens color : ●●Blue-Red ●●Red-Red ●●Amber-Amber ●●Green-Green
- Available in customized color arrangements
- Materials
  QLV Light Bar Model : Lens-PC, Cover-Al, Board-Al, Mount bracket-STS
  QLV-SET : QLV Light Bar Model-PC other/ SAMP-100-Steel, Al/ SM-100ND-Steel
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP56

Product Features



IP56 -30~+50℃



QLV-1250



QLV-1150



QLV-885

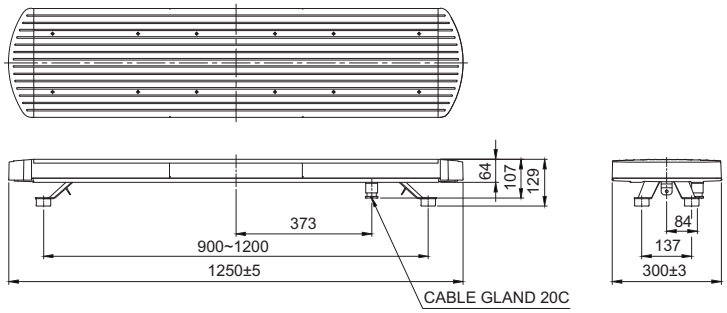
QLV LED Strobe Warning Light Bar

- Excellent light transmission with use of 24 High brightness LED Strobe modules
- Replaceable LED module design
- Flashing rate : 60-80flashes/min

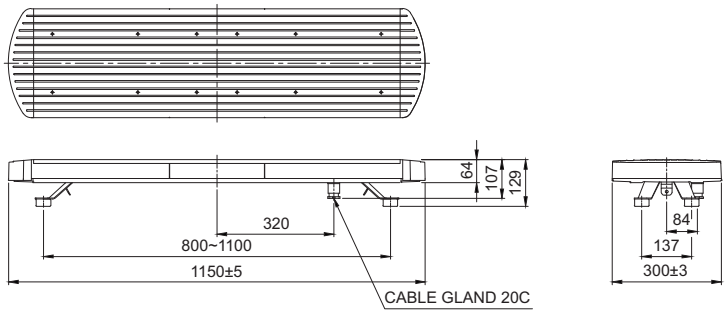
Model number	LED module number	Voltage	Current	Certificate	Weight	Color
QLV-1250	24EA	DC12V	13A	-	16.51kg	B-R
QLV-1150	22EA				15.62kg	R-R
QLV-885	18EA				12.97kg	A-A, G-G

Technical Diagram

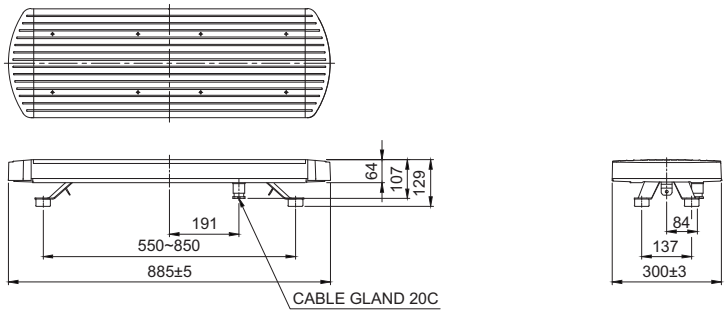
QLV-1250



QLV-1150



QLV-885

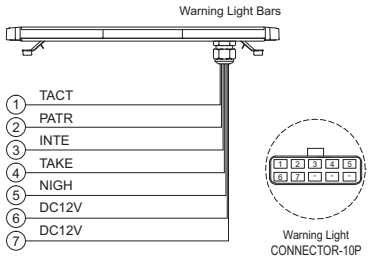


QLV Signal Light Functions

No.	Function
1	Full LED Strobe
2	LED Simulated revolving
3	Front & rear simulated revolving
4	TAKE DOWN LED Steady
5	NIGHT LED Steady (NIGHT MODE)

Wiring Instructions

QLV



Ordering Specification

QLV-1150	-	12	-	B/R
[Model number]		[Voltage]		[Color]
• QLV1250 • QLV1150 • QLV885		• 12-DC12V		• B/R Blue-Red • R/R Red-Red • A/A Amber-Amber • G/G Green-Green

IP56 | -30~+50°C | HORN | 135dB



QLV-SET

QLV-SET Signal Light and Sound Functions

	Mode	Function
Light Modes	TACT	Full LED strobe
	PATR	LED simulated revolving
	INTE	Front and rear simulated revolving
	TAKE	Take down LED steady
	NIGH	Night LED steady (Night mode)
Sound Modes	WAIL	Fire Alarm sound
	YELP	Emergency sound
	HORN	Horn sound
	PRIOR	Buzzer sound
	MIC	Microphone output mode

QLV-SET LED Strobe Light Bar SET

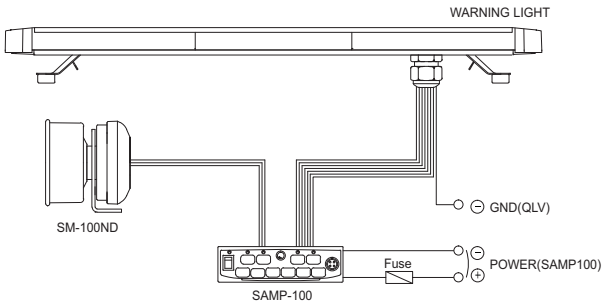
- Features high intensity LED strobe modules
- Amplifier includes built-in one-touch switch for selection between signal sound and warning light
- 100W high volume speaker with clear warning sounds
- Flashing rate : 60-80 flashes/min

Model number	LED module number	Voltage	Current	Volume	Certificate	Weight	Color
QLV-1250-SET	24EA	DC12V	28A	Max 135dB	-	20.31kg	B-R
QLV-1150-SET	22EA		26A			19.42kg	R-R, A-A
QLV-885-SET	18EA		23A			16.77kg	G-G

Technical Diagram

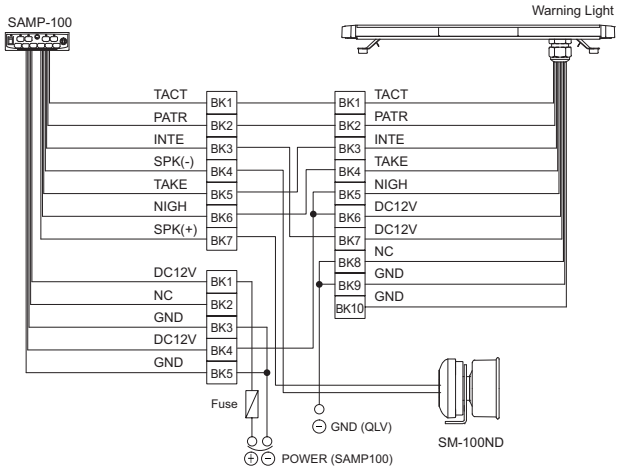
(Units : mm)

QLV-SET



Wiring Instructions

QLV-SET



Ordering Specification

QLV1150	-	12	-	R/W	-	SAMP	-	HORN
[Model number]		[Voltage]		[Color]		[AMP]		[HORN]
• QLV1250 • QLV1150 • QLV885		• 12-DC12V		• B/R Blue-Red • R/R Red-Red • A/A Amber-Amber • G/G Green-Green		• SAMP - SAMP-100 included		• HORN - SM100-ND included

Recommended Amplifier Designed for QLV Warning Light Bar



SAMP-100

SAMP-100 Controllable AMP for QLV Warning Light Bar

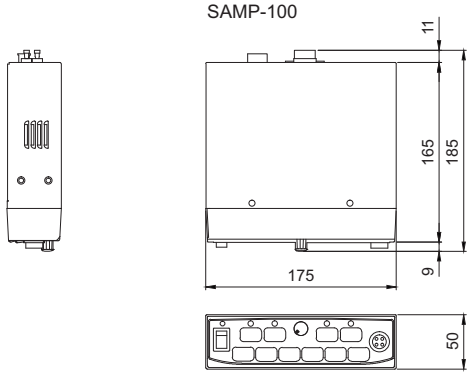
- Simple linkage between sound signal and warning lights
- Clear and stable sound signal
- Built-in switch for emergency voice on the microphone
- Amplifier is already part of QLV-SET model

Specifications

Model number	Voltage	Current	Sound pattern	Frequency/ Repeat time	Certificate	Weight
SAMP-100	DC12V	10A	Fire Alarm	300-700Hz/140cycle	-	1.15kg
			Emergency	350-750Hz/14cycle		
			Horn	600Hz-91KHz		
			Buzzer	2.25Hz/90cycle		

Technical Diagram (Units : mm)

SAMP-100



135dB HORN

Recommended Horn Designed for QLV Warning Light Bars



SM-100ND

SM-100ND Horn for QLV Warning Light Bars

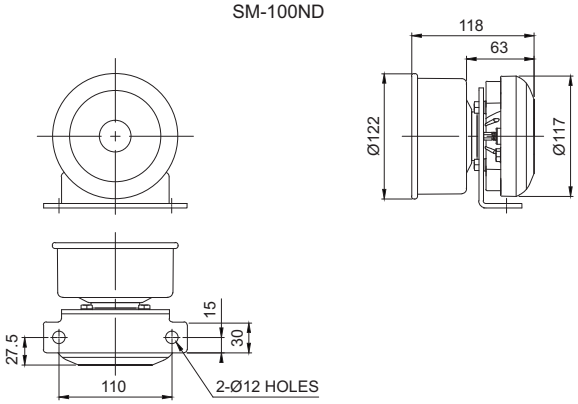
- 100W high volume horn with clear warning sounds
- Mounting bracket for applications in various environments

Specifications

Model number	Voltage	Volume	Certificate	Weight
SM-100ND	DC12V	Max 135dB	-	1.15kg

Technical Diagram (Units : mm)

SM-100ND



Suitable for all types of emergency response vehicles

Excellent durability with superior shock and vibration resistance, suitable for harsh environmental conditions such as storms and extreme hot/ cold environments

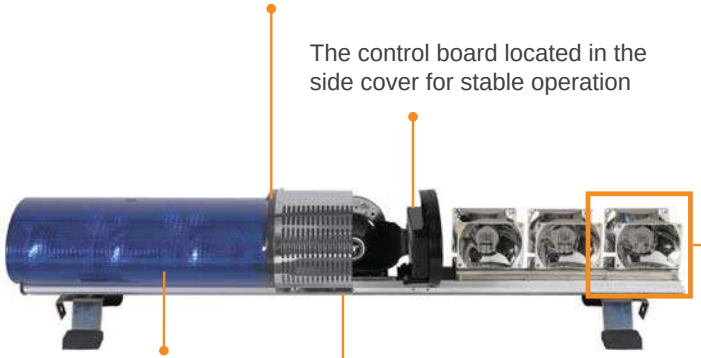


ELVS- Xenon lamp strobe type
ELVL- LED strobe type

Common Specifications

- LED and xenon lamp light sources are available to fit your sophisticated application needs
- Can deliver accurate and powerful signals even in crowded situations with a number of emergency vehicles in the field
- Designed in a structure which allows for quick disassembly and assembly for convenient light source replacement
- Stainless steel, aluminum, and polycarbonate (PC) materials are used to increase product strength while maintain a lightweight structure
- Waterproof and dustproof structure allows for superior durability in harsh environments such as storms and extreme heat/ cold
- Specially coated globe that protect the product from scratches, dust, and direct sunlight in order to maintain long lasting clarity
- Suitable for emergency response vehicles, security vehicles, road maintenance vehicles, and tow trucks
- Standard color arrangements : ●●Blue-Red ●●Red-Red ●●Amber-Amber ●●Green-Green
- Customized color arrangement available
- Materials : Lens/ Housing-PC, Speaker cover-STS, Reflector-Heat resistant ABS, Board-Al
- Protection rating : IP56

Product Features





Xenon Strobe Lamp Type
Easy lamp replacement with the special lamp connector system



LED Strobe Type
Individual LED diffusion lenses are coupled with the LED backlighting system for improved visibility

ELV series

Warning Lights for Emergency Response Vehicles (Max 126dB)

IP56 | -25~+50℃ | HORN | 126dB



ELVS



ELVL





ELVS Xenon Strobe Warning Light Bar

- 6 xenon lamp and reflecting system that emits strong strobe flashing
- Special long-lasting light source with excellent vibration resistance and easy lamp replacement from the special lamp connector system

Model number	Voltage	Current	Bulb			Certificate	Weight	Color
			Spec	Standard	Parts no			
ELVS	DC12V	4.950A	280V -400V	BH0647(G) W Type	49	-	12.70kg	●● B-R ●● R-R ●● A-A ●● G-G
	DC24V	2.970A						

ELVL LED Strobe Warning Light Bar

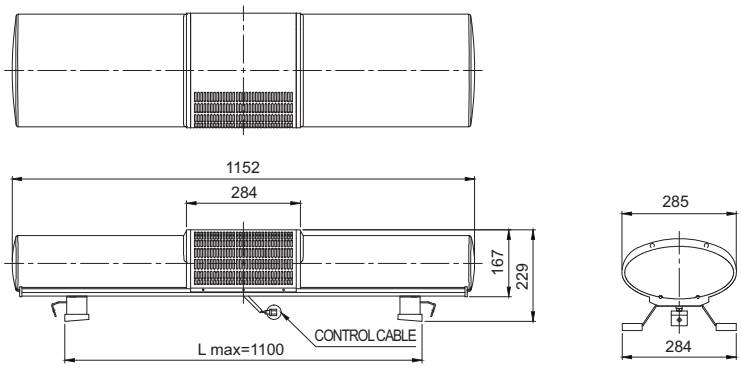
- A system of 14 LED strobe lights that emits flashing lights for excellent visibility
- Enhanced outdoor visibility with use of independent LED diffusion lenses coupled with the LED backlighting system
- Flashing rate : 60-80 flashes/min

Model number	Voltage	Current	Certificate	Weight	Color
ELVL	DC12V	1.000A	-	13.40kg	●● B-R ●● R-R ●● A-A ●● G-G
	DC24V	0.555A			

Technical Diagram

(Units : mm)

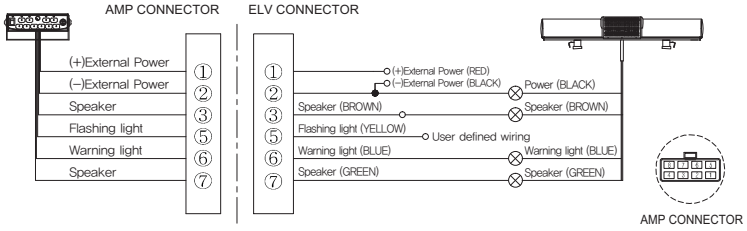
ELVS/ ELVL



※Power line standard : VCTF (0.75sq)×4C 3m

Wiring Instructions

ELVS/ ELVL-DC



Ordering Specification

ELVL	-	12	-	B/R	-	SAMP
[Model number]		[Voltage]		[Color]		[AMP]
• ELVS • ELVL		• 12-DC12V • 24-DC24V		• B/R ●● Blue-Red • R/R ●● Red-Red • A/A ●● Amber-Amber • G/G ●● Green-Green		• None - No AMP • SAMP - AMP included

Various combinations of sizes, color, and light source depending on the application needs

ELMS - Xenon lamp strobe type
ELML - LED strobe type



Common Specifications

- Adjustable size depending on the type of vehicle and application needs
- Can select from a xenon or LED light source for your various application needs
- Suitable for tow trucks, patrol cars and parking lots
- Designed in a structure which allows for quick assembly and disassembly for convenient light source replacement
- Built-in speaker, volume : Max 126dB at 1m
- Standard color arrangements : ●●Blue-Red ●●Red-Red ●●Amber-Amber ●●Green-Green
- Customized color arrangements available
- Materials : Lens/ Housing-PC, Reflector-Heat resistant ABS, Board-Al
- Protection rating : IP56
- Modular design allows user defined color arrangement if necessary





ELMS

ELMS Xenon Lamp Strobe Warning Light Bar

- Xenon lamp equipped with dual-faced reflector that emits a powerful strobe light
- Special long-lasting light source with excellent vibration resistance and easy lamp replacement by using the special lamp connector system
- Flashing rate : 60-80 flashes/min

Model umber	Lamp number	Voltage / Current (Based on 3 layers)	Certificate	Weight (Based on 3 layers)	Color
ELMS-1	2EA	DC12V / 4.950A DC24V / 2.970A	-	10.16kg	●● B-R ●● R-R ●● A-A ●● G-G
ELMS-2	4EA				
ELMS-3	6EA				
ELMS-4	8EA				
ELMS-5	10EA				

ELM series

Warning Lights for Road Safety (Max 126dB)

IP56 | -25~+50℃ | HORN | 126dB



ELML

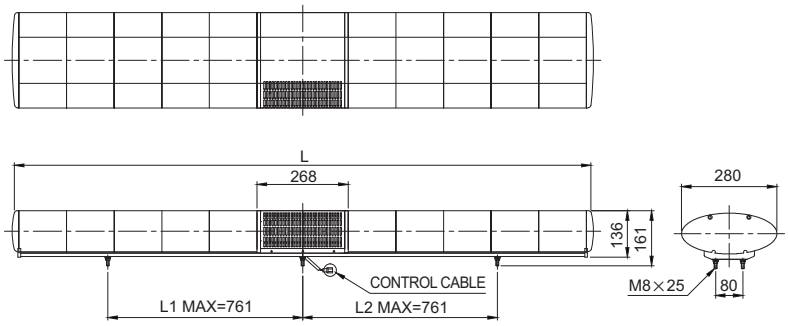
ELML LED Strobe Warning Light Bar

- Adopts LED strobe system that emits flashing light for excellent visibility
- Enhanced outdoor visibility with use of independent LED diffusion lenses coupled with the LED backlighting system
- Flashing rate : 60-80 flashes/min

Model number	LED module number	Voltage / Current (Based on 3 layers)	Certificate	Weight (Based on 3 layers)	Color
ELML-1	2EA	DC12V / 1.000A DC24V / 0.555A	-	11.02kg	●● B-R ●● R-R ●● A-A ●● G-G
ELML-2	4EA				
ELML-3	6EA				
ELML-4	8EA				
ELML-5	10EA				

Technical Diagram (Units : mm)

ELMS/ ELML

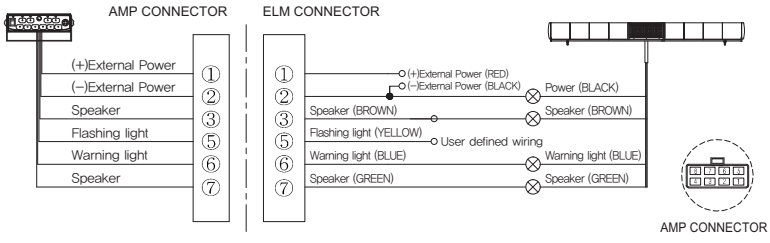


L (LENGTH)	
ELM-1 (BLOCKS 2)	588mm
ELM-2 (BLOCKS 4)	868mm
ELM-3 (BLOCKS 6)	1148mm
ELM-4 (BLOCKS 8)	1428mm
ELM-5 (BLOCKS 10)	1708mm

※Power line standard : VCTF (0.75sq)×4C 3m

Wiring Instructions

ELMS/ ELML-DC



Ordering Specification

ELML	-	4	-	12	-	B/R	-	SAMP
[Model number]		[Layer]		[Voltage]		[Color]		[AMP]
• ELMS • ELML		• 1-1layer • 2-2layers • 3-3layers • 4-4layers • 5-5layers		• 12-DC12V • 24-DC24V		• B/R ●● Blue-Red • R/R ●● Red-Red • A/A ●● Amber-Amber • G/G ●● Green-Green		• None - No AMP • SAMP - AMP included

ELR-SOL

Solar Powered Warning Light Bar

IP56 -25~+50℃

Solar powered warning light bar for road safety

- Semi-permanent lifetime by adopting high brightness LED
- Solar powered design does not require a power system(Built-in rechargeable battery)
- Built-in SUN switch activates a system that automatically operates the product when darkness is detected
- Operates for 96 hours upon full charge
- Flashing rate : 60-80 flashes/min



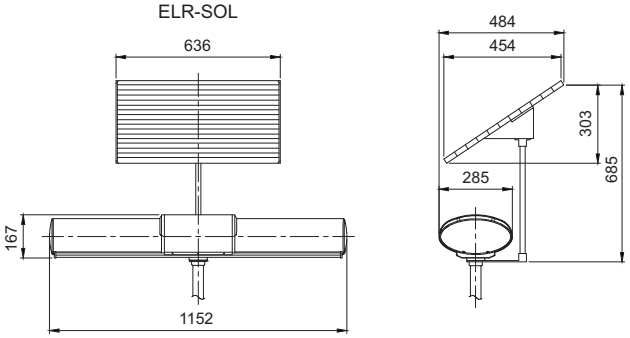
ELR-SOL

Specifications

Model number	Battery voltage	Battery capacity	Running time	Certificate	Weight
ELR-SOL	12V	12Ah	96 hour	-	12.80kg

Technical Diagram (Units : mm)

ELR-SOL



SAMP

Controllable AMP for Warning Light Bar

Signal sound AMP for ELV and ELM

- Simple linkage between sound signal and warning lights
- Clear and stable sound signal
- Built-in switch for emergency voice on the microphone
- Commonly applicable for ELV and ELM



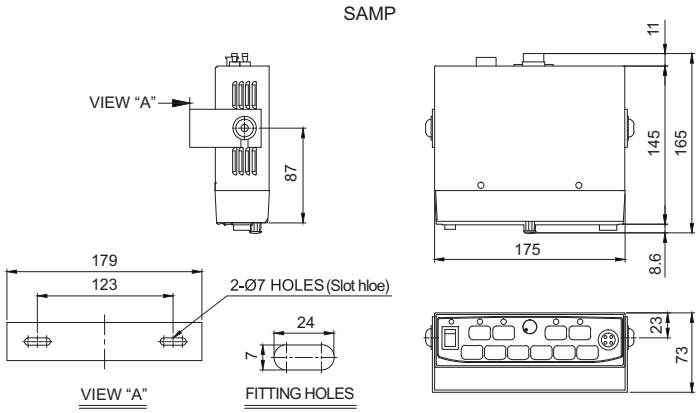
SAMP

Specifications

Model number	Voltage	Current	Sound pattern	Frequency/ Repeat time	Certificate	Weight
SAMP	DC12V DC24V	4.150A 1.870A	Fire	300-700Hz / 140cycle	-	1.09kg
			Emergency	350-750Hz / 14cycle		
			Ambulance	610-690Hz / 50cycle		
			Buzzer	2,200Hz		
			Horn sound	595Hz - 1,040Hz		

Technical Diagram (Units : mm)

SAMP



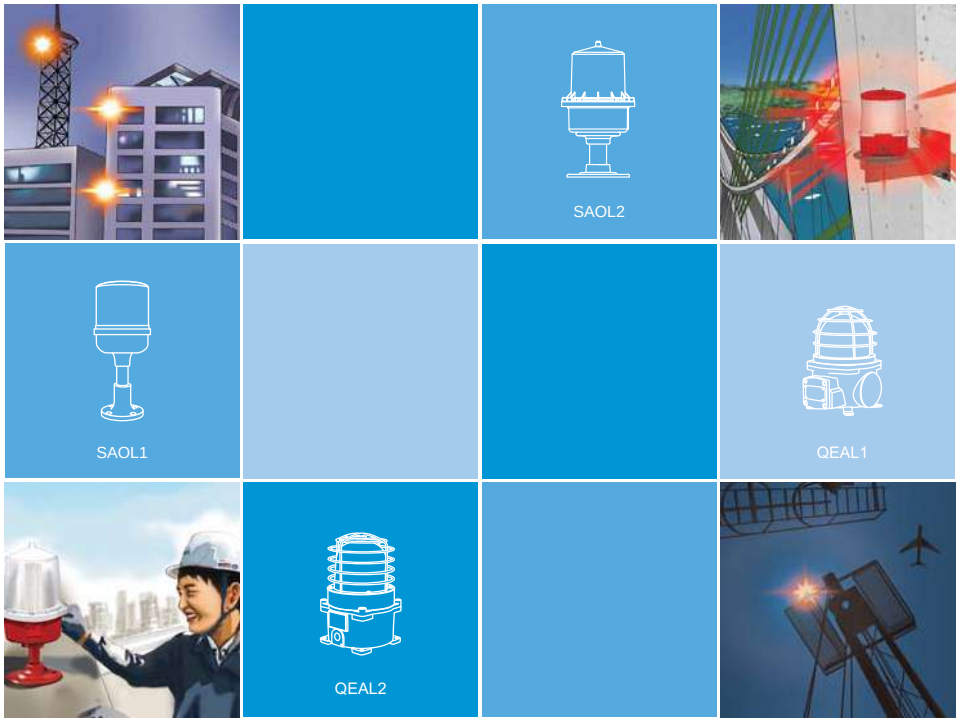
Ordering Specification

SAMP	-	12
[Model number]		[Voltage]
• SAMP		• 12-DC12V • 24-DC24V

TOTAL CATALOGUE

Aviation Obstruction Lights

INNOVATION IN ALARM & SIGNAL



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Aviation Obstruction Light Technical Data

Application areas

■ **Objects inside the Obstacle Restriction Area**

• Obstacle certified for use at night that is 60m from the ground and is located within the Obstacle Restriction Area of an airport.
  - If the obstacle is located above the approach surface or transitional surface of the airfield.
  - If the obstacle is located above the horizontal surface or conical surface of the airfield.

■ **Objects Outside the Obstacle Restriction Area**

• Obstacle that is 150m from the ground.
• Chimneys, steel towers, poles, frame structures, electricity pylons, or wind turbines that are 60m from the ground.

Classification

■ **Low Intensity A Type or Low Intensity B Type Warning Light**

• Obstacle that is 150m from ground and is located within the Obstacle Restriction Area.
• Low intensity A type model is installed on an obstacle that has limited mobility such as a boarding bridge.

■ **Low Intensity C Type Warning Light**

• Low intensity C type model(blue/flashing) is installed on an emergency vehicle or security vehicle operated inside the airport.
• Low intensity C type model(yellow/flashing) is installed on a normal vehicle or mobilize object that is operated inside the airport.

■ **Low Intensity D Type Warning Light**

• Low intensity D type model(yellow/flashing) is installed on escort vehicles that are operated inside the airport.

■ **Medium intensity A Type Warning Light**

• Medium intensity A type warning light(white/flashing) is installed in areas where trees or buildings are widespread.
• Obstacle that is 45m from the ground and is located within the Obstacle Restriction Area or an obstacle that is 150m from the ground and is located outside the Obstacle Restriction Area.

■ **Medium intensity B Type Warning Light**

• Medium intensity B type warning light(red/flashing) is installed in areas where trees or buildings are widespread.
• Obstacle that is 45m from the ground and is located within the Obstacle Restriction Area or an obstacle that is 150m from the ground and is located outside the Obstacle Restriction Area.

■ **Medium intensity C Type Warning Light**

• Medium intensity C type warning light(red/steady) is installed in areas where trees or buildings are widespread.
• Obstacle that is 45m from the ground and is located within the Obstacle Restriction Area or an obstacle that is 150m from the ground and is located outside the Obstacle Restriction Area.
• Medium intensity C type warning light(red/steady) cannot be used with other warning lights.

Requirements

1	2	3	4	5	6	7	8	9	10	11	12
Classification	Color	Operation	Max imum intensity of light(cd)			Straight beam spread angle	intensity of light depending on angle(cd)				
			Above 500cd/m² (Day time)	Above 50-500cd/m² (Twilight)	Below 50cd/m² (Night time)		-10°	-1°	±0°	+6°	+10°
Low intensity A type (Stationary)	Red	Steady	Non	Above10	above10	10°	—	—	—	Above 10	Above 10
Low intensity B type (Stationary)	Red	Steady	Non	Above32	above32	10°	—	—	—	Above 32	Above 32
Low intensity C type (Moving obstacle)	Amber/ Blue	Flashing(60-90fpm)	Non	40 - 400	40 - 400	12°	—	—	—	—	—
Low intensity D type (Escort vehicle)	Amber	Flashing(60-90fpm)	Non	200 - 400	200 - 400	12°	—	—	—	—	—
Medium intensity A type	White	Flashing(20-60fpm)	20000±25%	20000±25%	2000±25%	Above 3°	Below 3%	50% - 75%	Above 100%	—	—
Medium intensity B type	Red	Flashing(20-60fpm)	Non	Non	2000±25%	Above 3°	—	50% - 75%	Above 100%	—	—
Medium intensity C type	Red	Steady	Non	Non	2000±25%	Above 3°	—	50% - 75%	Above 100%	—	—
High intensity A type	White	Flashing(40-60fpm)	200000±25%	20000±25%	2000±25%	3°-7°	Below 3%	50% - 75%	Above 100%	—	—
High intensity B type	White	Flashing(40-60fpm)	100000±25%	20000±25%	2000±25%	3°-7°	Below 3%	50% - 75%	Above 100%	—	—

Specification List for Aviation Obstruction Lights







Model number(series)		SAOL1	QAOL1	SAOL2	SAOL3	SAOL4
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø115	Ø117	Ø139	Ø157	Ø180
	Height	275	267	185(SAOL2) 273(SAOL2P)	215(SAOL3) 303(SAOL3P)	290
	Depth	-	-	-	-	-
Materials		Lens, Housing-PC Bracket-Al	Lens, Housing-PC Bracket-Al	Lens-PC, Housing-Al Bracket-Al	Lens-PC, Housing-Al Bracket-Al	Lens-PC, Housing-Al Bracket-Al
Light source & Operation	Bulb Steady/Flashing					
	Bulb Revolving					
	LED Revolving					
	LED Steady/Flashing	●(Steady)	● (Flashing)	●(Steady)	●(Steady)	●
	LED Strobe					
	LED Simulated revolving xenon Strobe					
Mount type		Self stand	Self stand	Self stand	Self stand	Self stand
Cable entry		-	-	-	-	-
Protection rating		IP56	IP56	IP66	IP66	IP66
Certificate		ICAO	ICAO	ICAO	ICAO	ICAO
Customization		-	-	Cable entry - 1/2"PF, Built-in SUN switch	Cable entry - 1/2"PF, Built-in SUN switch	Cable entry - 1/2"PF, Built-in SUN switch
Page		P240	P241	P242	P243	P244




Model number(series)		QEAL1	QEAL2
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø152(Cage)	Ø167(Cage)
	Height	238	287
	Depth	183(Length)	172(Length)
Materials		Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al
Light source & Operation	Bulb Steady/Flashing		
	Bulb Revolving		
	LED Revolving		
	LED Steady/Flashing	●(Steady)	● (Flashing)
	LED Strobe		
	LED Simulated revolving xenon Strobe		
Mount type		Self stand	Self stand
Cable entry		1/2" NPT	1/2" NPT
Protection rating		IP66	IP66
Certificate		KOSHA	KOSHA
Explosion proof rating		Ex d IIC T4 (KOSHA)	Ex d IIC T4 (KOSHA)
Customization		Explosion proof cable gland, 2 ways cable entry, Cable entry : M20x1.5, Built-in SUN switch	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5, Built-in SUN switch
Page		P245	P246

SAOL1

Low Intensity LED Aviation Obstruction Light

IP56 -30~+50℃

Applied on tall structures for collision avoidance measures and airport runway safety

Obtained Certification from the International Civil Aviation Organization



SAOL1

Common Specifications(SAOL1/ SAOL2/ SAOL3/ SAOL4)

- LED light bulbs with increased lifetime decreases the replacement cost of the light source (LED lasts 25 times longer than a standard lamp bulb)
- For SAOL2 and SAOL3 type, can select between direct mount and pole mount type to fit your application needs
- Excellent durability from a selection of a polycarbonate or an aluminum housing structure
- Terminals located inside the housing for wiring (SAOL2/ SAOL3/ SAOL4)
- Built-in SUN switch available upon request which activates a system that automatically operates the product when darkness is detected

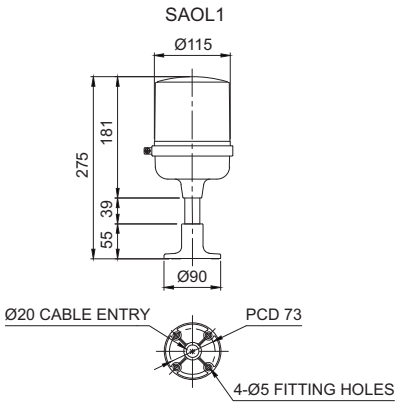
SAOL1 Low Intensity LED Aviation Obstruction Light

- Low intensity A type aviation obstruction lights are installed onto fixed objects that are less than 150m from the land or water surface

ICAO standard	Low intensity A type		
Light source	High intensity light emitting diodes(LED)		
Light color	Red		
Light function	Steady		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	20W		
Standard housing color	Black	Cable entry	Ø20
Materials	Lens-PC, Housing-PC, Lens ring- SUS316L, Pole-Al, Bracket-Al		
Protection rating	IP56	Ambient operating temperature	-30°C to +50°C
Certificate	ICAO compliant	Luminous intensity	17cd ±25%

Technical Diagram

(Units : mm)





Ordering Specification

SAOL1	-	24	-	R
[Model number]		[Voltage]		[Color]
• SAOL1		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red

QAOL1

Low Intensity LED Aviation Obstruction Light

IP56 -30~+50℃

Collision avoidance lights for running automobile and moving objectives in airport runway and aerodrome

Obtained Certification from the International Civil Aviation Organization



QAOL1

QAOL1 Low Intensity LED Aviation Obstruction Light

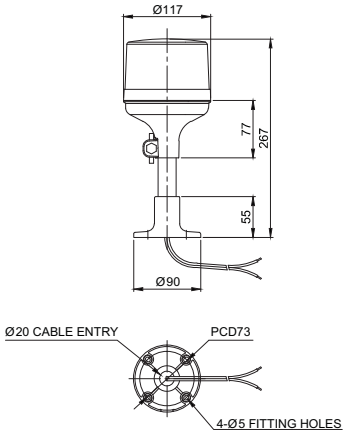
• Low intensity type C is intended for automobile and moving objectives in airport runway and aerodrome.

ICAO standard	Low intensity C type		
Light source	High intensity light emitting diodes(LED)		
Light color	Amber		
Light function	Flashing		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	20W		
Standard housing color	Black	Cable entry	Ø20
Materials	Lens-PC, Housing-PC, Pole-SUS304, Bracket-Al		
Protection rating	IP56	Ambient operating temperature	-30°C to +50°C
Certificate	ICAO compliant	Luminous intensity	200cd/m

Technical Diagram

(Units : mm)

QAOL1



Ordering Specification

QAOL1	–	24	–	A
[Model number]		[Voltage]		[Color]
• QAOL1		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● A-Amber

SAOL2

Low Intensity LED Aviation Obstruction Light

IP66 -30~+50℃

Applied on tall structures for collision avoidance measures and airport runway safety

Obtained Certification from the International Civil Aviation Organization



SAOL2



SAOL2P

Wire is not exposed outside in the pole mount model.

SAOL2 Low Intensity LED Aviation Obstruction Light

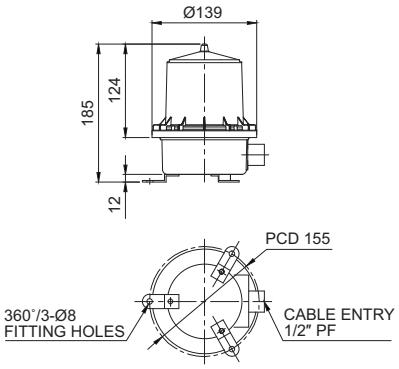
- Low intensity A type aviation obstruction lights are installed onto fixed objects that are less than 150m from the land or water surface

ICAO standard	Low intensity A type		
Light source	High intensity light emitting diodes		
Light color	Red		
Light function	Steady		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	20W		
Standard housing color	Red	Cable entry	1/2″PF
Materials	Lens-PC, Housing-Al		
Protection rating	IP66	Ambient operating temperature	-30°C to +50°C
Certificates	ICAO compliant	Luminous intensity	19cd ±25%

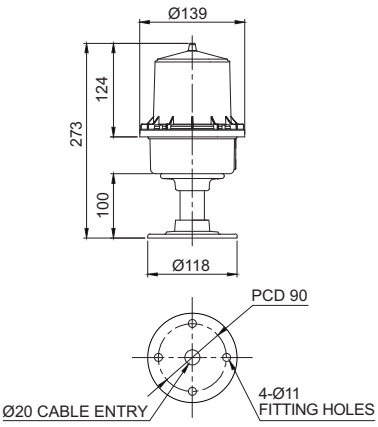
Technical Diagram

(Units : mm)

SAOL2



SAOL2P



Customization

- Cable gland - 1/2″PF
  Standard model is not equipped with cable gland
- Built-in darkness detecting sensor available

Ordering Specification

SAOL2	-	24	-	R
[Model number]		[Voltage]		[Color]
• SAOL2 • SAOL2P		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red

SAOL3

Low Intensity LED Aviation Obstruction Light

IP66 -30~+50℃

Applied on tall structures for collision avoidance measures and airport runway safety

Obtained Certification from the International Civil Aviation Organization



SAOL3



SAOL3P

Wire is not exposed outside in the pole mount model.

SAOL3 Low Intensity LED Aviation Obstruction Light

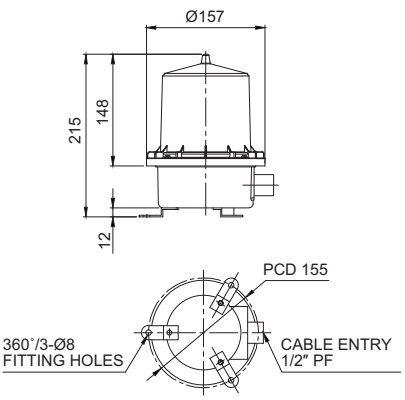
- Low intensity B type aviation obstruction lights are installed onto fixed objects that are less than 150m from the land or water surface

ICAO standard	Low intensity B type		
Light source	High intensity light emitting diodes		
Light color	Red		
Light function	Steady		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	30W		
Standard housing color	Red	Cable entry	1/2″PF
Materials	Lens-PC, Housing-Al		
Protection rating	IP66	Ambient operating temperature	-30°C to +50°C
Certificates	ICAO compliant	Luminous intensity	48cd/m

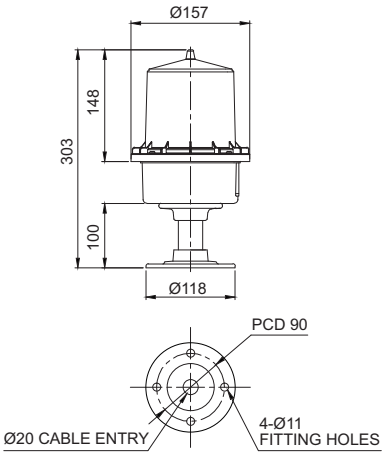
Technical Diagram

(Units : mm)

SAOL3



SAOL3P



Customization

- Cable gland - 1/2″PF
  Standard model is not equipped with cable gland
- Built-in darkness detecting sensor available

Ordering Specification

SAOL3	-	24	-	R
[Model number]		[Voltage]		[Color]
• SAOL3 • SAOL3P		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red

SAOL4

Medium Intensity LED Aviation Obstruction Light

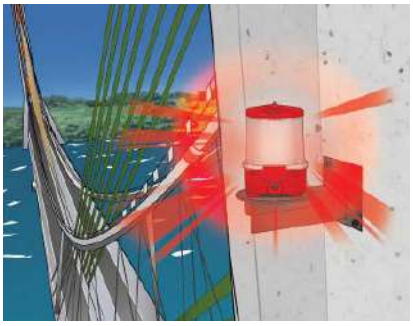
IP66 -30~+50℃

Applied on tall structures for collision avoidance measures and airport runway safety

Obtained Certification from the International Civil Aviation Organization



SAOL4



SAOL4 Medium Intensity LED Aviation Obstruction Light

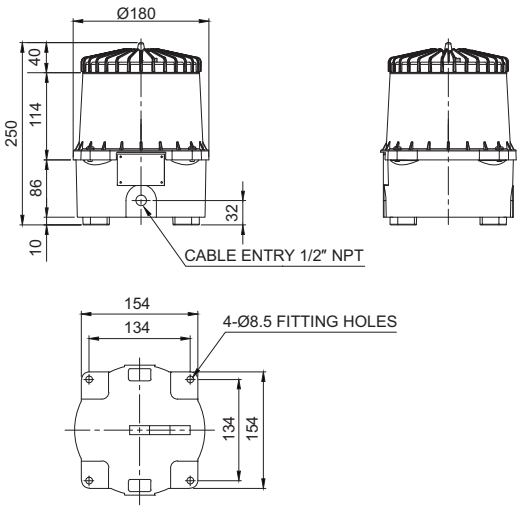
- Medium intensity A, B and C type aviation obstruction lights are installed onto objects higher than 45m within the Obstacle Restriction Area or higher than 150m outside the Obstacle Restriction Area

ICAO standard	Medium intensity A, B and C type		
Light source	High intensity light emitting diodes(LED)		
Light color	Red, White		
Light function	Flashing(A and B type), Steady(C type)		
Flashing rate	20-60 flashes/min		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	130W		
Standard housing color	Red	Cable entry	1/2″ NPT
Materials	Lens-PC, Housing-Al, Cover-Al, Heat sink-Al		
Protection rating	IP66	Ambient operating temperature	-30°C to +50°C
Certificates	ICAO compliant	Luminous intensity	2,000cd ± 25%

Technical Diagram

(Units : mm)

SAOL4



Customization

- Cable gland(connector)
  Standard model is not equipped with cable gland(connector)
- Built-in darkness detecting sensor available

Ordering Specification

SAOL4	-	A	-	24
[Model number]		[Type]		[Voltage]
• SAOL4		• A-Medium intensity A type : White, Flashing • B-Medium intensity B type : Red, Flashing • C-Medium intensity C type : Red, Steady		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V

QEAL1

Explosion Proof Low Intensity LED Aviation Obstruction Light

IP66 -40~+60℃



QEAL1



Explosion proof aviation obstruction lights are installed within hazardous areas on a surface that is more than 60m from the water surface or land such as towers and smokestacks.

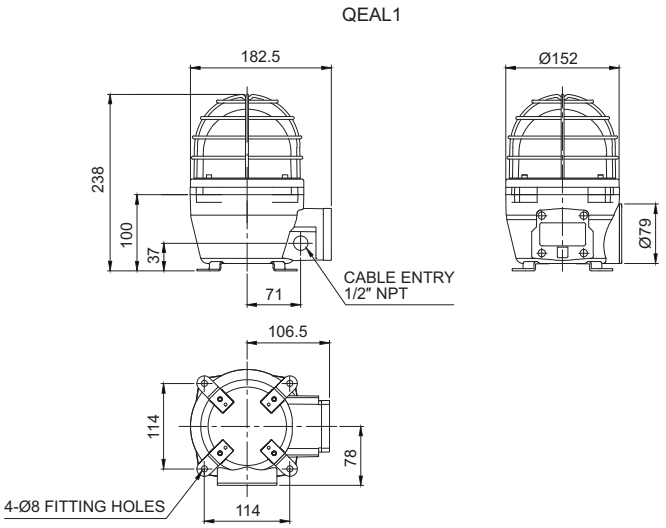
QEAL1 Explosion Proof Low Intensity LED Aviation Obstruction Light

- Low Intensity B type explosion proof aviation obstruction light
- Features high visibility from a distance with the direct LED light distribution system
- Cost savings enabled by using a long lasting LED light source which eliminates the need for maintenance
- Aluminum housing provides excellent durability
- Terminals located inside the housing for wiring
- Protection rating : Ex d ⅡC T4, IP66

ICAO standard	Low intensity B type		
Light source	High intensity light emitting diodes(LED)		
Light color	Red		
Light function	Steady		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	30W		
Standard housing color	Red	Cable entry	1/2″ NPT
Materials	Lens-Tempered glass, Housing-Al, Lens ring- SUS316L, Protection cage-SUS316L, Heat sink-Al		
Protection rating	IP66	Ambient operating temperature	-40°C ≤ T_{amb} ≤ +60°C
Certificate	KC(KOSHA)	Luminous intensity	50cd ±25%

Technical Diagram

(Units : mm)



Customization

- Built-in explosion proof cable gland available(Standard type does not provide explosion proof cable gland)
- Customized 2 cable entries available
- Customized cable entry(M20×1.5) available
- Built-in darkness detecting sensor available

Ordering Specification

QEAL1	-	220	-	R
[Model number]		[Voltage]		[Color]
• QEAL1		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red

IP66 -40~+60℃



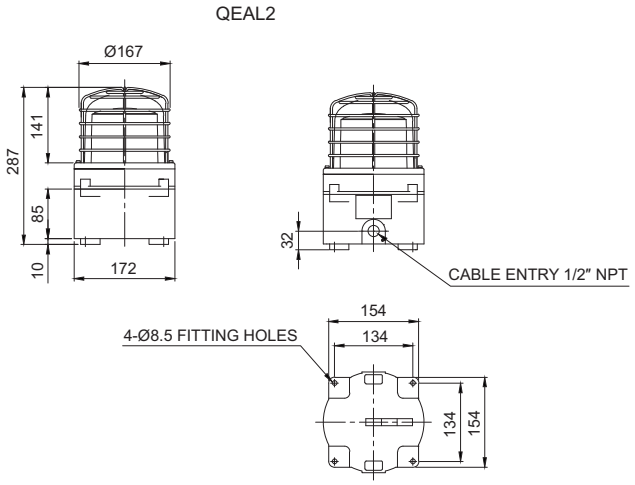
QEAL2

QEAL2 Explosion Proof Medium Intensity LED Aviation Obstruction Light

- Explosion proof medium intensity A and B type aviation obstruction light
- LED light distribution structure that directly radiates light to the user for excellent visibility
- Using semi-permanent lifetime of the LED light source decreases the light source replacement cost
- Excellent durability by adopting aluminum housing
- Built-in terminal for power line inside of housing
- Protection rating : Ex d ⅡC T4, IP66

ICAO standard	Medium intensity A and B type		
Light source	High intensity light emitting diodes(LED)		
Light color	Red, White		
Light function	Flashing		
Flashing rate	20-60 flashes/min		
Rated voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	130W		
Standard housing color	Red	Cable entry	1/2″ NPT
Materials	Lens-Tempered glass, Housing-Al, Protection cage-SUS316L, Heat sink-Al		
Protection rating	IP66	Ambient operating temperature	-40°C ≤ T_{amb} ≤ +60°C
Certificates	KC(KOSHA) compliant	Luminous intensity	2,000cd ± 25%

Technical Diagram (Units : mm)



Customization

- Explosion proof cable gland attached type available (Standard type does not come with explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry (3/4″ NPT, M20×1.5, M25×1.5) available
- Built-in darkness detecting sensor available

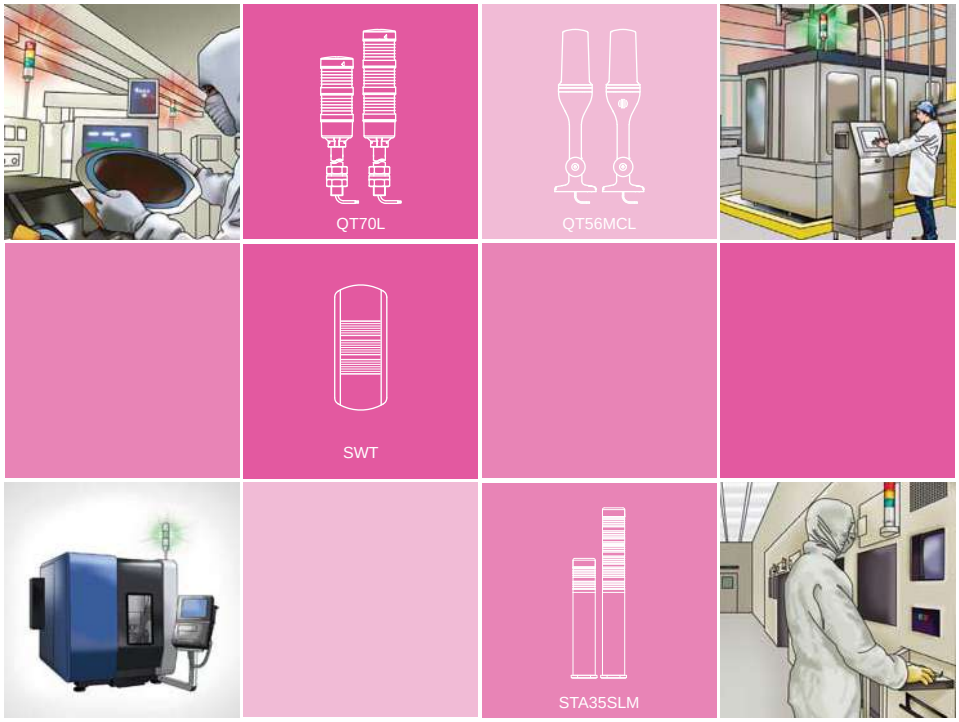
Ordering Specification

QEAL2	-	A	-	24
[Model number]		[Type]		[Voltage]
• QEAL2		• A-Medium intensity A Type : White, Flashing • B-Medium intensity B Type : Red, Flashing		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V

TOTAL CATALOGUE

Signal Tower Lights

INNOVATION IN ALARM & SIGNAL



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References for Signal Tower Lights

Model number(series)		STA25SLM	STA35SL	STA35SLM	STA45SLM	STA45SLMP	QTA56L
							
Voltage		AC/DC12V AC/DC24V AC110V, AC220V	DC12V DC24V	DC12V DC24V	DC12V DC24V	DC12V DC24V	DC24V
Dimension (mm)	Diameter	Ø25	Ø35	Ø35	Ø45	Ø45	52
	Height	368-488	85-265	205-385	198-378	398-568	435
	Depth						
Materials		Lens-AS Housing-Al	Lens-AS Housing-ABS	Lens-AS Housing-Al	Lens-Acryl Inner lens-AS Housing-Al	Lens-Acryl Inner lens-AS Housing-Al	Lens-PC Housing-Al
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	3 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady	•	•	•	•	•	•
	LED Steady/Flashing						
	LED Strobe						
	LED Simulated revolving						
Sound & Volume	1 buzzer sound				Max 90dB at 1m	Max 90dB at 1m	Max 85dB at 1m
Layer color change		No	No	No	No	No	No
Mount bracket		Direct mount	Direct mount	Direct mount	Direct mount	Pole mount	Direct mount
Bracket		STAWB25	STAWB25	STAWB25	STAWB45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	-
Protection rating		IP44	IP44	IP44	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)
Certificates		-	-	-	CE, UL	CE, UL	-
Customization		Same lens color with LED, Wall mount bracket	Wall mount bracket	Wall mount bracket	Wall mount bracket	Pole length adjustment	-
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P253	P254	P255	P256	P257	P259

Model number(series)		SWT	SWTE	QWT	ST45MB	ST45B	ST56MB	ST56B
								
Voltage		AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V-AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø90(Half)	Ø90(Half)	Ø70	Ø45	Ø45	Ø56	Ø56
	Height	216	216	122-286	116-362	330-576	157-502	371-716
	Depth	46	46	76	-	-	-	-
Materials		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Layers		2-3 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing				•	•	•	•
	LED Steady							
	LED Steady/Flashing	•	•	•				
	LED Strobe							
	LED Simulated revolving							
Sound & Volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 85dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
Layer color change		No	No	Yes	Yes	Yes	Yes	Yes
Mount bracket		Wall mount	Wall mount	Wall mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		-	-	-	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18
Protection rating		IP55	IP55	IP54	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)
Certificates		CE, UL	CE, UL	CE, UL	CE	CE	CE	CE
Customization		Color combination except for standard, 2 buzzer sounds, Transparent inner lens	Color combination except for standard, 2 buzzer sounds, Transparent inner lens	Color combination except for standard	Wall mount bracket, 2 Buzzer sounds	Pole length adjustment, 2 Buzzer sounds	Wall mount bracket, 2 buzzer sounds	Pole length adjustment, 2 buzzer sounds
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	-	-	-	-
Page		P261	P261	P263	P265	P266	P268	P269

References for Signal Tower Lights








Model number(series)		ST80MB	ST80B	ST45ML	ST45L	ST56MEL	ST56EL
Voltage		AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø80	Ø80	Ø45	Ø45	Ø56	Ø56
	Height	180-460	317-597	106-358	320-572	127-352	341-566
	Depth	-	-				
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing	•	•				
	LED Steady						
	LED Steady/Flashing			•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & Volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
	5 signal sounds	-	-	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18
Protection rating		IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)
Certificates		-	-	CE, UL	CE, UL	UL	UL
Customization		Wall mount bracket, 2 buzzer sounds	Pole length adjustment, 2 buzzer sounds	2 buzzer sounds, Wall mount bracket, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Pole length adjustment, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Wall mount bracket, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Pole length adjustment, AC each layer power supplied, DC24V UL listed
Transistor		-	-	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P271	P272	P284	P285	P287	P288








Model number(series)		ST56ML	ST56L	ST80MEL	ST80EL	ST80ML	ST80L
Voltage		AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V	AC/DC12V AC/DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø56	Ø56	Ø80	Ø80	Ø80	Ø80
	Height	157-502	371-716	150-310	287-447	180-460	317-597
	Depth						
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & Volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
	5 signal sounds	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type) IP44(Standard)	IP23(Buzzer type) IP44(Standard)	IP23(Buzzer type) IP44(Standard)	IP23(Buzzer type) IP44(Standard)
Certificates		CE, UL	CE, UL	UL	UL	CE, UL	CE, UL
Customization		2 buzzer sounds, Wall mount bracket, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Pole length adjustment, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Wall mount bracket, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Pole length adjustment, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Wall mount bracket, AC each layer power supplied, DC24V UL listed	2 buzzer sounds, Pole length adjustment, AC each layer power supplied, DC24V UL listed
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P290	P291	P296	P294	P296	P297

References for Signal Tower Lights

Multiple Color LED Signal Tower Lights







Model number(series)		STC45ML	STC45L	STC56ML	STC56L	QT56MCL
Voltage		AC/DC12V, AC/DC24V AC110V, AC220V	AC/DC12V, AC/DC24V AC110V, AC220V	AC/DC12V, AC/DC24V AC110V, AC220V	AC/DC12V, AC/DC24V AC110V, AC220V	DC24V
Dimension (mm)	Diameter	Ø45	Ø45	Ø56	Ø56	Ø45
	Height	106-198	320-412	157-287	371-501	276
	Depth					
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-PC Housing-AI
Layers		2-3 Colors	2-3 Colors	2-3 Colors	2-3 Colors	7 Colors
Light source & Operation	Bulb Steady/Flashing					
	LED Steady					•
	LED Steady/Flashing	•	•	•	•	
	LED Strobe					
	LED Simulated revolving					
Sound & Volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
	5 signal sounds					
Layer color change						
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	-
Protection rating		IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)	IP23(Buzzer type), IP44(Standard)
Certificates		CE	CE	CE	CE	-
Customization		2 buzzer sounds, Wall mount bracket	2 buzzer sounds, Pole length adjustment	2 Buzzer sounds, Lens length 40mm, Color combination except for standard, Wall mount Bracket	2 Buzzer sounds, Lens length 40mm, Color combination except for standard, Pole length adjustment	-
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P275	P276	P277	P278	P280






Model number(series)		STG40ML	STG40L	STG50ML	STG50L
Voltage		AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V
Dimension (mm)	Diameter	Ø40	Ø40	Ø50	Ø50
	Height	111-339	339-567	106-314	334-542
	Depth				
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing				
	LED Steady				
	LED Steady/Flashing	•	•	•	•
	LED Strobe				
	LED Simulated revolving				
Sound & Volume	1 buzzer sound	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
	5 signal sounds				
Layer color change		Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18
Protection rating		IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)
Certificates		-	-	CE	CE
Customization		Wall mount bracket, 2 buzzer sounds	2 buzzer sounds, Pole length adjustment	Wall mount bracket, 2 buzzer sounds	2 buzzer sounds, Pole length adjustment
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P301	P302	P303	P304

References for Signal Tower Lights



Model number(series)		QTG50ML	QTG50L	QTG60ML	QTG60L	QTG70ML	QTG70L
Voltage		AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V
Dimension (mm)	Diameter	Ø50	Ø50	Ø60	Ø60	Ø70	Ø70
	Height	116-364	344-592	126-399	352-635	126-399	274-557
	Depth						
Materials		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & Volume	1 buzzer sound	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
	5 signal sounds						
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)
Certificates		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL	CE, UL
Customization		2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing	2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing	2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P308	P309	P310	P311	P312	P313



Model number(series)		QTC50ML	QTC50L	QTC60ML	QTC60L	QTC70ML	QTC70L
Voltage		AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V
Dimension (mm)	Diameter	Ø50	Ø50	Ø60	Ø60	Ø70	Ø70
	Height	116-364	344-592	126-399	352-635	126-399	274-557
	Depth						
Materials		Lens, Inner Lens -PC Housing-ABS	Lens, Inner Lens -PC Housing-ABS	Lens, Inner Lens -PC Housing-ABS	Lens, Inner Lens -PC Housing-ABS	Lens, Inner Lens -PC Housing-ABS	Lens, Inner Lens -PC Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & Volume	1 buzzer sound	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
	5 signal sounds						
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)
Certificates		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL	CE, UL
Customization		2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment,, Strong buzzer, Black housing	2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing	2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P316	P317	P318	P319	P320	P321

References for Signal Tower Lights








Model number(series)		QTR50ML	QTR50L	QTR60ML	QTR60L	QTR70ML	QTR70L
Voltage		AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V
Dimension (mm)	Diameter	Ø50	Ø50	Ø60	Ø60	Ø70	Ø70
	Height	116-364	344-592	126-399	352-635	126-399	274-557
	Depth						
Materials		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & Volume	1 buzzer sound	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
	5 signal sounds						
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)
Certificates		CE, UL	CE, UL	CE, UL	CE, UL	CE, UL	CE, UL
Customization		2 buzzer sounds, Wall mount bracket, Strong buzzer	2 buzzer sounds, Pole length adjustment, Strong buzzer	2 buzzer sounds, Wall mount bracket, Strong buzzer	2 buzzer sounds, Pole length adjustment, Strong buzzer	2 buzzer sounds, Wall mount bracket, Strong buzzer	2 buzzer sounds, Pole length adjustment, Strong buzzer
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P324	P325	P326	P327	P328	P329






Model number(series)		QT50ML	QT50L	QT70ML	QT70L
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø50	Ø50	Ø70	Ø70
	Height	83-247	297-461	98-322	237-461
	Depth				
Materials		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing				
	LED Steady				
	LED Steady/Flashing	•	•	•	•
	LED Strobe	•	•	•	•
	LED Simulated revolving	•	•	•	•
Sound & Volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
	5 signal sounds	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
Layer color change		Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)
Certificates		CE	CE	CE	CE
Customization		Beige color, Wall mount bracket, LED strobe, LED simnulated revolving	Beige color, Pole length adjustment, LED strobe, LED simnulated revolving	Beige color, Wall mount bracket, LED strobe, LED simnulated revolving	Beige color, Pole length adjustment, LED strobe, LED simnulated revolving
Transistor		NPN/ PNP type	NPN/ PNP type	NPN/ PNP type	NPN/ PNP type
Page		P345-347	P342-344	P355-357	P352-354

STA25SLM

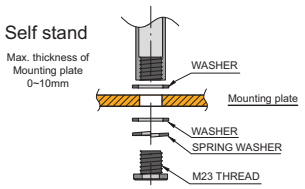
Ø25mm Slim LED Tower Lights

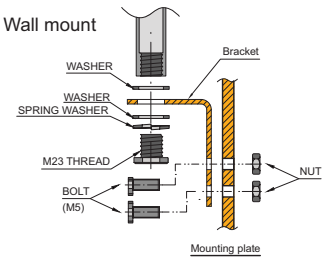
IP44 | -30~+50°C | NPN | PNP



STA25SLM

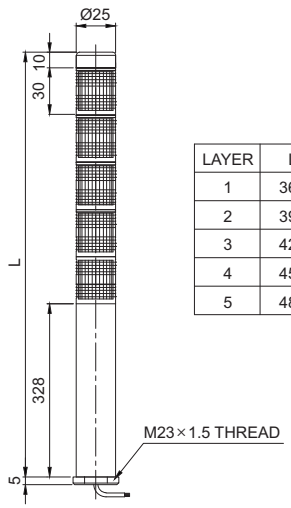
Mounting Instructions





Technical Diagram (Units : mm)

STA25SLM



LAYER	L
1	368
2	398
3	428
4	458
5	488

STA25SLM Ø25mm Direct Mount, LED Steady

- Ø25mm direct mount tower lights
- Aesthetically pleasing design with aluminum housing
- Excellent visibility by using a high brightness LED with a special diffusion lens
- Lens maintains a semi-transparent color when not emitting the specific color of the signal under operation.
- Steady mode only with fixed user selected color arrangement (can operate flashing mode with external contact)
- Materials : Lens-AS, Housing-Al
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STA25SLM Steady	1	AC/DC12V AC/DC24V AC110V AC220V	0.080A 0.040A 0.020A 0.020A	-	0.19kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.080A 0.040A 0.040A		0.21kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.120A 0.060A 0.060A		0.23kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.320A 0.160A 0.080A 0.080A		0.24kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.400A 0.200A 0.100A 0.100A		0.26kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Wiring Instructions

- External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 258 for detailed wiring instructions.

Customization

- LED color lenses matching the signal available
- Wall mount bracket options : Used for mounting on the vertical surface



LED Color Lenses



Wall Mount Bracket **STAWB25**

Ordering Specification

STA25SLM	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• STA25SLM		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

STA35SL

Ø35mm Slim LED Tower Lights

IP44 | -30~+50°C | NPN | PNP



STA35SL

STA35SL Ø35mm Direct Mount LED Steady Tower Lights

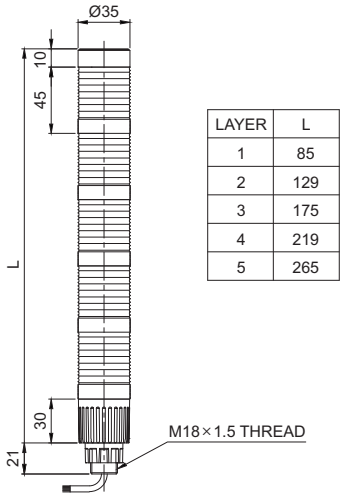
- Ø35mm direct mount tower lights
- Excellent visibility by using a high brightness LED with a special diffusion lens
- Lens maintains a semi-transparent color when not emitting the specific color of the signal under operation.
- Steady mode only (can operate flashing mode with external control) with fixed user selected color arrangement
- Easy mounting with the bolts/ screws located at the bottom of the product
- Materials : Lens-AS, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STA35SL Steady	1	DC12V DC24V	0.160A 0.080A	-	0.60kg	● R-Red
	2	DC12V DC24V	0.320A 0.160A		0.85kg	● R-Red ● G-Green
	3	DC12V DC24V	0.480A 0.240A		1.05kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V	0.640A 0.320A		1.30kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V	0.800A 0.400A		1.53kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Technical Diagram (Units : mm)

STA35SL



LAYER	L
1	85
2	129
3	175
4	219
5	265

Wiring Instructions

- External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 258 for detailed wiring instructions.

Customization

- Wall mount bracket options : Used for mounting on the vertical surface



Wall Mount Bracket
STAWB25

Ordering Specification

STA35SL	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• STA35SL		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

STA35SLM

Ø35mm Slim LED Tower Lights

IP44 | -30~+50°C | NPN | PNP



STA35SLM

STA35SLM Ø35mm Direct Mount LED Steady Tower Lights

- Ø35mm direct mount tower lights
- Aesthetically pleasing design with aluminum housing
- Fixed layer designs provides superior durability
- Excellent visibility by using a high brightness LED with a special diffusion lens
- Lens maintains a semi-transparent color when not emitting the specific color of the signal under operation.
- Steady mode only (can operate flashing mode with external control) with fixed user selected color arrangement
- Easy mounting with the bolts/ screws located at the bottom of the product
- Materials : Lens-AS, Housing-Al
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP44

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STA35SLM Steady	1	DC12V DC24V	0.160A 0.080A	-	2.85kg	● R-Red
	2	DC12V DC24V	0.320A 0.160A		3.04kg	● R-Red ● G-Green
	3	DC12V DC24V	0.480A 0.240A		3.17kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V	0.640A 0.320A		3.43kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V	0.800A 0.400A		3.58kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Wiring Instructions

- External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 258 for detailed wiring instructions.

Customization

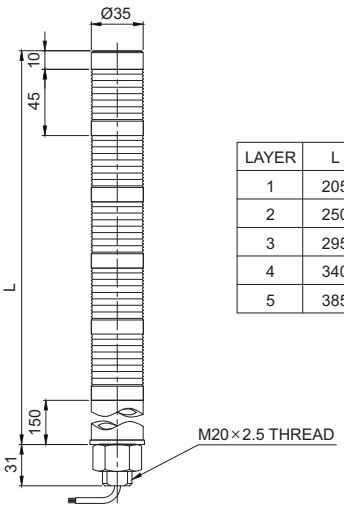
- Wall mount bracket options : Used for mounting on the vertical surface



Wall Mount Bracket
STAWB25

Technical Diagram (Units : mm)

STA35SLM



LAYER	L
1	205
2	250
3	295
4	340
5	385

Ordering Specification

STA35SLM	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• STA35SLM		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

STA45SLM

Ø45mm Slim LED Tower Light

IP23 IP44 -30~+50℃ BUZZER 90dB NPN PNP



STA45SLM series



Customization

- Wall mount bracket options : Used for mounting on the vertical surface



Wall Mount Bracket
STAWB45

Common Specifications(STA45SLM/ STA45SLMP)

- Ø45mm direct mount/pole mount tower lights
- Aluminum housing displays a unique metallic luster that defines a high class product
- Excellent visibility by using a high brightness LED with a special diffusion lens
- Lens maintains a semi-transparent color when not emitting the specific color of the signal under operation
- Steady mode only(can operate flashing mode with external control) with fixed user selected color arrangement
- Easy mounting with the bolts/screws located at the bottom of the product
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Materials : Lens-Acrylic, Filter lens -AS, Housing-Al
- Ambient operating temperature : -30°C to +50°C
- Protection rating : Standard type-IP44, Built-in buzzer type-IP23
- Certificates : CE Compliant, UL Listed

STA45SLM Ø45mm Direct Mount, LED Steady

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STA45SLM Steady STA45SLM-BZ Steady /w built-in buzzer	1	DC12V DC24V	0.160A 0.080A	CE DC24V only UL DC24V only	3.60kg	● R-Red
	2	DC12V DC24V	0.320A 0.160A		4.03kg	● R-Red ● G-Green
	3	DC12V DC24V	0.480A 0.240A		4.45kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V	0.640A 0.320A		4.95kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V	0.800A 0.400A		5.46kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

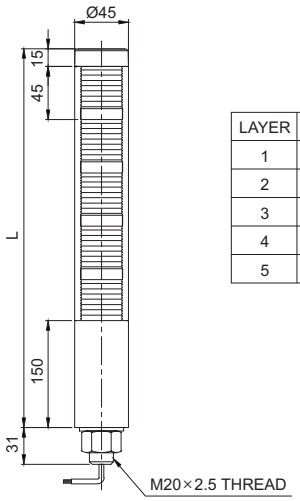
Signal/ Audible Line Current(per each layer)

Voltage settings	DC12V	DC24V
Signal line current	0.160A	0.080A
Audible line current	0.016A	0.031A

Technical Diagram

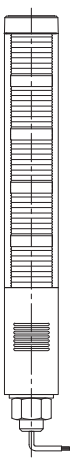
(Units : mm)

STA45SLM



LAYER	L
1	198
2	243
3	288
4	333
5	378

STA45SLM-BZ



STA45SLMP

Ø45mm Slim LED Tower Lights

IP23 IP44 -30~+50℃ BUZZER 90dB NPN PNP



STA45SLMP series

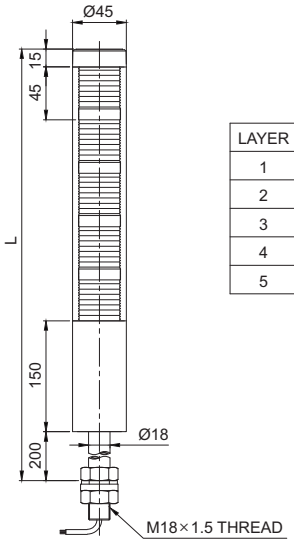
STA45SLMP Ø45mm Pole Mount, LED Steady

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STA45SLMP Steady STA45SLMP-BZ Steady/ w built-in buzzer	1	DC12V DC24V	0.160A 0.080A	CE DC only UL	4.16kg	• R-Red
	2	DC12V DC24V	0.320A 0.160A		4.65kg	• R-Red • G-Green
	3	DC12V DC24V	0.480A 0.240A		5.03kg	• R-Red • A-Amber • G-Green
	4	DC12V DC24V	0.640A 0.320A		5.53kg	• R-Red • A-Amber • G-Green • B-Blue
	5	DC12V DC24V	0.800A 0.400A		6.08kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

Technical Diagram

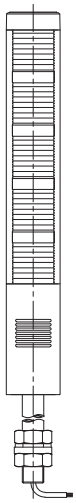
(Units : mm)

STA45SLMP



LAYER	L
1	398
2	443
3	488
4	533
5	568

STA45SLMP-BZ



Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC
SZ18	**QL18**	**SL18**	**QLA18**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

• Customized pole length available

Wiring Instructions

• External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 258 for detailed wiring instructions.

Ordering Specification

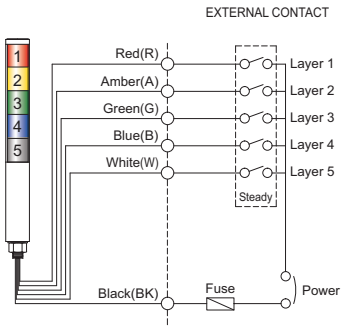
STA45SLMP	-	3	-	220	-	RAG	-	QZ18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• STA45SLM • STA45SLM-BZ • STA45SLMP • STA45SLMP-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Wiring Instructions

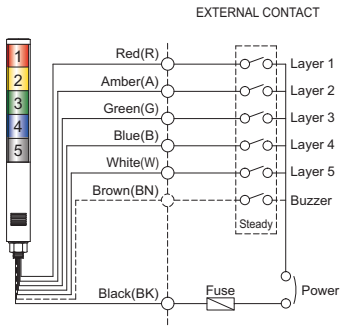
- STA25SLM, STA35SL, STA35SLM and STA45SLM can be wired by using both external contact and transistor.
- In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instructions below.

External Contact

STA25SLM-DC/AC
STA35SL/ STA35SLM-DC



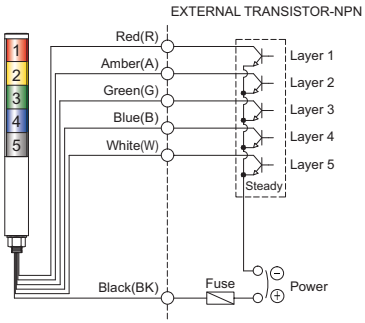
STA45SLM/ STA45SLMP-DC



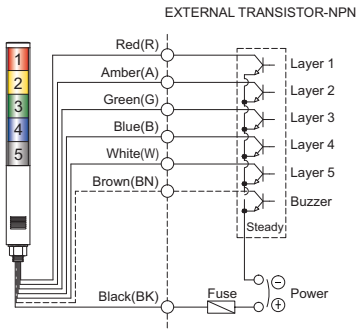
Transistor

NPN-Transistor

STA25SLM-DC
STA35SL/ STA35SLM-DC

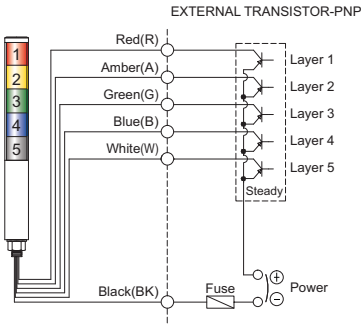


STA45SLM/ STA45SLMP-DC

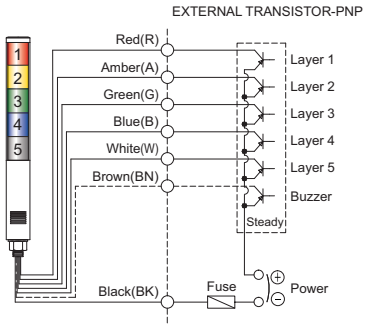


PNP-Transistor

STA25SLM-DC
STA35SL/ STA35SLM-DC



STA45SLM/ STA45SLMP-DC



Wiring Instructions

- External power line and signal line standard :
  UL1007 AWG22(0.3sq) 400mm

Transistor Rating

Type	NPN or PNP
Withstanding voltage	Vc ≧ 35V
Current	Ic ≧ 300mA
Leakage current	0.1mA ≧ IL

QTA56L LED Steady Tower Lights

IP23 IP44 -30~60°C BUZZER 85dB NPN PNP

QTA56L LED Steady
QTA56L-BZ Built-in Buzzer LED Steady



QT56HEX

Built-in buzzer output holes formed on the housing of the product.



QTA56L LED Steady

- High brightness LED with hexagon type mounting pole
- Elegant design with hexagon shaped metal housing
- Aluminum housing provides excellent durability
- Folding type mount bracket can be utilized in various environments
- Built-in buzzer available (Volume : Max 85dB at 1m)
- Materials : Lens-PC, Housing-Al, Mounting bracket-Al
- Ambient operating temperature : -30°C to +60°C
- Protection rating : Standard type-IP44, Built-in buzzer type-IP23

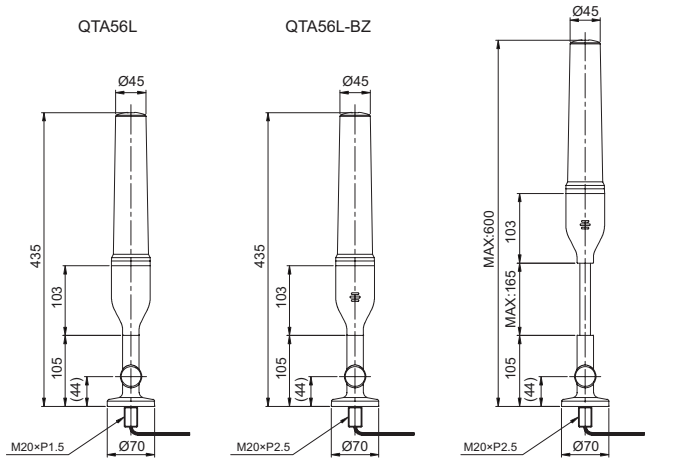
Model number	Layers	Voltage	Current	Certificates	Weight	Color
QTA56L Steady	3	DC24V	Max 0.126A	-	0.71kg	● R-Red ● A-Amber ● G-Green
QTA56L-BZ Steady /w built-in buzzer			Max 0.155A		0.72kg	

Signal/ Audible line current(Per each layer)

Voltage	DC24V
Signal line current	0.042A
Audible line current	0.029A

Technical Diagram (Units : mm)

※ Pole type(Customized model)



Wiring Instructions

- External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 260 for detailed wiring instructions.

Customization

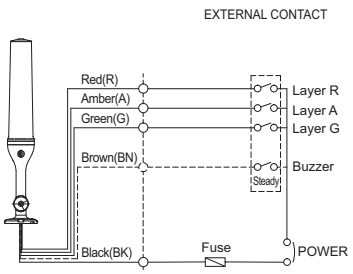
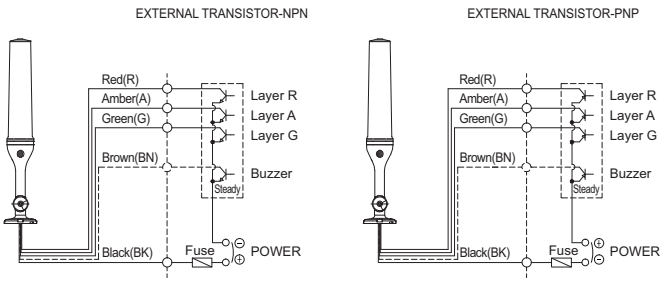
- Pole type

Ordering Specification

QTA56L	-	3	-	24	-	RAG
[Model number]		[Layers]		[Voltage]		[Color]
• QTA56L • QTA56L-BZ		• 3-3 Layers		• 24-DC24V		● R-Red ● A-Amber ● G-Green

Wiring Instructions

- QTA56L can be wired by using both external contact and transistor.
- In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instructions below.
- Product can be wired regardless of polarity.

	External Contact	Transistor
DC Steady		

- External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm

SWT series

Wall Mount Semicircular LED Signal Towers

IP55 | -30~+50°C | BUZZER | 90dB | NPN | PNP | RoHS



SWT series



SWTE series

SWT/ SWTE Wall Mount, LED Steady/Flashing

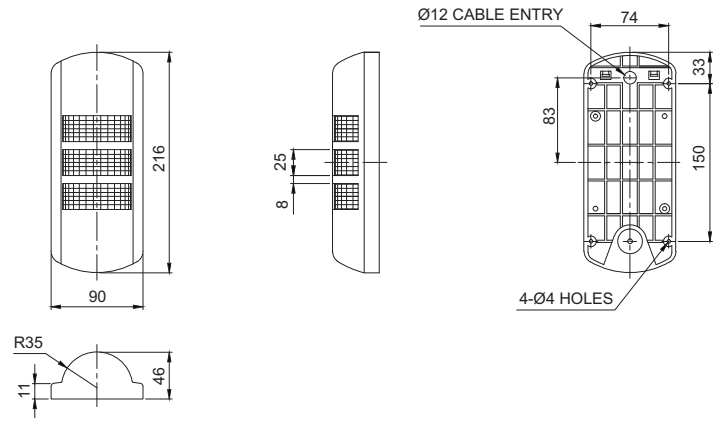
- Wall mount model that minimizes the chance of damage from moving obstacles or personnel
- Clear light signals emitted by adding separate color diffusion lenses beneath the outer transparent lens
- LED light distribution structure that directly radiates light to the user provides excellent visibility
- Can be used outdoors with tightly sealed structure
- Standard color arrangements : 2 Colors : ● Red-R ● Green-G
  3 Colors : ● Red-R ● Amber-A ● Green-G
- Flashing rate : 60-80 flashes/min
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Materials : Lens-PC, Cover-ABS, Housing-ABS, Filter lens-PC
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP55
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Layer	Voltage	Current	Certificates	Weight	Color
SWT(E)L Steady SWT(E)L-BZ Steady /w built-in buzzer	2	AC/DC12V AC/DC24V AC110V AC220V	0.095A 0.063A 0.048A 0.024A	CE DC only	0.27kg 0.27kg 0.42kg 0.42kg	● R-Red ● G-Green
SWT(E)LF Steady/Flashing SWT(E)LF-BZ Steady/Flashing /w built-in buzzer	3	AC/DC12V AC/DC24V AC110V AC220V	0.130A 0.085A 0.051A 0.025A	UL DC24V only	0.30kg 0.30kg 0.45kg 0.45kg	● R-Red ● A-Amber ● G-Green

Technical Diagram

(Units : mm)

SWT/ SWTE



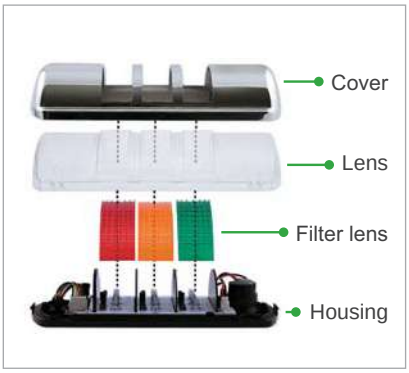
Customization

- Available in customized color arrangements
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Transparent filter lenses available

Ordering Specification

SWTL	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• SWTL • SWTLF • SWTL-BZ • SWTLF-BZ • SWTEL • SWTELF • SWTEL-BZ • SWTELF-BZ		• 2-2Layers • 3-3Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green

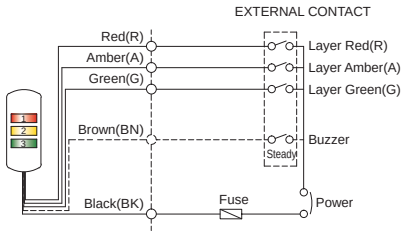
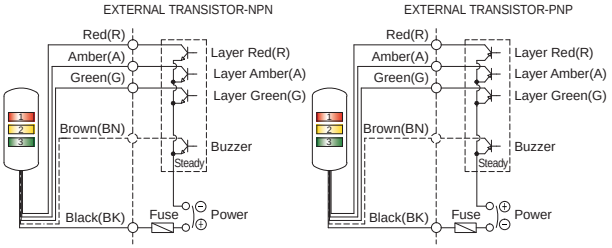
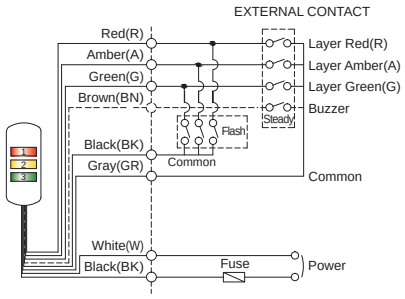
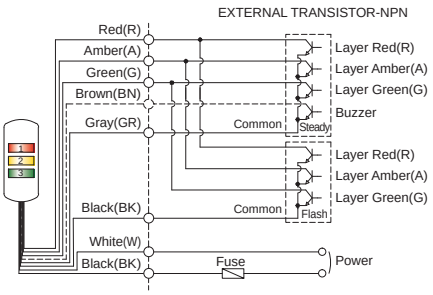
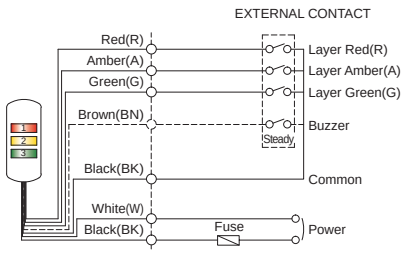
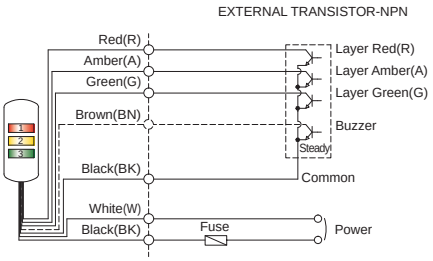
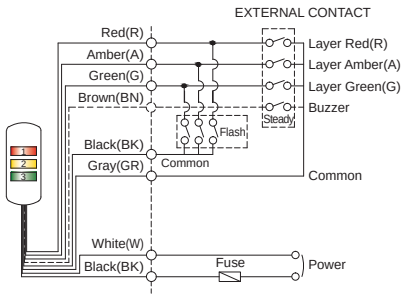
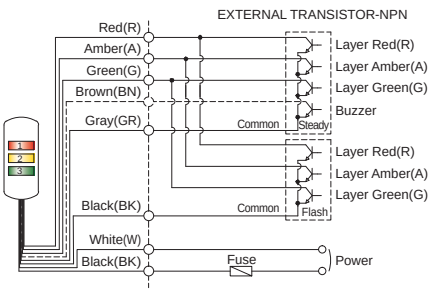
• SWT Lens Configuration



Adding a separate color filter lens inside the outer lens helps to provide a clear signal.

Wiring Instructions

- SWT series can be wired by using both external contact and transistor.
- In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instructions below.
- Product can be wired regardless of polarity.

	External Contact	Transistor
DC Steady	SWTL-DC 	SWTL-DC 
DC Steady/ Flashing	SWTLF-DC 	SWTLF-DC 
AC Steady	SWTL-AC 	SWTL-AC 
AC Steady/ Flashing	SWTLF-AC 	SWTLF-AC 

- DC steady type : External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm
- AC steady, AC/DC steady/flashing type : External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
  Signal line standard : UL1007 AWG22(0.3sq) 400mm

QWT series

Wall Mount LED Steady/Flashing Signal Towers

IP54 | -30~+50°C | BUZZER | 85dB | NPN | PNP | RoHS



QWT series

QWT Wall Mount, LED Steady/Flashing

- Wall mount model that minimizes the chance of breakage from moving obstacles
- The use of a circular lens design for the product improves visibility at the sides
- LED light distribution structure that directly radiates light to the user provides excellent visibility
- Flashing rate : 60-80 flashes/min
- Built-in buzzer available (Volume : Max 85dB at 1m)
- Materials : Lens-PC, Housing-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP54
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QWTL Steady QWTL-BZ Steady /w built-in buzzer QWTLF Steady/Flashing QWTLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.065A 0.050A Max 0.025A	CE DC only UL DC24V only	0.34kg 0.34kg 0.36kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.130A 0.100A Max 0.050A		0.41kg 0.41kg 0.43kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.195A 0.150A Max 0.075A		0.48kg 0.48kg 0.50kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.260A 0.200A Max 0.100A		0.55kg 0.55kg 0.57kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.325A 0.250A Max 0.125A		0.62kg 0.62kg 0.64kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

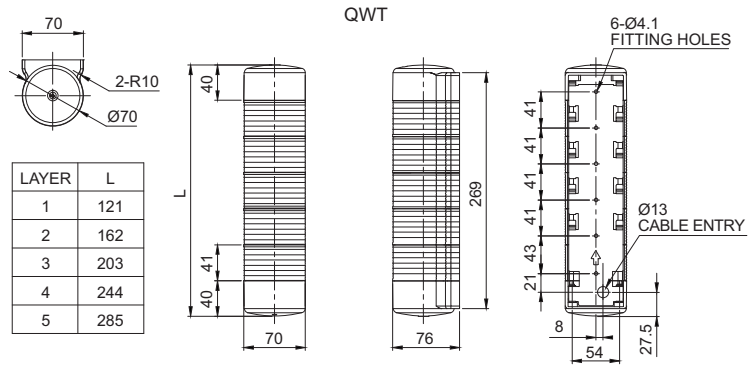
※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.065A	0.050A	Max 0.025A
Audible line current	0.034A	0.078A	Max 0.016A

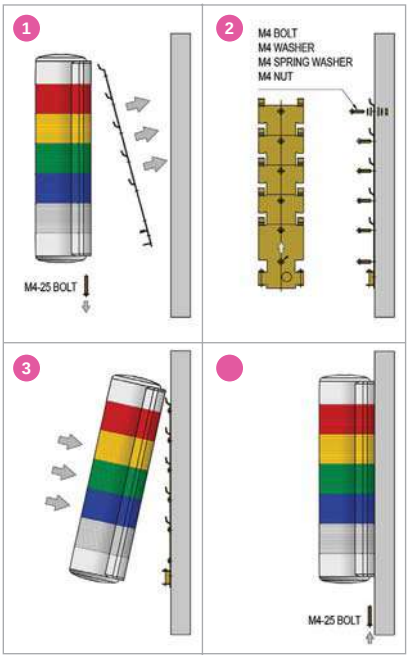
Technical Diagram

(Units : mm)



LAYER	L
1	121
2	162
3	203
4	244
5	285

Mounting Instructions



1. Loosen the two M4 bolts on the bottom of the bracket and remove the body
2. Attach the bracket to the wall with screws into the mounting holes
3. Hang the unit onto the bracket
4. After attaching the unit to the bracket, secure the two pieces together with the M4 bolts at the bottom of the product

Customization

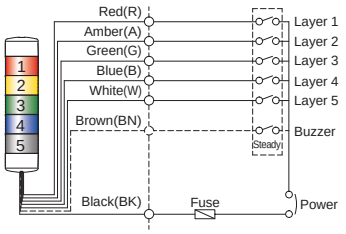
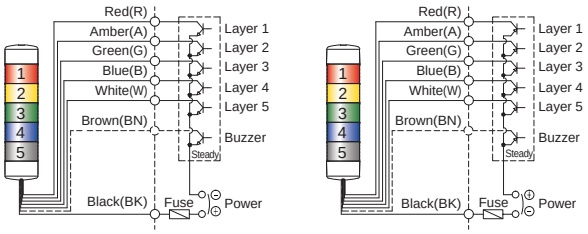
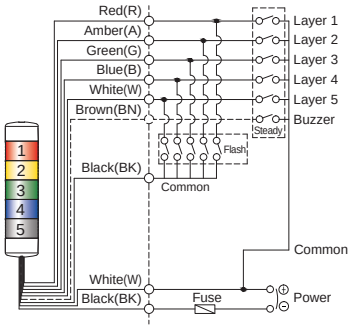
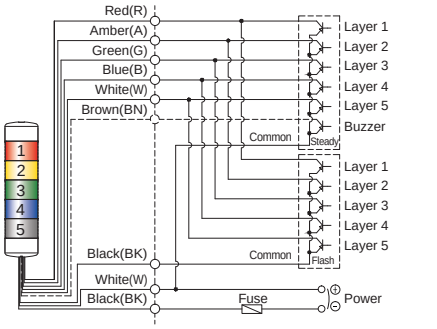
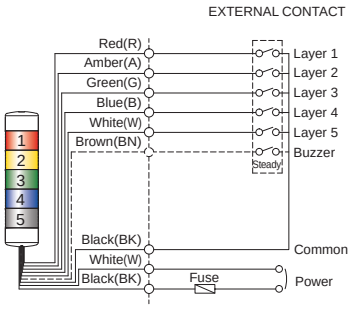
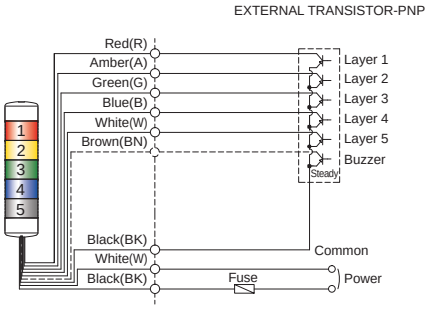
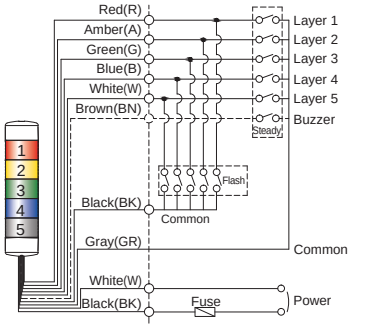
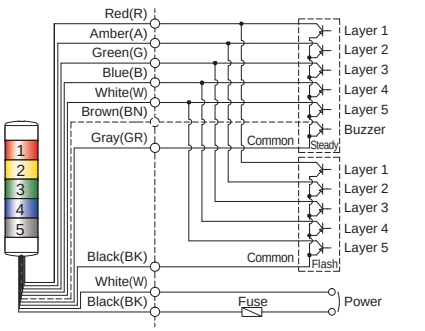
- Available in customized color arrangements

Ordering Specification

QWTL	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QWTL • QWTL-BZ • QWTLF • QWTLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Wiring Instructions

- QWT series can be wired by using both external contact and transistor.
- In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instructions below.
- Product can be wired regardless of polarity.

	External Contact	Transistor
DC Steady	QWTL-DC EXTERNAL CONTACT 	QWTL-DC EXTERNAL TRANSISTOR-NPN EXTERNAL TRANSISTOR-PNP 
DC Steady/ Flashing	QWTLF-DC EXTERNAL CONTACT 	QWTLF-DC EXTERNAL TRANSISTOR-PNP 
AC Steady	QWTL-AC EXTERNAL CONTACT 	QWTL-AC EXTERNAL TRANSISTOR-PNP 
AC Steady/ Flashing	QWTLF-AC EXTERNAL CONTACT 	QWTLF-AC EXTERNAL TRANSISTOR-PNP 

- DC steady type : External power line and signal line standard : UL1007 AWG22(0.3sq) 400mm
- AC steady, AC/DC steady/flashing type : External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
  Signal line standard : UL1007 AWG22(0.3sq) 400mm

ST45MB

Ø45mm Bulb Steady/Flashing Tower Lights

IP23 IP44 -25~+50°C BUZZER 90dB

ST45MB	Steady
ST45MB-BZ	Built-in Buzzer Steady
ST45MBF	Steady/Flashing
ST45MBF-BZ	Built-in Buzzer Steady/ Flashing



ST45MB series

Built-in buzzer output holes formed on the housing of the product.



Common Specifications(ST45MB/ ST45B/ ST56MB/ ST56B/ ST80MB/ ST80B)

- Bulb steady/flashing tower lights
- A variety of length selections from 45mm, 56mm, and 80mm to fit your sophisticated application needs
- Can select from a variety of mount bracket for the pole mount type
- Adopted a light bulb with excellent durability and longevity
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Flashing rate : 60-80 flashes/min
- Available in customized color arrangements
- Materials : Lens-AS, Housing-ABS, Pole-Al
- Ambient operating temperature : -25°C to +50°C
- Protection rating : Standard type-IP44, Built-in buzzer type-IP23
- Certificates : CE Compliant

ST45MB Ø45mm Direct Mount, Bulb Steady/Flashing

Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no#			
ST45MB Steady ST45MB-BZ Steady /w built-in buzzer ST45MBF Steady/ Flashing ST45MBF-BZ Steady/ Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V AC220V	0.398A 0.212A 0.048A 0.023A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4	CE DC only	0.22kg 0.22kg 0.22kg 0.22kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.797A 0.424A 0.097A 0.046A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.26kg 0.26kg 0.26kg 0.26kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	1.196A 0.636A 0.146A 0.070A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.31kg 0.31kg 0.31kg 0.31kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	1.595A 0.848A 0.195A 0.093A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.37kg 0.37kg 0.37kg 0.37kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	1.994A 1.061A 0.244A 0.116A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.42kg 0.42kg 0.42kg 0.42kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Signal/ Audible Line Voltage Settings and Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.398A	0.212A	0.048A	0.023A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

ST45MB	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST45MB • ST45MB-BZ • ST45MBF • ST45MBF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST45B

Ø45mm Bulb Steady/Flashing Tower Lights

IP23 IP44 -25~50℃ BUZZER 90dB

ST45B	Steady
ST45B-BZ	Built-in Buzzer Steady
ST45BF	Steady/Flashing
ST45BF-BZ	Built-in Buzzer Steady/Flashing



ST45B series

Built-in buzzer output holes formed on the housing of the product.





ST45B Ø45mm Pole Mount, Bulb Steady/Flashing

Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no#			
ST45B Steady ST45B-BZ Steady /w built-in buzzer ST45BF Steady/ Flashing ST45BF-BZ Steady/ Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V AC220V	0.398A 0.212A 0.048A 0.023A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4	CE DC only	0.36kg 0.36kg 0.36kg 0.36kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.797A 0.424A 0.097A 0.046A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.41kg 0.41kg 0.41kg 0.41kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	1.196A 0.636A 0.146A 0.070A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.46kg 0.46kg 0.46kg 0.46kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	1.595A 0.848A 0.195A 0.093A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.51kg 0.51kg 0.51kg 0.51kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	1.994A 1.061A 0.244A 0.116A	12V5W 24V5W 110V5W 220V5W	G14 9S G14 9S T16x28 9S T16x28 9S	1 2 3 4		0.56kg 0.56kg 0.56kg 0.56kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ Please refer to page 255 ST45MB type for signal/ audible line current.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- Customized pole length available
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available

Ordering Specification

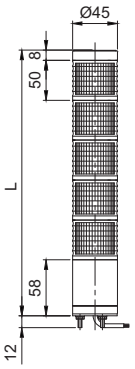
ST45B	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST45B • ST45B-BZ • ST45BF • ST45BF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Technical Diagram

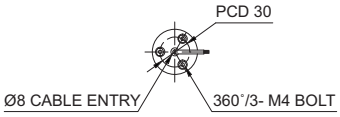
(Units : mm)



ST45MB : AC/DC
ST45MB-BZ : DC
ST45MBF : DC

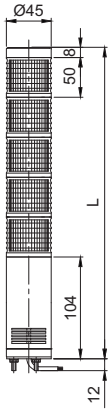


LAYER	L
1	116
2	166
3	216
4	266
5	316



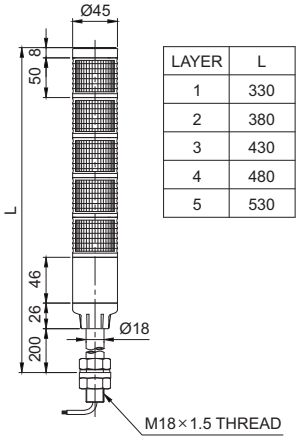
ST45MB-BZ : AC
ST45MBF : AC
ST45MBF-BZ : AC

LAYER	L
1	162
2	212
3	262
4	312
5	362





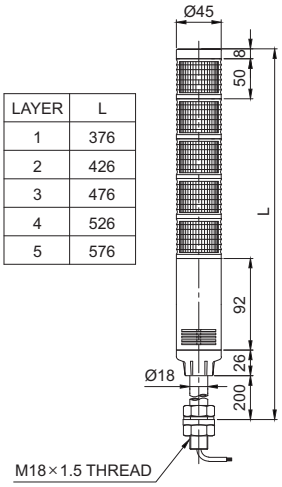
ST45B : AC/DC
ST45B-BZ : AC/DC
ST45BF : AC/DC



LAYER	L
1	330
2	380
3	430
4	480
5	530

ST45BF-BZ : AC/DC

LAYER	L
1	376
2	426
3	476
4	526
5	576



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 274 for detailed wiring instructions.

ST56MB

Ø56mm Bulb Steady/Flashing Tower Lights

IP23 IP44 -25~50℃ BUZZER 90dB

ST56MB	Steady
ST56MB-BZ	Built-in Buzzer Steady
ST56MBF	Steady/Flashing
ST56MBF-BZ	Built-in Buzzer Steady/Flashing



ST56MB series

Built-in buzzer output holes formed on the housing of the product.



ST56MB Ø56mm Direct Mount, Bulb Steady/Flashing

Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no#			
ST56MB Steady ST56MB-BZ Steady /w built-in buzzer ST56MBF Steady/ Flashing ST56MBF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V AC220V	0.925A 0.514A 0.095A 0.046A	12V10W 24V10W 110V10W 220V10W	T16x35 15S T16x35 15S T16x35 15S T16x35 15S	9 10 12 13	CE DC only	0.30kg 0.30kg 0.30kg 0.30kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	1.851A 1.028A 0.191A 0.093A	12V10W 24V10W 110V10W 220V10W	T16x35 15S T16x35 15S T16x35 15S T16x35 15S	9 10 12 13		0.39kg 0.39kg 0.39kg 0.39kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	2.776A 1.543A 0.286A 0.140A	12V10W 24V10W 110V10W 220V10W	T16x35 15S T16x35 15S T16x35 15S T16x35 15S	9 10 12 13		0.46kg 0.46kg 0.46kg 0.46kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	3.702A 2.057A 0.382A 0.186A	12V10W 24V10W 110V10W 220V10W	T16x35 15S T16x35 15S T16x35 15S T16x35 15S	9 10 12 13		0.54kg 0.54kg 0.54kg 0.54kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	4.627A 2.572A 0.477A 0.233A	12V10W 24V10W 110V10W 220V10W	T16x35 15S T16x35 15S T16x35 15S T16x35 15S	9 10 12 13		0.62kg 0.62kg 0.62kg 0.62kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal Line Current	0.925A	0.541A	0.095A	0.046A
Audible Line Current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

ST56MB	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST56MB • ST56MB-BZ • ST56MBF • ST56MBF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST56B

Ø56mm Bulb Steady/Flashing Tower Lights

IP23 IP44 -25~+50℃ BUZZER 90dB

ST56B	Steady
ST56B-BZ	Built-in Buzzer Steady
ST56BF	Steady/Flashing
ST56BF-BZ	Built-in Buzzer Steady/Flashing



ST56B series

Built-in buzzer output holes formed on the housing of the product.



ST56B Ø56mm Pole Mount, Bulb Steady/Flashing

Model number	Layer	Voltage	Current	Bulb Spec	Bulb Standard	Bulb Parts no#	Certificates	Weight	Color
ST56B Steady ST56B-BZ Steady /w built-in buzzer ST56BF Steady/ Flashing ST56BF-BZ Steady/ Flashing /w built-in buzzer	1	AC/DC12V	0.925A	12V10W	T16x35 15S	9	CE DC only	0.45kg	● R-Red
		AC/DC24V	0.514A	24V10W	T16x35 15S	10		0.45kg	
		AC110V	0.095A	110V10W	T16x35 15S	12		0.45kg	
		AC220V	0.046A	220V10W	T16x35 15S	13		0.45kg	
	2	AC/DC12V	1.851A	12V10W	T16x35 15S	9		0.53kg	● R-Red ● G-Green
		AC/DC24V	1.028A	24V10W	T16x35 15S	10		0.53kg	
		AC110V	0.191A	110V10W	T16x35 15S	12		0.53kg	
		AC220V	0.093A	220V10W	T16x35 15S	13		0.53kg	
	3	AC/DC12V	2.776A	12V10W	T16x35 15S	9		0.61kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	1.543A	24V10W	T16x35 15S	10		0.61kg	
		AC110V	0.286A	110V10W	T16x35 15S	12		0.61kg	
		AC220V	0.140A	220V10W	T16x35 15S	13		0.61kg	
	4	AC/DC12V	3.702A	12V10W	T16x35 15S	9		0.69kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	2.057A	24V10W	T16x35 15S	10		0.69kg	
		AC110V	0.382A	110V10W	T16x35 15S	12		0.69kg	
		AC220V	0.186A	220V10W	T16x35 15S	13		0.69kg	
	5	AC/DC12V	4.627A	12V10W	T16x35 15S	9		0.77kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	2.572A	24V10W	T16x35 15S	10		0.77kg	
		AC110V	0.477A	110V10W	T16x35 15S	12		0.77kg	
		AC220V	0.233A	220V10W	T16x35 15S	13		0.77kg	

※ Please refer to page 268 ST56MB type for signal/ audible line current.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- Customized pole length available
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available

Ordering Specification

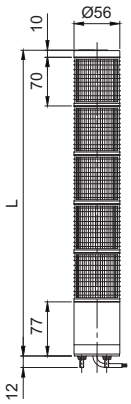
ST56B	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST56B • ST56B-BZ • ST56BF • ST56BF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Technical Diagram

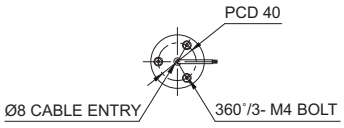
(Units : mm)



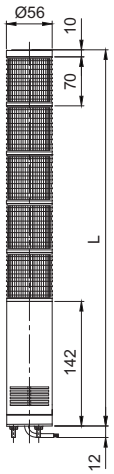
ST56MB : AC/DC
ST56MB-BZ : DC
ST56MBF : DC



LAYER	L
1	157
2	227
3	297
4	367
5	437



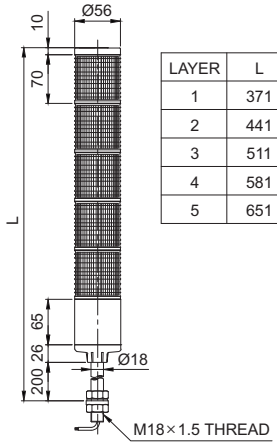
ST56MB-BZ : AC
ST56MBF : AC
ST56MBF-BZ : AC



LAYER	L
1	222
2	292
3	362
4	432
5	502

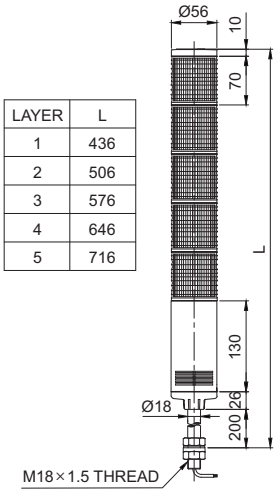


ST56B : AC/DC
ST56B-BZ : AC/DC
ST56BF : AC/DC



LAYER	L
1	371
2	441
3	511
4	581
5	651

ST56BF-BZ : AC/DC



LAYER	L
1	436
2	506
3	576
4	646
5	716

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 274 for detailed wiring instructions.

ST80MB

Ø80mm Bulb Steady/Flashing Tower Lights

IP23 IP44 -25~50℃ BUZZER 90dB

ST80MB Steady
ST80MB-BZ Built-in Buzzer Steady
ST80MBF Steady/Flashing
ST80MBF-BZ Built-in Buzzer Steady/Flashing



ST80MB series

Built-in buzzer output holes formed on the housing of the product.



ST80MB Ø80mm Direct mount, Bulb Steady/Flashing

Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no#			
ST80MB Steady ST80MB-BZ Steady /w built-in buzzer ST80MBF Steady/ Flashing ST80MBF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V AC220V	0.925A 0.514A 0.095A 0.046A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13	-	0.42kg 0.42kg 0.42kg 0.42kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	1.851A 1.028A 0.191A 0.093A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		0.56kg 0.56kg 0.56kg 0.56kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	2.776A 1.543A 0.286A 0.140A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		0.68kg 0.68kg 0.68kg 0.68kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	3.702A 2.057A 0.382A 0.186A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		0.84kg 0.84kg 0.84kg 0.84kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	4.627A 2.572A 0.477A 0.233A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		0.98kg 0.98kg 0.98kg 0.98kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.925A	0.514A	0.095A	0.046A
Audible line current	0.016A	0.031A	0.027A	0.030A

Ordering Specification

ST80MB	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST80MB • ST80MB-BZ • ST80MBF • ST80MBF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST80B

Ø80mm Bulb Steady/Flashing Tower Lights

IP23 IP44 -25~+50℃ BUZZER 90dB

ST80B	Steady
ST80B-BZ	Built-in Buzzer Steady
ST80BF	Steady/Flashing
ST80BF-BZ	Built-in Buzzer Steady/Flashing



ST80B series

Built-in buzzer output holes formed on the housing of the product.



ST80B Ø80mm Pole Mount, Bulb Steady/Flashing

Model number	Layer	Voltage	Current	Bulb			Certificates	Weight	Color
				Spec	Standard	Parts no#			
ST80B Steady ST80B-BZ Steady /w built-in buzzer ST80BF Steady/ Flashing ST80BF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V AC220V	0.925A 0.514A 0.095A 0.046A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13	-	0.61kg 0.61kg 0.61kg 0.61kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	1.851A 1.028A 0.191A 0.093A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		0.75kg 0.75kg 0.75kg 0.75kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	2.776A 1.543A 0.286A 0.140A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		0.88kg 0.88kg 0.88kg 0.88kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	3.702A 2.057A 0.382A 0.186A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		1.04kg 1.04kg 1.04kg 1.04kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	4.627A 2.572A 0.477A 0.233A	12V10W 24V10W 110V10W 220V10W	T16x35 15S	9 10 12 13		1.18kg 1.18kg 1.18kg 1.18kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ Please refer to page 271 ST80MB type for signal/ audible line current.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- Customized pole length available
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available

Ordering Specification

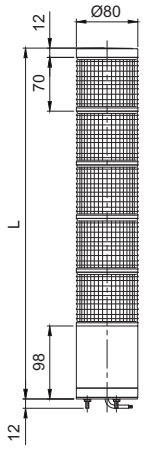
ST80B	-	3	-	24	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST80B • ST80B-BZ • ST80BF • ST80BF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

Technical Diagram

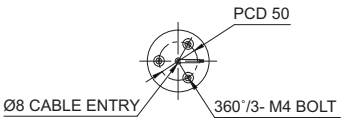
(Units : mm)



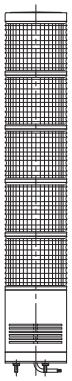
ST80MB : AC/DC
ST80MBF : AC/DC



LAYER	L
1	180
2	250
3	320
4	390
5	460

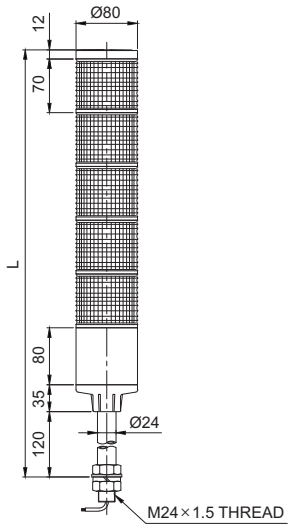


ST80MB-BZ : AC/DC
ST80MBF-BZ : AC/DC



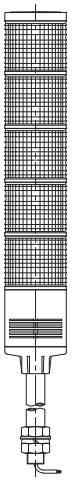


ST80B : AC/DC
ST80BF : AC/DC



LAYER	L
1	317
2	387
3	457
4	527
5	597

ST80B-BZ : AC/DC
ST80BF-BZ : AC/DC



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 274 for detailed wiring instructions.

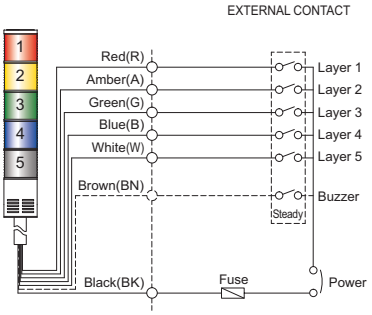
Wiring Instructions

- Please wire by following below instructions for ST45MB/ ST45B, ST56MB/ ST56B and ST80MB/ ST80B series.
- Bulb tower lights do not allow transistor wiring. Please use external contact.

External contact

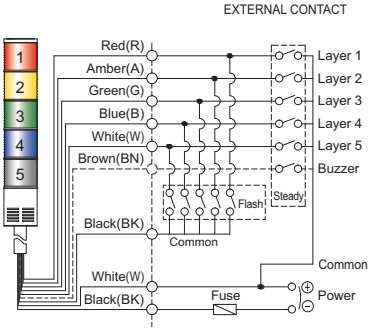
Steady

ST45MB/ ST45B-DC/AC
ST56MB/ ST56B-DC/AC
ST80MB/ ST80B-DC/AC

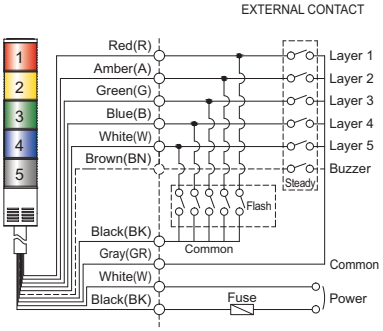


Steady/ Flashing

ST45MBF/ ST45BF-DC
ST56MBF/ ST56BF-DC
ST80MBF/ ST80BF-DC



ST45MBF/ ST45BF-AC
ST56MBF/ ST56BF-AC
ST80MBF/ ST80BF-AC



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm



STC45ML

Ø45mm Multiple Color LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB NPN PNP RoHS

STC45ML	LED Steady
STC45ML-BZ	Built-in Buzzer LED Steady
STC45MLF	LED Steady/Flashing
STC45MLF-BZ	Built-in Buzzer LED Steady/Flashing

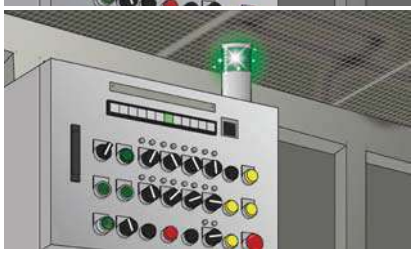


STC45ML series

Built-in buzzer output holes formed on the housing of the product.







Multiple color 1 layer LED tower lights

Can deliver two to three signals with one layer. Suitable for application condition with height limit.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 279 for detailed Wiring Instructions.

Common Specifications(STC45/ STC56/ STC80)

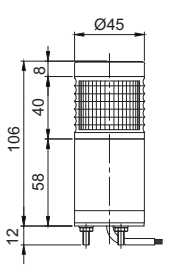
- Economical tower light model that can deliver two to three signals with one layer
- Long product lifetime of over 20,000 hours with the application of a high intensity multiple color LED light source
- Can select from size of Ø45mm, Ø56mm, and Ø80mm to fit your sophisticated application needs
- A variety of mounting bracket selections for the pole mount type to fit your location and mounting needs
- Built-in buzzer type available (Volume : Max 90dB at 1m)
- Customized 2 buzzer sound type available
- Flashing rate : 60-80 flashes/min
- Materials : Lens-AS, Housing-ABS, Pole-Al
- Ambient operating temperature : -30°C to +60°C
- Protection rating : Standard type-IP44, Built-in buzzer type-IP23
- Certificates : CE Compliant
- Compliant with RoHS directive

STC45ML Ø45mm Direct Mount, Multiple Color LED Steady/Flashing

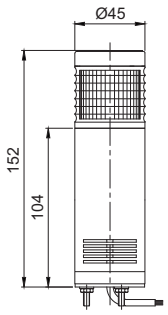
Model number	Layers	Voltage	Current	Certificates	Weight	Color
STC45ML STC45ML-BZ STC45MLF STC45MLF-BZ	2	AC/DC12V	0.111A	CE	0.19kg	● R-Red ● G-Green
		AC/DC24V	0.100A		0.19kg	
	3	AC110V	0.028A	-	0.32kg	● R-Red ● A-Amber ● G-Green
		AC220V	0.014A		0.32kg	

Technical Diagram (Units : mm)

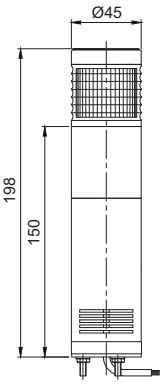
STC45ML : DC
STC45MLF : DC

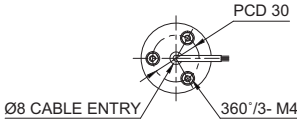


STC45ML : AC
STC45MLF : AC
STC45ML-BZ : DC
STC45MLF-BZ : DC



STC45ML-BZ : AC
STC45MLF-BZ : AC





Customization

- Customized color arrangement available
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

STC45ML	-	3	-	220	-	RAG
[Model number]		[Layers]		[Voltage]		[Color]
• STC45ML • STC45ML-BZ • STC45MLF • STC45MLF-BZ		• 2-2 Colors • 3-3 Colors		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green

STC45L

Ø45mm Multiple Color LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB NPN PNP RoHS

STC45L	LED Steady
STC45L-BZ	Built-in Buzzer LED Steady
STC45LF	LED Steady/Flashing
STC45LF-BZ	Built-in Buzzer LED Steady/Flashing



STC45L series



Built-in buzzer output holes formed on the housing of the product.



Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC
SZ18	**QL18**	**SL18**	**QLA18**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

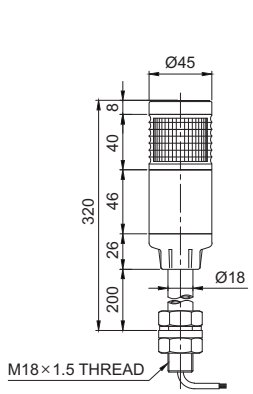
STC45L Ø45mm Pole Mount, Multiple Color LED Steady/Flashing

Model number	Layers	Voltage	Current	Certificates	Weight	Color
STC45L STC45L-BZ STC45LF STC45LF-BZ	2	AC/DC12V	0.111A	CE	0.33kg	• R-Red • G-Green
		AC/DC24V	0.100A		0.33kg	
	3	AC110V	0.028A	-	0.47kg	• R-Red • A-Amber • G-Green
		AC220V	0.014A		0.47kg	

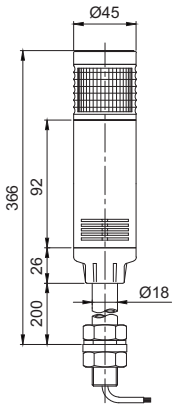
Technical Diagram

(Units : mm)

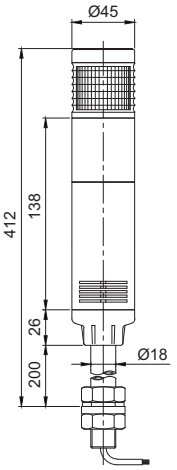
STC45L : DC
STC45LF : DC



STC45L : AC
STC45LF : AC
STC45L-BZ : DC
STC45LF-BZ : DC



STC45L-BZ : AC
STC45LF-BZ : AC



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 279 for detailed wiring instructions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized color arrangement available
- Customized pole length available

Ordering Specification

STC45L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layers]		[Voltage]		[Color]		[Mounting bracket]
• STC45L • STC45L-BZ • STC45LF • STC45LF-BZ		• 2-2 Colors • 3-3 Colors		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

STC56ML

Ø56mm Multiple Color LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB NPN PNP RoHS

STC56ML	LED Steady
STC56ML-BZ	Built-in Buzzer LED Steady
STC56MLF	LED Steady/Flashing
STC56MLF-BZ	Built-in Buzzer LED Steady/Flashing



STC56ML series



Built-in buzzer output holes formed on the housing of the product.





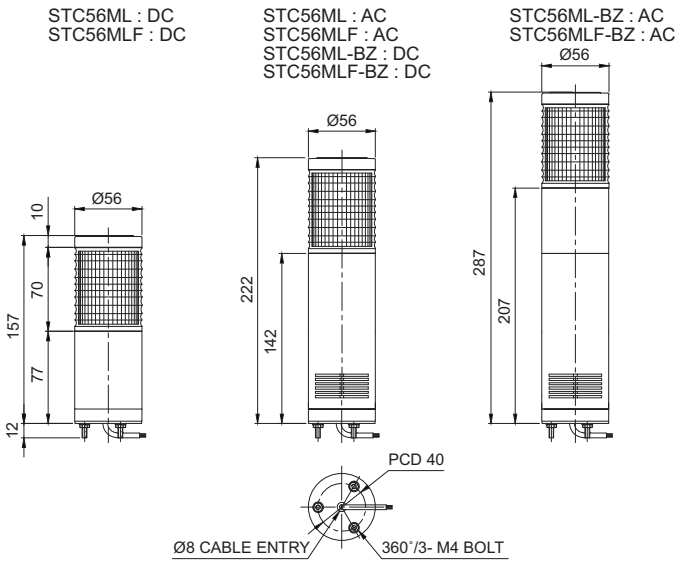
40mm lens height

Standard height of lens is 70mm. 40mm lens can optionally be provided.
(Model number : STC56MEL)

STC56ML Ø56mm Pole Mount, Multiple Color LED Steady/Flashing

Model number	Layers	Voltage	Current	Certificates	Weight	Color
STC56ML STC56ML-BZ	2	AC/DC12V	0.277A	CE	0.29kg	• R-Red • G-Green
		AC/DC24V	0.188A		0.29kg	
STC56MLF STC56MLF-BZ	3	AC110V	0.057A	-	0.49kg	• R-Red • A-Amber • G-Green
		AC220V	0.028A		0.49kg	

Technical Diagram (Units : mm)



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 279 for detailed wiring instructions.

Customization

- Customized color arrangement available
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- 40mm lens height (Model number : STC56MEL)
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

STC56ML	-	3	-	220	-	RAG
[Model number]		[Layers]		[Voltage]		[Color]
• STC56ML • STC56ML-BZ • STC56MLF • STC56MLF-BZ		• 2-2 Colors • 3-3 Colors		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green

STC56L

Ø56mm Multiple Color LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB NPN PNP RoHS

STC56L	LED Steady
STC56L-BZ	Built-in Buzzer LED Steady
STC56LF	LED Steady/Flashing
STC56LF-BZ	Built-in Buzzer LED Steady/Flashing



STC56L series

Built-in buzzer output holes formed on the housing of the product.





40mm lens height

Standard height of lens is 70mm. 40mm lens can optionally be provided.
(Model number : STC56EL)

Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC

SZ18	QL18	SL18	QLA18
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

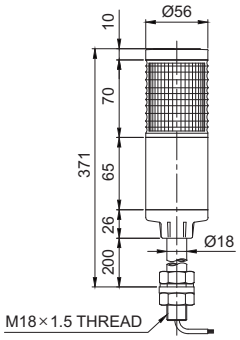
STC56L Ø56mm Pole Mount, Multiple Color LED Steady/Flashing

Model number	Layers	Voltage	Current	Certificates	Weight	Color
STC56L STC56L-BZ STC56LF STC56LF-BZ	2	AC/DC12V	0.277A	CE	0.43kg	• R-Red • G-Green
		AC/DC24V	0.188A		0.43kg	
	3	AC110V	0.057A	-	0.62kg	• R-Red • A-Amber • G-Green
		AC220V	0.028A		0.62kg	

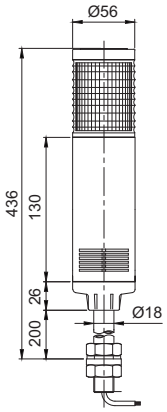
Technical Diagram

(Units : mm)

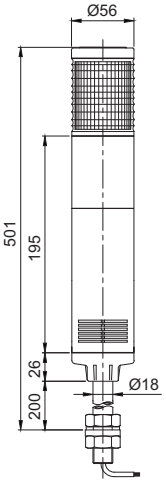
STC56L : DC
STC56LF : DC



STC56L : AC
STC56LF : AC
STC56L-BZ : DC
STC56LF-BZ : DC



STC56L-BZ : AC
STC56LF-BZ : AC



Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm

※ Please refer to page 279 for detailed wiring instructions.

Customization

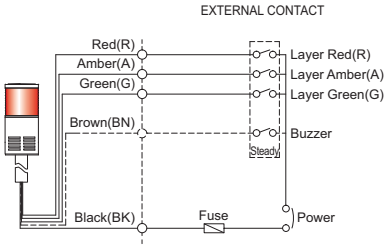
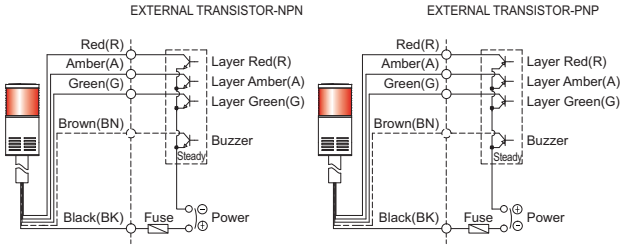
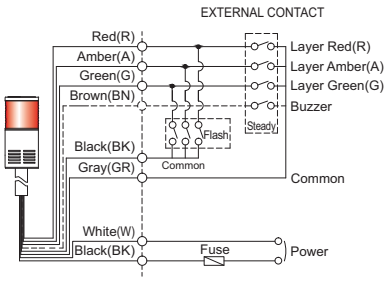
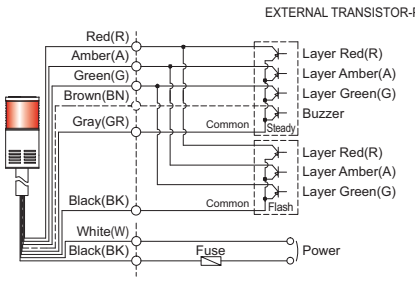
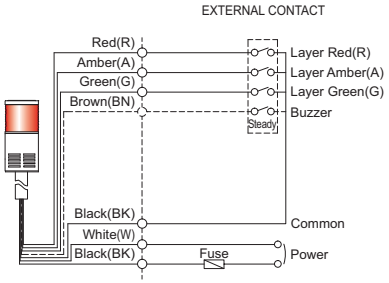
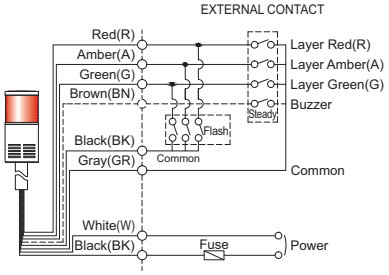
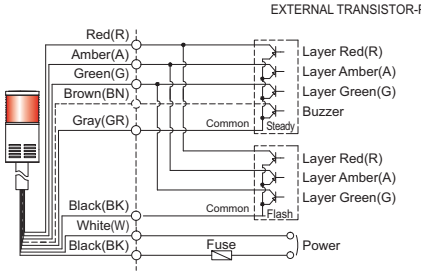
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized color arrangement available
- Customized pole length available
- 40mm lens height (Model number : STC56EL)

Ordering Specification

STC56L	-	3	-	220	-	RAG	-	LW18
[Model number]		[Layers]		[Voltage]		[Color]		[Mounting bracket]
• STC56L • STC56L-BZ • STC56LF • STC56LF-BZ		• 2-2 Colors • 3-3 Colors		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Wiring Instructions

- STC series can be wired by using both external contact and transistor.
- In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instruction below.
- Product can be wired regardless of polarity.

	External Contact	Transistor
DC Steady	STC45ML/ STC45L-DC STC56ML/ STC56L/ STC56MEL/ STC56EL-DC 	STC45ML/ STC45L-DC STC56ML/ STC56L/ STC56MEL/ STC56EL-DC 
DC Steady/ Flashing	STC45MLF/ STC45LF-DC STC56MLF/ STC56LF/ STC56MELF/ STC56ELF-DC 	STC45MLF/ STC45LF-DC STC56MLF/ STC56LF/ STC56MELF/ STC56ELF-DC 
AC Steady	STC45ML/ STC45L-AC STC56ML/ STC56L/ STC56MEL/ STC56EL-AC 	
AC Steady/ Flashing	STC45MLF/ STC45LF-AC STC56MLF/ STC56LF/ STC56MELF/ STC56ELF-AC 	STC45MLF/ STC45LF-AC STC56MLF/ STC56LF/ STC56MELF/ STC56ELF-AC 

- DC steady type : External power line and signal line standard UL1007 AWG22(0.3sq) 400mm
- AC steady, AC/DC steady/flashing type : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
  Signal line standard : UL1007 AWG22(0.3sq) 400mm

QT56MCL

LED Steady Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB NPN PNP

Signal light that can be configured with 7 colors in 1 tower light

QT56MCL LED Steady
QT56MCL-BZ Built-in Buzzer LED Steady



QT56MCL series

Built-in buzzer output holes formed on the housing of the product.



QT56MCL Multiple Color LED Steady

- Helps reduce the costs of installation by reducing the space needed to emit seven color signals in a single warning light
- Elegant design with hexagon shaped metal housing
- Aluminum housing provides excellent durability
- Soft LED illuminates designated colors when on
- When off, milky translucent color lens provides a comfortable and stable viewing condition for workers in close proximity
- Folding type mount bracket can be utilized in various environments
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Materials : Lens-PC, Housing-Al, Mounting bracket-Al
- Ambient operating temperature : -30°C to +60°C
- Protection rating : Standard type-IP44, Built-in Buzzer type-IP23

Model number	Voltage	Current	Certificates	Weight	Color
QT56MCL Steady	DC24V	Max 0.08A	-	0.45kg	7 Colors
QT56MCL-BZ Steady /w built-in buzzer				0.48kg	

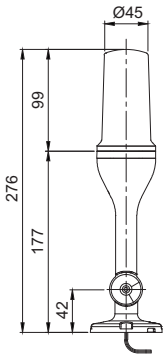
Signal/ Audible line current(Per each layer)

Voltage	DC24V
Signal line current	0.060A
Audible line current	0.020A

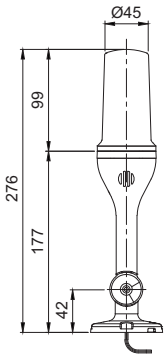
Technical Diagram

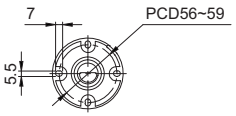
(Units : mm)

QT56MCL



QT56MCL-BZ





Wiring Instructions

- External signal line standard : Signal line 4P(R,G,B,K) threading, signal line standard UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- Please refer to Wiring Instructions diagram to properly configure color options

※ Please refer to page 281 for detailed wiring instructions.

Ordering Specification

QT56MCL	-	24
[Model number]		[Voltage]
• QT56MCL • QT56MCL-BZ		• 24-DC24V

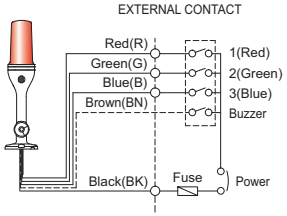
Wiring Instructions

- QT56MCL can be wired by using both external contact and transistor.
- In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instructions below.
- Product can be wired regardless of polarity.



QT56MCL

EXTERNAL CONTACT

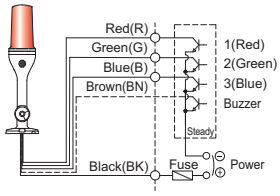


< Wiring Configuration for Signal Color >

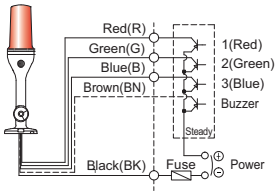
No.	Color	Wiring
1	Red	1(Red)
2	Green	2(Green)
3	Blue	3(Blue)
4	Amber	1(Red)+2(Green)
5	Cyan	2(Green)+3(Blue)
6	Puple	1(Red)+3(Blue)
7	White	1(Red)+2(Green)+3(Blue)



EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP



- External signal line standard : Signal line 4P(R,G,B,K) threading, signal line standard UL1007 AWG22(0.3sq) 400mm

Signal Color Options



[Red] [Green] [Blue] [Amber] [Cyan] [Purple] [White]

• 7 Color modes available via wiring

You can configure seven color signals by combining the 4 signal wires (red, green, blue, black) attached to the tower light.

Universal LED tower light with a wide selection of audio and visual signaling options according to the application environment and intended use



1 Different sizes of LED steady/flashing lenses

You can select from a variety of indicators depending on the working environment and application needs

Model number	Lens diameter	Lens length
ST45(M)L	45mm	40mm
ST45(M)LF	45mm	40mm
ST56(M)EL	56mm	40mm
ST56(M)ELF	56mm	40mm
ST56(M)L	56mm	70mm
ST56(M)LF	56mm	70mm
ST80(M)EL	80mm	40mm
ST80(M)ELF	80mm	40mm
ST80(M)L	80mm	70mm
ST80(M)LF	80mm	70mm

2 Buzzer and sound patterns with 15 different tones

Concrete messages can be clearly conveyed with the option of 15 types of audible signals

Main	Built-in sound	Channel	Sound patterns
BZ	1 buzzer sound 2 buzzer sounds		Customized 2 tone Buzzer available
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency Ambulance Machinery Fault High Expansion
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat

3 A variety of mounting bracket selection

- Wall mount type model allows for contained and tidy wiring with no exposed wires
- A number of pole mounting stands are available for a variety of environments depending on location and mounting needs
- Specifically, the QL-type and SL-type tower lights can be applied in a variety of environments as it can be folded up to 90 degrees in the horizontal direction. These products can avoid damage due to external forces when movement of the equipment is required
- QLA type offers an easy to use angle adjustment button on the side for angle intervals of 45 to 90 degrees. No additional tools necessary

Mounting Bracket Options

• Wall Mount Brackets

TWS45 TWS80	TWA45 TWA80
	
Steel	PC

• Pole Mount Brackets

Standard	LB18 LB24	LW18 LW24	QZ18 QZ24	SZ18 SZ24	QL18 QL24	SL18 SL24	QLA18 QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

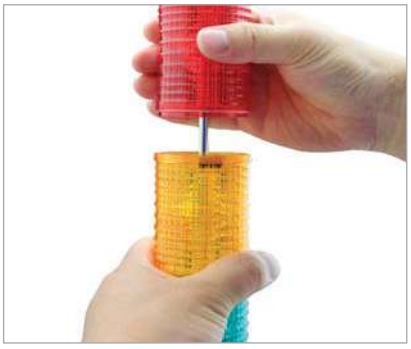
ST45L/ ST56L/ ST80L series

LED Steady/Flashing Tower Lights

Interchangeable Lens Concept

ST45L/ ST56L/ ST80L series product allows for the lens arrangement to be adjusted after removing the bolt that secures the cover. If additional lenses are required for this product please reach out to us. ST45L/ ST56L/ ST80L series can be stacked up to 5 layers.

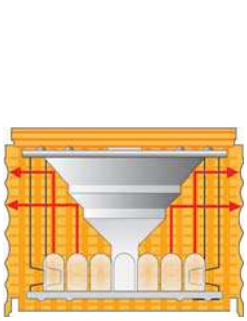




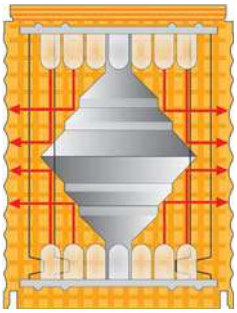
Common Specifications(ST45(M)L/ ST56(M)EL/ ST56(M)L/ ST80(M)EL/ ST80(M)L)

- LED steady/flashing tower lights
- Long product lifetime of over 20,000hours with the application of a high intensity LED light source
- Can select from size selections of Ø45mm, Ø56mm, and Ø80mm to fit your sophisticated application needs
- A variety of mounting bracket selections for the pole mount type to fit your location and mounting needs
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Built-in alarm available (Volume : Max 85dB at 1m/ Speaker output type) (Can select from 5 warning sounds, 5 alarms, 5 melodies to fit your application needs)
- Flashing rate : 60-80 flashes/min
- Customized color arrangement available (LED light distribution system and lens is integrated into a combined structure)
- Materials : Lens-AS, Housing-ABS, Pole-Al
- Ambient operating temperature: -30°C to +60°C
- Protection rating : Standard type-IP44, Built-in buzzer type-IP23
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

Reflection System



< EL series >



< L series >

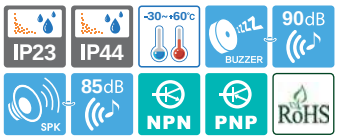
- Qlight's special light distribution system with multi-tiered reflector provides linear and balanced light transmission to the lens for strong LED illumination throughout the product
- The special light diffusion structure inside the product creates the brightest signal light at the center of the lens

References

Mount type	Sound	Buzzer and sound patterns	Lens dimension				
			Ø45mm H40mm	Ø56mm H40mm	Ø56mm H70mm	Ø80mm H40mm	Ø80mm H70mm
Direct mount	No sound	Standard	ST45ML(F)	ST56MEL(F)	ST56ML(F)	ST80MEL(F)	ST80ML(F)
	BUZZER	Built-in buzzer	ST45ML(F)-BZ	ST56MEL(F)-BZ	ST56ML(F)-BZ	ST80MEL(F)-BZ	ST80ML(F)-BZ
	SPK	5 Warning sounds	ST45ML(F)-WS	ST56MEL(F)-WS	ST56ML(F)-WS	ST80MEL(F)-WS	ST80ML(F)-WS
		5 Melodies	ST45ML(F)-WM	ST56MEL(F)-WM	ST56ML(F)-WM	ST80MEL(F)-WM	ST80ML(F)-WM
		5 Alarms	ST45ML(F)-WA	ST56MEL(F)-WA	ST56ML(F)-WA	ST80MEL(F)-WA	ST80ML(F)-WA
Pole mount	No sound	Standard	ST45L(F)	ST56EL(F)	ST56L(F)	ST80EL(F)	ST80L(F)
	BUZZER	Built-in buzzer	ST45L(F)-BZ	ST56EL(F)-BZ	ST56L(F)-BZ	ST80EL(F)-BZ	ST80L(F)-BZ
	SPK	5 Warning sounds	ST45L(F)-WS	ST56EL(F)-WS	ST56L(F)-WS	ST80EL(F)-WS	ST80L(F)-WS
		5 Melodies	ST45L(F)-WM	ST56EL(F)-WM	ST56L(F)-WM	ST80EL(F)-WM	ST80L(F)-WM
		5 Alarms	ST45L(F)-WA	ST56EL(F)-WA	ST56L(F)-WA	ST80EL(F)-WA	ST80L(F)-WA

ST45ML

Ø45mm LED Steady/Flashing Tower Lights





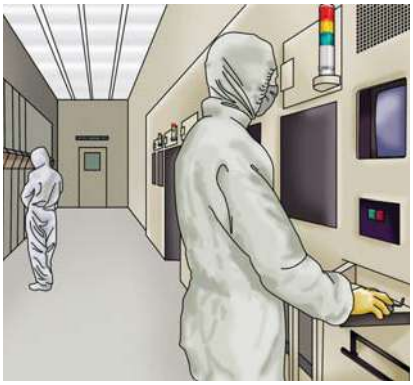
ST45ML series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST45ML-WS, ST45ML-WM, ST45ML-WA are substituted for old model number ST45WML.
All specifications such as diameter and functions are all the same.



ST45ML Ø45mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST45ML ST45ML-BZ ST45ML-WS ST45ML-WM ST45ML-WA ST45MLF ST45MLF-BZ ST45MLF-WS ST45MLF-WM ST45MLF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.040A 0.040A 0.024A 0.012A	CE DC24V only UL DC24V only	0.19kg 0.19kg 0.25kg 0.25kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.080A 0.080A 0.026A 0.013A		0.21kg 0.21kg 0.29kg 0.29kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.120A 0.120A 0.028A 0.014A		0.25kg 0.25kg 0.34kg 0.34kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.160A 0.031A 0.015A		0.30kg 0.30kg 0.38kg 0.38kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.200A 0.200A 0.033A 0.016A		0.34kg 0.34kg 0.42kg 0.42kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST45ML	Steady
ST45ML-BZ	Built-in buzzer, Steady
ST45ML-WS	Built-in 5 Warning sounds, Steady
ST45ML-WM	Built-in 5 Melodies, Steady
ST45ML-WA	Built-in 5 Alarms, Steady
ST45MLF	Steady/ flashing
ST45MLF-BZ	Built-in buzzer, Steady/ flashing
ST45MLF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST45MLF-WM	Built-in 5 Melodies, Steady/ flashing
ST45MLF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.040A	0.040A	0.024A	0.012A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

ST45ML	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST45ML • ST45ML-BZ • ST45ML-WS • ST45ML-WM • ST45ML-WA • ST45MLF • ST45MLF-BZ • ST45MLF-WS • ST45MLF-WM • ST45MLF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST45L

Ø45mm LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB SPK 85dB NPN PNP RoHS



ST45L series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST45L-WS, ST45L-WM, ST45L-WA are substituted for old model number ST45WL.
All specifications such as diameter and functions are all the same.

Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC

SZ18	QL18	SL18	QLA18
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

ST45L Ø45mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST45L ST45L-BZ ST45L-WS ST45L-WM ST45L-WA ST45LF ST45LF-BZ ST45LF-WS ST45LF-WM ST45LF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.040A 0.040A 0.024A 0.012A	CE DC24V only UL DC24V only	0.35kg 0.35kg 0.45kg 0.45kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.080A 0.080A 0.026A 0.013A		0.39kg 0.39kg 0.49kg 0.49kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.120A 0.120A 0.028A 0.014A		0.44kg 0.44kg 0.54kg 0.54kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.160A 0.031A 0.015A		0.48kg 0.48kg 0.58kg 0.58kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.200A 0.200A 0.033A 0.016A		0.52kg 0.52kg 0.62kg 0.62kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST45L	Steady
ST45L-BZ	Built-in buzzer, Steady
ST45L-WS	Built-in 5 Warning sounds, Steady
ST45L-WM	Built-in 5 Melodies, Steady
ST45L-WA	Built-in 5 Alarms, Steady
ST45LF	Steady/ flashing
ST45LF-BZ	Built-in buzzer, Steady/ flashing
ST45LF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST45LF-WM	Built-in 5 Melodies, Steady/ flashing
ST45LF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.040A	0.040A	0.024A	0.012A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

Ordering Specification

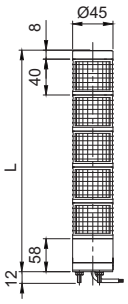
ST45L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST45L • ST45L-BZ • ST45L-WS • ST45L-WM • ST45L-WA • ST45LF • ST45LF-BZ • ST45LF-WS • ST45LF-WM • ST45LF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Technical Diagram

(Units : mm)

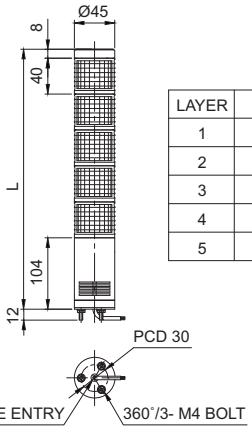


ST45ML : AC/DC
ST45ML-BZ : DC
ST45MLF : DC



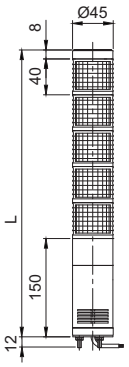
LAYER	L
1	106
2	146
3	186
4	226
5	266

ST45ML-BZ : AC
ST45MLF : AC
ST45MLF-BZ : DC



LAYER	L
1	152
2	192
3	232
4	272
5	312

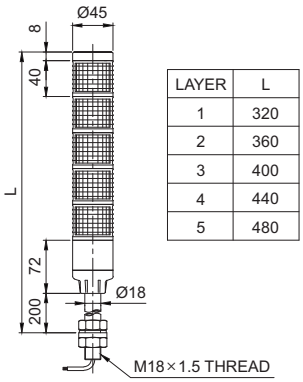
ST45MLF-BZ : AC



LAYER	L
1	198
2	238
3	278
4	318
5	358

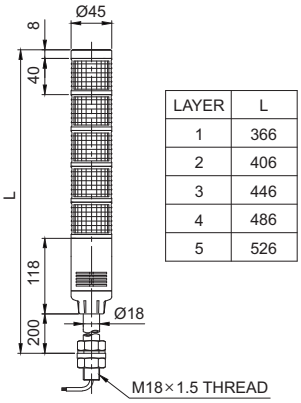


ST45L : AC/DC
ST45L-BZ : DC
ST45LF : DC



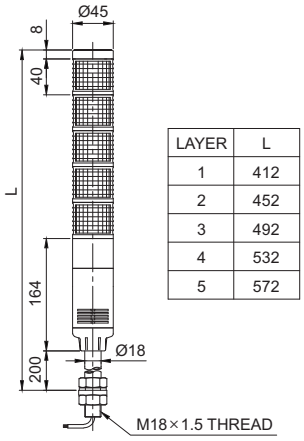
LAYER	L
1	320
2	360
3	400
4	440
5	480

ST45L-BZ : AC
ST45LF : AC
ST45LF-BZ : DC



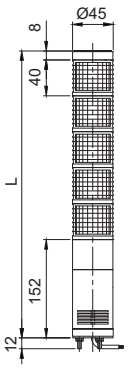
LAYER	L
1	366
2	406
3	446
4	486
5	526

ST45LF-BZ : AC



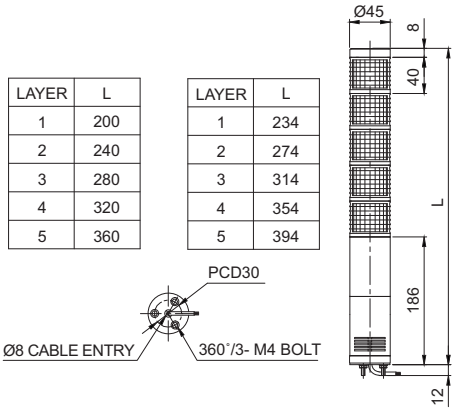
LAYER	L
1	412
2	452
3	492
4	532
5	572

ST45ML-W☐ : DC
ST45MLF-W☐ : DC



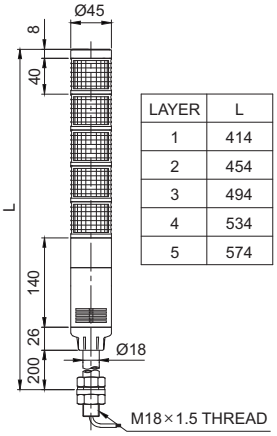
LAYER	L
1	200
2	240
3	280
4	320
5	360

ST45ML-W☐ : AC
ST45MLF-W☐ : AC



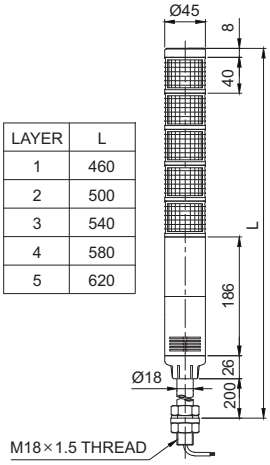
LAYER	L
1	234
2	274
3	314
4	354
5	394

ST45L-W☐ : DC
ST45LF-W☐ : DC



LAYER	L
1	414
2	454
3	494
4	534
5	574

ST45L-W☐ : AC
ST45LF-W☐ : AC



LAYER	L
1	460
2	500
3	540
4	580
5	620

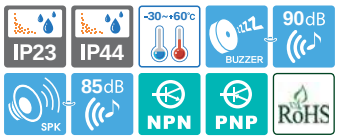
Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page299-300 for detailed wiring instructions.

ST56MEL

Ø56mm LED Steady/Flashing Tower Lights





ST56MEL series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST56MEL-WS, ST56MEL-WM, ST56MEL-WA are substituted for old model number ST56WMEL. All specifications such as diameter and functions are all the same.

ST56MEL Ø56mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56MEL ST56MEL-BZ ST56MEL-WS ST56MEL-WM ST56MEL-WA ST56MELF ST56MELF-BZ ST56MELF-WS ST56MELF-WM ST56MELF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.060A 0.040A 0.044A 0.022A	DC24V only	0.26kg 0.26kg 0.42kg 0.42kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.120A 0.080A 0.048A 0.024A		0.32kg 0.32kg 0.48kg 0.48kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.180A 0.120A 0.053A 0.026A		0.37kg 0.37kg 0.54kg 0.54kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.160A 0.057A 0.028A		0.43kg 0.43kg 0.59kg 0.59kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.300A 0.200A 0.062A 0.031A		0.49kg 0.49kg 0.65kg 0.65kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST56MEL	Steady
ST56MEL-BZ	Built-in buzzer, Steady
ST56MEL-WS	Built-in 5 Warning sounds, Steady
ST56MEL-WM	Built-in 5 Melodies, Steady
ST56MEL-WA	Built-in 5 Alarms, Steady
ST56MELF	Steady/ flashing
ST56MELF-BZ	Built-in buzzer, Steady/ flashing
ST56MELF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST56MELF-WM	Built-in 5 Melodies, Steady/ flashing
ST56MELF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.060A	0.040A	0.044A	0.022A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



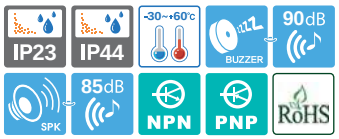
Wall Mount Bracket **TWA45**

Ordering Specification

ST56MEL	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST56MEL • ST56MEL-BZ • ST56MEL-WS • ST56MEL-WM • ST56MEL-WA • ST56MELF • ST56MELF-BZ • ST56MELF-WS • ST56MELF-WM • ST56MELF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST56EL

Ø56mm LED Steady/Flashing Tower Lights





ST56EL series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST56EL-WS, ST56EL-WM, ST56EL-WA are substituted for old model number ST56WEL.
All specifications such as diameter and functions are all the same.

Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC

SZ18	QL18	SL18	QLA18
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

ST56EL Ø56mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56EL ST56EL-BZ ST56EL-WS ST56EL-WM ST56EL-WA ST56ELF ST56ELF-BZ ST56ELF-WS ST56ELF-WM ST56ELF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.060A 0.040A 0.044A 0.022A	DC24V only	0.41kg 0.41kg 0.57kg 0.57kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.120A 0.080A 0.048A 0.024A		0.47kg 0.47kg 0.62kg 0.62kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.180A 0.120A 0.053A 0.026A		0.52kg 0.52kg 0.68kg 0.68kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.160A 0.057A 0.028A		0.58kg 0.58kg 0.74kg 0.74kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.300A 0.200A 0.062A 0.031A		0.63kg 0.63kg 0.75kg 0.75kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST56EL	Steady
ST56EL-BZ	Built-in buzzer, Steady
ST56EL-WS	Built-in 5 Warning sounds, Steady
ST56EL-WM	Built-in 5 Melodies, Steady
ST56EL-WA	Built-in 5 Alarms, Steady
ST56ELF	Steady/ flashing
ST56ELF-BZ	Built-in buzzer, Steady/ flashing
ST56ELF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST56ELF-WM	Built-in 5 Melodies, Steady/ flashing
ST56ELF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.060A	0.040A	0.044A	0.022A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

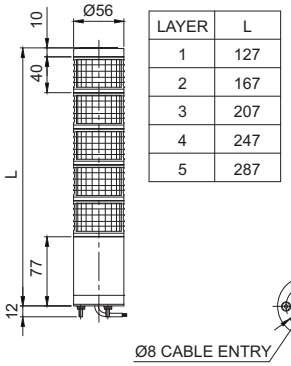
Ordering Specification

ST56EL	-	3	-	220	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST56EL • ST56EL-BZ • ST56EL-WS • ST56EL-WM • ST56EL-WA • ST56ELF • ST56ELF-BZ • ST56ELF-WS • ST56ELF-WM • ST56ELF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Technical Diagram

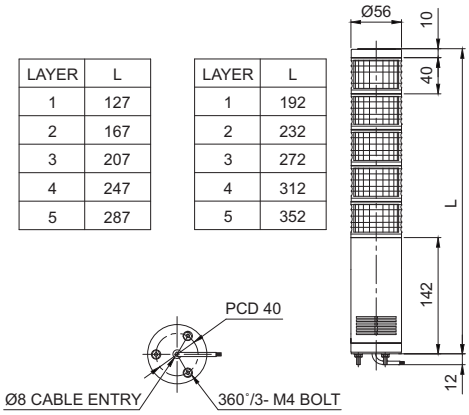
(Units : mm)

ST56MEL : AC/DC
ST56MEL-BZ : DC
ST56MELF : DC



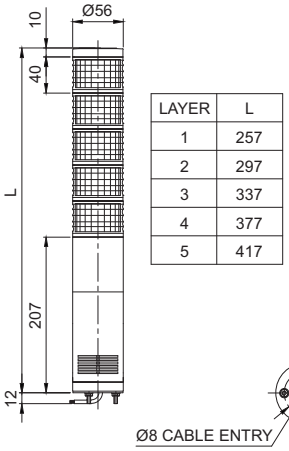
LAYER	L
1	127
2	167
3	207
4	247
5	287

ST56MEL-BZ : AC
ST56MELF-BZ : AC/DC
ST56MELF : AC



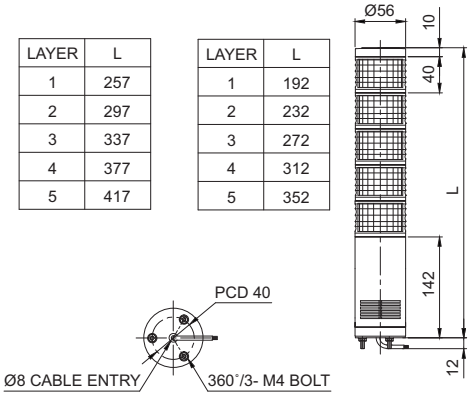
LAYER	L
1	192
2	232
3	272
4	312
5	352

ST56MEL-W☐ : AC
ST56MELF-W☐ : AC



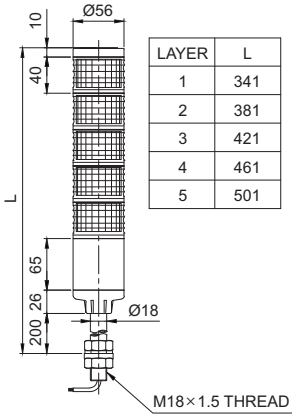
LAYER	L
1	257
2	297
3	337
4	377
5	417

ST56MEL-W☐ : DC
ST56MELF-W☐ : DC



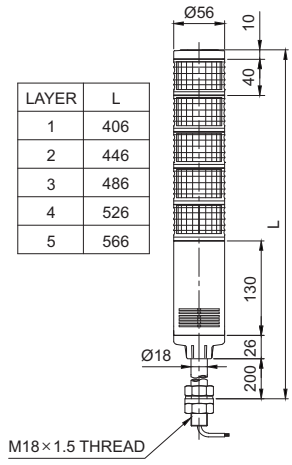
LAYER	L
1	192
2	232
3	272
4	312
5	352

ST56EL : AC/DC
ST56EL-BZ : DC
ST56ELF : DC



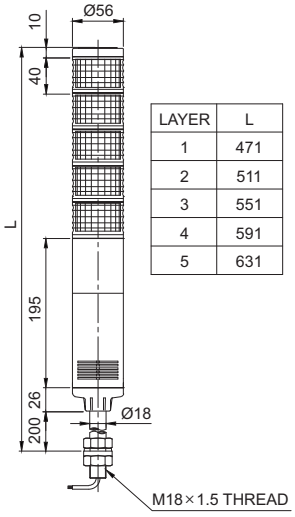
LAYER	L
1	341
2	381
3	421
4	461
5	501

ST56EL-BZ : AC
ST56ELF-BZ : AC/DC
ST56ELF : AC



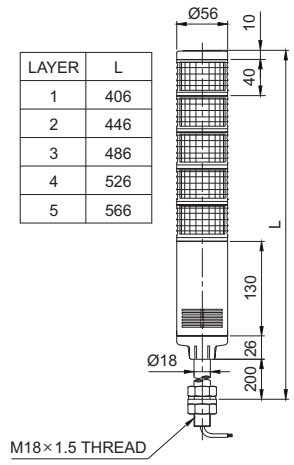
LAYER	L
1	406
2	446
3	486
4	526
5	566

ST56EL-W☐ : AC
ST56ELF-W☐ : AC



LAYER	L
1	471
2	511
3	551
4	591
5	631

ST56EL-W☐ : DC
ST56ELF-W☐ : DC



LAYER	L
1	406
2	446
3	486
4	526
5	566

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page 299-300 for detailed wiring instructions.

ST56ML

Ø56mm LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60°C BUZZER 90dB SPK 85dB NPN PNP RoHS



ST56ML series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST56ML-WS, ST56ML-WM, ST56ML-WA are substituted for old model number ST56WML.
All specifications such as diameter and functions are all the same.

ST56ML Ø56mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56ML ST56ML-BZ ST56ML-WS ST56ML-WM ST56ML-WA ST56MLF ST56MLF-BZ ST56MLF-WS ST56MLF-WM ST56MLF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.120A 0.080A 0.048A 0.024A	CE DC24V only UL DC24V only	0.22kg 0.22kg 0.45kg 0.45kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.160A 0.057A 0.028A		0.30kg 0.30kg 0.53kg 0.53kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.360A 0.240A 0.066A 0.033A		0.38kg 0.38kg 0.61kg 0.61kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.480A 0.320A 0.075A 0.037A		0.46kg 0.46kg 0.70kg 0.70kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.600A 0.400A 0.082A 0.041A		0.54kg 0.54kg 0.78kg 0.78kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST56ML	Steady
ST56ML-BZ	Built-in buzzer, Steady
ST56ML-WS	Built-in 5 Warning sounds, Steady
ST56ML-WM	Built-in 5 Melodies, Steady
ST56ML-WA	Built-in 5 Alarms, Steady
ST56MLF	Steady/ flashing
ST56MLF-BZ	Built-in buzzer, Steady/ flashing
ST56MLF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST56MLF-WM	Built-in 5 Melodies, Steady/ flashing
ST56MLF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.120A	0.080A	0.048A	0.024A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Order specification

ST56ML	-	3	-	110	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST56ML • ST56ML-BZ • ST56ML-WS • ST56ML-WM • ST56ML-WA • ST56MLF • ST56MLF-BZ • ST56MLF-WS • ST56MLF-WM • ST56MLF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

ST56L

Ø56mm LED Steady/Flashing Tower Lights

IP23 IP44 -30~60℃ BUZZER 90dB SPK 85dB NPN PNP RoHS



ST56L series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST56L-WS, ST56L-WM, ST56L-WA are substituted for old model number ST56WL.
All specifications such as diameter and functions are all the same.

Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC
SZ18	**QL18**	**SL18**	**QLA18**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

ST56L Ø56mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56L ST56L-BZ ST56L-WS ST56L-WM ST56L-WA ST56LF ST56LF-BZ ST56LF-WS ST56LF-WM ST56LF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.120A 0.080A 0.048A 0.024A	CE DC24V only UL DC24V only	0.44kg 0.44kg 0.60kg 0.60kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.160A 0.057A 0.028A		0.52kg 0.52kg 0.68kg 0.68kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.360A 0.240A 0.066A 0.033A		0.60kg 0.60kg 0.76kg 0.76kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.480A 0.320A 0.075A 0.037A		0.68kg 0.68kg 0.84kg 0.84kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.600A 0.400A 0.082A 0.041A		0.77kg 0.77kg 0.93kg 0.93kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST56L	Steady
ST56L-BZ	Built-in buzzer, Steady
ST56L-WS	Built-in 5 Warning sounds, Steady
ST56L-WM	Built-in 5 Melodies, Steady
ST56L-WA	Built-in 5 Alarms, Steady
ST56LF	Steady/ flashing
ST56LF-BZ	Built-in buzzer, Steady/ flashing
ST56LF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST56LF-WM	Built-in 5 Melodies, Steady/ flashing
ST56LF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.120A	0.080A	0.048A	0.024A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

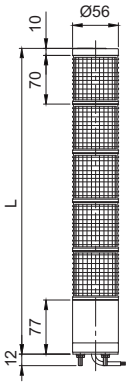
Ordering Specification

ST56L	-	3	-	220	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST56L • ST56L-BZ • ST56L-WS • ST56L-WM • ST56L-WA • ST56LF • ST56LF-BZ • ST56LF-WS • ST56LF-WM • ST56LF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Technical Diagram

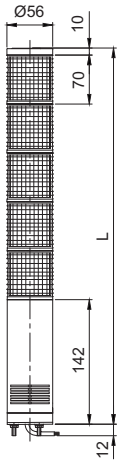
(Units : mm)

ST56ML : AC/DC
ST56ML-BZ : DC

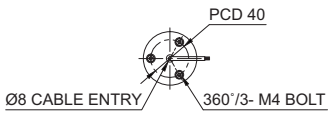


LAYER	L
1	157
2	227
3	297
4	367
5	437

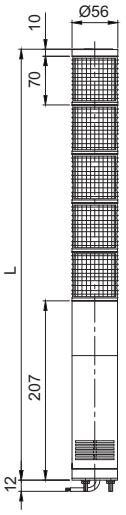
ST56ML-BZ : AC
ST56MLF-BZ : AC/DC



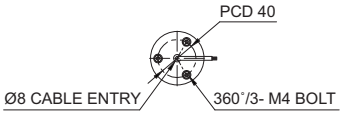
LAYER	L
1	222
2	292
3	362
4	432
5	502



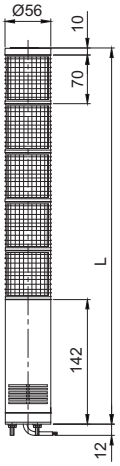
ST56ML-W☐ : AC
ST56MLF-W☐ : AC



LAYER	L
1	287
2	357
3	427
4	497
5	567

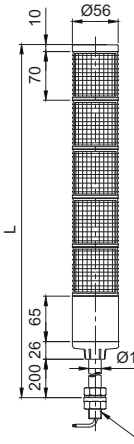


ST56ML-W☐ : DC
ST56MLF-W☐ : DC



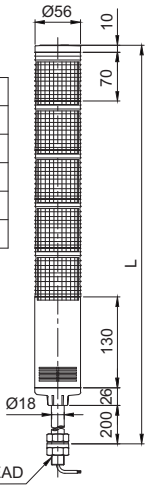
LAYER	L
1	222
2	292
3	362
4	432
5	502

ST56L : AC/DC
ST56L-BZ : DC
ST56LF : DC



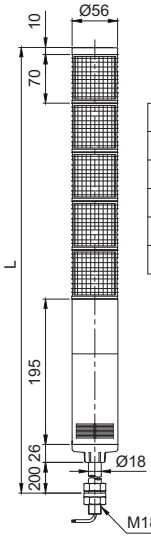
LAYER	L
1	371
2	441
3	511
4	581
5	651

ST56L-BZ : AC
ST56LF-BZ : AC/DC
ST56LF : AC



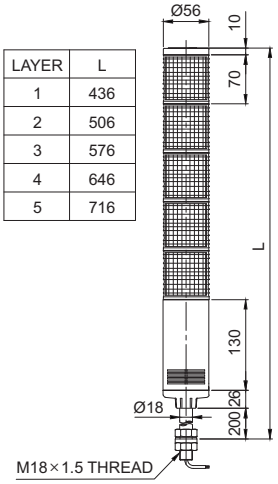
LAYER	L
1	436
2	506
3	576
4	646
5	716

ST56L-W☐ : AC
ST56LF-W☐ : AC



LAYER	L
1	501
2	571
3	641
4	711
5	781

ST56L-W☐ : DC
ST56LF-W☐ : DC



LAYER	L
1	436
2	506
3	576
4	646
5	716

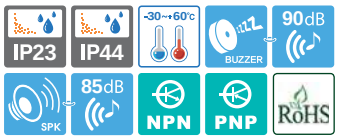
Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page 299-300 for detailed wiring instructions.

ST80MEL

Ø80mm LED Steady/Flashing Tower Lights





ST80MEL series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST80MEL-WS, ST80MEL-WM, ST80MEL-WA are substituted for old model number ST80WMEL. All specifications such as diameter and functions are all the same.

ST80MEL Ø80mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST80MEL ST80MEL-BZ ST80MEL-WS ST80MEL-WM ST80MEL-WA ST80MELF ST80MELF-BZ ST80MELF-WS ST80MELF-WM ST80MELF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.080A 0.040A 0.046A 0.023A	DC24V only	0.36kg 0.36kg 0.59kg 0.59kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.080A 0.051A 0.025A		0.45kg 0.45kg 0.68kg 0.68kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.120A 0.057A 0.028A		0.55kg 0.55kg 0.76kg 0.76kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.320A 0.160A 0.064A 0.032A		0.64kg 0.64kg 0.87kg 0.87kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.400A 0.200A 0.071A 0.035A		0.73kg 0.73kg 0.96kg 0.96kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST80MEL	Steady
ST80MEL-BZ	Built-in buzzer, Steady
ST80MEL-WS	Built-in 5 Warning sounds, Steady
ST80MEL-WM	Built-in 5 Melodies, Steady
ST80MEL-WA	Built-in 5 Alarms, Steady
ST80MELF	Steady/ flashing
ST80MELF-BZ	Built-in buzzer, Steady/ flashing
ST80MELF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST80MELF-WM	Built-in 5 Melodies, Steady/ flashing
ST80MELF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal Line Current	0.080A	0.040A	0.046A	0.023A
Audible Line Current	0.016A	0.031A	0.027A	0.030A

Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS80**



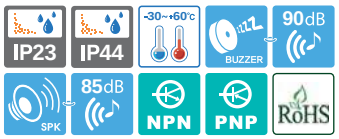
Wall Mount Bracket **TWA80**

Ordering Specification

ST80MEL	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST80MEL • ST80MEL-BZ • ST80MEL-WS • ST80MEL-WM • ST80MEL-WA • ST80MELF • ST80MELF-BZ • ST80MELF-WS • ST80MELF-WM • ST80MELF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST80EL

Ø80mm LED Steady/Flashing Tower Lights





ST80EL series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST80EL-WS, ST80EL-WM, ST80EL-WA are substituted for old model number ST80WEL.
All specifications such as diameter and functions are all the same.

Mounting Bracket

Standard	LB24	LW24	QZ24
			
Steel	Steel	PC	PC

SZ24	QL24	SL24	QLA24
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

ST80EL Ø80mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST80EL ST80EL-BZ ST80EL-WS ST80EL-WM ST80EL-WA ST80ELF ST80ELF-BZ ST80ELF-WS ST80ELF-WM ST80ELF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.080A 0.040A 0.046A 0.023A	DC24V only	0.58kg 0.58kg 0.81kg 0.81kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.080A 0.051A 0.025A		0.67kg 0.67kg 0.91kg 0.91kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.240A 0.120A 0.057A 0.028A		0.77kg 0.77kg 1.00kg 1.00kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.320A 0.160A 0.064A 0.032A		0.86kg 0.86kg 1.09kg 1.09kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.400A 0.200A 0.071A 0.035A		0.95kg 0.95kg 1.19kg 1.19kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST80EL	Steady
ST80EL-BZ	Built-in buzzer, Steady
ST80EL-WS	Built-in 5 Warning sounds, Steady
ST80EL-WM	Built-in 5 Melodies, Steady
ST80EL-WA	Built-in 5 Alarms, Steady
ST80ELF	Steady/ flashing
ST80ELF-BZ	Built-in buzzer, Steady/ flashing
ST80ELF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST80ELF-WM	Built-in 5 Melodies, Steady/ flashing
ST80ELF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.080A	0.040A	0.046A	0.023A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

Ordering Specification

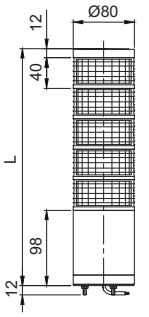
ST80EL	-	3	-	220	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST80EL • ST80EL-BZ • ST80EL-WS • ST80EL-WM • ST80EL-WA • ST80ELF • ST80ELF-BZ • ST80ELF-WS • ST80ELF-WM • ST80ELF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

Technical Diagram

(Units : mm)

ST80MEL : AC/DC
ST80MELF : AC/DC

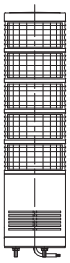


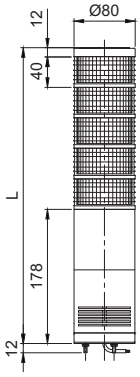


LAYER	L
1	150
2	190
3	230
4	270
5	310



ST80MEL-BZ : AC/DC
ST80MELF-BZ : AC/DC





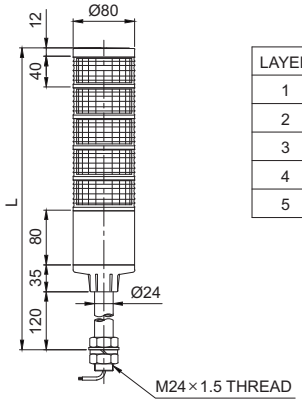
ST80MEL-W☐
ST80MELF-W☐

LAYER	L
1	230
2	270
3	310
4	350
5	390



ST80EL : AC/DC
ST80ELF : AC/DC

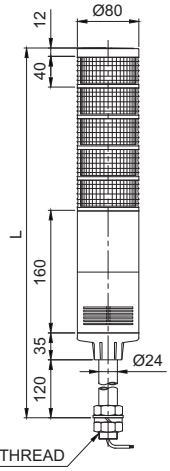




LAYER	L
1	287
2	327
3	367
4	407
5	447

ST80EL-BZ : AC/DC
ST80ELF-BZ : AC/DC





ST80EL-W☐
ST80ELF-W☐

LAYER	L
1	367
2	407
3	447
4	487
5	527

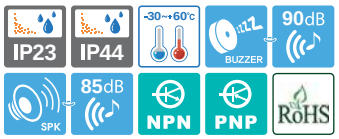
Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page 299-300 for detailed wiring instructions.

ST80ML

Ø80mm LED Steady/Flashing Tower Lights





ST80ML series

Built-in buzzer output holes formed on the body of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST80ML-WS, ST80ML-WM, ST80ML-WA are substituted for old model number ST80WML.
All specifications such as diameter and functions are all the same.

ST80ML Ø80mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST80ML ST80ML-BZ ST80ML-WS ST80ML-WM ST80ML-WA ST80MLF ST80MLF-BZ ST80MLF-WS ST80MLF-WM ST80MLF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.080A 0.055A 0.027A	CE DC24V only UL DC24V only	0.40kg 0.40kg 0.64kg 0.64kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.320A 0.160A 0.064A 0.032A		0.54kg 0.54kg 0.78kg 0.78kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.480A 0.240A 0.073A 0.036A		0.68kg 0.68kg 0.92kg 0.92kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.640A 0.320A 0.084A 0.042A		0.83kg 0.83kg 1.06kg 1.06kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.800A 0.400A 0.093A 0.046A		0.97kg 0.97kg 1.20kg 1.20kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST80ML	Steady
ST80ML-BZ	Built-in buzzer, Steady
ST80ML-WS	Built-in 5 Warning sounds, Steady
ST80ML-WM	Built-in 5 Melodies, Steady
ST80ML-WA	Built-in 5 Alarms, Steady
ST80MLF	Steady/ flashing
ST80MLF-BZ	Built-in buzzer, Steady/ flashing
ST80MLF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST80MLF-WM	Built-in 5 Melodies, Steady/ flashing
ST80MLF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.160A	0.080A	0.055A	0.027A
Audible line current	0.016A	0.031A	0.027A	0.030A

Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

ST80ML	-	3	-	110	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• ST80ML • ST80ML-BZ • ST80ML-WS • ST80ML-WM • ST80ML-WA • ST80MLF • ST80MLF-BZ • ST80MLF-WS • ST80MLF-WM • ST80MLF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

ST80L

Ø80mm LED Steady/Flashing Tower Lights

IP23 IP44 -30~+60℃ BUZZER 90dB SPK 85dB NPN PNP RoHS



ST80L series

Built-in buzzer output holes formed on the housing of the product.



Substitute model numbers for discontinued model

Built-in signal sound type, ST80L-WS, ST80L-WM, ST80L-WA are substituted for old model number ST80WL.
All specifications such as diameter and functions are all the same.

Mounting Bracket

Standard	LB24	LW24	QZ24
			
Steel	Steel	PC	PC

SZ24	QL24	SL24	QLA24
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

ST80L Ø80mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST80L ST80L-BZ ST80L-WS ST80L-WM ST80L-WA ST80LF ST80LF-BZ ST80LF-WS ST80LF-WM ST80LF-WA	1	AC/DC12V AC/DC24V AC110V AC220V	0.160A 0.080A 0.055A 0.027A	CE DC24V only UL DC24V only	0.62kg 0.62kg 0.86kg 0.86kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V AC220V	0.320A 0.160A 0.064A 0.032A		0.77kg 0.77kg 1.00kg 1.00kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V AC220V	0.480A 0.240A 0.073A 0.036A		0.91kg 0.91kg 1.14kg 1.14kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V AC220V	0.640A 0.320A 0.084A 0.042A		1.05kg 1.05kg 1.29kg 1.29kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V AC220V	0.800A 0.400A 0.093A 0.046A		1.19kg 1.19kg 1.14kg 1.14kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

ST80L	Steady
ST80L-BZ	Built-in buzzer, Steady
ST80L-WS	Built-in 5 Warning sounds, Steady
ST80L-WM	Built-in 5 Melodies, Steady
ST80L-WA	Built-in 5 Alarms, Steady
ST80LF	Steady/ flashing
ST80LF-BZ	Built-in buzzer, Steady/ flashing
ST80LF-WS	Built-in 5 Warning sounds, Steady/ flashing
ST80LF-WM	Built-in 5 Melodies, Steady/ flashing
ST80LF-WA	Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 24 for detailed information about selectable sound patterns.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal Line Current	0.160A	0.080A	0.055A	0.027A
Audible Line Current	0.016A	0.031A	0.027A	0.030A

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

Order Specification

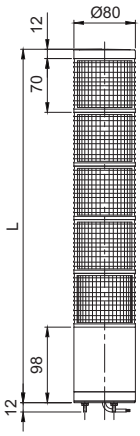
ST80L	-	3	-	220	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• ST80L • ST80L-BZ • ST80L-WS • ST80L-WM • ST80L-WA • ST80LF • ST80LF-BZ • ST80LF-WS • ST80LF-WM • ST80LF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

Technical Diagram

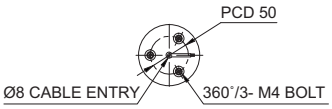
(Units : mm)

ST80ML : AC/DC
ST80MLF : AC/DC

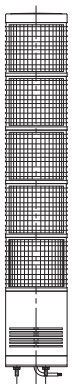




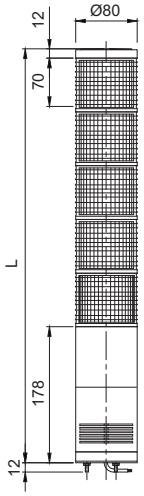
LAYER	L
1	180
2	250
3	320
4	390
5	460



ST80ML-BZ : AC/DC
ST80MLF-BZ : AC/DC



ST80ML-W□
ST80MLF-W□

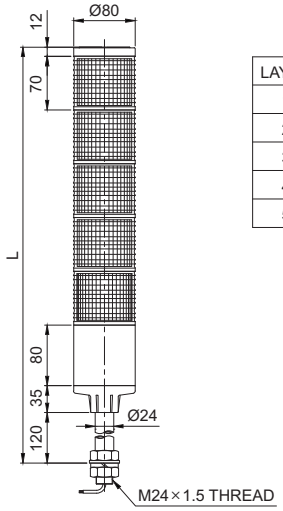


LAYER	L
1	260
2	330
3	400
4	470
5	540



ST80L : AC/DC
ST80LF : AC/DC



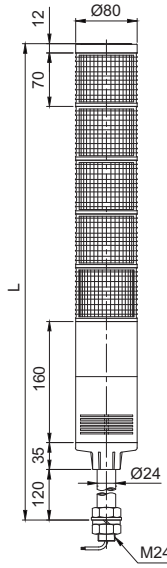


LAYER	L
1	317
2	387
3	457
4	527
5	597

ST80L-BZ : AC/DC
ST80LF-BZ : AC/DC



ST80L-W□
ST80LF-W□



LAYER	L
1	397
2	467
3	537
4	607
5	677

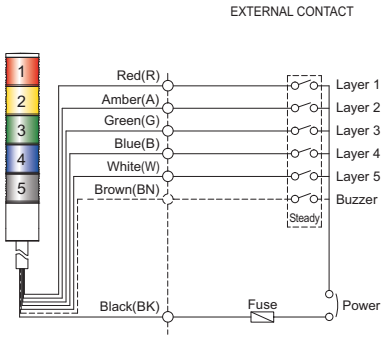
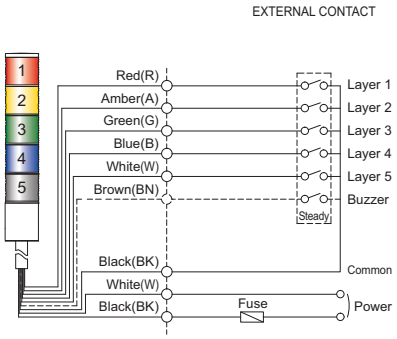
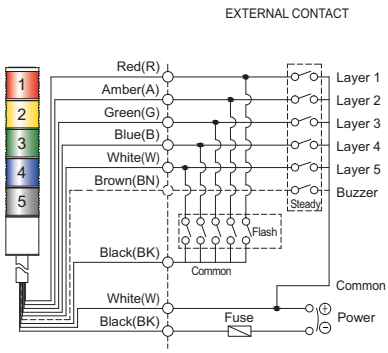
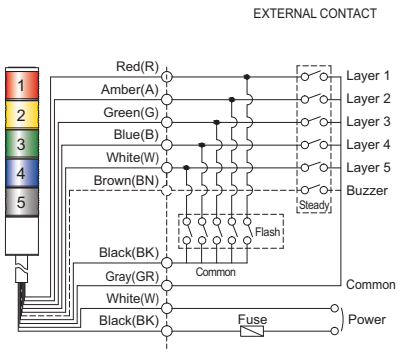
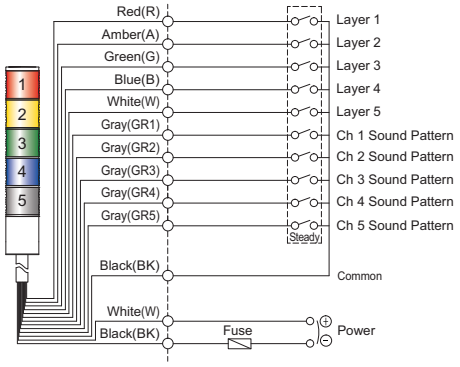
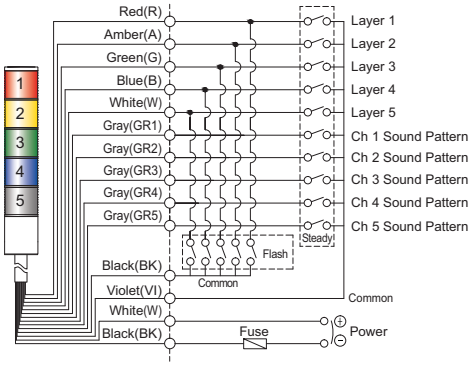
Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page 299-300 for detailed wiring instructions.

Wiring Instructions(using transistor)

- Please wire based on below instructions in case of using external contact.
- Customized AC each layer power supply type wiring is same as DC steady type.

Applied products	Wiring Instructions	Applied products	Wiring Instructions
DC Steady ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L		AC Steady ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L	
DC Steady/Flashing ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF		AC Steady/Flashing ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	
DC/AC Steady Built-in Signal Sound ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L	 • STXXM(E)L - WS/ WM/ WA same wiring instruction • STXX(E)L - WS/ WM/ WA same wiring instruction • STXXL └ Lens diameter 45(45mm) : ST45L 56(56mm) : ST56L 80(80mm) : ST80L	DC/AC Steady/Flashing Built-in Signal Sound ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	 • STXXM(E)LF - WS/ WM/ WA same wiring instruction • STXX(E)LF - WS/ WM/ WA same wiring instruction • STXXLF └ Lens diameter 45(45mm) : ST45LF 56(56mm) : ST56LF 80(80mm) : ST80LF

- DC Steady type : External power, signal line standard UL1007 AWG22(0.3sq) 400mm
- AC Steady, AC/DC steady/flashing type : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
  External signal line standard : UL1007 AWG22(0.3sq) 400mm

Wiring Instructions(using transistor)

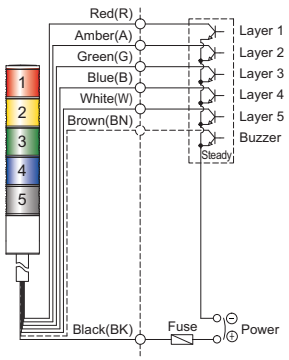
• In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instruction below.

Applied products: DC Steady

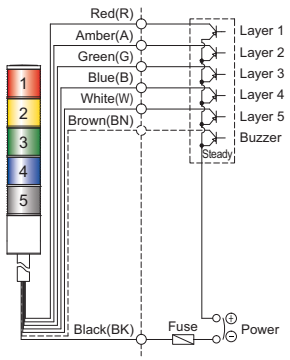
ST45ML
ST45L
ST56MEL
ST56ML
ST56EL
ST56L
ST80MEL
ST80ML
ST80EL
ST80L

Wiring Instructions

EXTERNAL TRANSISTOR-NPN



EXTERNAL TRANSISTOR-PNP

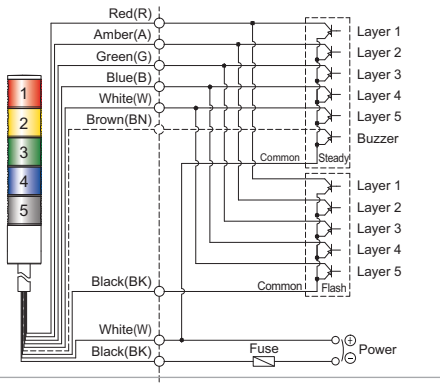


Applied products: DC Steady/Flashing

ST45MLF
ST45LF
ST56MELF
ST56MLF
ST56ELF
ST56LF
ST80MELF
ST80MLF
ST80ELF
ST80LF

Wiring Instructions

EXTERNAL TRANSISTOR-PNP

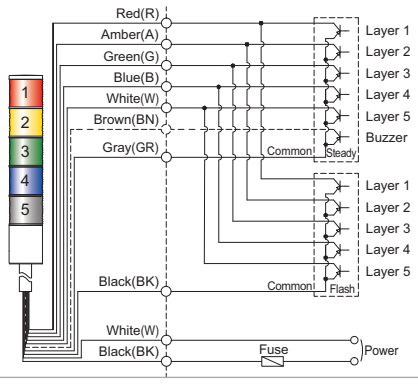


Applied products: AC Steady/Flashing

ST45MLF
ST45LF
ST56MELF
ST56MLF
ST56ELF
ST56LF
ST80MELF
ST80MLF
ST80ELF
ST80LF

Wiring Instructions

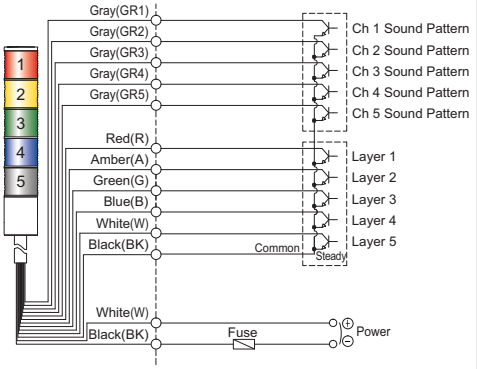
EXTERNAL TRANSISTOR-PNP



Applied products: DC/AC Steady Built-in Signal Sound

ST45ML
ST45L
ST56MEL
ST56ML
ST56EL
ST56L
ST80MEL
ST80ML
ST80EL
ST80L

EXTERNAL TRANSISTOR-NPN

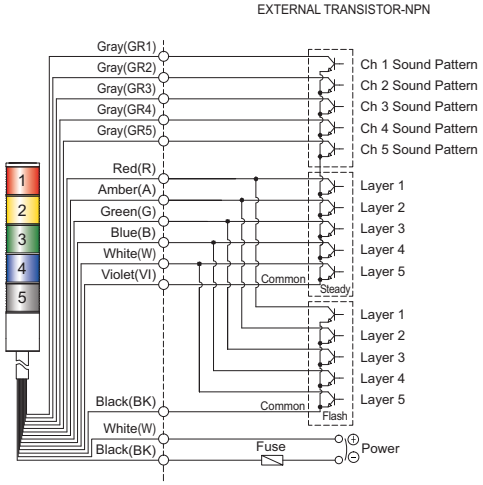


• STXXM(E)L - WS/ WM/ WA same wiring instruction
• STXX(E)L - WS/ WM/ WA same wiring instruction
• STXXL
  └ Lens diameter 45(45mm) : ST45L
  56(56mm) : ST56L
  80(80mm) : ST80L

Applied products: DC/AC Steady/Flashing Built-in Signal Sound

ST45MLF
ST45LF
ST56MELF
ST56MLF
ST56ELF
ST56LF
ST80MELF
ST80MLF
ST80ELF
ST80LF

EXTERNAL TRANSISTOR-NPN



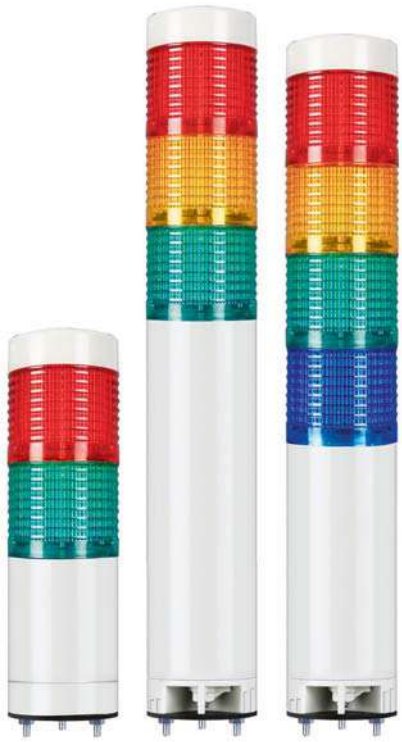
• STXXM(E)LF - WS/ WM/ WA same wiring instruction
• STXX(E)LF - WS/ WM/ WA same wiring instruction
• STXXLF
  └ Lens diameter 45(45mm) : ST45LF
  56(56mm) : ST56LF
  80(80mm) : ST80LF

• DC Steady type : External power, signal line standard UL1007 AWG22(0.3sq) 400mm
• AC Steady, AC/DC steady/flashing type : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
  External signal line standard : UL1007 AWG22(0.3sq) 400mm

STG40ML

Ø 40mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+60°C BUZZER 85dB NPN PNP RoHS



STG40ML series

Buzzer model has a lever mounted at the bottom of the product to adjust the volume depending on the specific working conditions. (BZ type)



Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket
TWS45



Wall Mount Bracket
TWA45

Common Specifications(STG40ML/ STG40L)

- Ø 40mm LED steady/flashing tower lights
- The special vertical contact structure of the lens allows for easy assembly and disassembly
- Can select between standard type and built-in buzzer type to fit your application needs
- Can be used with an NPN open collector transistor driven input which allows direct connection to a PLC
- Flashing rate : 60-80 flashes/min
- Customized color arrangement available(LED light distribution system and Lens is integrated into a combined structure)
- Materials : Lens-AS, Housing-ABS, Pole-Al
- Ambient operating temperature : -30°C to +60°C
- Protection rating : Standard type-IP65, Built-in buzzer type-IP54
- Compliant with RoHS directive

STG40ML Ø40mm Direct Mount Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STG40ML Steady STG40ML-BZ Steady /w built-in buzzer STG40MLF Steady/Flashing STG40MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.040A 0.020A Max 0.035A	-	0.12kg 0.12kg 0.14kg 0.14kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.040A Max 0.055A		0.19kg 0.19kg 0.21kg 0.21kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.120A 0.060A Max 0.075A		0.25kg 0.25kg 0.27kg 0.27kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.080A Max 0.095A		0.31kg 0.31kg 0.33kg 0.33kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.200A 0.100A Max 0.115A		0.36kg 0.36kg 0.38kg 0.38kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.040A	0.020A	Max 0.035A
Audible line current	0.016A	0.031A	Max 0.030A

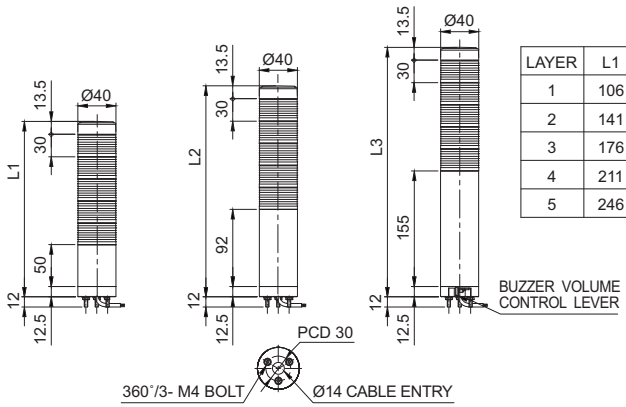
Technical Diagram

(Units : mm)

STG40ML : DC
STG40MLF : DC
STG40ML-BZ : DC

STG40ML : AC
STG40MLF-BZ : DC

STG40MLF : AC
STG40ML-BZ : AC
STG40MLF-BZ : AC

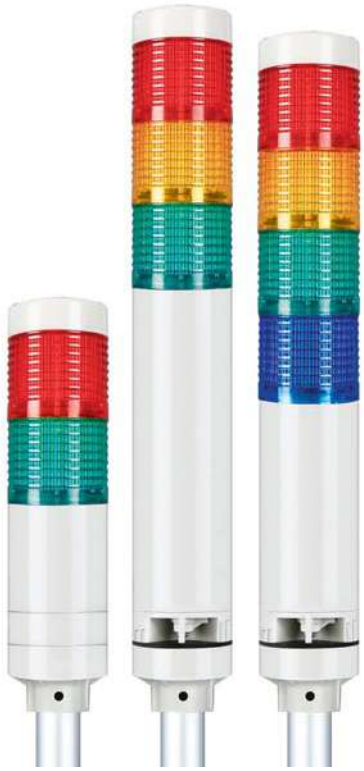


LAYER	L1	L2	L3
1	106	148	211
2	141	183	241
3	176	218	271
4	211	253	301
5	246	288	331

STG40L

Ø40mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+60°C BUZZER 85dB NPN PNP RoHS



STG40L series

Buzzer model has a lever mounted at the bottom of the product to adjust the volume depending on the specific working conditions. (BZ type)



Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and Staccato (beep, beep, beep) buzzer output available
- Customized pole length available

Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC

SZ18	QL18	SL18	QLA18
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

STG40L Ø40mm Pole Mount

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STG40L Steady STG40L-BZ Steady /w built-in buzzer STG40LF Steady/Flashing STG40LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.040A 0.020A Max 0.035A	-	0.29kg 0.29kg 0.31kg 0.31kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.040A Max 0.055A		0.33kg 0.33kg 0.36kg 0.36kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.120A 0.060A Max 0.075A		0.38kg 0.38kg 0.40kg 0.40kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.080A Max 0.095A		0.45kg 0.45kg 0.47kg 0.47kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.200A 0.100A Max 0.115A		0.51kg 0.51kg 0.53kg 0.53kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

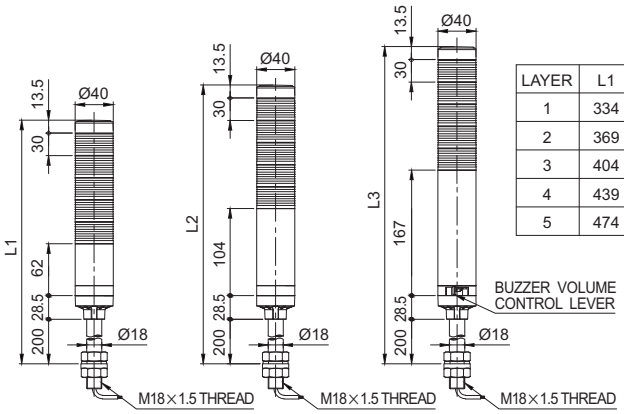
Technical Diagram

(Units : mm)

STG40L : DC
STG40LF : DC
STG40L-BZ : DC

STG40L : AC
STG40LF-BZ : DC

STG40LF : AC
STG40L-BZ : AC
STG40LF-BZ : AC



LAYER	L1	L2	L3
1	334	375	439
2	369	411	469
3	404	445	499
4	439	481	529
5	474	516	559

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)x2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page 305-306 for detailed wiring instruction.

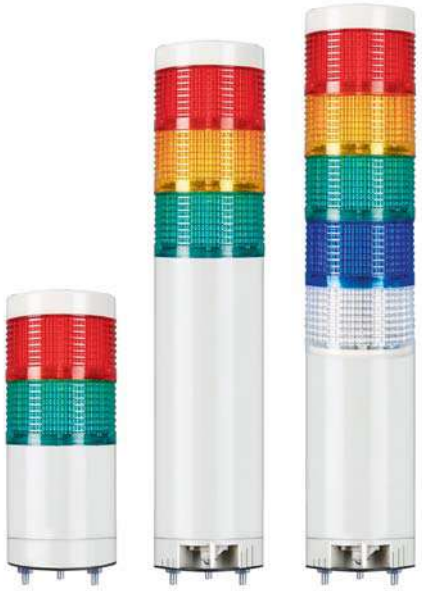
Ordering Specification

STG40L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• STG40ML • STG40ML-BZ • STG40MLF • STG40MLF-BZ • STG40L • STG40L-BZ • STG40LF • STG40LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

STG50ML

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+60°C BUZZER 85dB NPN PNP RoHS



STG50ML series

Buzzer model has a lever mounted at the bottom of the product to adjust the volume depending on the specific working conditions. (BZ type)



Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



Wall Mount Bracket
TWS45



Wall Mount Bracket
TWA45

Common Specifications(STG50ML/ STG50L)

- Ø50mm LED steady/flashing tower lights
- The special vertical contact structure of the lens allows for easy assembly and disassembly
- Built-in buzzer available upon request: audible signal can be delivered
- Transistors can be connected and can be operated on PLC directly
- Flashing rate : 60-80 flashes/min
- Customized color arrangement available(LED light distribution system and lens is integrated into a combined structure)
- Materials : Lens-AS, Housing-ABS, Pole-Al
- Ambient operating temperature : -30°C to +60°C
- Protection rating : Standard type-IP65, Built-in buzzer type-IP54
- Certificates : CE Compliant
- Compliant with RoHS directive

STG50ML Ø50mm Direct Mount Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STG50ML Steady STG50ML-BZ Steady /w built-in buzzer STG50MLF Steady/Flashing STG50MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.040A 0.020A Max 0.035A	CE DC24V only	0.20kg 0.20kg 0.22kg 0.22kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.040A Max 0.055A		0.28kg 0.28kg 0.30kg 0.30kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.120A 0.060A Max 0.075A		0.36kg 0.36kg 0.38kg 0.38kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.080A Max 0.095A		0.45kg 0.45kg 0.47kg 0.47kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.200A 0.100A Max 0.115A		0.53kg 0.53kg 0.55kg 0.55kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

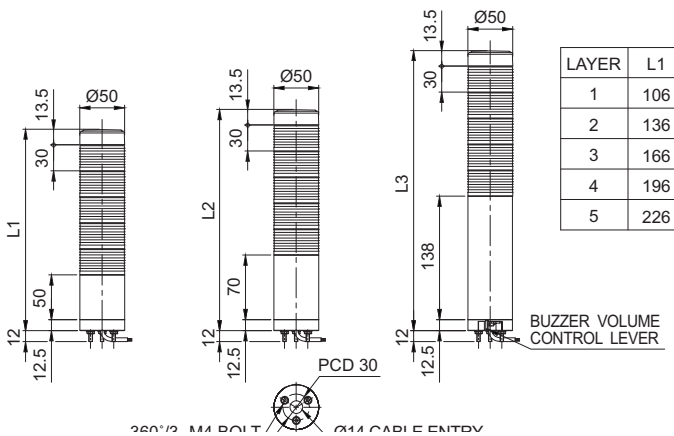
Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.040A	0.020A	Max 0.035A
Audible line current	0.016A	0.031A	Max 0.030A

Technical Diagram (Units : mm)

STG50ML : DC
STG50MLF : DC
STG50ML-BZ : DC

STG50MLF-BZ : DC

STG50ML : AC
STG50MLF : AC
STG50ML-BZ : AC
STG50MLF-BZ : AC



LAYER	L1	L2	L3
1	106	126	194
2	136	156	224
3	166	186	254
4	196	216	284
5	226	246	314

STG50L

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+60°C BUZZER 85dB NPN PNP RoHS



STG50L series

Buzzer model has a lever mounted at the bottom of the product to adjust the volume depending on the specific working conditions. (BZ type)



Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available

Mounting Bracket

Standard	LB18	LW18	QZ18
Steel	Steel	PC	PC
SZ18	**QL18**	**SL18**	**QLA18**
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

STG50L Ø50mm Pole Mount Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
STG50L Steady STG50L-BZ Steady /w built-in buzzer STG50LF Steady/Flashing STG50LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.040A 0.020A Max 0.035A	CE DC24V only	0.36kg 0.36kg 0.38kg 0.38kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.040A Max 0.055A		0.43kg 0.43kg 0.45kg 0.45kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.120A 0.060A Max 0.075A		0.53kg 0.53kg 0.55kg 0.55kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.080A Max 0.095A		0.59kg 0.59kg 0.61kg 0.61kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.200A 0.100A Max 0.115A		0.67kg 0.67kg 0.69kg 0.69kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

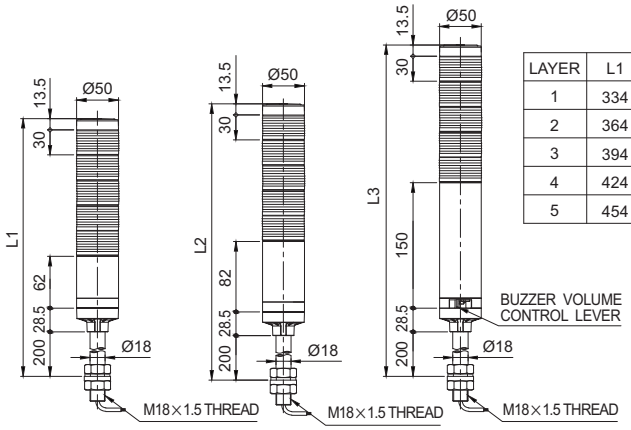
※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram (Units : mm)

STG50L : DC
STG50LF : DC
STG50L-BZ : DC

STG50LF-BZ : DC

STG50L : AC
STG50LF : AC
STG50L-BZ : AC
STG50LF-BZ : AC



LAYER	L1	L2	L3
1	334	354	422
2	364	384	452
3	394	414	482
4	424	444	512
5	454	474	542

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)x2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

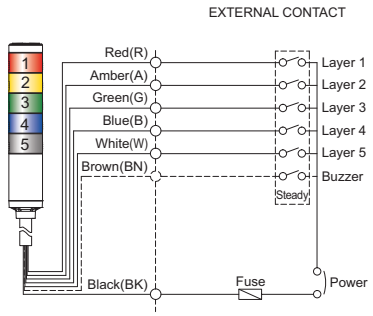
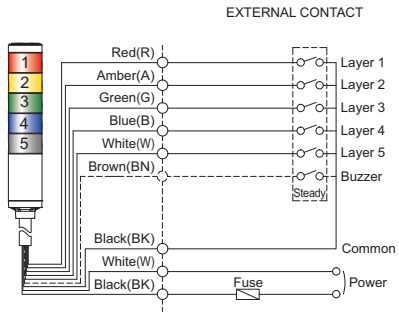
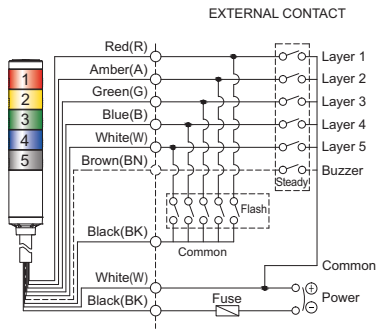
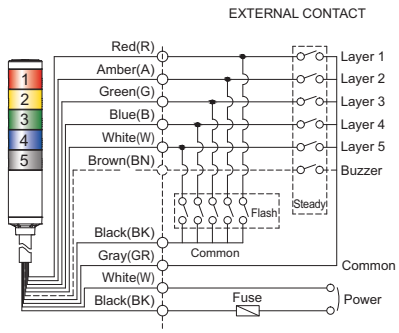
※ Please refer to page 305-306 for detailed wiring instructions.

Ordering Specification

STG50L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• STG50ML • STG50ML-BZ • STG50MLF • STG50MLF-BZ • STG50L • STG50L-BZ • STG50LF • STG50LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Wiring Instructions(using transistor)

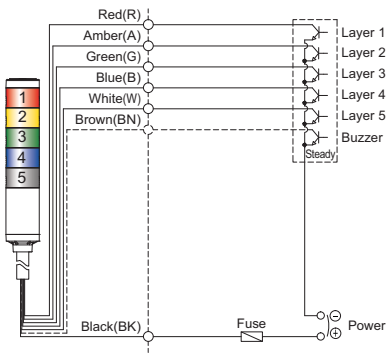
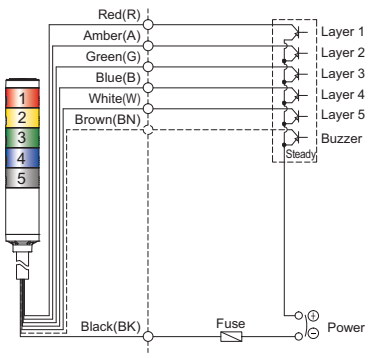
• Please wiring based below instruction in case of using external contact.

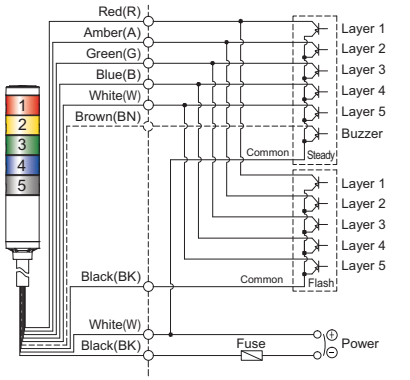
Applied products	Wiring Instructions	Applied products	Wiring Instructions
DC Steady		AC Steady	
STG40ML STG40L STG50ML STG50L	 • STGXXML - Same wiring including buzzer type • STGXXL - Same wiring including buzzer type • STGXXL └ Lens diameter 40(40mm) : STG40(M)L 50(50mm) : STG50(M)L	STG40ML STG40L STG50ML STG50L	 • STGXXML - Same wiring including buzzer type • STGXXL - Same wiring including buzzer type • STGXXL └ Lens diameter 40(40mm) : STG40(M)L 50(50mm) : STG50(M)L
DC Steady/Flashing		AC Steady/Flashing	
STG40MLF STG40LF STG50MLF STG50LF	 • STGXXMLF - Same wiring including buzzer type • STGXXLF - Same wiring including buzzer type • STGXXLF └ Lens diameter 40(40mm) : STG40(M)LF 50(50mm) : STG50(M)LF	STG40MLF STG40LF STG50MLF STG50LF	 • STGXXMLF - Same wiring including buzzer type • STGXXLF - Same wiring including buzzer type • STGXXLF └ Lens diameter 40(40mm) : STG40(M)LF 50(50mm) : STG50(M)LF

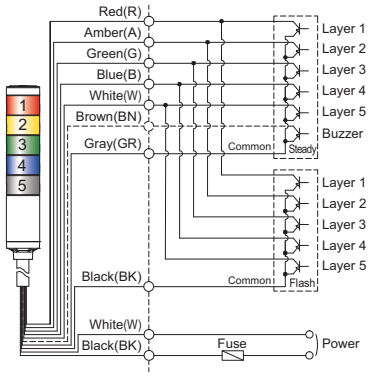
• DC Steady type : External power, signal line standard UL1007 AWG22(0.3sq) 400mm
• AC Steady, AC/DC steady/flashing type : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
External signal line standard : UL1007 AWG22(0.3sq) 400mm

Wiring Instructions(using transistor)

• In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instructions below.

Applied products	Wiring Instructions
DC Steady STG40ML STG40L STG50ML STG50L	EXTERNAL TRANSISTOR-NPN  EXTERNAL TRANSISTOR-PNP  • STGXXML - Same wiring including buzzer type • STGXXL - Same wiring including buzzer type • STGXXL └ Lens diameter 40(40mm) : STG40(M)L 50(50mm) : STG50(M)L

Applied products	Wiring Instructions
DC Steady/Flashing STG40MLF STG40LF STG50MLF STG50LF	EXTERNAL TRANSISTOR-PNP  • STGXXMLF - Same wiring including buzzer type • STGXXLF - Same wiring including buzzer type • STGXXLF └ Lens diameter 40(40mm) : STG40(M)LF 50(50mm) : STG50(M)LF

Applied products	Wiring Instructions
AC Steady/Flashing STG40MLF STG40LF STG50MLF STG50LF	EXTERNAL TRANSISTOR-PNP  • STGXXMLF - Same wiring including buzzer type • STGXXLF - Same wiring including buzzer type • STGXXLF └ Lens diameter 40(40mm) : STG40(M)LF 50(50mm) : STG50(M)LF

• DC Steady type : External power, signal line standard UL1007 AWG22(0.3sq) 400mm
• AC Steady, AC/DC steady/flashing type : External power line standard UL1015 AWG18(0.75sq)×2C 400mm
External signal line standard : UL1007 AWG22(0.3sq) 400mm

Clear and Strong Signal Light Emitted through the Colored Diffusion Lens

Common Specifications(QTG50/ QTG60/ QTG70)

- Modular steady/flashing type signal tower lights
- Excellent visibility from a distance with the use of a special color diffusing lens
- Can select from size selections of Ø50mm, Ø60mm, and Ø70mm to fit your sophisticated application needs
- The addition of modules and change in color arrangement can be achieved without the use of tools by using the Lock-type structure
- QTGA type offers a nifty integrated lens and cover for a simple aesthetically pleasing product
- A variety of mounting bracket selections for the pole mount type to fit your location and mounting needs
- Buzzer sound output : Sound volume of Max 85dB at 1m
- Available in 2 customized options; sounds buzzer type and high volume(105dB) buzzer type
- Can be used with NPN open collector transistor driven input, which allows direct connection to a PLC
- Flashing rate : 60-80 flashes/min
- Materials : Lens-PC, Housing-ABS, Pole-Al
- Ambient operating temperature : -30°C to +50°C
- Protection rating : Standard type-IP65, Built-in buzzer type-IP54
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive





• Each modular color lens can be added without additional tools

QTG model uses a special contact structure for stable operation, the lens modules lock into place by rotating the modular structures together. This allows for easy changes to the color arrangement without any tools. Additional modules can be added.





• Buzzer volume is adjusted via the volume control lever

QTG type volume can be adjusted for each specific working condition with the equipped buzzer volume control lever at the bottom of the product.(-BZ type)

1 High volume buzzer (105dB) option can be fitted to the top of the product. (Customization)

High volume 105dB volume buzzer module fastened to the top of the product provides 360 degree buzzer signal output which cannot be achieved with the single directional buzzer.(Buzzer volume cannot be adjusted)

2 Integrated cover and lens model (QTGA50/ QTGA60/ QTGA70)

QTGA50/ QTGA60/ QTGA70 The sleek lens cover model is made of one piece for a simple unified look.

3 Black body option available

Products can be configured with the black body and cover option. In addition, the buzzer option is also available in a black color body and buzzer.

4 Can select from a variety of mounting brackets option to fit your application needs and build environment

There are a variety of mounting brackets options available depending on cost and installation requirements.

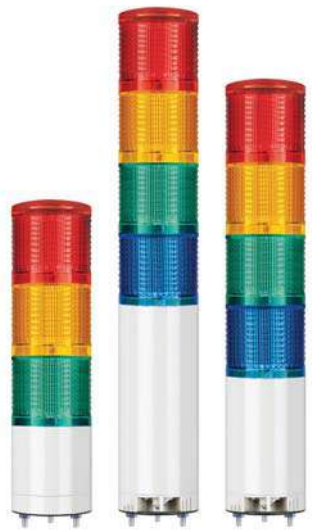
QTG50ML

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTG50ML series



QTGA50ML series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTG50ML Ø50mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTG50ML Steady QTG50ML-BZ Steady /w built-in buzzer QTG50MLF Steady/Flashing QTG50MLF-BZ Steady/Flashing /w built-in buzzer QTGA50ML Steady QTGA50ML-BZ Steady /w built-in buzzer QTGA50MLF Steady/Flashing QTGA50MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.045A Max 0.045A	CE DC24V only UL DC24V only	0.19kg 0.19kg 0.29kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.090A Max 0.065A		0.27kg 0.27kg 0.37kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.240A 0.135A Max 0.080A		0.36kg 0.36kg 0.46kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.320A 0.180A Max 0.100A		0.44kg 0.44kg 0.54kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.400A 0.225A Max 0.120A		0.53kg 0.53kg 0.63kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.080A	0.045A	Max 0.045A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

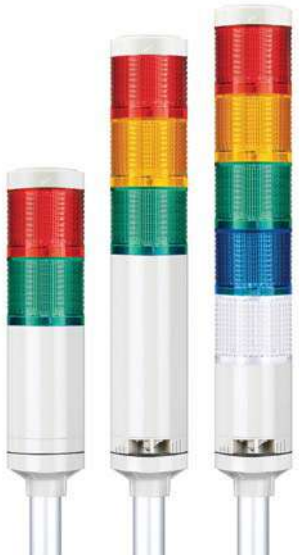
Ordering Specification

QTG50ML	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTG50ML • QTG50ML-BZ • QTG50MLF • QTG50MLF-BZ • QTGA50ML • QTGA50ML-BZ • QTGA50MLF • QTGA50MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

QTG50L

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTG50L series



QTGA50L series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTG50L Ø50mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTG50L Steady QTG50L-BZ Steady /w built-in buzzer QTG50LF Steady/Flashing QTG50LF-BZ Steady/Flashing /w built-in buzzer QTGA50L Steady QTGA50L-BZ Steady /w built-in buzzer QTGA50LF Steady/Flashing QTGA50LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.045A Max 0.045A	CE DC24V only UL DC24V only	0.34kg 0.34kg 0.44kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.090A Max 0.065A		0.43kg 0.43kg 0.53kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.240A 0.135A Max 0.080A		0.51kg 0.51kg 0.61kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.320A 0.180A Max 0.100A		0.60kg 0.60kg 0.70kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.400A 0.225A Max 0.120A		0.68kg 0.68kg 0.78kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

Ordering Specification

QTG50L	-	3	-	110/220	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTG50L • QTG50L-BZ • QTG50LF • QTG50LF-BZ • QTGA50L • QTGA50L-BZ • QTGA50LF • QTGA50LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

QTG60ML

Ø60mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTG60ML series



QTGA60ML series

- **Customization**



- High buzzer module equipped on top/ Black housing tower lights.

QTG60ML Ø60mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTG60ML Steady QTG60ML-BZ Steady /w built-in buzzer QTG60MLF Steady/Flashing QTG60MLF-BZ Steady/Flashing /w built-in buzzer QTGA60ML Steady QTGA60ML-BZ Steady /w built-in buzzer QTGA60MLF Steady/Flashing QTGA60MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.26kg 0.26kg 0.36kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.34kg 0.34kg 0.44kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.43kg 0.43kg 0.53kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.51kg 0.51kg 0.61kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		0.59kg 0.59kg 0.69kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.090A	0.050A	Max 0.050A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

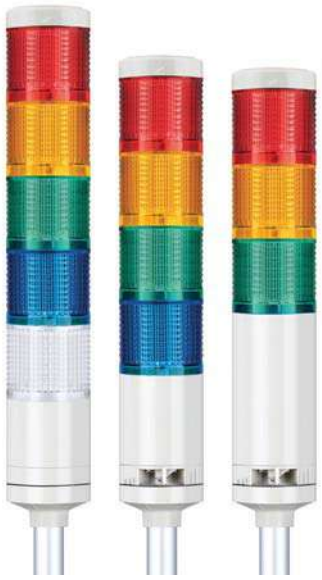
Ordering Specification

QTG60ML	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTG60ML • QTG60ML-BZ • QTG60MLF • QTG60MLF-BZ • QTGA60ML • QTGA60ML-BZ • QTGA60MLF • QTGA60MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QTG60L

Ø60mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTG60L series



QTGA60L series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTG60L Ø60mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTG60L Steady QTG60L-BZ Steady /w built-in buzzer QTG60LF Steady/Flashing QTG60LF-BZ Steady/Flashing /w built-in buzzer QTGA60L Steady QTGA60L-BZ Steady /w built-in buzzer QTGA60LF Steady/Flashing QTGA60LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.41kg 0.41kg 0.51kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.50kg 0.50kg 0.60kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.58kg 0.58kg 0.68kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.67kg 0.67kg 0.77kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		0.75kg 0.75kg 0.85kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

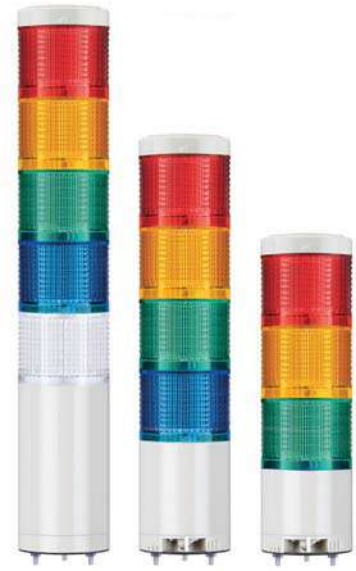
Ordering Specification

QTG60L	-	3	-	110/220	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTG60L • QTG60L-BZ • QTG60LF • QTG60LF-BZ • QTGA60L • QTGA60L-BZ • QTGA60LF • QTGA60LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

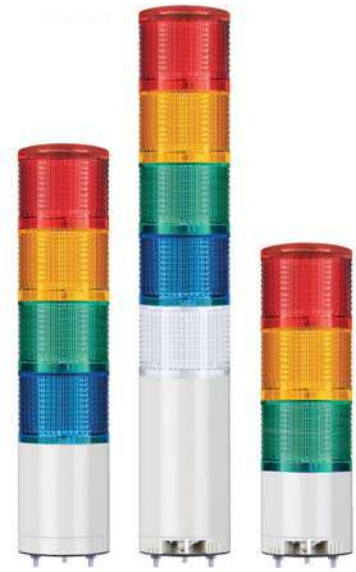
QTG70ML

Ø70mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTG70ML series



QTGA70ML series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTG70ML Ø70mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTG70ML Steady QTG70ML-BZ Steady /w built-in buzzer QTG70MLF Steady/Flashing QTG70MLF-BZ Steady/Flashing /w built-in buzzer QTGA70ML Steady QTGA70ML-BZ Steady /w built-in buzzer QTGA70MLF Steady/Flashing QTGA70MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.42kg 0.42kg 0.52kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.56kg 0.56kg 0.66kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.77kg 0.77kg 0.87kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.92kg 0.92kg 1.02kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		1.07kg 1.07kg 1.17kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.090A	0.050A	Max 0.050A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

QTG70ML	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTG70ML • QTG70ML-BZ • QTG70MLF • QTG70MLF-BZ • QTGA70ML • QTGA70ML-BZ • QTGA70MLF • QTGA70MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

QTG70L

Ø70mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTG70L series



QTGA70L series

- **Customization**



- High buzzer module equipped on top/ Black housing tower lights.

QTG70L Ø70mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTG70L Steady QTG70L-BZ Steady /w built-in buzzer QTG70LF Steady/Flashing QTG70LF-BZ Steady/Flashing /w built-in buzzer QTGA70L Steady QTGA70L-BZ Steady /w built-in buzzer QTGA70LF Steady/Flashing QTGA70LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.54kg 0.54kg 0.64kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.66kg 0.66kg 0.76kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.81kg 0.81kg 0.90kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.96kg 0.96kg 1.06kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		1.20kg 1.20kg 1.29kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

Ordering Specification

QTG70L	-	3	-	110/220	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTG70L • QTG70L-BZ • QTG70LF • QTG70LF-BZ • QTGA70L • QTGA70L-BZ • QTGA70LF • QTGA70LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

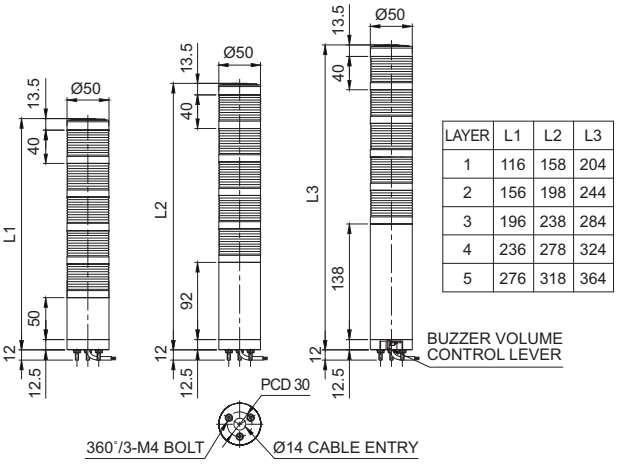
Technical Diagram

(Units : mm)

QTG50ML : DC
QTG50MLF : DC
QTG50ML-BZ : DC

QTG50ML : AC
QTG50MLF-BZ : DC

QTG50MLF : AC
QTG50ML-BZ : AC
QTG50MLF-BZ : AC

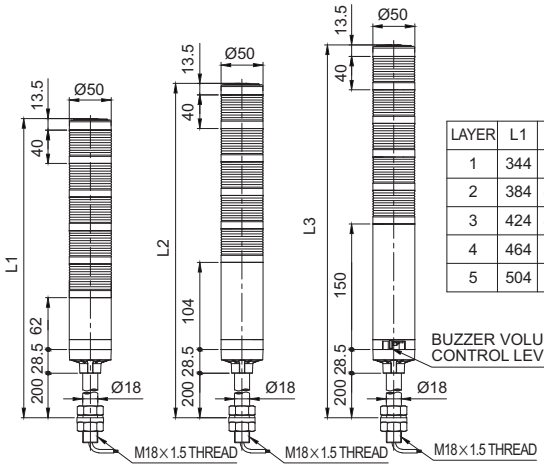


LAYER	L1	L2	L3
1	116	158	204
2	156	198	244
3	196	238	284
4	236	278	324
5	276	318	364

QTG50L : DC
QTG50LF : DC
QTG50L-BZ : DC

QTG50L : AC
QTG50LF-BZ : DC

QTG50LF : AC
QTG50L-BZ : AC
QTG50LF-BZ : AC

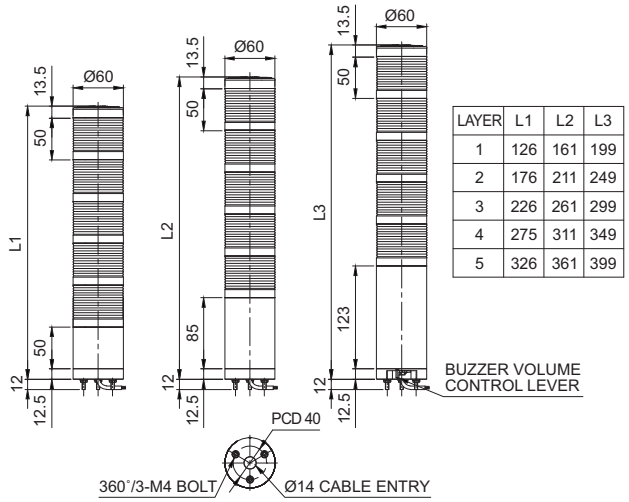


LAYER	L1	L2	L3
1	344	386	432
2	384	426	472
3	424	466	512
4	464	506	552
5	504	546	592

QTG60ML : DC
QTG60MLF : DC
QTG60ML-BZ : DC

QTG60ML : AC
QTG60MLF-BZ : DC

QTG60MLF : AC
QTG60ML-BZ : AC
QTG60MLF-BZ : AC

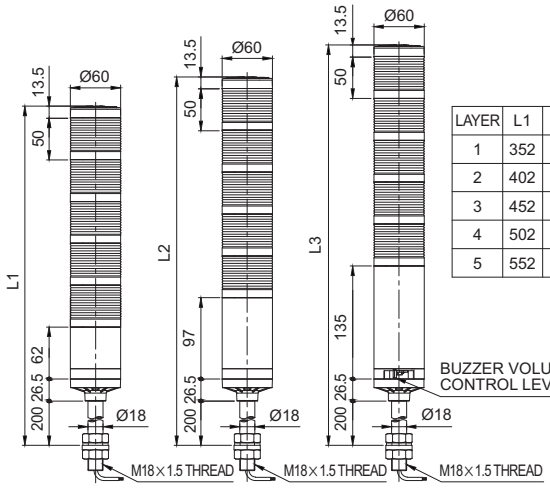


LAYER	L1	L2	L3
1	126	161	199
2	176	211	249
3	226	261	299
4	275	311	349
5	326	361	399

QTG60L : DC
QTG60LF : DC
QTG60L-BZ : DC

QTG60L : AC
QTG60LF-BZ : DC

QTG60LF : AC
QTG60L-BZ : AC
QTG60LF-BZ : AC

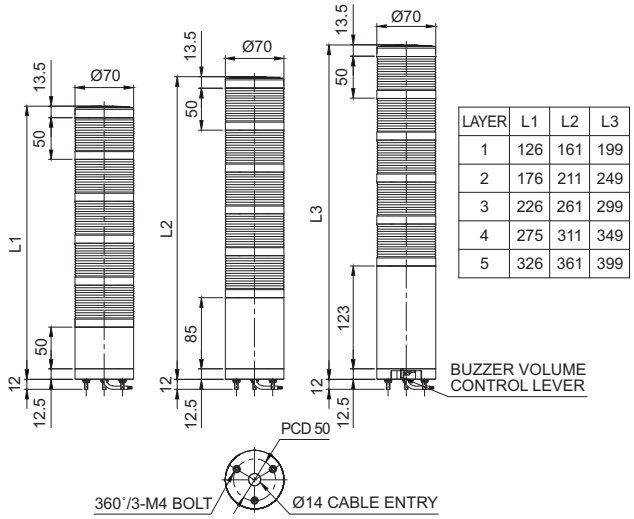


LAYER	L1	L2	L3
1	352	387	425
2	402	437	475
3	452	487	525
4	502	537	575
5	552	587	625

QTG70ML : DC
QTG70MLF : DC
QTG70ML-BZ : DC

QTG70ML : AC
QTG70MLF : AC
QTG70ML-BZ : AC
QTG70MLF-BZ : DC

QTG70MLF-BZ : AC

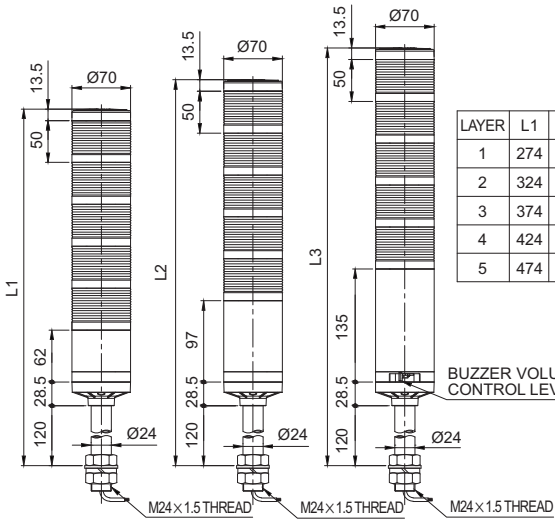


LAYER	L1	L2	L3
1	126	161	199
2	176	211	249
3	226	261	299
4	275	311	349
5	326	361	399

QTG70L : DC
QTG70LF : DC
QTG70L-BZ : DC

QTG70L : AC
QTG70LF : AC
QTG70L-BZ : AC
QTG70LF-BZ : DC

QTG70LF-BZ : AC



LAYER	L1	L2	L3
1	274	309	347
2	324	359	397
3	374	409	447
4	424	459	497
5	474	509	547

Separate Color Filter Lens Inside the Outer Lens Helps to Provide a Clear Signal



Common Specifications(QTC50/ QTC60/ QTC70)

- Modular LED steady/flashing signal tower lights
- Added a separate color filter lens inside the outer lens to help provide a clear signal
- Can select from size selections of Ø50mm, Ø60mm and Ø70mm to fit your sophisticated application needs
- The addition of modules and change in color arrangement can be achieved without the use of tools by using the Lock-type structure
- QTCA type offers a nifty integrated lens and cover for a simple aesthetically pleasing product
- When it is turned off the milky color filter provides comfortable viewing at close proximity for the operator
- A variety of mounting bracket selections for the pole mount type to fit your location and mounting needs
- Built-in buzzer available : Volume of Max 85dB at 1m
- Available in customized 2 sound buzzer type and high volume(105dB) buzzer type
- Can be used with NPN open collector transistor driven input, which allows direct connection to a PLC
- Flashing rate : 60-80 flashes/min
- Materials : Lens-PC, Filter lens : PC, Housing-ABS, Pole-Al
- Ambient operating temperature : -30°C to +50°C
- Protection rating : Standard type-IP65, Built-in buzzer type-IP54
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive



• Each modular color lens can be added without additional tools

QTC model uses a special contact structure for stable operation, the lens modules lock into place by rotating the modular structures together. This allows for easy changes to the color arrangement without any tools. Additional modules can be added.



• QTC Series Special Lens

QTC Series added a separate color filter lens inside the outer lens to help provide a clear signal.



• Buzzer volume is adjusted via the volume control lever

QTC type volume can be adjusted for each specific working condition with the equipped buzzer volume control lever at the bottom of the product.(-BZ type)



1 High volume buzzer (105dB) option can be fitted to the top of the product. (Customization)

High volume 105dB volume buzzer module fastened to the top of the product provides 360 degree buzzer signal output which cannot be achieved with the single directional buzzer.(Buzzer volume cannot be adjusted)

2 Integrated cover and lens model (QTCA50/ QTCA60/ QTCA70)

The sleek body cover and lens model is made of one piece for a simple unified look.

3 Black housing option available

Products can be configured with the black housing and cover option. In addition, the buzzer option is also available in a black color housing and buzzer.

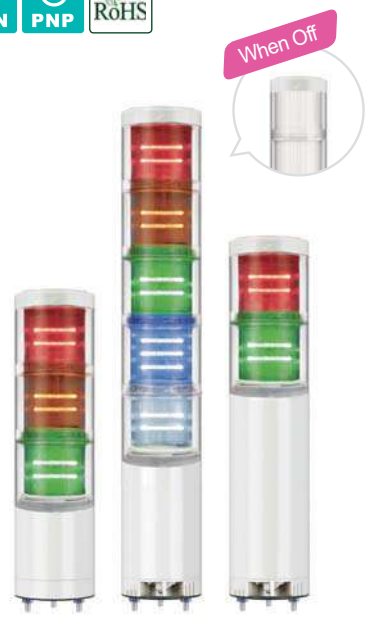
4 Can select from a variety of mounting brackets option to fit your application needs and build environment

There are a variety of mounting options brackets available depending on cost and installation requirements.

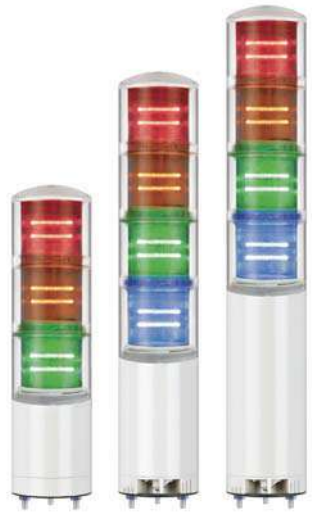
QTC50ML

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTC50ML series



QTCA50ML series

- **Customization**



- High buzzer module equipped on top/ Black housing tower lights.

QTC50ML Ø50mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTC50ML Steady QTC50ML-BZ Steady /w built-in buzzer QTC50MLF Steady/Flashing QTC50MLF-BZ Steady/Flashing /w built-in buzzer QTCA50ML Steady QTCA50ML-BZ Steady /w built-in buzzer QTCA50MLF Steady/Flashing QTCA50MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.045A Max 0.045A	CE DC24V only UL DC24V only	0.20kg 0.20kg 0.30kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.090A Max 0.065A		0.28kg 0.28kg 0.38kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.240A 0.135A Max 0.080A		0.37kg 0.37kg 0.47kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.320A 0.180A Max 0.100A		0.45kg 0.45kg 0.55kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.400A 0.225A Max 0.120A		0.54kg 0.54kg 0.64kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.080A	0.045A	Max 0.045A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

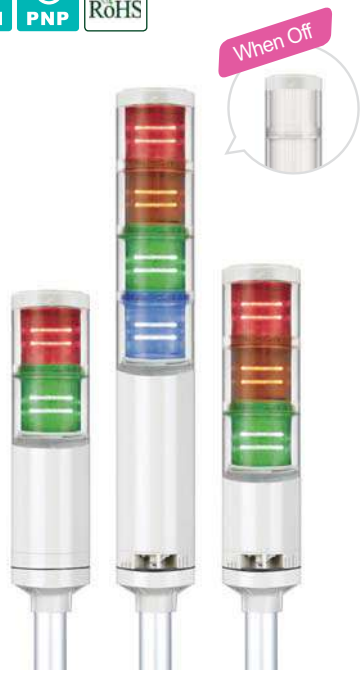
Ordering Specification

QTC50ML	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTC50ML • QTC50ML-BZ • QTC50MLF • QTC50MLF-BZ • QTCA50ML • QTCA50ML-BZ • QTCA50MLF • QTCA50MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

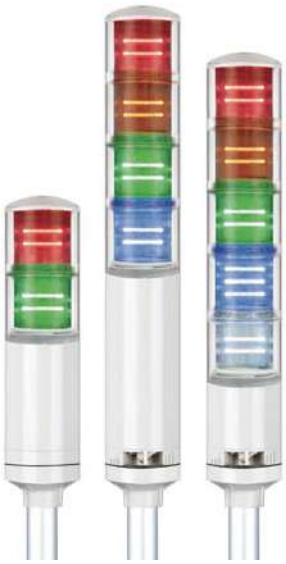
QTC50L

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTC50L series



QTCA50L series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTC50L Ø50mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTC50L Steady QTC50L-BZ Steady /w built-in buzzer QTC50LF Steady/Flashing QTC50LF-BZ Steady/Flashing /w built-in buzzer QTCA50L Steady QTCA50L-BZ Steady /w built-in buzzer QTCA50LF Steady/Flashing QTCA50LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.045A Max 0.045A	CE DC24V only UL DC24V only	0.35kg 0.35kg 0.45kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.090A Max 0.065A		0.44kg 0.44kg 0.54kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.240A 0.135A Max 0.080A		0.52kg 0.52kg 0.62kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.320A 0.180A Max 0.100A		0.61kg 0.61kg 0.71kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.400A 0.225A Max 0.120A		0.69kg 0.69kg 0.79kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

Ordering Specification

QTC50L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTC50L • QTC50L-BZ • QTC50LF • QTC50LF-BZ • QTCA50L • QTCA50L-BZ • QTCA50LF • QTCA50LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

QTC60ML

Ø60mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTC60ML series



QTCA60ML series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTC60ML Ø60mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTC60ML Steady QTC60ML-BZ Steady /w built-in buzzer QTC60MLF Steady/Flashing QTC60MLF-BZ Steady/Flashing /w built-in buzzer QTCA60ML Steady QTCA60ML-BZ Steady /w built-in buzzer QTCA60MLF Steady/Flashing QTCA60MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.28kg 0.28kg 0.38kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.36kg 0.36kg 0.46kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.45kg 0.45kg 0.55kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.53kg 0.53kg 0.63kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		0.61kg 0.61kg 0.71kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.090A	0.050A	Max 0.050A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

QTC60ML	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTC60ML • QTC60ML-BZ • QTC60MLF • QTC60MLF-BZ • QTCA60ML • QTCA60ML-BZ • QTCA60MLF • QTCA60MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

QTC60L

Ø60mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTC60L series



QTCA60L series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTC60L Ø60mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTC60L Steady QTC60L-BZ Steady /w built-in buzzer QTC60LF Steady/Flashing QTC60LF-BZ Steady/Flashing /w built-in buzzer QTCA60L Steady QTCA60L-BZ Steady /w built-in buzzer QTCA60LF Steady/Flashing QTCA60LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.43kg 0.43kg 0.53kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.52kg 0.52kg 0.62kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.60kg 0.60kg 0.70kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.69kg 0.69kg 0.79kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		0.77kg 0.77kg 0.87kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

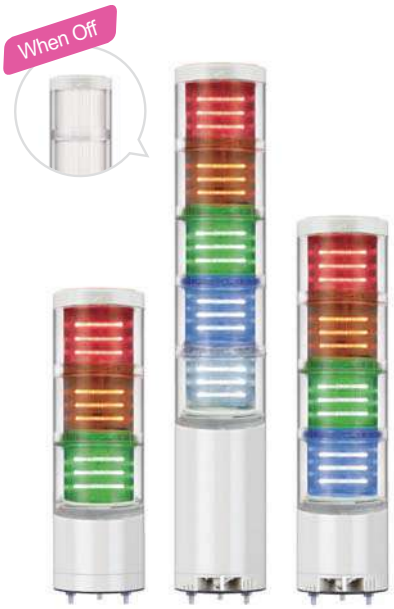
Ordering Specification

QTC60L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTC60L • QTC60L-BZ • QTC60LF • QTC60LF-BZ • QTCA60L • QTCA60L-BZ • QTCA60LF • QTCA60LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

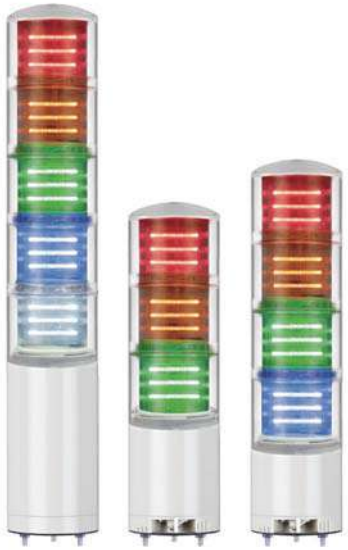
QTC70ML

Ø70mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTC70ML series



QTCA70ML series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTC70ML Ø70mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTC70ML Steady QTC70ML-BZ Steady /w built-in buzzer QTC70MLF Steady/Flashing QTC70MLF-BZ Steady /w built-in buzzer/Flashing QTCA70ML Steady QTCA70ML-BZ Steady /w built-in buzzer QTCA70MLF Steady/Flashing QTCA70MLF-BZ Steady /w built-in buzzer/Flashing	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.44kg 0.44kg 0.54kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.58kg 0.58kg 0.68kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.79kg 0.79kg 0.89kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.94kg 0.94kg 1.04kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		1.09kg 1.09kg 1.19kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.090A	0.050A	Max 0.050A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

QTC70ML	-	3	-	12	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTC70ML • QTC70ML-BZ • QTC70MLF • QTC70MLF-BZ • QTCA70ML • QTCA70ML-BZ • QTCA70MLF • QTCA70MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

QTC70L

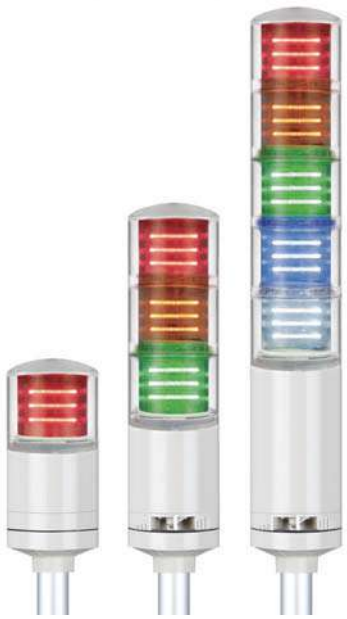
Ø70mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS

When Off



QTC70L series



QTCA70L series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTC70L Ø70mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTC70L Steady QTC70L-BZ Steady /w built-in buzzer QTC70LF Steady/Flashing QTC70LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC24V only UL DC24V only	0.56kg 0.56kg 0.66kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.68kg 0.68kg 0.78kg	• R-Red • G-Green
QTCA70L Steady QTCA70L-BZ Steady /w built-in buzzer QTCA70LF Steady/Flashing QTCA70LF-BZ Steady/Flashing /w built-in buzzer	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.83kg 0.83kg 0.92kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.98kg 0.98kg 1.08kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		1.22kg 1.22kg 1.31kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

Ordering Specification

QTC70L	-	3	-	110/220	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTC70L • QTC70L-BZ • QTC70LF • QTC70LF-BZ • QTCA70L • QTCA70L-BZ • QTCA70LF • QTCA70LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

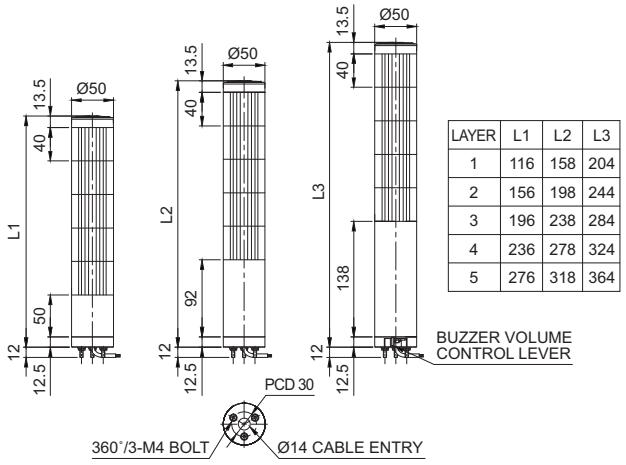
Technical Diagram

(Units : mm)

QTC50ML : DC
QTC50MLF : DC
QTC50ML-BZ : DC

QTC50ML : AC
QTC50MLF-BZ : DC

QTC50MLF : AC
QTC50ML-BZ : AC
QTC50MLF-BZ : AC

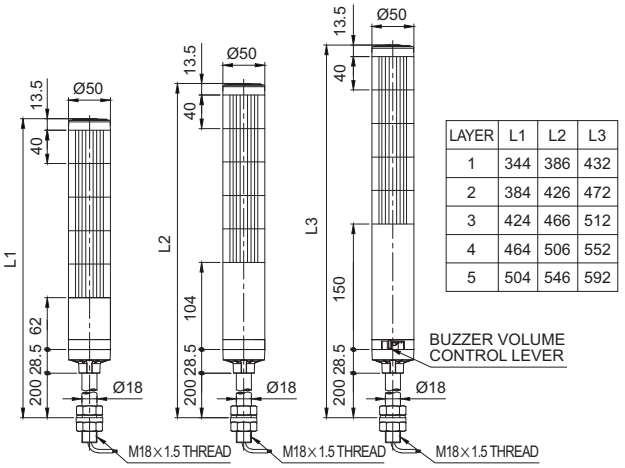


LAYER	L1	L2	L3
1	116	158	204
2	156	198	244
3	196	238	284
4	236	278	324
5	276	318	364

QTC50L : DC
QTC50LF : DC
QTC50L-BZ : DC

QTC50L : AC
QTC50LF-BZ : DC

QTC50LF : AC
QTC50L-BZ : AC
QTC50LF-BZ : AC

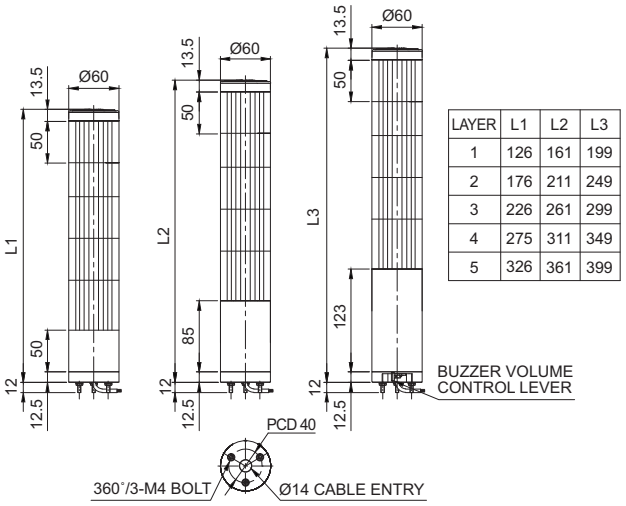


LAYER	L1	L2	L3
1	344	386	432
2	384	426	472
3	424	466	512
4	464	506	552
5	504	546	592

QTC60ML : DC
QTC60MLF : DC
QTC60ML-BZ : DC

QTC60ML : AC
QTC60MLF-BZ : DC

QTC60MLF : AC
QTC60ML-BZ : AC
QTC60MLF-BZ : AC

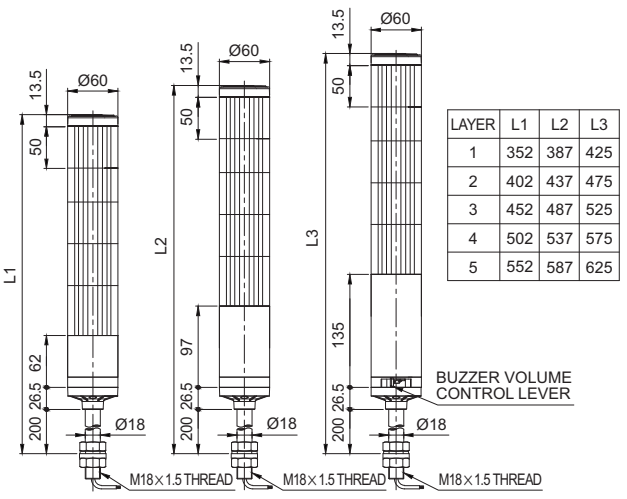


LAYER	L1	L2	L3
1	126	161	199
2	176	211	249
3	226	261	299
4	275	311	349
5	326	361	399

QTC60L : DC
QTC60LF : DC
QTC60L-BZ : DC

QTC60L : AC
QTC60LF-BZ : DC

QTC60LF : AC
QTC60L-BZ : AC
QTC60LF-BZ : AC

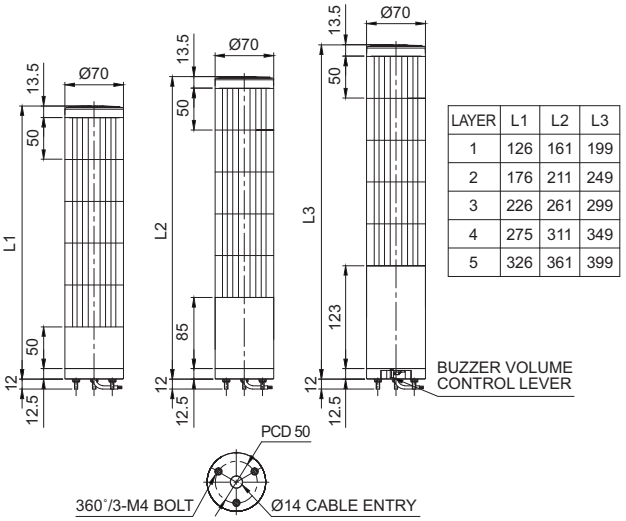


LAYER	L1	L2	L3
1	352	387	425
2	402	437	475
3	452	487	525
4	502	537	575
5	552	587	625

QTC70ML : DC
QTC70MLF : DC
QTC70ML-BZ : DC

QTC70ML : AC
QTC70MLF : AC
QTC70ML-BZ : AC
QTC70MLF-BZ : DC

QTC70MLF-BZ : AC

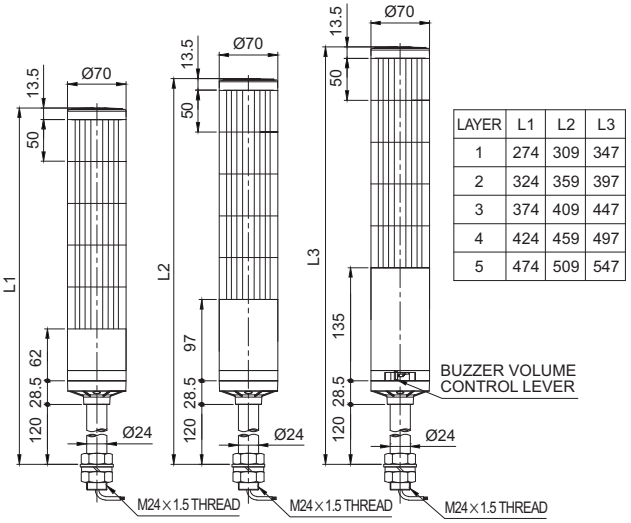


LAYER	L1	L2	L3
1	126	161	199
2	176	211	249
3	226	261	299
4	275	311	349
5	326	361	399

QTC70L : DC
QTC70LF : DC
QTC70L-BZ : DC

QTC70L : AC
QTC70LF : AC
QTC70L-BZ : AC
QTC70LF-BZ : DC

QTC70LF-BZ : AC



LAYER	L1	L2	L3
1	274	309	347
2	324	359	397
3	374	409	447
4	424	459	497
5	474	509	547

Soft and Comfortable Signal Light Emitted through the Translucent Milky Lens

Common Specifications(QTR50/ QTR60/ QTR70)

- Modular LED steady/flashing signal tower lights
- Soft and comfortable signal light emitted through the translucent milky lens
- When the product is turned off the milky color filter provides comfortable viewing at close proximity for the operator
- Can select from size selections of Ø50mm, Ø60mm, and Ø70mm to fit your sophisticated application needs
- The addition of modules and change in color arrangement can be achieved without the use of tools by using the Lock-type structure
- QTRA type offers a nifty integrated lens and cover for a simple aesthetically pleasing product
- A variety of mounting brackets selections for the pole mount type to fit your location and mounting needs
- Built-in buzzer available (Volume : Max 85dB at 1m)
- Available in customized 2 sound buzzer type and high volume(105dB) buzzer type
- Can be used with NPN open collector transistor driven input, which allows direct connection to a PLC
- Flashing rate : 60-80 flashes/min.
- Materials : Lens-PC, Housing-ABS, Pole-Al
- Ambient operating temperature : -30°C to +50°C
- Protection rating: Standard type-IP65, Built-in buzzer type-IP54
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive





• Each modular color lens can be added without additional tools

QTR model uses a special contact structure for stable operation, the lens modules lock into place by rotating the modular structures together. This allows for easy changes to the color arrangement without any tools. Additional modules can be added.





• QTR series special lens

QTR series provides soft and comfortable signal light emitted through the translucent milky lens.

• Buzzer volume is adjusted via the volume control lever

QTR type volume can be adjusted for each specific working condition with the equipped buzzer volume control lever at the bottom of the product.(-BZ type)

1 High volume buzzer (105dB) option can be fitted to the top of the product.

High volume 105dB volume buzzer module fastened to the top of the product provides 360 degree buzzer signal output which cannot be achieved with the single directional buzzer.(Buzzer volume cannot be adjusted)

2 Integrated Housing cover and lens model (QTRA50/ QTRA60/ QTRA70)

The sleek housing cover and lens model is made of one piece for a simple unified look.

3 Black Housing option available

Products can be configured with the black housing and cover option. In addition, the buzzer option is also available in a black color housing and buzzer.

4 Can select from a variety of mounting bracket options to fit your application needs and build environment

There are a variety of mounting bracket options available depending on cost and installation requirements.

QTR50ML

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30→50°C BUZZER 85dB NPN PNP RoHS



QTR50ML series



QTRA50ML series

- **Customization**



- High buzzer module equipped on top/ Black housing tower lights.

QTR50ML Ø50mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTR50ML Steady QTR50ML-BZ Steady /w built-in buzzer QTR50MLF Steady/Flashing QTR50MLF-BZ Steady/Flashing /w built-in buzzer QTRA50ML Steady QTRA50ML-BZ Steady /w built-in buzzer QTRA50MLF Steady/Flashing QTRA50MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.045A Max 0.045A	CE DC only UL DC24V only	0.19kg 0.19kg 0.29kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.090A Max 0.065A		0.27kg 0.27kg 0.37kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.240A 0.135A Max 0.080A		0.36kg 0.36kg 0.46kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.320A 0.180A Max 0.100A		0.44kg 0.44kg 0.54kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.400A 0.225A Max 0.120A		0.53kg 0.53kg 0.63kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.080A	0.045A	Max 0.045A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be 4 layers or less)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

QTR50ML	-	3	-	12	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTR50ML • QTR50ML-BZ • QTR50MLF • QTR50MLF-BZ • QTRA50ML • QTRA50ML-BZ • QTRA50MLF • QTRA50MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

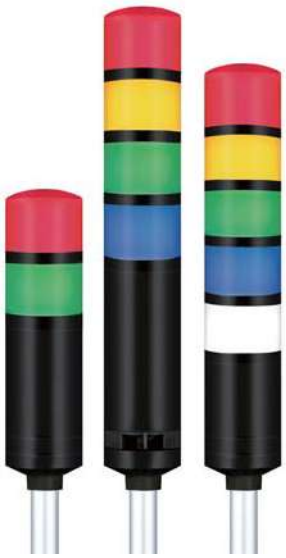
QTR50L

Ø50mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTR50L series



QTRA50L series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTR50L Ø50mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTR50L Steady QTR50L-BZ Steady /w built-in buzzer QTR50LF Steady/Flashing QTR50LF-BZ Steady/Flashing /w built-in buzzer QTRA50L Steady QTRA50L-BZ Steady /w built-in buzzer QTRA50LF Steady/Flashing QTRA50LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.080A 0.045A Max 0.045A	CE DC only UL DC24V only	0.34kg 0.34kg 0.44kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.160A 0.090A Max 0.065A		0.43kg 0.43kg 0.53kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.240A 0.135A Max 0.080A		0.51kg 0.51kg 0.61kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.320A 0.180A Max 0.100A		0.60kg 0.60kg 0.70kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.400A 0.225A Max 0.120A		0.68kg 0.68kg 0.78kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be 4 layers or less)
- Black housing tower lights

Ordering Specification

QTR50L	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTR50L • QTR50L-BZ • QTR50LF • QTR50LF-BZ • QTRA50L • QTRA50L-BZ • QTRA50LF • QTRA50LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

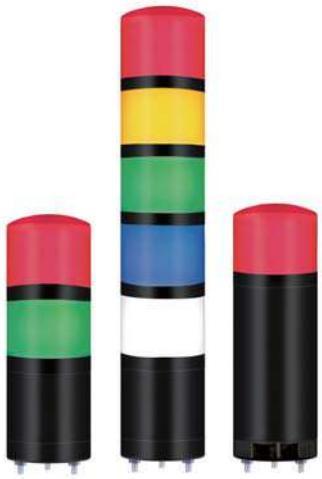
QTR60ML

Ø60mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~50°C BUZZER 85dB NPN PNP RoHS



QTR60ML series



QTRA60ML series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTR60ML Ø60mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTR60ML Steady QTR60ML-BZ Steady /w built-in buzzer QTR60MLF Steady/Flashing QTR60MLF-BZ Steady/Flashing /w built-in buzzer QTRA60ML Steady QTRA60ML-BZ Steady /w built-in buzzer QTRA60MLF Steady/Flashing QTRA60MLF-BZ Steady/Flashing /w built-in buzzer/	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC only UL DC24V only	0.26kg 0.26kg 0.36kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.34kg 0.34kg 0.44kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.43kg 0.43kg 0.53kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.51kg 0.51kg 0.61kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		0.59kg 0.59kg 0.69kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.090A	0.050A	Max 0.050A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be 4 layers or less)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

QTR60ML	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTR60ML • QTR60ML-BZ • QTR60MLF • QTR60MLF-BZ • QTRA60ML • QTRA60ML-BZ • QTRA60MLF • QTRA60MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

QTR60L

Ø60mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTR60L series



QTRA60L series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTR60L Ø60mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTR60L Steady QTR60L-BZ Steady /w built-in buzzer QTR60LF Steady/Flashing QTR60LF-BZ Steady/Flashing /w built-in buzzer QTRA60L Steady QTRA60L-BZ Steady /w built-in buzzer QTRA60LF Steady/Flashing QTRA60LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC only UL DC24V only	0.41kg 0.41kg 0.51kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.50kg 0.50kg 0.60kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.58kg 0.58kg 0.68kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.67kg 0.67kg 0.77kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		0.75kg 0.75kg 0.85kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

• External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• Signal line standard : UL1007 AWG22(0.3sq) 400mm
• LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

• 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
• Customized pole length available
• High buzzer module equipped on top(Lens should be 4 layers or less)
• Black housing tower lights

Ordering Specification

QTR60L	-	3	-	12	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTR60L • QTR60L-BZ • QTR60LF • QTR60LF-BZ • QTRA60L • QTRA60L-BZ • QTRA60LF • QTRA60LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

QTR70ML

Ø70mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~50°C BUZZER 85dB NPN PNP RoHS



QTR70ML series



QTRA70ML series

• **Customization**



• High buzzer module equipped on top/ Black housing tower lights.

QTR70ML Ø70mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTR70ML Steady QTR70ML-BZ Steady /w built-in buzzer QTR70MLF Steady/Flashing QTR70MLF-BZ Steady/Flashing /w built-in buzzer QTRA70ML Steady QTRA70ML-BZ Steady /w built-in buzzer QTRA70MLF Steady/Flashing QTRA70MLF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC only UL DC24V only	0.42kg 0.42kg 0.52kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.56kg 0.56kg 0.66kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.77kg 0.77kg 0.87kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.92kg 0.92kg 1.02kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		1.07kg 1.07kg 1.17kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V-220V
Signal line current	0.090A	0.050A	Max 0.050A
Audible line current	0.016A	0.031A	Max 0.030A

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Customization

- High buzzer module equipped on top(Lens should be 4 layers or less)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

QTR70ML	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTR70ML • QTR70ML-BZ • QTR70MLF • QTR70MLF-BZ • QTRA70ML • QTRA70ML-BZ • QTRA70MLF • QTRA70MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White

QTR70L

Ø70mm LED Steady/Flashing Tower Lights

IP54 IP65 -30~+50°C BUZZER 85dB NPN PNP RoHS



QTR70L series



QTRA70L series

• Customization



• High buzzer module equipped on top/ Black housing tower lights.

QTR70L Ø70mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QTR70L Steady QTR70L-BZ Steady /w built-in buzzer QTR70LF Steady/Flashing QTR70LF-BZ Steady/Flashing /w built-in buzzer QTRA70L Steady QTRA70L-BZ Steady /w built-in buzzer QTRA70LF Steady/Flashing QTRA70LF-BZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.090A 0.050A Max 0.050A	CE DC only UL DC24V only	0.54kg 0.54kg 0.64kg	• R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.180A 0.100A Max 0.072A		0.66kg 0.66kg 0.76kg	• R-Red • G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.270A 0.150A Max 0.094A		0.81kg 0.81kg 0.90kg	• R-Red • A-Amber • G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.360A 0.200A Max 0.116A		0.96kg 0.96kg 1.06kg	• R-Red • A-Amber • G-Green • B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.450A 0.250A Max 0.138A		1.20kg 1.20kg 1.29kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 331-332 for detailed wiring instructions.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be 4 layers or less)
- Black housing tower lights

Ordering Specification

QTR70L	-	3	-	110/220	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTR70L • QTR70L-BZ • QTR70LF • QTR70LF-BZ • QTRA70L • QTRA70L-BZ • QTRA70LF • QTRA70LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

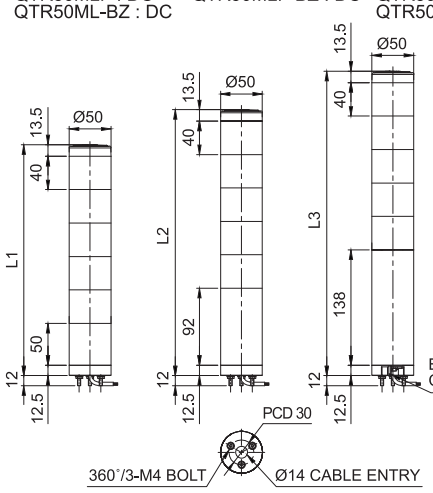
Technical Diagram

(Units : mm)

QTR50ML : DC
QTR50MLF : DC
QTR50ML-BZ : DC

QTR50ML : AC
QTR50MLF-BZ : DC

QTR50MLF : AC
QTR50ML-BZ : AC
QTR50MLF-BZ : AC

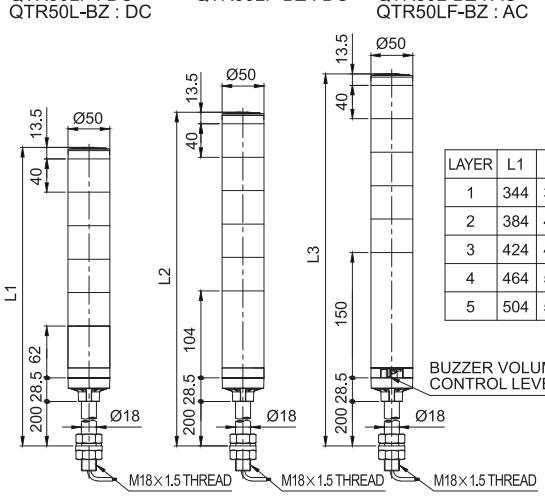


LAYER	L1	L2	L3
1	116	158	204
2	156	198	244
3	196	238	284
4	236	278	324
5	276	318	364

QTR50L : DC
QTR50LF : DC
QTR50L-BZ : DC

QTR50L : AC
QTR50LF-BZ : DC

QTR50LF : AC
QTR50L-BZ : AC
QTR50LF-BZ : AC

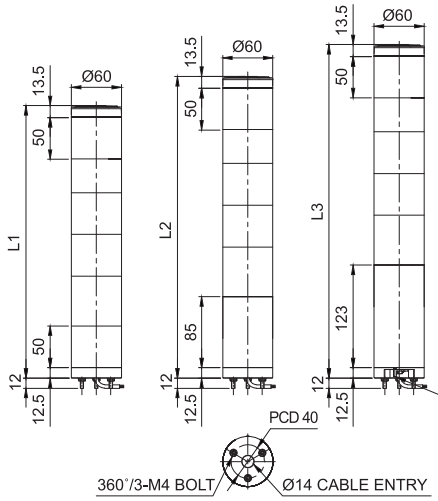


LAYER	L1	L2	L3
1	344	386	432
2	384	426	472
3	424	466	512
4	464	506	552
5	504	546	592

QTR60ML : DC
QTR60MLF : DC
QTR60ML-BZ : DC

QTR60ML : AC
QTR60MLF-BZ : DC

QTR60MLF : AC
QTR60ML-BZ : AC
QTR60MLF-BZ : AC

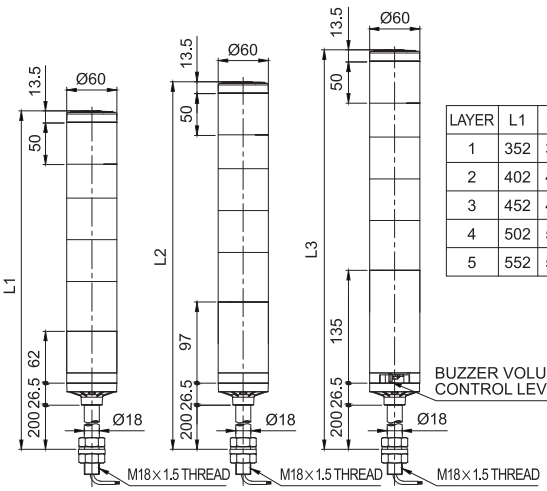


LAYER	L1	L2	L3
1	126	161	199
2	176	211	249
3	226	261	299
4	275	311	349
5	326	361	399

QTR60L : DC
QTR60LF : DC
QTR60L-BZ : DC

QTR60L : AC
QTR60LF-BZ : DC

QTR60LF : AC
QTR60L-BZ : AC
QTR60LF-BZ : AC

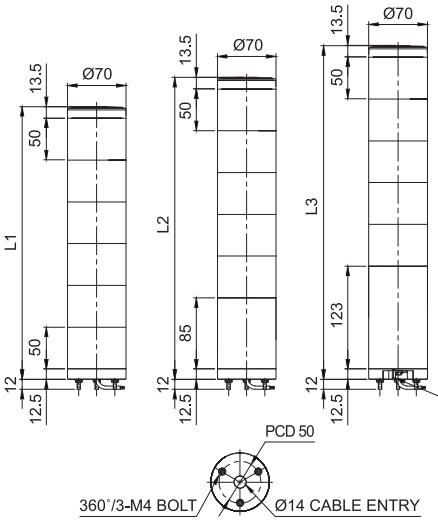


LAYER	L1	L2	L3
1	352	387	425
2	402	437	475
3	452	487	525
4	502	537	575
5	552	587	625

QTR70ML : DC
QTR70MLF : DC
QTR70ML-BZ : DC

QTR70ML : AC
QTR70MLF : AC
QTR70ML-BZ : AC
QTR70MLF-BZ : DC

QTR70MLF-BZ : AC

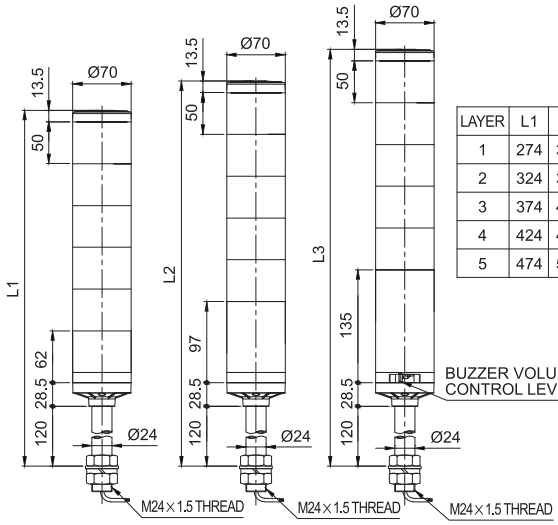


LAYER	L1	L2	L3
1	126	161	199
2	176	211	249
3	226	261	299
4	275	311	349
5	326	361	399

QTR70L : DC
QTR70LF : DC
QTR70L-BZ : DC

QTR70L : AC
QTR70LF : AC
QTR70L-BZ : AC
QTR70LF-BZ : DC

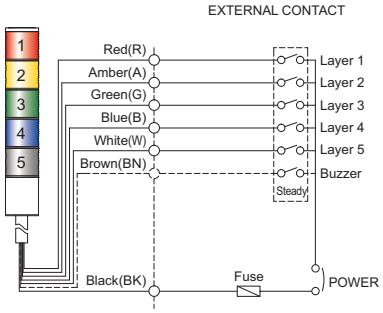
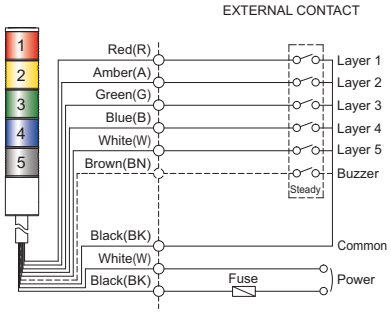
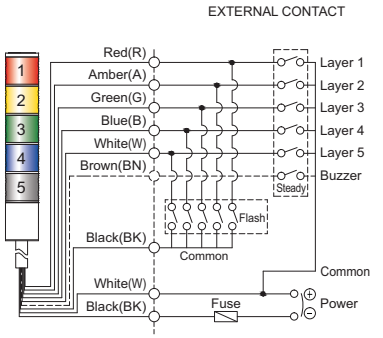
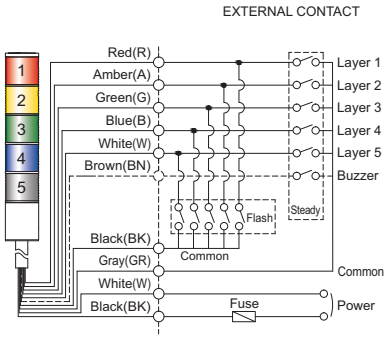
QTR70LF-BZ : AC



LAYER	L1	L2	L3
1	274	309	347
2	324	359	397
3	374	409	447
4	424	459	497
5	474	509	547

Wiring Instructions(using transistor)

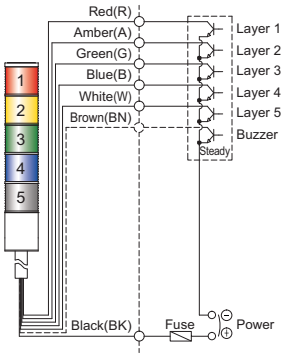
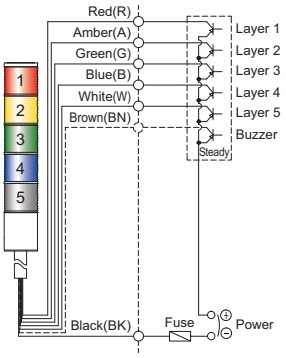
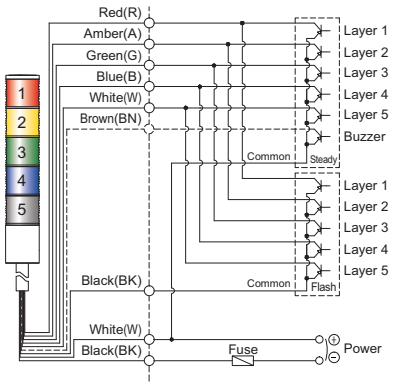
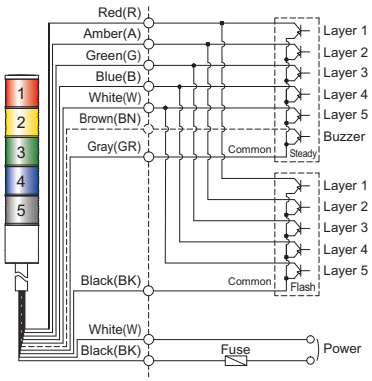
• In case of wiring with external contact, please select the proper transistor type : either NPN or PNP based on the source voltage setting.

Applied products	Wiring Instructions	Applied products	Wiring Instructions
DC Steady		AC Steady	
QTG50ML QTG50L QTG60ML QTG60L QTG70ML QTG70L QTC50ML QTC50L QTC60ML QTC60L QTC70ML QTC70L QTR50ML QTR50L QTR60ML QTR60L QTR70ML QTR70L	 • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L	QTG50ML QTG50L QTG60ML QTG60L QTG70ML QTG70L QTC50ML QTC50L QTC60ML QTC60L QTC70ML QTC70L QTR50ML QTR50L QTR60ML QTR60L QTR70ML QTR70L	 • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L
DC Steady/Flashing		AC Steady/Flashing	
QTG50MLF QTG50LF QTG60MLF QTG60LF QTG70MLF QTG70LF QTC50MLF QTC50LF QTC60MLF QTC60LF QTC70MLF QTC70LF QTR50MLF QTR50LF QTR60MLF QTR60LF QTR70MLF QTR70LF	 • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L	QTG50MLF QTG50LF QTG60MLF QTG60LF QTG70MLF QTG70LF QTC50MLF QTC50LF QTC60MLF QTC60LF QTC70MLF QTC70LF QTR50MLF QTR50LF QTR60MLF QTR60LF QTR70MLF QTR70LF	 • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L

• DC steady type : External power/ signal line standard : UL1007 AWG22(0.3sq) 400mm
• AC steady, AC/DC steady/flashing type : External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
External signal line standard : UL1007 AWG22(0.3sq) 400mm

Wiring Instructions(using transistor)

• In case of wiring with transistors, please select the proper transistor type : either NPN or PNP based on the source voltage setting.

Applied products	Wiring Instructions
DC Steady QTG50ML QTG50L QTG60ML QTG60L QTG70ML QTG70L QTC50ML QTC50L QTC60ML QTC60L QTC70ML QTC70L QTR50ML QTR50L QTR60ML QTR60L QTR70ML QTR70L	EXTERNAL TRANSISTOR-NPN  EXTERNAL TRANSISTOR-PNP  • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L
DC Steady/Flashing QTG50MLF QTG50LF QTG60MLF QTG60LF QTG70MLF QTG70LF QTC50MLF QTC50LF QTC60MLF QTC60LF QTC70MLF QTC70LF QTR50MLF QTR50LF QTR60MLF QTR60LF QTR70MLF QTR70LF	EXTERNAL TRANSISTOR-PNP  • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L
AC Steady/Flashing QTG50MLF QTG50LF QTG60MLF QTG60LF QTG70MLF QTG70LF QTC50MLF QTC50LF QTC60MLF QTC60LF QTC70MLF QTC70LF QTR50MLF QTR50LF QTR60MLF QTR60LF QTR70MLF QTR70LF	EXTERNAL TRANSISTOR-PNP  • QTG(A)XX(M)L - Same wiring including buzzer type • QTC(A)XX(M)L - Same wiring including buzzer type • QTR(A)XX(M)L - Same wiring including buzzer type • QTGXXL QTCXXL QTRXXL └ Lens diameter 50(50mm) : QTR50(M)L 60(60mm) : QTR60(M)L 70(70mm) : QTR70(M)L

• DC steady type : External power/ signal line standard : UL1007 AWG22(0.3sq) 400mm
• AC steady, AC/DC steady/flashing type : External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
External signal line standard : UL1007 AWG22(0.3sq) 400mm

QT50L/ QT50ML
QT70L/ QT70ML



New Model Concept which Allows for Significant Customization to Your Specific Needs Using Special Modular Components



- QT Series tower light is a multifunctional product that allows for significant customization to your specific needs using our special modular components such as the lens, buzzer, ethernet cord, USB cord and mounting brackets. Additional tools are not required for assembly
- All modular components can be arranged freely to the user desired position (upper/ lower) except for the dial tone lever



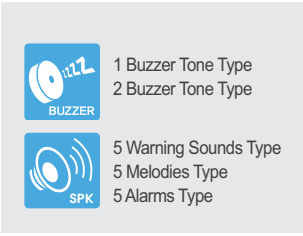
• Buzzer modules position can be chosen freely

The buzzer module is designed to be compatible with the light modules by using a novel architecture developed by Qlight. Therefore, users can reposition the module to the location they desire. In the photo to the left, the buzzer module is located at the top, center and bottom positions.

• Can select from a variety of LED light functions

The LED indicator can provide varying signals/actions by using different independent light modules; flashing, strobe, rotating. For example, green would indicate normal operation, a red module would indicate risk which can be highlighted further by selecting a strobe flashing or rotating module.





• Select from 15 kinds of buzzer tones

There are 4 audible modules available which includes one buzzer type module and 3 alarm modules. Each alarm module comes with 5 sound patterns that can be selected for your specific application environment. The Buzzer module is customizable with two options- the 2 tone buzzer and high volume buzzer. Detailed specifications of the alarm sounds and buzzer sounds are included in page 334-336.

• Can select from a variety of pole selections to fit your application needs

You can chose from 8 different kinds of pole options for mounting. The pole materials vary from steel, aluminum, and polycarbonate. Please refer to page 34-39 for more detailed information about the pole specifications and dimensions.





• Module Selections

Users can directly purchase the necessary modules for assembly. Detailed specifications and features for each Individual module are introduced in page 338-341(QT50), page 348-351(QT70). For information about module combination procedure can be found in the assembly Instructions page.

• Assembled Product

We are able to provide the consumer with an assembled product with module specifications provided by the customer. Specifications and products assembled in a variety of formats are detailed in page 342-347(QT50), page 352-357(QT70).

Module

Multi-functional module can be assemble to user requirements



Please use the switch for Steady and Flashing which is on top of Q50L-F and Q70L-F, LED steady/flashing module.

LED Module

- 4 kinds of LED modules; Steady, steady/flashing, strobe, revolving flashing
- Good visibility with high brightness.
- Module position can be chosen based on signal importance.





LED Steady Module
- Output LED Steady signal
- High brightness LED
- Voltage : DC12V, DC24V, AC110V, AC220V





LED Steady/Flashing Module
- Output LED Steady/Flashing signal
- High brightness LED
- Voltage : DC12V, DC24V, AC110V, AC220V





LED Strobe Module
- LED flashing light
- Excellent notice compare to flashing type
- Voltage : DC12V, DC24V





LED Revolving Flashing Module
- LED light revolve and flash
- Dynamic Signal
- Voltage : DC12V, DC24V

Buzzer Module

- Buzzer module has Siren and Bip sound, Bip sound is adjustable.
- Buzzer module position can be chosen freely and has a good air tight seal.

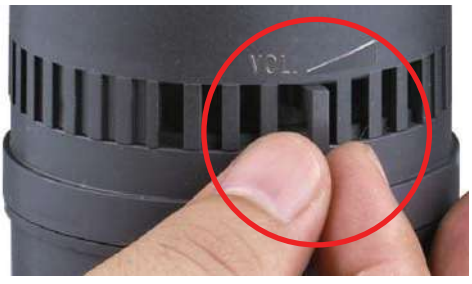


Siren Sound Buzzer Module
- Siren buzzer volume : Max 90dB
- Sound fixed
- Voltage : DC12V, DC24V, AC110V, AC220V





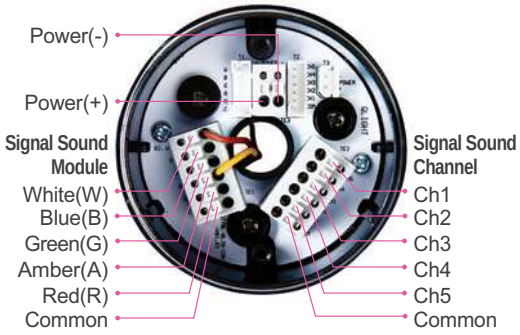
Bip Sound Buzzer Module
- Bip sound(Pi-Pi) volume : Max 90dB
- Sound adjustable
- Voltage : DC12V, DC24V, AC110V, AC220V





- Sound adjustable by lever on module side
- Buzzer module position can be chosen freely

Basic Signal Sound Module



Please follow wiring instruction for power and signal line on page 358.





Example for Signal Sound Module

Signal Sound Module

- Warning sound, melody, and alarm sound selection can be chosen by dip switch or external contact on top of module.
- For sound selection by dip switch the module can be in any position. However, for sound selection by external contact the module should be located at the base/ bottom.
- Excellent air tight seal.

 Q70L-WS Q50L-WS	**Warning Sound Module** • 5 Warning sounds : Max 85dB - fire, emergency , Ambulance, PI.PI.PI Short, Machinery Fault , Beep Intermittent • Voltage : DC12V, DC24V
 Q70L-WM Q50L-WM	**Melody Module** • 5 Melodies : Max 85dB - Sweet home, For Elise, Cuckoo's Waltz, Piano sonata, Turkish March • Voltage : DC12V, DC24V
 Q70L-WA Q50L-WA	**Alarm Module** • 5 Alarms : Max 85dB - Beep Intermittent, Door Chime, Phone Ring, PI.PI.PI Short, Triple Beat • Voltage : DC12V, DC24V

Signal Sound Selection and Sound Adjust

- Signal module built-in 3 signal sounds, warning sound(WS), melody(WM) and alarm(WA).(User can select sound pattern)
- Warning sound, melody, and alarm and sound selection can be chosen by dip switch or external contact on top of module.
- Sound can be adjusted by lever on module.
- Please refer to below list for sound and specification.

Article	Built-in Sounds	Channel	Sound
WS	5 Warning Sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire, emergency Ambulance PI.PI.PI Short Machinery Fault Beep Intermittent
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet home For Elise Cuckoo's Waltz Piano sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Triple Beat

- For sound selection by external contact, please refer to the following picture for an example of easy wiring of the sound module using the enclosed signal lines for the module.

USB Module(Built-in Signal Sound)

- LED tower light system with built-in sound connected and controlled by a PC application program.
- Sound module should be positioned at the base of the tower light.
- Sound can be adjusted with the lever on the module.



Built-in Warning USB Sound Module
- 5 Warning sounds : Max 85dB
  - fire, emergency , Ambulance, PI.PI.PI Short, Machinery Fault , Beep Intermittent
- Voltage : DC12V, DC24V



Built-in Melody USB Module
- 5 Melodies : Max 85dB
  - Sweet home, For Elise, Cuckoo's Waltz, Piano sonata, Turkish March
- Voltage : DC12V, DC24V



Built-in Alarm USB Module
- 5 Alarms : Max 85dB
  - Beep Intermittent, Door Chime, Phone Ring, PI.PI.PI Short, Triple Beat
- Voltage : DC12V, DC24V

Ethernet Module(Built-in Signal Sound)

- Ethernet tower light system that can be controlled by internet or LAN from a remote place.
- Sound module should be positioned at the base of the tower light.
- Sound can be adjust with the lever on the module.
- Excellent air tight seal.



Built-in Warning Ethernet Sound Module
- 5 Warning sounds : Max 85dB
  - fire, emergency , Ambulance, PI.PI.PI Short, Machinery Fault , Beep Intermittent
- Voltage : DC12V, DC24V



Built-in Melody Ethernet Module
- 5 Melodies : Max 85dB
  - Sweet home, For Elise, Cuckoo's Waltz, Piano sonata, Turkish March
- Voltage : DC12V, DC24V



Built-in Alarm Ethernet Module
- 5 Alarms : Max 85dB
  - Beep Intermittent, Door Chime, Phone Ring, PI.PI.PI Short, Triple Beat
- Voltage : DC12V, DC24V

Module Connection

- Adopts a convenient connector for easy assemble.
- Simple connection structure makes assembly straightforward and effortless when compared to other manufacturer's products.

Module Connection



1 Connect wire between module



2 Match the edge of module



3 To assemble turn right



Uses a connector for easy assembly.



Base Module is composed of the control line and threaded to the mounting bracket for improved product mounting efficiency.
Please refer to below instruction and choose the mount type.

Base Module

• 6P Terminal plate equipped on basic module. Please refer to page 358 for wiring of power line and signal line.

Direct Mount		3 Bolts on base module
Wall Mount		Wall mount bracket on base module
Pole Mount		Pole module and pole assemble on base module

Module Color

• Housing color of the QT series modular tower lights is black
• Customizable in beige color

Wiring Instruction

• QT series can be wired to external contact and transistor
• In case of wiring with transistor, please select the proper transistor type either NPN or PNP based on the source voltage setting
• DC Steady type : External power/signal line standard : UL1007 AWG22(0.3sq) 400mm
• AC Steady, AC/DC steady/flashing type :
External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• External signal line standard : UL1007 AWG22(0.3sq)400mm

※ Please refer to page 358 for detailed wiring instruction.

Mounting Bracket

• Pole Mounting Bracket

Standard	LB18 LB24	LW18 LW24	QZ18 QZ24	SZ18 SZ24	QL18 QL24	SL18 SL24	QLA18 QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed information about the pole specifications and dimensions.

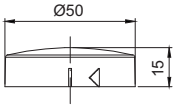
Power Line Wiring Instruction



Terminal box can be wired without a special tool by using the push and release locking mechanism.

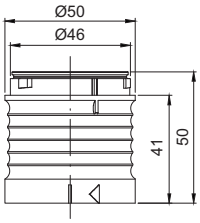
Modular Products Detailed Specifications : QT50L/QT50ML

(Units : mm)

Shape	Parts Name	Model No.	Common Specifications
	QT50L cover	Q50L-CV	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×15 

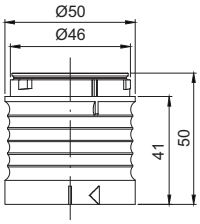
LED Steady Module

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-NR Red LED Steady Module	Q50L-NR-12 Q50L-NR-24 Q50L-NR-110 Q50L-NR-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×50 
	Q50L-NA Amber LED Steady Module	Q50L-NA-12 Q50L-NA-24 Q50L-NA-110 Q50L-NA-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	
	Q50L-NG Green LED Steady Module	Q50L-NG-12 Q50L-NG-24 Q50L-NG-110 Q50L-NG-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	
	Q50L-NB Blue LED Steady Module	Q50L-NB-12 Q50L-NB-24 Q50L-NB-110 Q50L-NB-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	
	Q50L-NC White LED Steady Module	Q50L-NC-12 Q50L-NC-24 Q50L-NC-110 Q50L-NC-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	

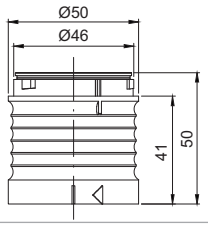
LED Simulated Revolving module

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-FR Red LED Steady/Flashing Module	Q50L-FR-12 Q50L-FR-24 Q50L-FR-110 Q50L-FR-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×50 
	Q50L-FA Amber LED Steady/Flashing Module	Q50L-FA-12 Q50L-FA-24 Q50L-FA-110 Q50L-FA-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	
	Q50L-FG Green LED Steady/Flashing Module	Q50L-FG-12 Q50L-FG-24 Q50L-FG-110 Q50L-FG-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	

(Units : mm)

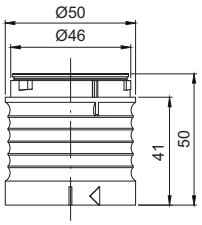
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-FB Blue LED Steady/Flashing Module	Q50L-FB-12 Q50L-FB-24 Q50L-FB-110 Q50L-FB-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×50
	Q50L-FC White LED Steady/Flashing Module	Q50L-FC-12 Q50L-FC-24 Q50L-FC-110 Q50L-FC-220	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	



LED Strobe Module

(Units : mm)

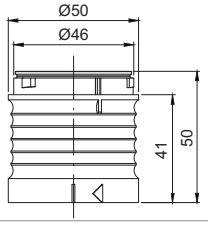
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-SR Red LED Strobe Module	Q50L-SR-12 Q50L-SR-24	DC12V DC24V	0.100A 0.120A	
	Q50L-SA Amber LED Strobe Module	Q50L-SA-12 Q50L-SA-24	DC12V DC24V	0.100A 0.120A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×50
	Q50L-SG Green LED Strobe Module	Q50L-SG-12 Q50L-SG-24	DC12V DC24V	0.100A 0.120A	
	Q50L-SB Blue LED Strobe Module	Q50L-SB-12 Q50L-SB-24	DC12V DC24V	0.100A 0.120A	
	Q50L-SC White LED Strobe Module	Q50L-SC-12 Q50L-SC-24	DC12V DC24V	0.100A 0.120A	



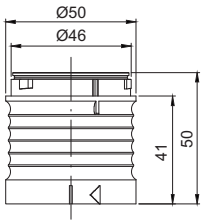
LED Revolving/ Flashing Module

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-RR Red LED Revolving Flashing Module	Q50L-RR-12 Q50L-RR-24	DC12V DC24V	0.050A 0.060A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×50
	Q50L-RA Amber LED Revolving Flashing Module	Q50L-RA-12 Q50L-RA-24	DC12V DC24V	0.050A 0.060A	

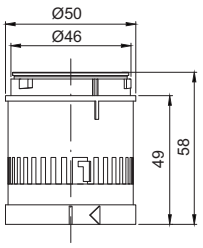


(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-RG Green LED Revolving Flashing Module	Q50L-RG-12 Q50L-RG-24	DC12V DC24V	0.050A 0.060A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50×50
	Q50L-RB Blue LED Revolving Flashing Module	Q50L-RB-12 Q50L-RB-24	DC12V DC24V	0.050A 0.060A	
	Q50L-RC White LED Revolving Flashing Module	Q50L-RC-12 Q50L-RC-24	DC12V DC24V	0.050A 0.060A	

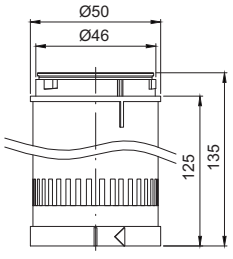
Buzzer Module

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-BZ Buzzer Module	Q50L-BZ-12 Q50L-BZ-24 Q50L-BZ-110 Q50L-BZ-220	DC12V DC24V AC110V AC220V	0.015A 0.028A 0.021A 0.038A	• Material : PC • Protection ratings with assemble : IP54 • Product size : Ø50×58 • Sound : Max 90dB 

Signal Sound Module

(Units : mm)

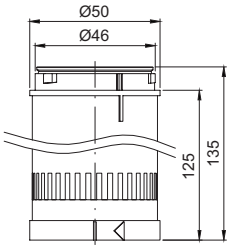
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-WS Warning sound module	Q50L-WS-12 Q50L-WS-24	DC12V DC24V	0.250A 0.172A	• Material : PC • Protection ratings with assemble : IP54 • Product size : Ø50×135 • Sound : Max 85dB 
	Q50L-WM Melody module	Q50L-WM-12 Q50L-WM-24	DC12V DC24V	0.283A 0.194A	
	Q50L-WA Alarm module	Q50L-WA-12 Q50L-WA-24	DC12V DC24V	0.288A 0.200A	

QT50 series

Modular Multi-Functional LED Tower Lights

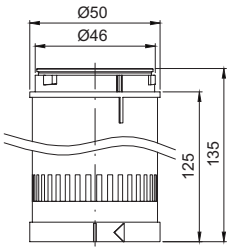
USB Module(Built-In Signal Sound)

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-USB-WS Warning Sounds Module (USB Type)	Q50L-USB-WS-12 Q50L-USB-WS-24	USB 5V	0.500A	• Material : PC • Protection ratings with assemble : IP 54 • Product size : Ø50×135 • Sound : Max 85dB 
	Q50L-USB-WM Melody Module (USB Type)	Q50L-USB-WM-12 Q50L-USB-WM-24	USB 5V	0.500A	
	Q50L-USB-WA Alarm Module (USB Type)	Q50L-USB-WA-12 Q50L-USB-WA-24	USB 5V	0.500A	

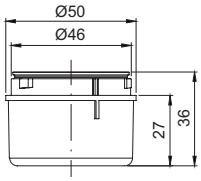
Ethernet Module(Built-In Signal Sound)

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q50L-ETN-WS Warning Sounds Module (Ethernet type)	Q50L-ETN-WS-12 Q50L-ETN-WS-24	DC12V DC24V	0.250A 0.172A	• Material : PC • Protection ratings with assemble : IP 54 • Product size : Ø50 x 135 • Sound : Max 85dB 
	Q50L-ETN-WM Melody Module (Ethernet Type)	Q50L-ETN-WM-12 Q50L-ETN-WM-24	DC12V DC24V	0.283A 0.194A	
	Q50L-ETN-WA Alarm Module (Ethernet Type)	Q50L-ETN-WA-12 Q50L-ETN-WA-24	DC12V DC24V	0.288A 0.200A	

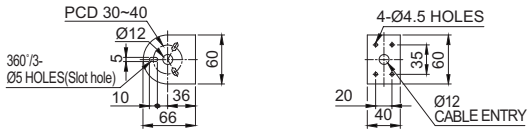
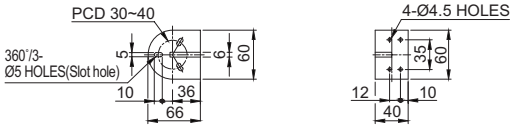
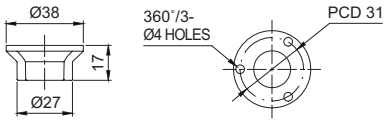
Base Module

(Units : mm)

Shape	Parts Name	Model No.	Common Specifications
	Base Module	Q50L-BS	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø50 x 36 
	Built-In Signal Sound Module	Q50L-W-BS	
	PC Control Module	Q50L-Special-BS	

Mount Bracket Module

(Units : mm)

Shape	Parts Name	Model No.	Material	Technical Diagram
	Wall Mount Bracket	TWS45	Steel	
	Wall Mount Bracket	TWA45	PC	
	Pole Module	Q50L-PB	PC	

QT50L

Ø50mm Modular Multi-Functional LED Tower Lights

IP65 | -30~+50℃ | NPN | PNP



QT50L

Color Options:

Beige color is available



QT50L Ø50mm Modular LED Tower Lights, Pole Mount

Product consist of signal light modules, base module, and pole module

Specifications

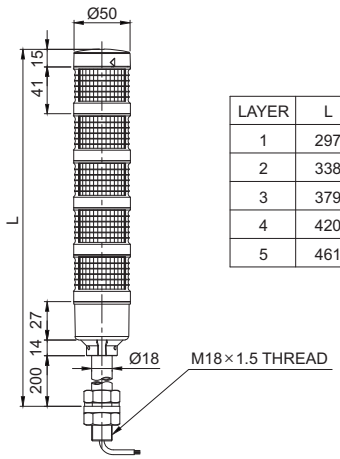
Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT50L QT50LF	1	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	CE DC24V only	0.25kg 0.25kg 0.26kg 0.26kg	• R-Red
	2	DC12V DC24V AC110V AC220V	0.160A 0.080A 0.036A 0.040A		0.30kg 0.30kg 0.31kg 0.31kg	• R-Red • G-Green
	3	DC12V DC24V AC110V AC220V	0.240A 0.120A 0.054A 0.060A		0.34kg 0.34kg 0.35kg 0.35kg	• R-Red • A-Amber • G-Green
	4	DC12V DC24V AC110V AC220V	0.320A 0.160A 0.072A 0.080A		0.38kg 0.38kg 0.39kg 0.39kg	• R-Red • A-Amber • G-Green • B-Blue
	5	DC12V DC24V AC110V AC220V	0.400A 0.200A 0.090A 0.100A		0.43kg 0.43kg 0.44kg 0.44kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

QT50L Steady Module
QT50LF Steady/Flashing Module
\+ Base Module(BS) + Pole Module(PB)

※ Please refer to page 338-341 for detailed specification of module.

Technical Diagram (Units : mm)

QT50L



LAYER	L
1	297
2	338
3	379
4	420
5	461

Customization

- Customized pole length available
- Beige color
- LED strobe(Model number : QT50LS)
- LED simulated revolving (Model number : QT50LR)

Wiring Instructions

- LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed information about the pole specifications and dimensions.

Ordering Specification

QT50L	-	3	-	24	-	RAG	-	QZ18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QT50L • QT50LF		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

QT50L-BZ

Ø50mm Built-in Buzzer Modular Multi-Functional LED Tower Lights

IP54 | -30~+50℃ | BUZZER | 90dB | NPN | PNP



QT50L-BZ

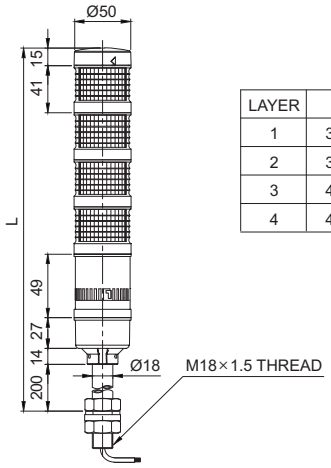
Color Options:

Beige color is available



Technical Diagram (Units : mm)

QT50L-BZ



LAYER	L
1	346
2	387
3	428
4	469

Customization

- Customized pole length available
- Beige color
- LED strobe
  (Model number : QT50LS-BZ)
- LED simulated revolving
  (Model number : QT50LR-BZ)

QT50L-BZ Ø50mm Built-in Buzzer Modular LED Tower Lights, Pole Mount

Product that consist of signal lights module, base module, pole module

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT50L-BZ QT50LF-BZ (Max 90dB)	1	DC12V DC24V AC110V AC220V	0.095A 0.068A 0.039A 0.058A	CE DC24V only	0.32kg 0.32kg 0.33kg 0.33kg	● R-Red
	2	DC12V DC24V AC110V AC220V	0.175A 0.108A 0.057A 0.078A		0.37kg 0.37kg 0.38kg 0.38kg	● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.255A 0.148A 0.075A 0.098A		0.41kg 0.41kg 0.42kg 0.42kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.335A 0.188A 0.093A 0.118A		0.45kg 0.45kg 0.46kg 0.46kg	● R-Red ● A-Amber ● G-Green ● B-Blue

QT50L Steady Module
QT50LF Steady/Flashing Module
+ Base Module(BS) + Pole Module(PB) + Buzzer Module(BZ)

※ Please refer to page 338-341 for detailed specification of module.

Wiring Instructions

- LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed information about the pole specifications and dimensions.

Ordering Specification

QT50L-BZ	-	3	-	24	-	RAG	-	QZ18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QT50L-BZ • QT50LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

QT50L-W

Ø50mm Built-in Signal Modular Multi-Functional LED Tower Lights

IP54 | -30~+50℃ | SPK | 85dB | NPN



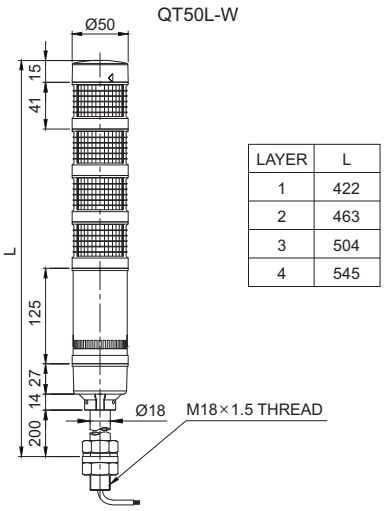
QT50L-W

Color Options:

Beige color is available



Technical Diagram (Units : mm)



LAYER	L
1	422
2	463
3	504
4	545

Customization

- Customized pole length available
- Beige color
- LED strobe(Model number : QT50LS-W)
- LED simulated revolving (Model number : QT50LR-W)

QT50L-W Ø50mm Built-in Signal Modular LED Tower Lights, Pole Mount

Product consists of signal light modules, base module, and pole module

Specifications

Model number	Layer	built-in Sound	Voltage	Current	Certificates	Weight	Color
QT50L-WS QT50L-WM QT50L-WA QT50LF-WS QT50LF-WM QT50LF-WA	1	WS-5 Warning Sounds WM-5 Melodies WA-Alarm Sounds (Max 85dB)	DC12V	0.368A	-	0.42kg	● R-Red
			DC24V	0.240A		0.42kg	
	2		DC12V	0.448A		0.46kg	● R-Red ● G-Green
			DC24V	0.280A		0.46kg	
	3		DC12V	0.528A		0.50kg	● R-Red ● A-Amber ● G-Green
			DC24V	0.320A		0.50kg	
	4		DC12V	0.608A		0.54kg	● R-Red ● A-Amber ● G-Green ● B-Blue
			DC24V	0.360A		0.54kg	

QT50L Steady Module
QT50LF Steady/Flashing Module
+ Base Module(BS) + Pole Module(PB) +
Signal Sound Module
WS Warning Sounds
WM Melody
WA Alarm

※ Please refer to page 338-341 for detailed specification of module.
※ Please refer to page 24 for detailed sound specification.

Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed information about the pole specifications and dimensions.

Ordering Specification

QT50L-WS	-	3	-	24	-	RAG	-	QZ18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QT50L-WS • QT50L-WM • QT50L-WA • QT50LF-WS • QT50LF-WM • QT50LF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

QT50ML

Ø50mm Modular LED Tower Lights

IP65 | -30~+50℃ | NPN | PNP



QT50ML

Color Options:

Beige color is available



QT50ML Ø50mm Modular LED Tower Lights, Direct Mount

Product that consist of signal lights module, base module

Specifications

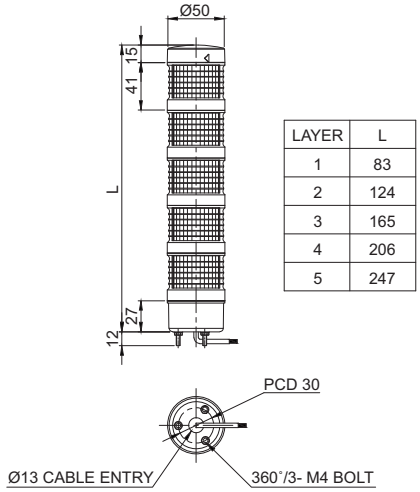
Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT50ML QT50MLF	1	DC12V DC24V AC110V AC220V	0.080A 0.040A 0.018A 0.020A	CE DC24V only	0.10kg 0.10kg 0.11kg 0.11kg	● R-Red
	2	DC12V DC24V AC110V AC220V	0.160A 0.080A 0.036A 0.040A		0.14kg 0.14kg 0.15kg 0.15kg	● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.240A 0.120A 0.054A 0.060A		0.19kg 0.19kg 0.20kg 0.20kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.320A 0.160A 0.072A 0.080A		0.23kg 0.23kg 0.24kg 0.24kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V AC110V AC220V	0.400A 0.200A 0.090A 0.100A		0.27kg 0.27kg 0.28kg 0.28kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QT50L Steady Module
QT50LF Steady/Flashing Module + Base Module(BS)

※ Please refer to page 338-341 for detailed specification of module.

Technical Diagram (Units : mm)

QT50ML



LAYER	L
1	83
2	124
3	165
4	206
5	247

Wiring Instructions

- LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Customization

- Beige color
- LED strobe(Model number: QT50MLS)
- LED simulated revolving(Model number : QT50MLR)
- Wall mount bracket :
  Bracket Structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

QT50ML	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QT50ML • QT50MLF		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QT50ML-BZ

Ø50mm Built-in Buzzer Modular LED Tower Lights

IP54 | -30~+50℃ | BUZZER | 90dB | NPN | PNP



QT50ML-BZ

Color Options:

Beige color is available



QT50ML-BZ Ø50mm Built-in Buzzer Modular LED Tower Lights, Direct Mount

Product that consist of signal lights module, base module, buzzer module

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT50ML-BZ QT50MLF-BZ (Max 90dB)	1	DC12V DC24V AC110V AC220V	0.095A 0.068A 0.039A 0.058A	CE DC24V only	0.17kg 0.17kg 0.18kg 0.18kg	● R-Red
	2	DC12V DC24V AC110V AC220V	0.175A 0.108A 0.057A 0.078A		0.21kg 0.21kg 0.22kg 0.22kg	● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.255A 0.148A 0.075A 0.098A		0.25kg 0.25kg 0.26kg 0.26kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.335A 0.188A 0.093A 0.118A		0.30kg 0.30kg 0.31kg 0.31kg	● R-Red ● A-Amber ● G-Green ● B-Blue

QT50L Steady Module
QT50LF Steady/Flashing Module
+ Base Module(BS) + Buzzer(BZ)

※ Please refer to page 338-341 for detailed specification of module.

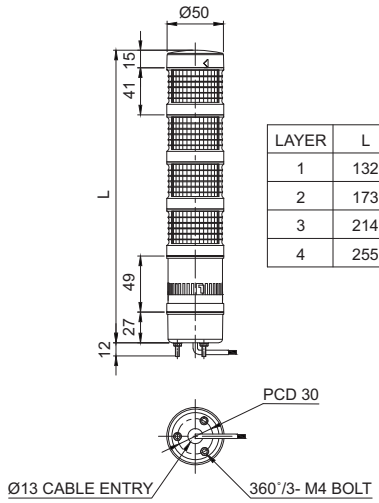
Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Technical Diagram (Units : mm)

QT50ML-BZ



LAYER	L
1	132
2	173
3	214
4	255

Customization

• Beige color
• LED strobe(model number : QT50MLS-BZ)
• LED simulated revolving(model number : QT50MLR-BZ)
• Wall mount bracket :
Bracket Structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

QT50ML-BZ	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QT50ML-BZ • QT50MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

QT50ML-W

Ø50mm Built-in Signal Modular LED Tower Lights

IP54 | -30~+50℃ | SPK | 85dB | NPN



QT50ML-W

QT50ML-W Ø50mm Built-in Signal Modular LED Tower Lights, Direct Mount

Product that consist of signal lights module, base module, buzzer module

Specifications

Model number	Layer	built-in Sound	Voltage	Current	Certificates	Weight	Color
QT50ML-WS QT50ML-WM QT50ML-WA QT50MLF-WS QT50MLF-WM QT50MLF-WA	1	WS-5 Warning Sounds WM-5 Melodies WA-Alarm Sounds (Max 85dB)	DC12V	0.368A	-	0.27kg	● R-Red
			DC24V	0.240A		0.27kg	
	2		DC12V	0.448A		0.28kg	● R-Red ● G-Green
			DC24V	0.280A		0.28kg	
	3		DC12V	0.528A		0.30kg	● R-Red ● A-Amber ● G-Green
			DC24V	0.320A		0.30kg	
	4		DC12V	0.608A		0.32kg	● R-Red ● A-Amber ● G-Green ● B-Blue
			DC24V	0.360A		0.32kg	

QT50L Steady Module
QT50LF Steady/Flashing Module
+ Base Module(BS) +
Signal Sound Module
WS Warning Sounds
WM Melody
WA Alarm

※ Please refer to page 338-341 for detailed specification of module.
※ Please refer to page 24 for detailed sound specification.

Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Customization

• Beige color
• LED strobe(model number : QT50MLS-W)
• LED simulated revolving(model number : QT50MLR-W)
• Wall mount bracket :
Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

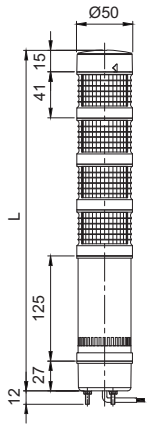
Color Options:

Beige color is available



Technical Diagram (Units : mm)

QT50ML-W



LAYER	L
1	208
2	249
3	290
4	331

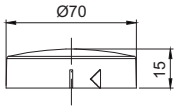


Ordering Specification

QT50ML-WS	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QT50ML-WS • QT50ML-WM • QT50ML-WA • QT50MLF-WS • QT50MLF-WM • QT50MLF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

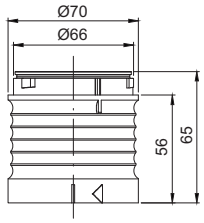
Module Specifications QT70L/QT70ML

(Units : mm)

Shape	Parts Name	Model No.	Common Specifications
	QT70L cover	Q70L-CV	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø70×15 

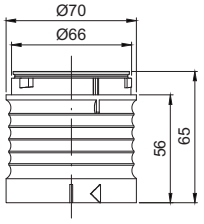
LED Steady Module

(Units : mm)

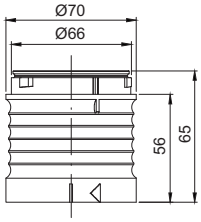
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-NR Red LED Steady Module	Q70L-NR-12 Q70L-NR-24 Q70L-NR-110 Q70L-NR-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø70×65 
	Q70L-NA Amber LED Steady Module	Q70L-NA-12 Q70L-NA-24 Q70L-NA-110 Q70L-NA-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	
	Q70L-NG Green LED Steady Module	Q70L-NG-12 Q70L-NG-24 Q70L-NG-110 Q70L-NG-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	
	Q70L-NB Blue LED Steady Module	Q70L-NB-12 Q70L-NB-24 Q70L-NB-110 Q70L-NB-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	
	Q70L-NC White LED Steady Module	Q70L-NC-12 Q70L-NC-24 Q70L-NC-110 Q70L-NC-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	

LED Simulated Revolving module

(Units : mm)

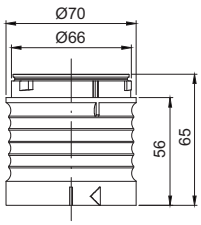
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-FR Red LED Steady/Flashing Module	Q70L-FR-12 Q70L-FR-24 Q70L-FR-110 Q70L-FR-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	• Material : PC • Protection ratings with assemble : IP 65 • Product size : Ø70×65 
	Q70L-FA Amber LED Steady/Flashing Module	Q70L-FA-12 Q70L-FA-24 Q70L-FA-110 Q70L-FA-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	
	Q70L-FG Green LED Steady/Flashing Module	Q70L-FG-12 Q70L-FG-24 Q70L-FG-110 Q70L-FG-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-FB Blue LED Steady/Flashing Module	Q70L-FB-12 Q70L-FB-24 Q70L-FB-110 Q70L-FB-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	• Material : PC • Protection rating : IP65 • Dimension : Ø70×65 
	Q70L-FC White LED Steady/Flashing Module	Q70L-FC-12 Q70L-FC-24 Q70L-FC-110 Q70L-FC-220	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	

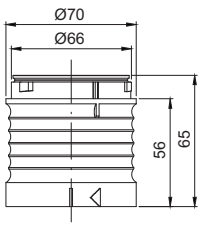
LED Strobe Module

(Units : mm)

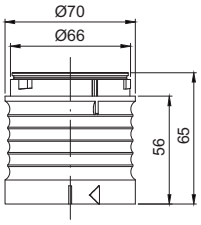
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-SR Red LED Strobe Module	Q70L-SR-12 Q70L-SR-24	DC12V DC24V	0.140A 0.160A	• Material : PC • Protection rating : IP65 • Dimension : Ø70×65 
	Q70L-SA Amber LED Strobe Module	Q70L-SA-12 Q70L-SA-24	DC12V DC24V	0.140A 0.160A	
	Q70L-SG Green LED Strobe Module	Q70L-SG-12 Q70L-SG-24	DC12V DC24V	0.140A 0.160A	
	Q70L-SB Blue LED Strobe Module	Q70L-SB-12 Q70L-SB-24	DC12V DC24V	0.140A 0.160A	
	Q70L-SC White LED Strobe Module	Q70L-SC-12 Q70L-SC-24	DC12V DC24V	0.140A 0.160A	

LED Revolving/ Flashing module

(Units : mm)

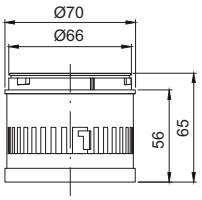
Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-RR Red LED Revolving Flashing Module	Q70L-RR-12 Q70L-RR-24	DC12V DC24V	0.060A 0.070A	• Material : PC • Protection rating : IP65 • Dimension : Ø70x65 
	Q70L-RA Amber LED Revolving Flashing Module	Q70L-RA-12 Q70L-RA-24	DC12V DC24V	0.060A 0.070A	

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-RG Green LED Revolving Flashing Module	Q70L-RG-12 Q70L-RG-24	DC12V DC24V	0.060A 0.070A	• Material : PC • Protection rating : IP65 • Dimension : Ø70×65
	Q70L-RB Blue LED Revolving Flashing Module	Q70L-RB-12 Q70L-RB-24	DC12V DC24V	0.060A 0.070A	
	Q70L-RC White LED Revolving Flashing Module	Q70L-RC-12 Q70L-RC-24	DC12V DC24V	0.060A 0.070A	

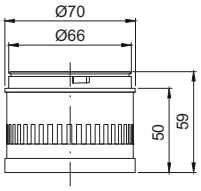
Buzzer Module

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-BZ Buzzer Module	Q70L-BZ-12 Q70L-BZ-24 Q70L-BZ-110 Q70L-BZ-220	DC12V DC24V AC110V AC220V	0.015A 0.028A 0.021A 0.038A	• Material : PC • Protection rating : IP54 • Dimension : Ø70×65 • Volume : Max 90dB
	Q70L-BZS Siren Buzzer Module	Q70L-BZS-12 Q70L-BZS-24 Q70L-BZS-110 Q70L-BZS-220	DC12V DC24V AC110V AC220V	0.240A 0.150A 0.018A 0.009A	

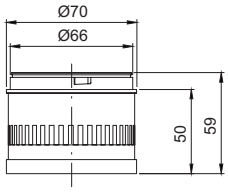
Siren Module

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-WS Siren Module	Q70L-WS-12 Q70L-WS-24	DC12V DC24V	0.250A 0.170A	• Material : PC • Protection rating : IP54 • Dimension : Ø70×59 • Volume : Max 85dB
	Q70L-WM Melody Module	Q70L-WM-12 Q70L-WM-24	DC12V DC24V	0.280A 0.190A	
	Q70L-WA Alarm Module	Q70L-WA-12 Q70L-WA-24	DC12V DC24V	0.280A 0.200A	

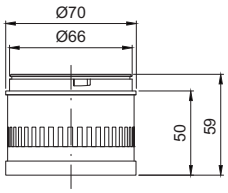
USB Module(Built-in Sounder)

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-USB-WS Siren Module (USB Type)	Q70L-USB-WS-12 Q70L-USB-WS-24	USB 5V	0.500A	• Material : PC • Protection rating : IP54 • Dimension : Ø70×59 • Volume : Max 85dB 
	Q70L-USB-WM Melody Module (USB Type)	Q70L-USB-WM-12 Q70L-USB-WM-24	USB 5V	0.500A	
	Q70L-USB-WA Alarm Module (USB Type)	Q70L-USB-WA-12 Q70L-USB-WA-24	USB 5V	0.500A	

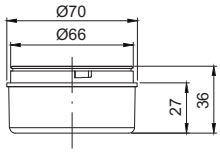
Ethernet Module(Built-in Sounder)

(Units : mm)

Shape	Parts Name	Model No.	Specification		Common Specifications
			Voltage	Current	
	Q70L-ETN-WS Siren Module (Ethernet Type)	Q70L-ETN-WS-12 Q70L-ETN-WS-24	DC12V DC24V	0.250A 0.172A	• Material : PC • Protection rating : IP54 • Dimension : Ø70×59 • Volume : Max 85dB 
	Q70L-ETN-WM Melody Module (Ethernet Type)	Q70L-ETN-WM-12 Q70L-ETN-WM-24	DC12V DC24V	0.283A 0.194A	
	Q70L-ETN-WA Alarm Module (Ethernet Type)	Q70L-ETN-WA-12 Q70L-ETN-WA-24	DC12V DC24V	0.288A 0.200A	

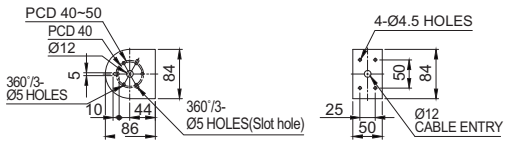
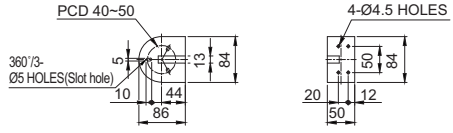
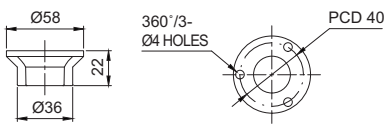
Base Module

(Units : mm)

Shape	Parts Name	Model No.	Common Specifications
	Basic Module	Q70L-BS	• Material : PC • Protection rating : IP65 • Dimension : Ø70×36 
	Built-in Sounder Module	Q70L-W-BS	
	Special Module	Q70L-Special-BS	

Ethernet Module(Built-in Sounder)

(Units : mm)

Shape	Parts Name	Model No.	Material	Technical Diagram
	Wall Mount Bracket	TWS80	Steel	
	Wall Mount Bracket	TWA80	PC	
	Pole Module	Q70L-PB	PC	

QT70L

Ø70mm Multi-Functional Modular LED Tower Lights

IP65 | -30~+50℃ | NPN | PNP



QT70L

Color Options:

Beige color is available



QT70L Ø70mm Pole Mount Modular LED Tower Lights

Consist of lens module, base module and pole module

Specifications

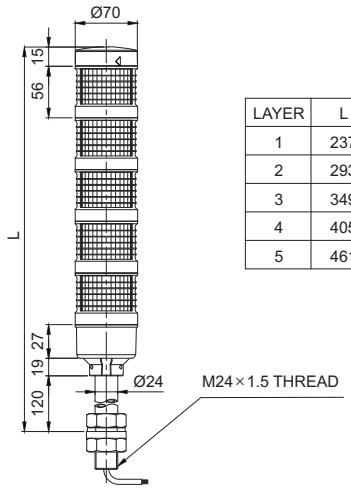
Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT70L QT70LF	1	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	CE DC24V only	0.41kg 0.41kg 0.42kg 0.42kg	• R-Red
	2	DC12V DC24V AC110V AC220V	0.240A 0.120A 0.036A 0.040A		0.48kg 0.48kg 0.49kg 0.49kg	• R-Red • G-Green
	3	DC12V DC24V AC110V AC220V	0.360A 0.180A 0.054A 0.060A		0.55kg 0.55kg 0.56kg 0.56kg	• R-Red • A-Amber • G-Green
	4	DC12V DC24V AC110V AC220V	0.480A 0.240A 0.072A 0.080A		0.63kg 0.63kg 0.64kg 0.64kg	• R-Red • A-Amber • G-Green • B-Blue
	5	DC12V DC24V AC110V AC220V	0.600A 0.300A 0.090A 0.100A		0.71kg 0.71kg 0.72kg 0.72kg	• R-Red • A-Amber • G-Green • B-Blue • W-White

QT70L Steady Module
QT70LF Steady/Flashing Module
\+ Base Module(BS) + Pole Module(PB)

※ Please refer to page 348-351 for detailed specification of module.

Technical Diagram (Units : mm)

QT70L



LAYER	L
1	237
2	293
3	349
4	405
5	461

Customization

- Customized pole length available
- Beige color
- LED strobe (Model number : QT70LS)
- LED simulated revolving (Model number : QT70LR)

Wiring Instructions

- LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimension of mount brackets.

Ordering Specification

QT70L	-	3	-	24	-	RAG	-	QZ24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QT70L • QT70LF		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

QT70L-BZ

Ø70mm Multi-Functional Modular LED Tower Lights with Buzzer

IP54 | -30~+50℃ | BUZZER | 90dB | NPN | PNP



QT70L-BZ

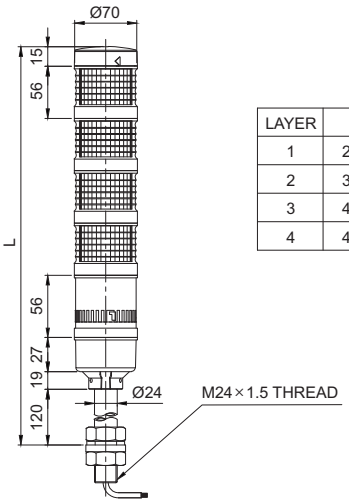
Color Options:

Beige color is available



Technical Diagram (Units : mm)

QT70L-BZ



LAYER	L
1	293
2	349
3	405
4	461

Customization

- Customized pole length available
- Beige color
- LED strobe (Model number : QT70LS-BZ)
- LED simulated revolving (Model number : QT70LR-BZ)

QT70L-BZ Ø70mm Pole Mount Modular LED Tower Lights with Buzzer

Consist of LED module, base module, buzzer module and pole module

Specifications

Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT70L-BZ QT70LF-BZ (Max 90dB)	1	DC12V DC24V AC110V AC220V	0.135A 0.088A 0.039A 0.058A	CE DC24V only	0.50kg 0.50kg 0.51kg 0.51kg	● R-Red
	2	DC12V DC24V AC110V AC220V	0.255A 0.148A 0.057A 0.078A		0.58kg 0.88kg 0.59kg 0.59kg	● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.375A 0.208A 0.075A 0.098A		0.65kg 0.65kg 0.66kg 0.66kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.495A 0.268A 0.093A 0.118A		0.73kg 0.73kg 0.74kg 0.74kg	● R-Red ● A-Amber ● G-Green ● B-Blue

QT70L Steady Module
QT70LF Steady/Flashing Module
+ Base Module(BS) + Pole Module(PB) + Buzzer Module(BZ)

※ Please refer to page 348-351 for detailed specification of module.

Wiring Instructions

- LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimension of mount brackets.

Ordering Specification

QT70L-BZ	-	3	-	24	-	RAG	-	QZ24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QT70L-BZ • QT70LF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

QT70L-W

Ø70mm Multi-Functional Modular LED Tower Lights with Sounder

IP54 | -30~+50℃ | SPK | 85dB | NPN



QT70L-W

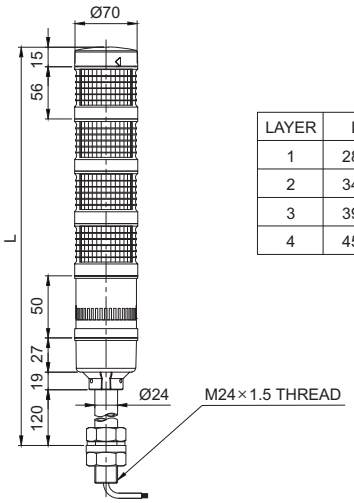
Color Options:

Beige color is available



Technical Diagram (Units : mm)

QT70L-W



LAYER	L
1	287
2	343
3	399
4	455

Customization

- Customized pole length available
- Beige color
- LED strobe (Model number : QT70LS-W)
- LED simulated revolving (Model number : QT70LR-W)

QT70L-W Ø70mm Pole Mount Modular LED Tower Lights with Sounder

Consist of LED module, base module, sounder module and pole module

Specifications

Model number	Layer	built-in Sound	Voltage	Current	Certificates	Weight	Color
QT70L-WS QT70L-WM QT70L-WA QT70LF-WS QT70LF-WM QT70LF-WA	1	WS-5 Warning sounds WM-5 Melodies WA-Alarms (Max 85dB)	DC12V	0.400A	-	0.62kg	● R-Red
			DC24V	0.260A		0.62kg	
	2		DC12V	0.520A		0.69kg	● R-Red ● G-Green
			DC24V	0.320A		0.69kg	
	3		DC12V	0.640A		0.76kg	● R-Red ● A-Amber ● G-Green
			DC24V	0.380A		0.76kg	
	4		DC12V	0.760A		0.84kg	● R-Red ● A-Amber ● G-Green ● B-Blue
			DC24V	0.440A		0.84kg	

QT70L Steady Module
QT70LF Steady/Flashing Module
+ Base Module(BS) + Pole Module(PB) +
Signal Sound Module
WS Warning sounds
WM Melodies
WA Alarms

※ Please refer to page 348-351 for detailed specification of module.
※ Please refer to page 24 for detailed sound specification.

Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Mounting Bracket

Standard	LB24	LW24	QZ24	SZ24	QL24	SL24	QLA24
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimension of mount brackets.

Ordering Specification

QT70L-WA	-	3	-	24	-	RAG	-	QZ24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QT70L-WS • QT70L-WM • QT70L-WA • QT70LF-WS • QT70LF-WM • QT70LF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

QT70ML

Ø70mm Multi-Functional Modular LED Tower Lights

IP65 | -30~+50℃ | NPN | PNP



QT70ML

Color Options:

Beige color is available



QT70ML Ø70mm Direct Mount Modular LED Tower Lights

Consist of LED module and base module

Specifications

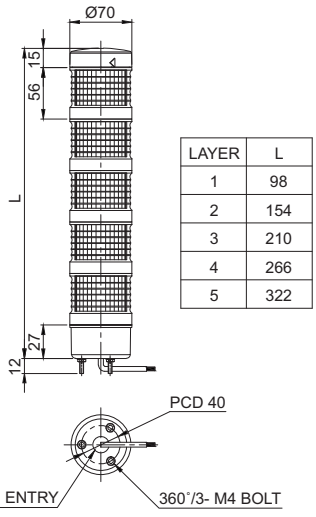
Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT70ML QT70MLF	1	DC12V DC24V AC110V AC220V	0.120A 0.060A 0.018A 0.020A	CE DC24V only	0.17kg 0.17kg 0.18kg 0.18kg	● R-Red
	2	DC12V DC24V AC110V AC220V	0.240A 0.120A 0.036A 0.040A		0.25kg 0.25kg 0.26kg 0.26kg	● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.360A 0.180A 0.054A 0.060A		0.32kg 0.32kg 0.33kg 0.33kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.480A 0.240A 0.072A 0.080A		0.40kg 0.40kg 0.41kg 0.41kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V AC110V AC220V	0.600A 0.300A 0.090A 0.100A		0.47kg 0.47kg 0.48kg 0.48kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QT70L Steady Module
QT70LF Steady/Flashing Module + Base Module(BS)

※ Please refer to page 348-351 for detailed specification of module.

Technical Diagram (Units : mm)

QT70ML



LAYER	L
1	98
2	154
3	210
4	266
5	322

Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Customization

• Beige color
• LED strobe (Model number : QT70MLS)
• LED simulated revolving (Model number : QT70MLR)
• Wall mount bracket :
Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

QT70ML	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QT70ML • QT70MLF		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers • 5-5Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QT70ML-BZ

Ø70mm Multi-Functional Modular LED Tower Lights with Buzzer

IP54 | -30~+50℃ | BUZZER | 90dB | NPN | PNP



QT70ML-BZ

Color Options:

Beige color is available



QT70ML-BZ Ø70mm Direct Mount Modular LED Tower Lights with Buzzer

Consist of LED module, base module and buzzer module

Specifications

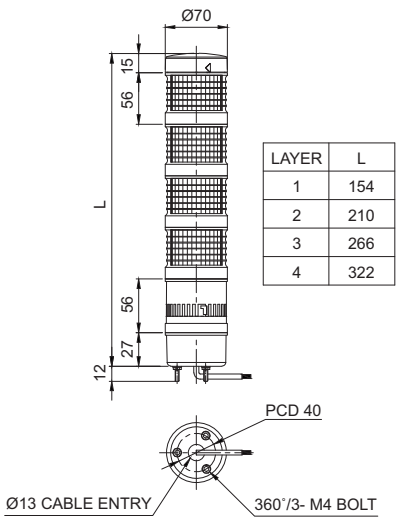
Model number	Layer	Voltage	Current	Certificates	Weight	Color
QT70ML-BZ QT70MLF-BZ (Max 90dB)	1	DC12V DC24V AC110V AC220V	0.135A 0.088A 0.039A 0.058A	CE DC24V only	0.26kg 0.26kg 0.27kg 0.27kg	● R-Red
	2	DC12V DC24V AC110V AC220V	0.265A 0.148A 0.057A 0.078A		0.34kg 0.34kg 0.35kg 0.35kg	● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.375A 0.208A 0.075A 0.098A		0.42kg 0.42kg 0.43kg 0.43kg	● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.495A 0.268A 0.093A 0.118A		0.49kg 0.49kg 0.50kg 0.50kg	● R-Red ● A-Amber ● G-Green ● B-Blue

QT70L Steady Module
QT70LF Steady/Flashing Module
+ Base Module(BS) + Buzzer(BZ)

※ Please refer to page 348-351 for detailed specification of module.

Technical Diagram (Units : mm)

QT70ML-BZ



LAYER	L
1	154
2	210
3	266
4	322

Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Customization

• Beige color
• LED strobe (Model number : QT70MLS-BZ)
• LED simulated revolving (Model number : QT70MLR-BZ)
• Wall mount bracket :
Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

QT70ML-BZ	-	3	-	220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QT70ML-BZ • QT70MLF-BZ		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue

QT70ML-W

Ø70mm Multi-Functional Modular LED Tower Lights with Sounder

IP54 | -30~+50℃ | SPK | 85dB | NPN



QT70ML-W

Color Options:

Beige color is available



QT70ML-W Ø70mm Pole Mount Modular LED Tower Lights with Sounder

Consist of LED module, base module, sounder module and pole module

Specifications

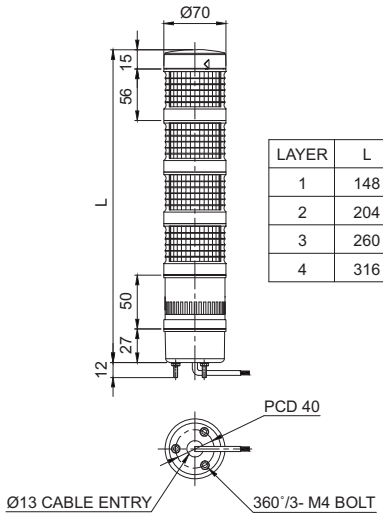
Model number	Layer	built-in Sound	Voltage	Current	Certificates	Weight	Color
QT70ML-WS QT70ML-WM QT70ML-WA QT70MLF-WS QT70MLF-WM QT70MLF-WA	1	WS-5 Warning sounds WM-5 Melodies WA-Alarms (Max 85dB)	DC12V	0.400A	-	0.37kg	● R-Red
			DC24V	0.260A		0.37kg	
	2		DC12V	0.520A		0.44kg	● R-Red ● G-Green
			DC24V	0.320A		0.44kg	
	3		DC12V	0.640A		0.54kg	● R-Red ● A-Amber ● G-Green
			DC24V	0.380A		0.54kg	
	4		DC12V	0.760A		0.59kg	● R-Red ● A-Amber ● G-Green ● B-Blue
			DC24V	0.440A		0.59kg	

QT70L Steady Module
QT70LF Steady/Flashing Module
+ Base Module(BS) +
Signal Sound Module
WS Warning sounds
WM Melodies
WA Alarms

※ Please refer to page 348-351 for detailed specification of module.
※ Please refer to page 24 for detailed sound specification.

Technical Diagram (Units : mm)

QT70ML-W



LAYER	L
1	148
2	204
3	260
4	316

Wiring Instructions

• LED tower light can be wired with external contact and transistor

※ Please refer to page 358 for detailed information about the wiring instructions.

Customization

• Beige color
• LED strobe (Model number : QT70MLS-W)
• LED simulated revolving (Model number : QT70MLR-W)
• Wall mount bracket :
Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



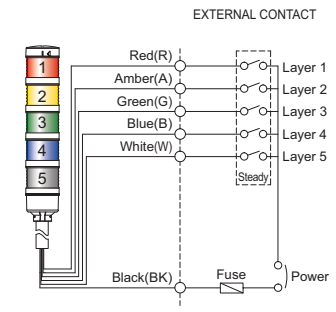
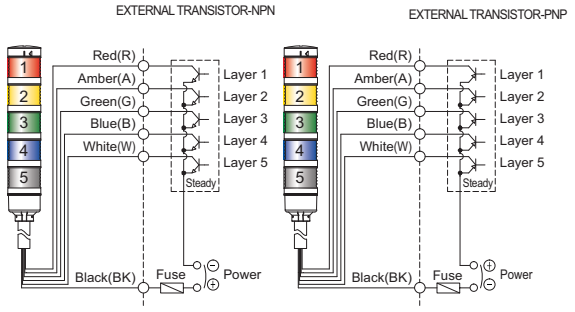
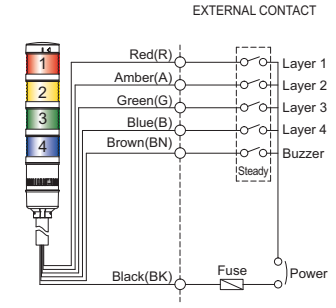
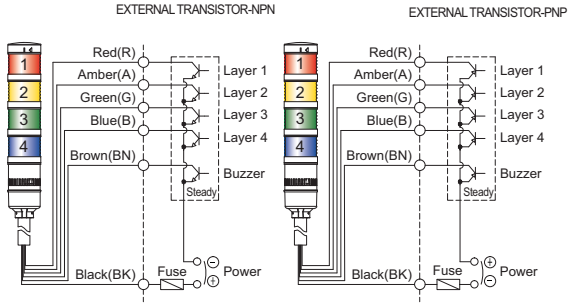
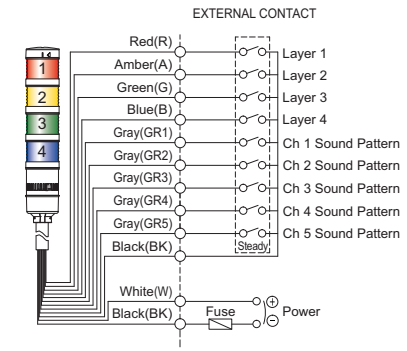
Wall Mount Bracket **TWA80**

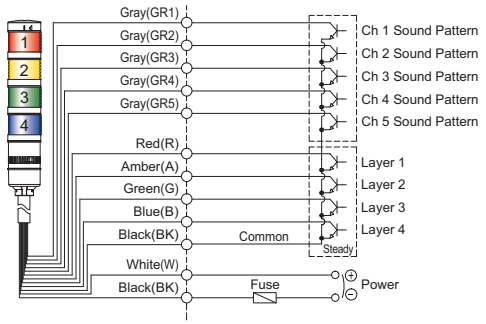
Ordering Specification

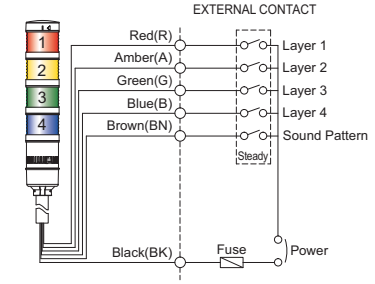
QT70ML-WA	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QT70ML-WS • QT70ML-WM • QT70ML-WA • QT70MLF-WS • QT70MLF-WM • QT70MLF-WA		• 1-1Layer • 2-2Layers • 3-3Layers • 4-4Layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue

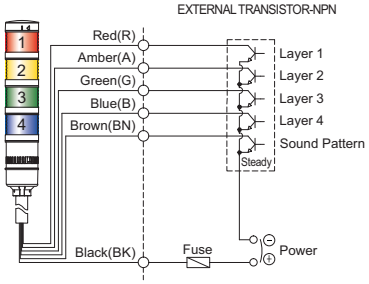
Wiring Instructions

- QT series modular LED tower lights can be wired by external contact and transistor.
- Please follow below wiring instructions carefully.

<table>
<tr><th>Type</th><th>External Contact</th><th>Type</th><th>Transistor</th></tr>
<tr><td>DC/AC Standard
QT50ML
QT50MLF
QT50MLS
QT50MLR
QT50L
QT50LF
QT50LS
QT50LR
QT70ML
QT70MLF
QT70MLS
QT70MLR
QT70L
QT70LF
QT70LS
QT70LR</td><td> 
</td><td>DC/AC Standard
QT50ML
QT50MLF
QT50MLS
QT50MLR
QT50L
QT50LF
QT50LS
QT50LR
QT70ML
QT70MLF
QT70MLS
QT70MLR
QT70L
QT70LF
QT70LS
QT70LR</td><td> 
</td></tr>
<tr><td>DC/AC Buzzer
QT50ML-BZ
QT50MLF-BZ
QT50MLS-BZ
QT50MLR-BZ
QT50L-BZ
QT50LF-BZ
QT50LS-BZ
QT50LR-BZ
QT70ML-BZ
QT70MLF-BZ
QT70MLS-BZ
QT70MLR-BZ
QT70L-BZ
QT70LF-BZ
QT70LS-BZ
QT70LR-BZ</td><td> 
</td><td>DC/AC Buzzer
QT50ML-BZ
QT50MLF-BZ
QT50MLS-BZ
QT50MLR-BZ
QT50L-BZ
QT50LF-BZ
QT50LS-BZ
QT50LR-BZ
QT70ML-BZ
QT70MLF-BZ
QT70MLS-BZ
QT70MLR-BZ
QT70L-BZ
QT70LF-BZ
QT70LS-BZ
QT70LR-BZ</td><td> 
</td></tr>
<tr><td>DC/AC
Built-in Sounder
QT50ML
QT50MLF
QT50MLS
QT50MLR
QT50L
QT50LF
QT50LS
QT50LR
QT70ML
QT70MLF
QT70MLS
QT70MLR
QT70L
QT70LF
QT70LS
QT70LR</td><td> 

• QTXX(M)L - Including WS/WM/WA type
• QTXX(M)LF - Including WS/WM/WA type
• QTXX(M)LS - Including WS/WM/WA type
• QTXX(M)LR - Including WS/WM/WA type
• QTXXL
└ Lens Diameter 50(50mm) : QT50(M)L
70(70mm) : QT70(M)L</td><td>DC/AC
Built-in Sounder
QT50ML
QT50MLF
QT50MLS
QT50MLR
QT50L
QT50LF
QT50LS
QT50LR
QT70ML
QT70MLF
QT70MLS
QT70MLR
QT70L
QT70LF
QT70LS
QT70LR</td><td> 

• QTXX(M)L - Including WS/WM/WA type
• QTXX(M)LF - Including WS/WM/WA type
• QTXX(M)LS - Including WS/WM/WA type
• QTXX(M)LR - Including WS/WM/WA type
• QTXXL
└ Lens Diameter 50(50mm) : QT50(M)L
70(70mm) : QT70(M)L</td></tr>
<tr><td>DC/AC Built-in Sounder
Internal Switch
QT50ML
QT50MLF
QT50MLS
QT50MLR
QT50L
QT50LF
QT50LS
QT50LR
QT70ML
QT70MLF
QT70MLS
QT70MLR
QT70L
QT70LF
QT70LS
QT70LR</td><td> 

• QTXX(M)L - Including WS/WM/WA type
• QTXX(M)LF - Including WS/WM/WA type
• QTXX(M)LS - Including WS/WM/WA type
• QTXX(M)LR - Including WS/WM/WA type
• QTXXL
└ Lens Diameter 50(50mm) : QT50(M)L
70(70mm) : QT70(M)L</td><td>DC/AC Built-in Sounder
Internal Switch
QT50ML
QT50MLF
QT50MLS
QT50MLR
QT50L
QT50LF
QT50LS
QT50LR
QT70ML
QT70MLF
QT70MLS
QT70MLR
QT70L
QT70LF
QT70LS
QT70LR</td><td> 

• QTXX(M)L - Including WS/WM/WA type
• QTXX(M)LF - Including WS/WM/WA type
• QTXX(M)LS - Including WS/WM/WA type
• QTXX(M)LR - Including WS/WM/WA type
• QTXXL
└ Lens Diameter 50(50mm) : QT50(M)L
70(70mm) : QT70(M)L</td></tr>
</table>

TOTAL CATALOGUE

USB/ Ethernet Signal Tower Lights

INNOVATION IN ALARM & SIGNAL



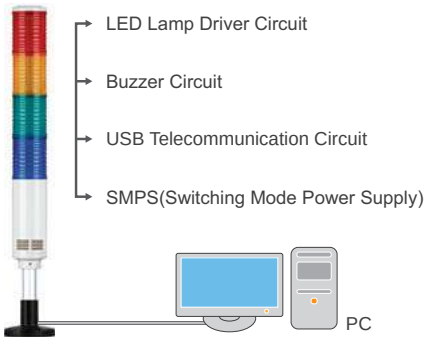
USB Technical Information 360
Product Specifications 363
Product Information 364
Ethernet Technical Information 370
Product Specifications 374
Product Information 375

Technical Data for USB Type LED Tower Light

Can be connected to the USB port of your PC without any additional power supply



- The LED tower light that is fully controllable by the PC application program of a PC via a USB port connection
- The USB communication cable is comprise of VCC, D-, D +, GND, and Shield
- Uses 2 DC 5V/500mA rated Personal Computer (PC) USB for its power
- Available on hosts that support USB 1.1 or higher
- Provides MS Runtime libraries for developers to utilize on various PC applications
- Built-in 8-polyphonic clear melody, alarm sound, the type of sound can be chosen when ordered
- Supported OS: WINDOWS XP / WINDOWS 7 (32bit / 64bit)
- Supported Program: VC++, VB, Delphi(32bit), C#(64bit)



- Qlight's USB Tower Light is a LED tower lamp connected to a USB interface and controlled by a PC program. These products work on hosts that support USB 1.1 or higher and allow up to 4 USB Tower Light connections per PC
- Supports Low speed (1.5Mbps) and Full speed (12Mbps) communication
- Provides MS Runtime libraries for developers(VC ++, VB, Delphi) to utilize in various PC applications. A sample program (VC ++) is available for testing purposes. The product uses device drivers in the PC for built-in HID (Human Interface Devices). Therefore, the operating system (OS) does not need a separate driver to control and to communicate with the LED Tower Light through the PC application
  Native support for 32bit OS, and supports 64bit in Windows XP, Win7. For other OS, please contact us

※ Image to the left shows the Tower Light Connections.

1. Basic USB Information

USB is an abbreviation for Universal Serial Bus, a PC peripheral bus standard developed to satisfy the industries growing need in the mid 1990s for a new interconnection between computers and electronic devices. Developed by companies such as Intel, Microsoft, Compaq, IBM, NEC, Nortel, DEC etc. the USB can connect up to 127 devices without reboot or setup for new peripherals. Data transfer speed have been improving rapidly.

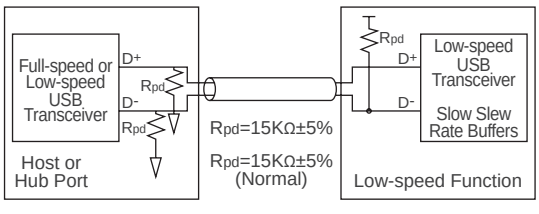
Communication	DEVICE CLASS CODE	INTERFACE CLASS CODE
Audio Interface	0×00	0×01
Communication Device	0×02	-
HID	0×00	0×00
HUB	0×09	0×09
Storage	0×00	0×08
Monitor	Same as HID	Same as HID
Print	-	0×07

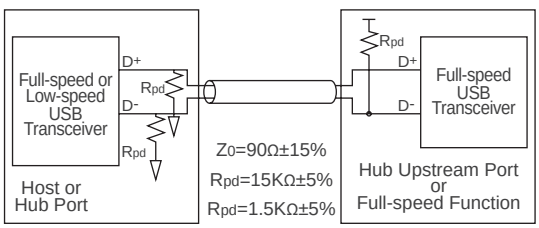
※ HID(Human Interface Devices)?

USB can be applied to various devices and can be classified by its use case. Among them is the USB classification called the Human Interface Device (HID). These devices can be used to control the PC. A typical HID device includes a mouse, keyboard, joystick, etc. The data from the devices is sent to the host(PC) by a "interrupt" type IN-endpoint format.

2. Connection

The process of connecting and detecting the device to the USB port is called "the initial determination". After "the initial determination" is made, the host PC requests the device's specific role and the function is then specified by the Descriptor. At that moment the device and the PC periodically exchanges requests, and the descriptor. This process is called "Enumeration". After the finishing the "enumeration" process the PC detects the device and registers it as a USB Device. When the registration is completed, the USB Device exchanges data and perform its designated function.





The process how the USB Device is connected to the PC

1. When you connect a USB Device to the PC, Device is powered on.
2. Normally the D+, D- of the PC is on low signal with both D+ and D- having pull down resistors of 15KΩ.
3. A full speed USB Device has a pull-up resistor of 1.5KΩ hung on D+, Low speed devices on the other hand have a pull-up resistor of 1.5KΩ on the D-.
4. Therefore, the PC usually has a low signal on the data line but when the USB device is connected the PC it detects the high signal of the data line and notifies the host of the USB device connection.

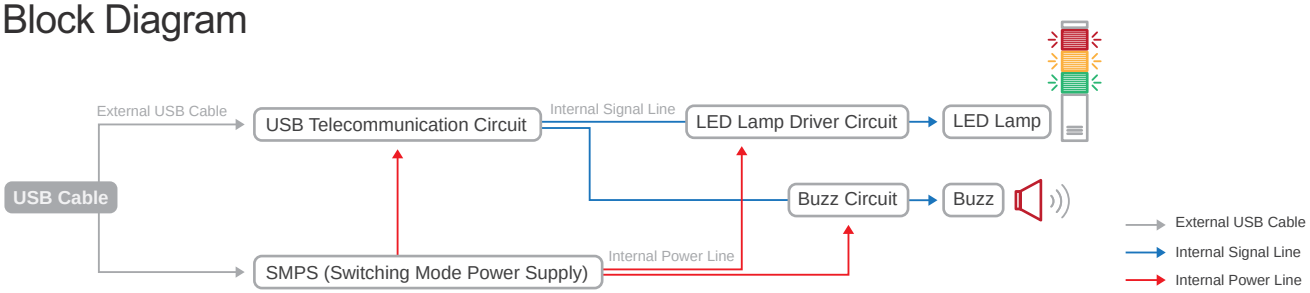
Technical Data for USB Type LED Tower Light

3. Communication data format of the USB product

Developers can use the programming format below to control the LED USB Tower light via PC.
For detailed programing information, please see the reference code that is provided separately.

PC to USB Tower Light				
No.	Type	ABB	Descript	Size(Bytes)
1	Device Information	VID	VENDOR ID : 0x04D8(Provided by IC manufacturer)	2
2		PID	PRODUCT ID : 0xE73C(QLIGHT ID)	2
3		INDEX	1. Maximum of 4 USB tower lights can be installed per PC. 2. Field value helps to distinguish each USB tower light. 3. Reference - USB0 : 0×4970/ USB1 : 0×4971/ USB2 : 0×4972/ usb3 : 0×4973 4. Assign 0-3 for convenient use in IBM PC environment.	2
1	Data	Write	1. Send 'W=0x57' which means transferring the data from PC to USB.	1
2		Sound Group	1. Field for sound pattern designation. 0 : WS/ 1 : WP/ 2 : WM/ 3 : WA/ 4 : WB/ 5 : BZ/ 6 : WM(8)/ 7 : WA(8) 2. Total 8 groups are provided and each group has channel 1 to 5.	1
3		R LAMP	1. Field for controlling Red lamp. 2. Reference - 0 : LAMP OFF/ 1 : LAMP BLINK(ON/OFF)/ 2 : LAMP ON/ Else : Don't care	1
4		A LAMP	1. Field for controlling Amber lamp. 2. Reference - 0 : LAMP OFF/ 1 : LAMP BLINK(ON/OFF)/ 2 : LAMP ON/ Else : Don't care	1
5		G LAMP	1. Field for controlling Green lamp. 2. Reference - 0 : LAMP OFF/ 1 : LAMP BLINK(ON/OFF)/ 2 : LAMP ON/ Else : Don't care	1
6		B LAMP	1. Field for controlling Blue lamp. 2. Reference - 0 : LAMP OFF/ 1 : LAMP BLINK(ON/OFF)/ 2 : LAMP ON/ Else : Don't care	1
7		W LAMP	1. Field for controlling White lamp. 2. Reference - 0 : LAMP OFF/ 1 : LAMP BLINK(ON/OFF)/ 2 : LAMP ON/ Else : Don't care	1

4. Block Diagram

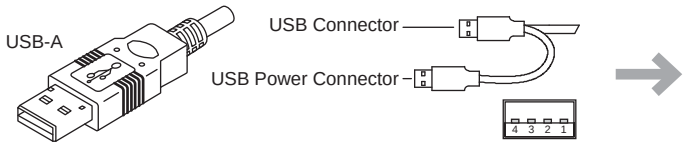


5. Specifications

Category	Specifications	Category	Specifications
Tower light	• Layer : 1-5 • Voltage : DC12V • Current : 0.300A • Color : ● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White	Cable	1. VCC (Red) 2. D- (White) 3. D+ (Green) 4. GND (Black) 5. Shield
Speaker	• Rated : 1W • Volume : Max 85dB at 1m	Buzzer	• Voltage : DC12V • Current : 20mA • Volume : Max 90dB at 1m
USB standard	• Available on hosts that support USB 1.1 or higher • DC5V/500mA rated (uses 2 USB port)	Input voltage	• USB DC 5V×2PORT(Built-in 5V To 12V converter)

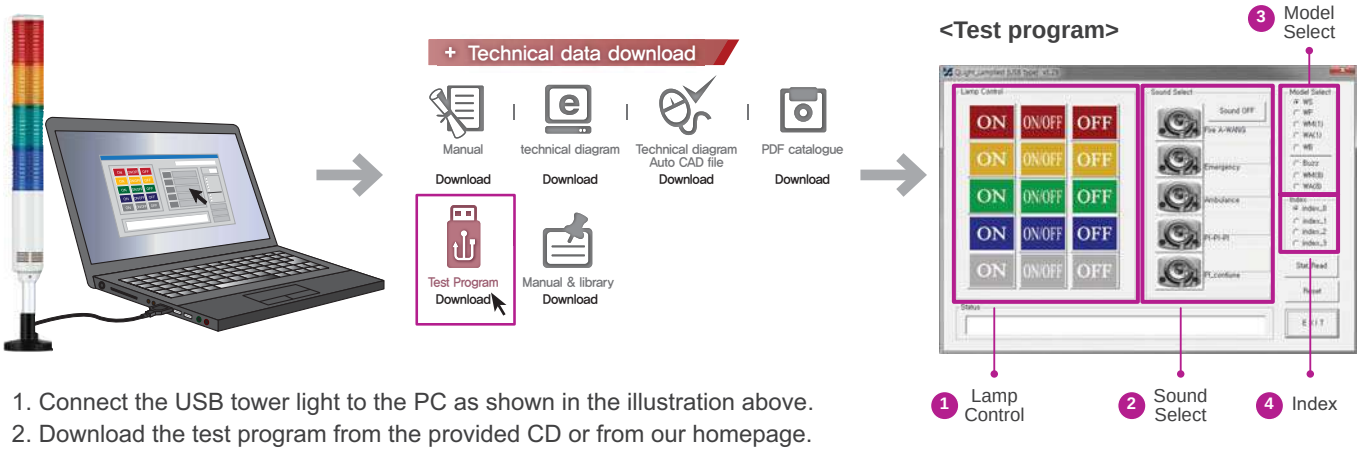
6. USB Cable

1. The power consumption of a USB Tower light(3 layers type) is only about 2.5W.
2. The USB specification is 5VDC/(300mA/500mA) per PC port which equals approximately 1.5W. Thus, using two ports will supply the proper power to the product.
3. It is possible to use multiple colors at the same time by using the USB power supply, but using one lamp and one alarm sound at a time is recommended.
4. There are two types of USB connections as shown in the image below; a standard USB connector and a USB power connector with a power line connected in parallel.



Pin	Name	WIRE Color	Description
1	VCC	RED	+5V
2	D-	WHITE	Data-
3	D+	GREEN	Data+
4	GND	BLACK	Ground

7. Use of the USB device



1. Connect the USB tower light to the PC as shown in the illustration above.
2. Download the test program from the provided CD or from our homepage.
3. The downloaded sample program will be saved as “USB Test Program.zip”. When you unzip the file, there will be a file with the names below.

QLight_Lamptest_USB.exe
Test program

QUvc_dll.dll
Required library for test program

※ When developing the program, please download and refer to the file “manual and library. (sample programs and manuals for Developers)”

4. When you run the “QLight lamptest_usb.exe”file, a test programs will show up as above. Products sound options are classified as WS / WP / WA / WM / BZ . The product will only play the sound option selected when the order was placed.

Article	Detailed specification
1 Lamp Control	- ON: Lamp turns on when the button is clicked - ON/OFF: Lamp flashes when the button is clicked - OFF: Lamp turns off when the button is clicked
2 Sound Select	- 1ch-5ch: Has 5 sounds per model, turns on the chosen sound - Click “Sound off” button to turn off the sound
3 Model Select	- WS : 5 warning sounds(mono) - WP : 5 special warning sounds(mono) - WM(1) : 5 Melodies(mono) - WA(1) : 5 alarms(mono) - WB : Software Buzzer 5 sounds(speaker type) - Buzzer : 5 Buzzer sounds - WM(8) : 5 Melodies(8 chord) - WA(8) : 5 alarms(8 chord)
4 Index	- You can connect up to a maximum of 4 USB Tower lights per PC - Must be controlled by selecting Index0 - Index3 for controlling the USB tower light. The default is set to Index0

Specification List for USB LED Tower Lights



Model number(series)		ST45ML-USB	ST45L-USB	ST56MEL-USB	ST56EL-USB	ST80MEL-USB	ST80EL-USB
	Voltage	USB DC 5V	USB DC 5V	USB DC 5V	USB DC 5V	USB DC 5V	USB DC 5V
Dimension (mm)	Diameter	Ø45	Ø45	Ø56	Ø56	Ø80	Ø80
	Height	198-358	412-572	192-352	406-566	230-390	367-527
	Depth						
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Layer		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
	5 Signal sounds	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP23	IP23	IP23	IP23	IP23	IP23
Certificates							
Customization		Customized color arrangements, Wall mount brackets	Customized color arrangements, Customized pole length	Customized color arrangements, 70mm lens height, Wall mount brackets	Customized color arrangements, 70mm lens height, Customized pole length	Customized color arrangements, 70mm lens height, Wall mount brackets	Customized color arrangements, 70mm lens height, Customized pole length
Page		P364	P364	P365	P365	P366	P366



Model number(series)		QT50ML-USB	QT50L-USB	QT70ML-USB	QT70L-USB	STDEL-USB	
	Voltage	USB DC 5V	USB DC 5V	USB DC 5V	USB DC 5V	DC12V, DC24V AC110V, AC220V	
Dimension (mm)	Diameter	Ø50	Ø50	Ø70	Ø70	Ø80(Lens) Ø119(Housing)	
	Height	208-372	422-586	148-372	287-511	204-364	
	Depth						
Materials		Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-AS Housing-ABS	
Layer		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	
	LED Strobe	•	•	•	•		
	LED Simulated revolving	•	•	•	•		
Sound & volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m		
	5 Signal sounds	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 105dB at 1m	
Layer color change		Yes	Yes	Yes	Yes	Yes	
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24	-	
Protection rating		IP54	IP54	IP54	IP54	IP54	
Certificates							
Customization		Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Wall mount brackets	Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Customized pole length	Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Wall mount brackets	Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Customized pole length	Customized color arrangements, 70mm lens height	
Page		P368	P368	P369	P369	P367	

ST45(M)L-USB

Ø45mm USB LED Tower Lights

IP23 | -30~+50°C | BUZZER | 90dB | SPK | 85dB | RoHS

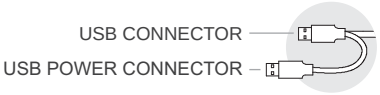
Connected to PC USB port without power supply unit



ST45(M)L-USB series

Wiring Instructions

- Connect both USB connector and USB power connector to PC



Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC
SZ18	**QL18**	**SL18**	**QLA18**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- Customized color arrangement available
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Common Specifications(ST45L-USB/ ST56EL-USB/ ST80EL-USB/ QT50L-USB/ QT70L-USB)

- Software controls the steady/flashing function
- Please refer to page 282-300 and 333-358 for detailed lamp specifications and page 24 for sound patterns
- USB control port and power supply port are provided with product
- The number of activated LED lights are limited to the capacity of USB port current
- Volume : Buzzer – Max 90dB at 1m / Sounder – Max 85db at 1m
- Compliant with RoHS directive

※ Number of activated LED lights reference

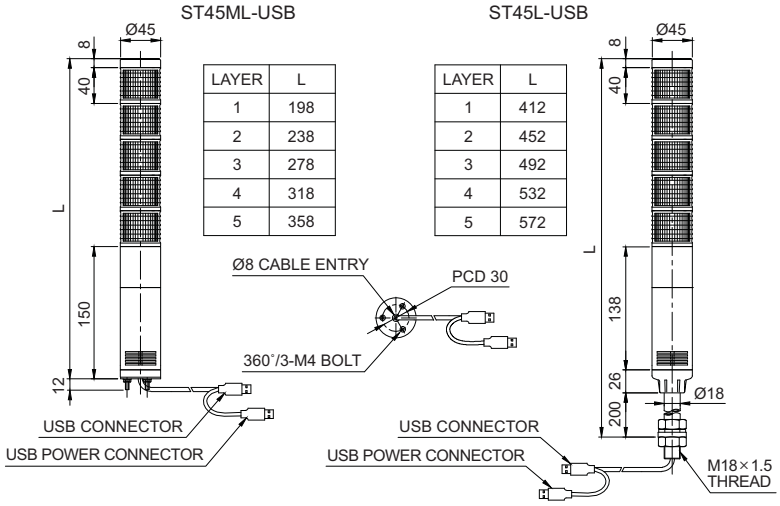
- ST45L-USB / ST45ML-USB : Three layers are activated simultaneously
- ST56EL-USB / ST56MEL-USB : Two layers are activated simultaneously
- ST80EL-USB / ST80MEL-USB : Two layers are activated simultaneously
- QT50L-USB / QT50ML-USB : Three layers are activated simultaneously
- QT70L-USB / QT70ML-USB : Two layers are activated simultaneously

ST45L-USB Ø45mm Pole Mount USB LED Tower Light

Model number		Layer	Certificate	Color
ST45L-USB-BZ ST45L-USB-WS ST45L-USB-WM ST45L-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B W

Technical Diagram

(Units : mm)



ST45ML-USB Ø45mm Direct Mount USB LED Tower Light

Model number		Layer	Certificate	Color
ST45ML-USB-BZ ST45ML-USB-WS ST45ML-USB-WM ST45ML-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B W

Ordering Specification

ST45L-USB-BZ	-	3	-	RAG	-	LW18
[Model number]		[Layer]		[Color]		[Mount bracket]
• ST45L-USB-BZ • ST45L-USB-WS • ST45L-USB-WM • ST45L-USB-WA • ST45ML-USB-BZ • ST45ML-USB-WS • ST45ML-USB-WM • ST45ML-USB-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18	

※ Mount brackets are available for the pole mount type(ST45L-USB series) only.

ST56(M)EL-USB

Ø56mm USB LED Tower Lights

IP23 | -30~+50℃ | BUZZER 90dB | SPK 85dB | RoHS

Connected to PC USB port without power supply unit



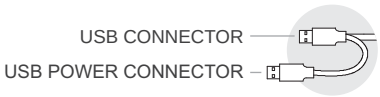
ST56(M)EL-USB series



70mm lens height model is available upon request
(Model number : ST56(M)L-USB)

Wiring Instructions

- Connect both USB connector and USB power connector to PC



Mounting Bracket

Standard	LB18	LW18	QZ18
			
Steel	Steel	PC	PC
SZ18	**QL18**	**SL18**	**QLA18**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

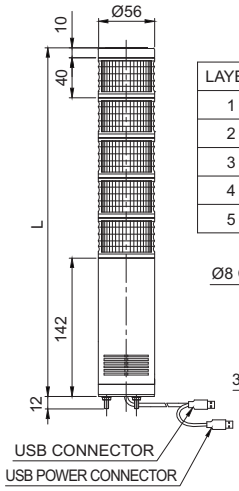
ST56EL-USB Ø56mm Pole Mount USB LED Tower Light

Model number		Layer	Certificate	Color
ST56EL-USB-BZ ST56EL-USB-WS ST56EL-USB-WM ST56EL-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

Technical Diagram

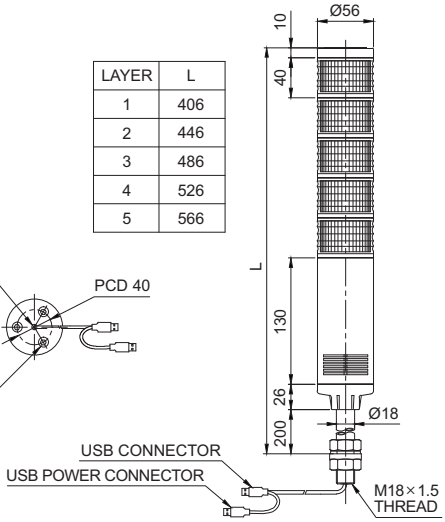
(Units : mm)

ST56MEL-USB



LAYER	L
1	192
2	232
3	272
4	312
5	352

ST56EL-USB



LAYER	L
1	406
2	446
3	486
4	526
5	566

ST56MEL-USB Ø56mm Direct Mount USB LED Tower Light

Model number		Layer	Certificate	Color
ST56MEL-USB-BZ ST56MEL-USB-WS ST56MEL-USB-WM ST56MEL-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

Customization

- Customized color arrangement available
- 70mm lens height(Standard : 40mm)
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

ST56EL-USB-WS	-	3	-	RAG	-	QL18
[Model number]		[Layer]		[Color]		[Mount bracket]
• ST56EL-USB-BZ • ST56EL-USB-WS • ST56EL-USB-WM • ST56EL-USB-WA • ST56MEL-USB-BZ • ST56MEL-USB-WS • ST56MEL-USB-WM • ST56MEL-USB-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

※ Mount brackets are available for the pole mount type(ST56EL-USB series) only.

ST80(M)EL-USB

Ø80mm USB LED Tower Lights

IP23 | -30~+50℃ | BUZZER 90dB | SPK 85dB | RoHS

Connected to PC USB port without power supply unit





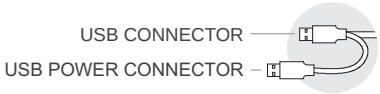
ST80(M)EL-USB series



70mm lens height model is available upon request (Model number : ST80(M)L-USB)

Wiring Instructions

- Connect both USB connector and USB power connector to PC



Mounting Bracket

Standard	LB24	LW24	QZ24
			
Steel	Steel	PC	PC
SZ24	**QL24**	**SL24**	**QLA24**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

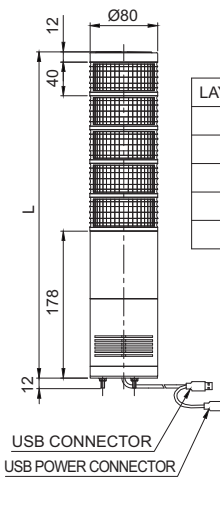
ST80EL-USB Ø80mm Pole Mount USB LED Tower Light

Model number		Layer	Certificate	Color
ST80EL-USB-BZ ST80EL-USB-WS ST80EL-USB-WM ST80EL-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

Technical Diagram

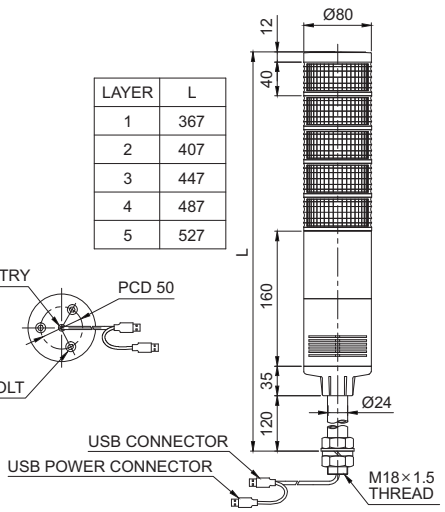
(Units : mm)

ST80MEL-USB



LAYER	L
1	230
2	270
3	310
4	350
5	390

ST80EL-USB



LAYER	L
1	367
2	407
3	447
4	487
5	527

ST80MEL-USB Ø80mm Direct Mount USB LED Tower Light

Model number		Layer	Certificate	Color
ST80MEL-USB-BZ ST80MEL-USB-WS ST80MEL-USB-WM ST80MEL-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

Customization

- Customized color arrangement available
- 70mm lens height(Standard : 40mm)
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

ST80EL-USB-WS	-	3	-	RAG	-	QL24
[Model number]		[Layer]		[Color]		[Mount bracket]
• ST80EL-USB-BZ • ST80EL-USB-WS • ST80EL-USB-WM • ST80EL-USB-WA • ST80MEL-USB-BZ • ST80MEL-USB-WS • ST80MEL-USB-WM • ST80MEL-USB-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

※ Mount brackets are available for the pole mount type(ST80EL-USB series) only.

STDEL-USB

USB LED Steady/ Flashing Tower Light & Electric Horn Combination

IP54 | -30~+50℃ | HORN | 105dB | RoHS

USB controllable high signal sound





STDEL-USB

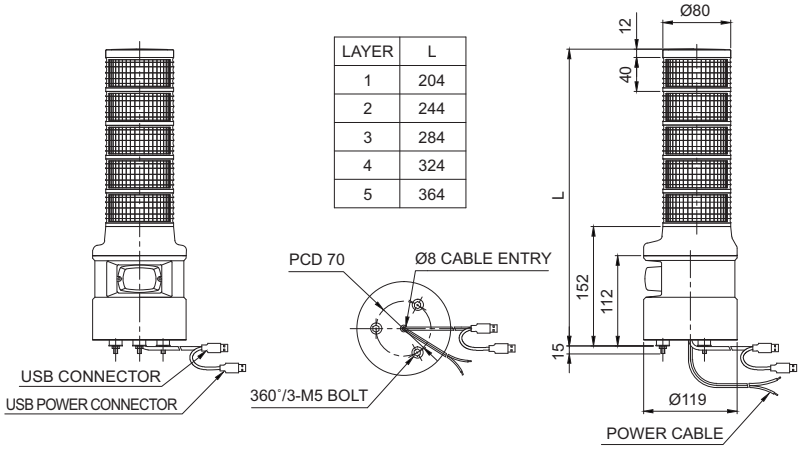
STDEL-USB Ø80mm USB Steady/ Flashing Tower Light & Electric Combination

Model number		Layer	Certificate	Color
STDEL-USB-WS STDEL-USB-WM STDEL-USB-WA	5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

Technical Diagram

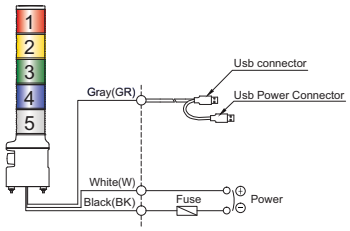
(Units : mm)

STDEL-USB



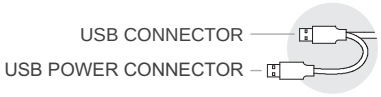
Wiring Instruction

STDEL-USB



Wiring Instructions

- External power line standard :
  UL1015 AWG18(0.75sq)×2C 400mm
- USB Cable :
  Connect both USB connector and USB power connector to PC



Customization

- Customized color arrangement available
- 70mm lens height(Standard : 40mm)

Ordering Specification

STDEL-USB-WS	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• STDEL-USB-WS • STDEL-USB-WM • STDEL-USB-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QT50(M)L-USB

Ø50mm USB LED Tower Lights

IP54 | -30~+50℃ | BUZZER | 90dB | SPK | 85dB



QT50(M)L-USB series

Product of LED Strobe, LED Simulated revolving module

- LED Steady/ Flashing is standard
- LED Strobe and LED Simulated revolving module are available upon request

Type	Model number
LED Strobe	QT50MLS-USB(Direct mount) QT50LS-USB(Pole mount)
LED Simulated revolving	QT50MLR-USB(Direct mount) QT50LR-USB(Pole mount)

Mounting Bracket

Standard	LB18	LW18	QZ18
Steel	Steel	PC	PC
SZ18	QL18	SL18	QLA18
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

QT50L-USB Ø50mm Pole Mount USB Tower Light

Model number		Layer	Certificate	Color
QT50L-USB-BZ QT50L-USB-WS QT50L-USB-WM QT50L-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

• Modules : LED Module + USB Buzzer/Sound Module + Base Module(BS) + Pole Module(PB)

Technical Diagram

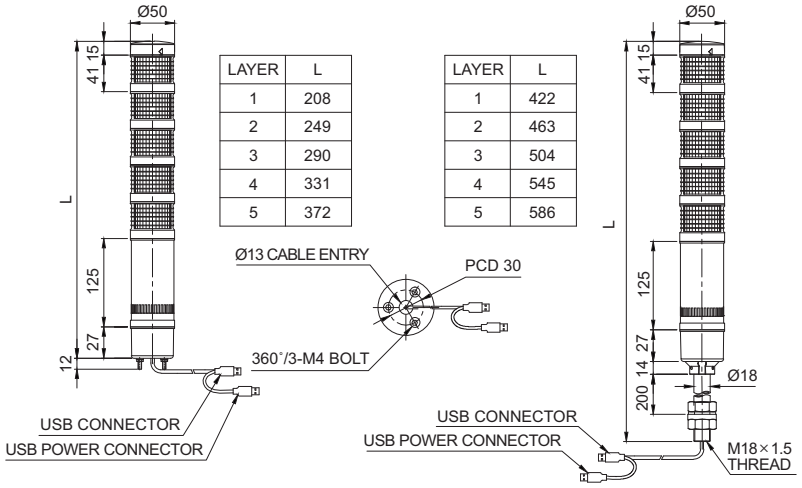
(Units : mm)

QT50ML-USB

LAYER	L
1	208
2	249
3	290
4	331
5	372

QT50L-USB

LAYER	L
1	422
2	463
3	504
4	545
5	586



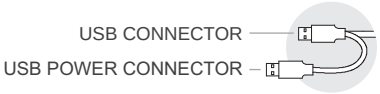
QT50ML-USB Ø50mm Direct Mount USB Tower Light

Model number		Layer	Certificate	Color
QT50ML-USB-BZ QT50ML-USB-WS QT50ML-USB-WM QT50ML-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

• Modules : LED Module + USB Buzzer/Sound Module + Base Module(BS)

Wiring Instructions

- Connect both USB connector and USB power connector to PC



Customization

- LED strobe, LED simulated revolving module are available upon request
- Customized color arrangement available
- Beige color
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

QT50L-USB-BZ	-	3	-	RAG	-	LB18
[Model number]		[Layer]		[Color]		[Mount bracket]

- [Model number]
  - QT50L-USB-BZ
  - QT50L-USB-WS
  - QT50L-USB-WM
  - QT50L-USB-WA
  - QT50ML-USB-BZ
  - QT50ML-USB-WS
  - QT50ML-USB-WM
  - QT50ML-USB-WA
- [Layer]
  - 1-1 layer
  - 2-2 layers
  - 3-3 layers
  - 4-4 layers
  - 5-5 layers
- [Color]
  - R-Red
  - A-Amber
  - G-Green
  - B-Blue
  - W-White
- [Mount bracket]
  - None -Standard
  - Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

※ Mount brackets are available for the pole mount type(QT50L-USB series) only.

QT70(M)L-USB

Ø70mm USB LED Tower Lights





QT70(M)L-USB series

Product of LED Strobe, LED Simulated revolving module

- LED Steady/ Flashing is standard
- LED Strobe and LED Simulated revolving module are available upon request

Type	Model number
LED Strobe	QT70MLS-USB(Direct mount) QT70LS-USB(Pole mount)
LED Simulated revolving	QT70MLR-USB(Direct mount) QT70LR-USB(Pole mount)

Mounting Bracket

Standard	LB24	LW24	QZ24
			
Steel	Steel	PC	PC
SZ24	**QL24**	**SL24**	**QLA24**
			
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

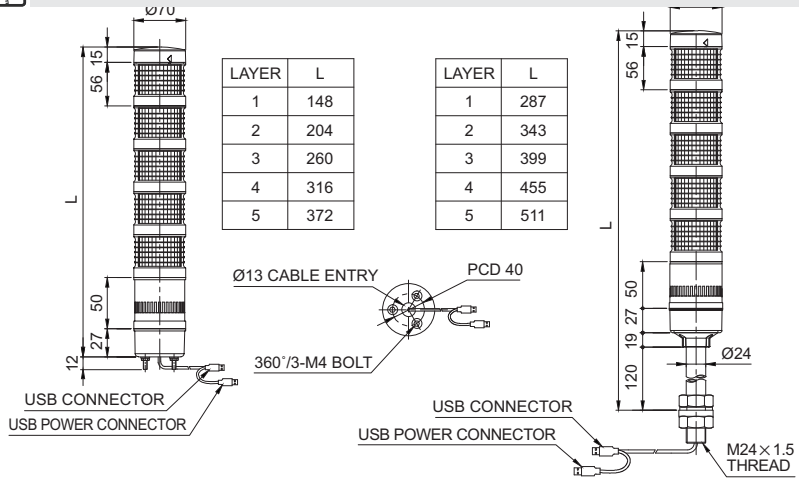
QT70L-USB Ø70mm Pole Mount USB Tower Light

Model number		Layer	Certificate	Color
QT70L-USB-BZ QT70L-USB-WS QT70L-USB-WM QT70L-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

• Modules : LED Module + USB Buzzer/Sound Module + Base Module(BS) + Pole Module(PB)

Technical Diagram

(Units : mm)



LAYER	L
1	148
2	204
3	260
4	316
5	372

LAYER	L
1	287
2	343
3	399
4	455
5	511

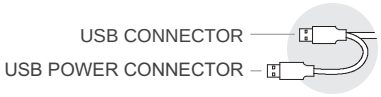
QT70ML-USB Ø70mm Direct Mount USB Tower Light

Model number		Layer	Certificate	Color
QT70ML-USB-BZ QT70ML-USB-WS QT70ML-USB-WM QT70ML-USB-WA	5 Buzzer sounds 5 Warning sounds 5 Melodies 5 Alarms	1 layer 2 layers 3 layers 4 layers 5 layers	-	1 layer : ●R 2 layers : ●R ●G 3 layers : ●R ●A ●G 4 layers : ●R ●A ●G ●B 5 layers : ●R ●A ●G ●B ●W

• Modules : LED Module + USB Buzzer/Sound Module + Base Module(BS)

Wiring Instructions

- Connect both USB connector and USB power connector to PC



Customization

- LED strobe, LED simulated revolving module are available upon request
- Customized color arrangement available
- Beige color
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Ordering Specification

QT70L-USB-WS	-	3	-	RAG	-	QL24
[Model number]		[Layer]		[Color]		[Mount bracket]
• QT70L-USB-BZ • QT70L-USB-WS • QT70L-USB-WM • QT70L-USB-WA • QT70ML-USB-BZ • QT70ML-USB-WS • QT70ML-USB-WM • QT70ML-USB-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QL24 -SL24 -QLA24

※ Mount brackets are available for the pole mount type(QT70L-USB series) only.

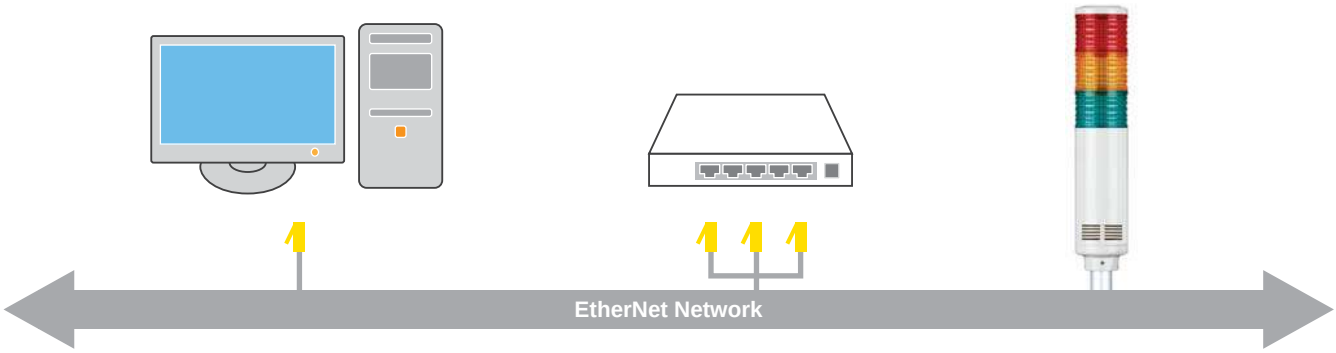
Technical Data of Ethernet LED Tower Light

Controllable LED tower light connected to the application program in the PC using a PC and ETN(Ethernet) interface



- ETN tower light is a controllable LED tower light connected to the application program in the PC using a PC and ETN(Ethernet) Interface.
- You can monitor or control the product from a remote location because it is controllable by using a web browser or application on a PC.
- Provides MS runtime libraries for developers(VC ++, VB, Delphi) to utilize on various applications of a PC, and a sample program (VC ++) is available for testing purpose.
- Communication speed : 10M/ half duplex method

※ The figure below shows the connection of the ETN tower light.



1. What is Ethernet?

Ethernet is the most popular physical layer LAN technology in use today. It defines the number of conductors that are required for a connection, the performance thresholds that can be expected, and provides the framework for data transmission. A standard Ethernet network can transmit data at a rate up to 10 Megabits per second (10 Mbps). The Institute for Electrical and Electronic Engineers developed an Ethernet standard known as IEEE Standard 802.3. This standard defines rules for configuring an Ethernet network and also specifies how the elements in an Ethernet network interact with one another. By adhering to the IEEE standard, network equipment and network protocols can communicate efficiently.

2. What is TCP/IP Protocol?

TCP/IP (Transmission Control Protocol/Internet Protocol) is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network (either an intranet or an extranet)
TCP/IP is a two-layer program. The higher layer, Transmission Control Protocol, manages the assembling of a message or file into smaller packets that are transmitted over the Internet and received by a TCP layer that reassembles the packets into the original message. The lower layer, Internet Protocol, handles the address part of each packet so that it gets to the right destination. Each gateway computer on the network checks this address to see where to forward the message. TCP/IP communication is primarily point-to-point, meaning each communication is from one point (or host computer) in the network to another point or host computer.

Technical Data of Ethernet LED Tower Light

3. IP Address format

The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255. For example, 203.172.12.7 could be an IP address. An IP address is divided into network address and computer address, and classified as Class A, B, C, D, and E depending on the size of the network or the number of host. Of these, only Class A, B, C are given to a general user.
The IP address what we are about to test is classified as C Class.



192	.	168	.	0	.	128
1st		2nd		3rd		4th

No.	Description	Command
1st	1st address, Classes are A,B,C,D,E. A CLASS : Large network B CLASS : Large network C CLASS : Small network(private IP) D CLASS : Multi cast(use in designated group) E CLASS : Stand by	A CLASS address : 1-127 B CLASS address : 128-191 C CLASS address : 192-223 D CLASS address : 224-239 E CLASS address : 240-255
2nd	2nd address, Being Network ID or Host ID depending on 1st Address	
3rd	3rd address, Being Network ID or Host ID depending on 1st Address	
4th	4th address, Being Network ID or Host ID depending on 1st Address	

IP address assignment by class

GROUP	1st address	2nd address	3rd address	4th address
A CLASS	1-127	0.0.0-255.255.255		
B CLASS	128.0-191.255		0.0-255.255	
C CLASS	192.0.0-223.255.255			0-255

4. What is MAC Address?

MAC address (Media Access Control) is a global unique identifier assigned to network devices. In other words, you can use the Mac Address IP address to find a separate devices. It delivers Data Packet just like a postman delivers a letter.
So what would be the difference between IP address and Mac address? Both IP address and MAC address are the address of its destination. IP address is simply the address while Mac address is a social security number of people living in the house IP address can be changed dynamically, but Mac address only has one unique address per device.

- Mac Address : an address for computers to communicate with each other, and there is no other PC that has a same Mac Addr as yours.
- IP Address: needed routing when other computers are searching for your computer address, that is an address of your computer for others to search.

An IP address is assigned to every device on a network so that device can be located on the network. The internet is a network, and Every device on an TCP/IP network must have a unique IP address. IP addresses are assigned, either automatically by DHCP, or by manual configuration. That number is used by the network routing equipment so that when you ask for a page from the site, that request is routed to the right server. MAC addresses are typically used only to direct packets in the device-to-device portion of a network transaction. That means that your computer's MAC address will be in network packets only until the next device in the chain. If you have a router, then your machine's MAC address will go no further than that. Your router's MAC address will show up in packets sent further upstream, until that too is replaced by the MAC address of the next device.

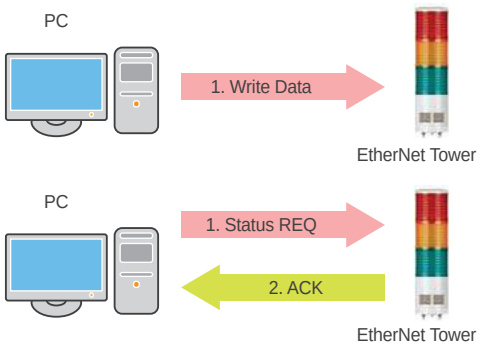
5. What is PORT?

A port (noun) is a "logical connection place" and specifically, using the Internet's protocol and TCP/IP, the way a client's program specifies a particular server program on a computer in a network. Higher-level applications that use TCP/IP such as the Web protocol, Hypertext Transfer Protocol, have ports with preassigned numbers. These are known as "well-known ports" that have been assigned by the Internet Assigned Numbers Authority (IANA). Other application processes are given port numbers dynamically for each connection. When a service (server program) initially starts, it is said to be bound to its designated port number. As any client's program wants to use that server, it also must request to bind to the designated port number.
Port numbers are from 0 to 65535. Ports 0 to 1024 are reserved for use by certain privileged services. For the HTTP service, port 80 is defined as a default and it does not have to be specified in the Uniform Resource Locator.

6. What is Socket Program?

It is to implement a program to send and receive data between host PCs that are apart from each other in network programming. However, the connection between host PCs are far away so a device is that has a feature of connecting the two at a software level is required, and that device is the socket. Generally, the terms “socket programming” and “network programming” have the same meaning. We have provided a library file for users so that they can easily use the socket program.

※ The figure below show the sequence of our ETN Tower Lamp.



1. WRITE to DEVICE
1.Write Data: A command sent when turning on/off each lamp 2.The command is sent from PC to ETN device

2. READ from DEVICE
1.Status REQ: A requesting command for turning on/off each lamp 2.The command is sent from PC to ETN device 3.When the ETN device receives a REQ Command it sends the setting status of each lamps using ACK.

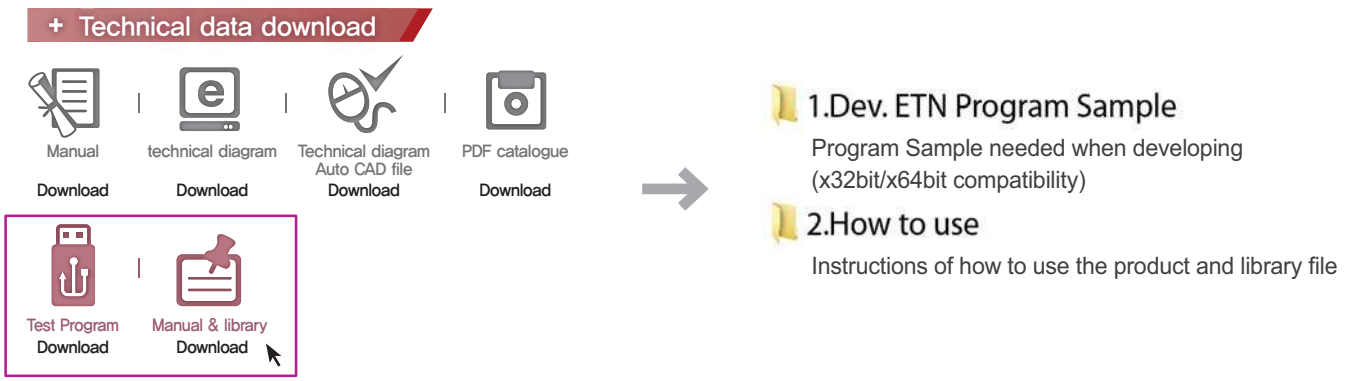
7. Applying the Ethernet Device

1. Proceed to check the current network and the assigned IP address of your PC.
Start(run) -> CMD – ipconfig/all

```
Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . . : 192.168.10.101
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.10.1
```

2. Because the ETN tower light is connected to a hub with the PC that is same as the picture on the front page, ETN tower light and the PC are now connected with the same network.
3. Download the library file, test programs and manuals from the CD provided or from our website.
4. When you unzip the file, there will be a file with the same name below. The instructions are listed inside the file.



Technical Data of Ethernet LED Tower Lamp

5. When you unzip “ETN TEST PROGRAM.zip” file, following folders are created.

1.ETN Test Program
A program for setting IP before testing the ETN device

2.IP Set Program
A program for setting testing the ETN device

6. Run the “Mac_Setting.exe” program that is inside the IP Set Program Folder .

- When the program is running such as the right figure, click the “Mac Find” button in the “Find Mac Address / Select” section
- MAC Address of the connected device appears when you click the Device List combo box . (If the Mac Addr does not appear, make sure that the connection status or the power supply is functional and then retry.)
- Select the MAC Addr of the device you want to change, and then click on the “Read” button.
- Check the information and settings from the “Mac config status”
- Set the value of users network information identified in the previous chapter (subnet mask, gateway) in each text box, and set a different IP_Addr than your PC
  Apply the settings by pressing the Write button
- The port is set to “20000“by default and the port number can be changed if necessary
- Reconnect After Disconnecting the power from the tower light.



7. ETN Test Program Files folder includes the following below.

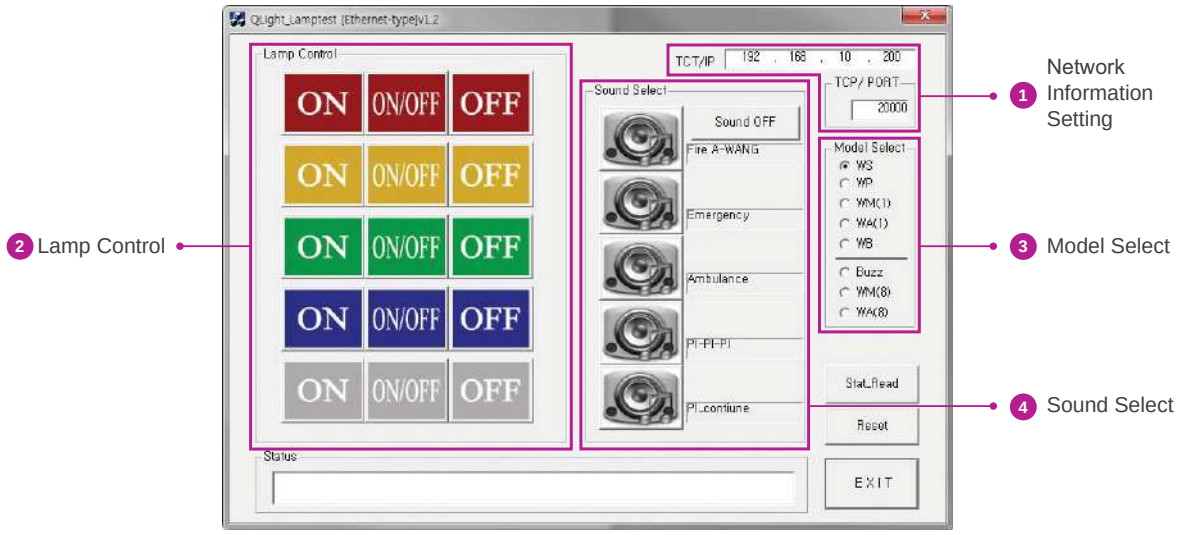
QLight_Lamptest_TCP.exe
Test Program

QTvc_dll.dll
Library required for the test program

8. Run the “QLight_Lamptest_TCP” program.

Article	Detailed specification
1 Network Information Setting	- Input port on TCP/PORT and IP address on TCP/IP that set on Ethernet tower lights
2 Lamp Control	- ON : Click the button Lamp ON - ON/OFF : Click the button Lamp Flash - OFF : Click the button Lamp OFF
3 Model Select	- WS : 5 warning sounds(mono) - WP : 5 special warning sounds(mono) - WM(1) : 5 Melodies(mono) - WA(1) : 5 alarms(mono) - WB : Software Buzzer 5 sounds(speaker type) - Buzzer : 5 Buzzer sounds - WM(8) : 5 Melodies(8 chord) - WA(8) : 5 alarms(8 chord)
4 Sound Select	- Select 5 sounds based on model which is fixed on “Model select

• User can select appropriate sound pattern by using ‘Model select’ menu. There’re WS, WP, WM, WA and WB sound patterns and user can choose the option when placing order.



Specification List for Ethernet LED Tower Lights








Model number(series)		ST45ML-ETN	ST45L-ETN	ST56MEL-ETN	ST56EL-ETN	ST80MEL-ETN	ST80EL-ETN
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø45	Ø45	Ø56	Ø56	Ø80	Ø80
	Height	244-404	458-618	257-517	471-731	230-390	367-527
	Depth						
Materials		Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS	Lens-AS Housing-ABS
Layer		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•	•	•
	LED Strobe						
	LED Simulated revolving						
Sound & volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m
	5 Signal sounds	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m	Max 85dB at 1m
Layer color change		Yes	Yes	Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QLA18	TWS45, TWA45	LB18, LW18, QZ18, SZ18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QLA24
Protection rating		IP23	IP23	IP23	IP23	IP23	IP23
Certificates		-	-	CE, KCC	CE, KCC	-	-
Customization		Customized color arrangements, Wall mount brackets	Customized color arrangements, Customized pole length	Customized color arrangements, 70mm lens height, Wall mount brackets	Customized color arrangements, 70mm lens height, Customized pole length	Customized color arrangements, 70mm lens height, Wall mount brackets	Customized color arrangements, 70mm lens height, Customized pole length
Page		P375	P375	P376	P376	P377	P377





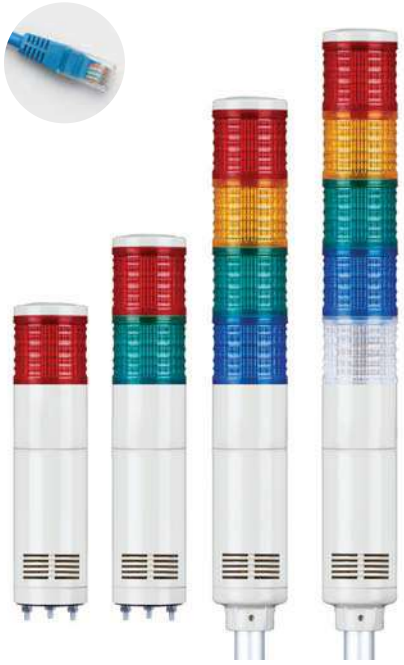

Model number(series)		QT50ML-ETN	QT50L-ETN	QT70ML-ETN	QT70L-ETN		
Voltage		DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V		
Dimension (mm)	Diameter	Ø50	Ø50	Ø70	Ø70		
	Height	208-372	422-586	148-372	287-511		
	Depth						
Materials		Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC	Lens-PC Housing-PC		
Layer		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers		
Light source & Operation	Bulb Steady/Flashing						
	LED Steady						
	LED Steady/Flashing	•	•	•	•		
	LED Strobe	•	•	•	•		
	LED Simulated revolving	•	•	•	•		
Sound & volume	1 buzzer sound	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m	Max 90dB at 1m		
	5 Signal sounds	Max 85dB at 1m	Max 85dB at 1m	Max 90dB at 1m	Max 90dB at 1m		
Layer color change		Yes	Yes	Yes	Yes		
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount		
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QLA24		
Protection rating		IP54	IP54	IP54	IP54		
Certificates		-	-	-	-		
Customization		Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Wall mount brackets	Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Customized Pole Length	Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Wall mount brackets	Customized color arrangements, Beige color, LED strobe, LED simulated revolving, Customized Pole Length		
Page		P378	P378	P379	P379		

ST45(M)L-ETN

Ø45mm Ethernet LED Tower Lights

IP23 | -30~+50℃ | BUZZER 90dB | SPK 85dB

Can Control Remotely Through Internet or Local Area Network



ST45(M)L-ETN series

Mounting Bracket

Standard	LB18	LW18
		
Steel	Steel	PC
QZ18	**SZ18**	**QLA18**
		
PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- Customized color arrangement available
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Common Specifications(ST45L-ETN/ ST56EL-ETN/ ST80EL-ETN/ QT50L-ETN/ QT70L-ETN)

- Software controls the steady/flashing function
- Please refer to page 282-300 and 333-358 for detailed lamp specifications and page 24 for sound patterns
- Ethernet port and power cable are provided with product.
- Volume : Buzzer – Max 90dB at 1m/ Sounder – Max 85dB at 1m

ST45(M)L-ETN Ø45mm Pole Mount Ethernet Tower Light

Model number	Layer	Voltage	Current	Certificate	Color
ST45L-ETN ST45ML-ETN	1	DC12V DC24V AC110V AC220V	0.200A 0.137A 0.053A 0.027A	-	● R-Red
	2	DC12V DC24V AC110V AC220V	0.210A 0.145A 0.056A 0.029A		● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.220A 0.153A 0.058A 0.030A		● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.230A 0.161A 0.061A 0.032A		● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V AC110V AC220V	0.240A 0.169A 0.063A 0.033A		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Signal Sound Current (Per Layer)

Voltage	DC12V	DC24V	AC110V	AC220V
Current	0.424A	0.271A	0.094A	0.048A

Wiring Instructions

- Apply properly rated voltage through the POWER CABLE
- Connect the RJ45 connector of the UTP cable into the PC's Ethernet port or router
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Power plug will be provided in case of AC type
- UTP cable : Category 5 cable

Ordering Specification

ST45L-ETN-WS	-	3	-	24	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mount bracket]
• ST45L-ETN-BZ • ST45L-ETN-WS • ST45L-ETN-WM • ST45L-ETN-WA • ST45ML-ETN-BZ • ST45ML-ETN-WS • ST45ML-ETN-WM • ST45ML-ETN-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QLA18

※ Mount brackets are available for the pole mount type(ST45L-ETN series) only.

ST56(M)EL-ETN

Ø56mm Ethernet LED Tower Lights

IP23 | -30~+50℃ | BUZZER 90dB | SPK 85dB

Remote control through internet or local area network



ST56(M)EL-ETN series



70mm lens height model is available upon request
(Model number : ST56(M)L-ETN)

Mounting Bracket

Standard	LB18	LW18
 Steel	 Steel	 PC
QZ18	**SZ18**	**QLA18**
 PC	 Al	 PC

※ Please refer to page 34-39 for detailed dimensions.

ST56EL-ETN Ø56mm Pole Mount Ethernet Tower Light

• Certificates : KCC Compliant

Model number	Layer	Voltage	Current	Certificate	Color
ST56EL-ETN ST56MEL-ETN	1	DC12V DC24V AC110V AC220V	0.216A 0.147A 0.056A 0.031A	CE DC24V only	● R-Red
	2	DC12V DC24V AC110V AC220V	0.244A 0.168A 0.063A 0.034A		● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.272A 0.189A 0.069A 0.036A		● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.300A 0.210A 0.076A 0.039A		● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V AC110V AC220V	0.328A 0.231A 0.082A 0.041A		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Signal Sound Current (Per Layer)

Voltage	DC12V	DC24V	AC110V	AC220V
Current	0.424A	0.271A	0.094A	0.048A

Wiring Instructions

• Apply properly rated voltage through the POWER CABLE
• Connect the RJ45 connector of the UTP cable into the PC's Ethernet port or router
• External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
• Power plug will be provided in case of AC type
• UTP cable : Category 5 cable

Customization

• Customized color arrangement available
• 70mm lens height(Standard : 40mm)
• Customized pole length available
• Wall mount bracket available


Wall Mount Bracket **TWS45**


Wall Mount Bracket **TWA45**

Ordering Specification

ST56EL-ETN-WS	-	3	-	220	-	RAG	-	QZ18
[Model number]		[Layer]		[Voltage]		[Color]		[Mount bracket]
• ST56EL-ETN-BZ • ST56EL-ETN-WS • ST56EL-ETN-WM • ST56EL-ETN-WA • ST56MEL-ETN-BZ • ST56MEL-ETN-WS • ST56MEL-ETN-WM • ST56MEL-ETN-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QLA18

※ Mount brackets are available for the pole mount type(ST56EL-ETN series) only.

ST80(M)EL-ETN

Ø80mm Ethernet LED Tower Lights

IP23 | -30~+50℃ | BUZZER | 90dB | SPK | 85dB

Remote control through internet or local area network





ST80(M)EL-ETN series



70mm lens height model is available upon request
(Model number : ST80(M)L-ETN)

Mounting Bracket

Standard	LB24	LW24
 Steel	 Steel	 PC
QZ24	**SZ24**	**QLA24**
 PC	 Al	 PC

※ Please refer to page 34-39 for detailed dimensions.

ST80EL-ETN Ø80mm Pole Mount Ethernet Tower Light

Model number	Layer	Voltage	Current	Certificate	Color
ST80EL-ETN ST80MEL-ETN	1	DC12V DC24V AC110V AC220V	0.228A 0.154A 0.059A 0.032A	-	● R-Red
	2	DC12V DC24V AC110V AC220V	0.258A 0.179A 0.067A 0.035A		● R-Red ● G-Green
	3	DC12V DC24V AC110V AC220V	0.288A 0.204A 0.075A 0.038A		● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V AC110V AC220V	0.318A 0.229A 0.083A 0.041A		● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V AC110V AC220V	0.348A 0.254A 0.091A 0.044A		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Signal Sound Current (Per Layer)

Voltage	DC12V	DC24V	AC110V	AC220V
Current	0.424A	0.271A	0.094A	0.048A

Wiring Instructions

- Apply properly rated voltage through the POWER CABLE
- Connect the RJ45 connector of the UTP cable into the PC's Ethernet port or router
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Power plug will be provided in case of AC type
- UTP cable : Category 5 cable

Customization

- Customized color arrangement available
- 70mm lens height(Standard : 40mm)
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Ordering Specification

ST80EL-ETN-WS	-	3	-	24	-	RAG	-	QZ24
[Model number]		[Layer]		[Voltage]		[Color]		[Mount bracket]
• ST80EL-ETN-BZ • ST80EL-ETN-WS • ST80EL-ETN-WM • ST80EL-ETN-WA • ST80MEL-ETN-BZ • ST80MEL-ETN-WS • ST80MEL-ETN-WM • ST80MEL-ETN-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QLA24

※ Mount brackets are available for the pole mount type(ST80EL-ETN series) only.

QT50(M)L-ETN

Ø50mm Ethernet LED Tower Lights

IP54 | -30~+50℃ | BUZZER 90dB | SPK 85dB

Remote control through internet or local area network



QT50(M)L-ETN series

QT50L-ETN Ø50mm Pole Mount Ethernet Tower Light

Model number	Layer	Voltage	Current	Certificate	Color
QT50L-ETN QT50ML-ETN	1	DC12V DC24V	0.208A 0.107A	-	● R-Red
	2	DC12V DC24V	0.281A 0.152A		● R-Red ● G-Green
	3	DC12V DC24V	0.354A 0.196A		● R-Red ● A-Amber ● G-Green
	4	DC12V DC24V	0.427A 0.240A		● R-Red ● A-Amber ● G-Green ● B-Blue
	5	DC12V DC24V	0.501A 0.284A		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

Signal Sound Current (Per Layer)

Voltage	DC12V	DC24V
Current	0.198A	0.115A

Wiring Instructions

- Apply properly rated voltage through the POWER CABLE
- Connect the RJ45 connector of the UTP cable into the PC's Ethernet port or router
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Power plug will be provided in case of AC type
- UTP cable : Category 5 cable

Customization

- Customized color arrangement available
- Beige color
- LED Strobe, LED simulated revolving module are available upon request
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS45**



Wall Mount Bracket **TWA45**

Mounting Bracket

Standard	LB18	LW18
 Steel	 Steel	 PC
QZ18	**SZ18**	**QLA18**
 PC	 Al	 PC

※ Please refer to page 34-39 for detailed dimensions.

Ordering Specification

QT50L-ETN-WS	-	3	-	24	-	RAG	-	QZ18
[Model number]		[Layer]		[Voltage]		[Color]		[Mount bracket]
• QT50L-ETN-BZ • QT50L-ETN-WS • QT50L-ETN-WM • QT50L-ETN-WA • QT50ML-ETN-BZ • QT50ML-ETN-WS • QT50ML-ETN-WM • QT50ML-ETN-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None -Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QLA18

※ Mount brackets are available for the pole mount type(QT50L-ETN series) only.

QT70(M)L-ETN

Ø70mm Ethernet LED Tower Lights

IP54 | -30~+50°C | BUZZER 90dB | SPK 85dB

Remote control through internet or local area network



QT70(M)L-ETN series

QT70L-ETN Ø70mm Pole Mount Ethernet Tower Light

Model number	Layer	Voltage	Current	Certificate	Color
QT70L-ETN QT70ML-ETN	1	DC12V DC24V	0.212A 0.113A	-	• R-Red
	2	DC12V DC24V	0.290A 0.160A		• R-Red • G-Green
	3	DC12V DC24V	0.378A 0.209A		• R-Red • A-Amber • G-Green
	4	DC12V DC24V	0.466A 0.259A		• R-Red • A-Amber • G-Green • B-Blue
	5	DC12V DC24V	0.554A 0.308A		• R-Red • A-Amber • G-Green • B-Blue • W-White

Signal Sound Current (Per Layer)

Voltage	DC12V	DC24V
Current	0.198A	0.115A

Wiring Instructions

- Apply properly rated voltage through the POWER CABLE
- Connect the RJ45 connector of the UTP cable into the PC's Ethernet port or router
- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Power plug will be provided in case of AC type
- UTP cable : Category 5 cable

Customization

- Customized color arrangement available
- Beige color
- LED Strobe, LED simulated revolving module are available upon request
- Customized pole length available
- Wall mount bracket available



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

Mounting Bracket

Standard	LB24	LW24
 Steel	 Steel	 PC
QZ24	**SZ24**	**QLA24**
 PC	 Al	 PC

※ Please refer to page 34-39 for detailed dimensions.

Ordering Specification

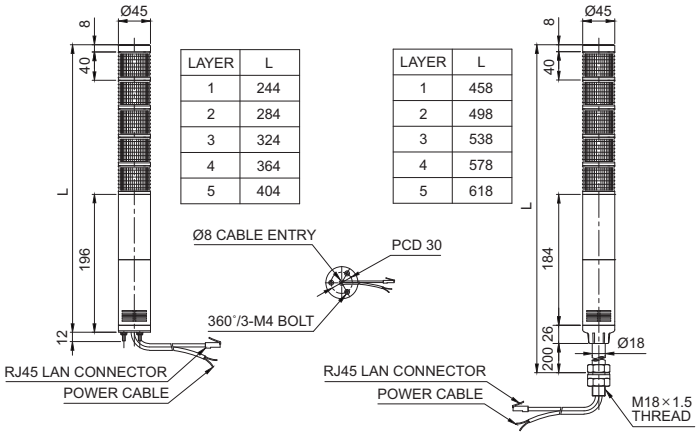
QT70L-ETN-WS	-	3	-	24	-	RAG	-	QZ24
[Model number]		[Layer]		[Voltage]		[Color]		[Mount bracket]
• QT70L-ETN-BZ • QT70L-ETN-WS • QT70L-ETN-WM • QT70L-ETN-WA • QT70ML-ETN-BZ • QT70ML-ETN-WS • QT70ML-ETN-WM • QT70ML-ETN-WA		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V		• R-Red • A-Amber • G-Green • B-Blue • W-White		• None -Standard • Bracket -LB24 -LW24 -QZ24 -SZ24 -QLA24

※ Mount brackets are available for the pole mount type(QT70L-ETN series) only.

Technical Diagram

(Units : mm)

ST45ML-ETN

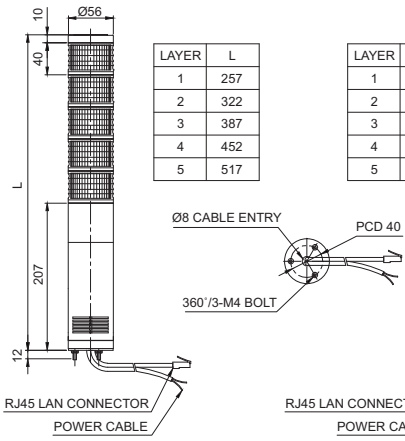


LAYER	L
1	244
2	284
3	324
4	364
5	404

ST45L-ETN

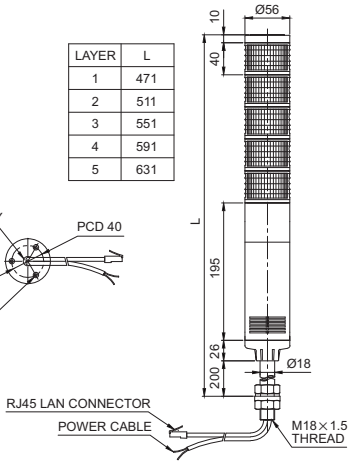
LAYER	L
1	458
2	498
3	538
4	578
5	618

ST56MEL-ETN



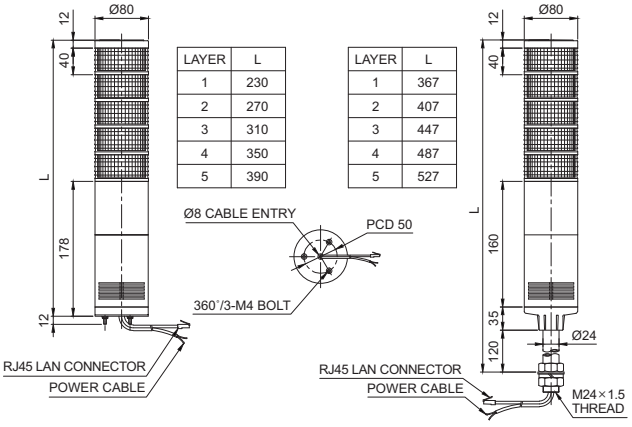
LAYER	L
1	257
2	322
3	387
4	452
5	517

ST56EL-ETN



LAYER	L
1	471
2	511
3	551
4	591
5	631

ST80MEL-ETN

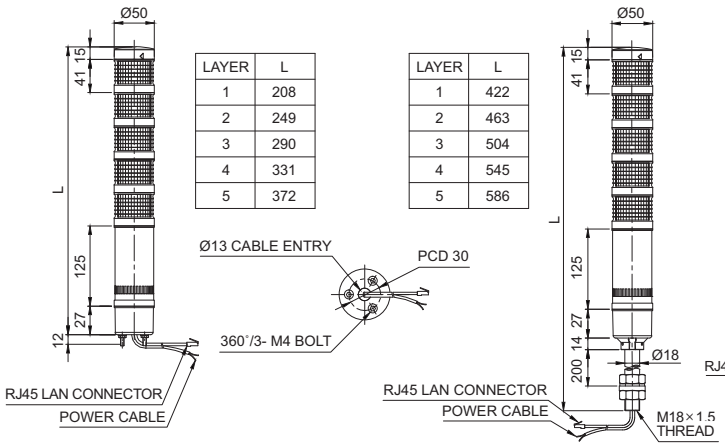


LAYER	L
1	230
2	270
3	310
4	350
5	390

ST80EL-ETN

LAYER	L
1	367
2	407
3	447
4	487
5	527

QT50ML-ETN

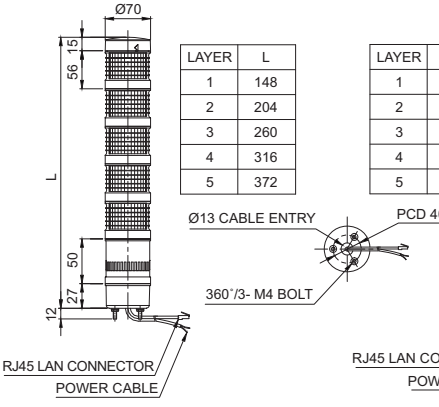


LAYER	L
1	208
2	249
3	290
4	331
5	372

QT50L-ETN

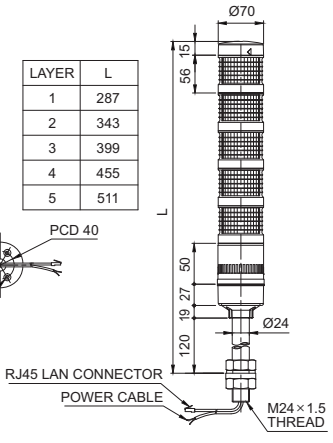
LAYER	L
1	422
2	463
3	504
4	545
5	586

QT70ML-ETN



LAYER	L
1	148
2	204
3	260
4	316
5	372

QT70L-ETN



LAYER	L
1	287
2	343
3	399
4	455
5	511

TOTAL CATALOGUE

Wireless Network System

INNOVATION IN ALARM & SIGNAL



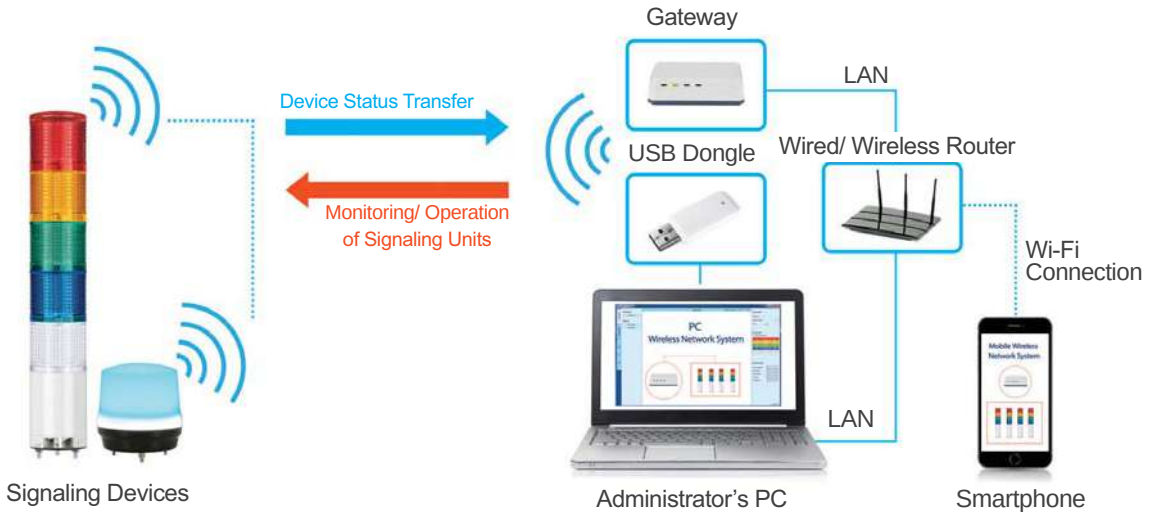
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Product Specifications 388

Product Information 389

Wireless Network System Features

Wireless network system uses wireless network to remotely monitor and control the operation status of a signaling device through a PC or smartphone. By applying wireless communication between production equipment, users can build an advanced production system.







- Uses a Mesh Topology that operates in 2.4 GHz short-range wireless technology which ensures the communication reliability in harsh environments
- Multi-hop function of the signaling device enables stable long-distance communication (with up to 100M between devices)
- Conform to International Standard IEEE802.15.4g

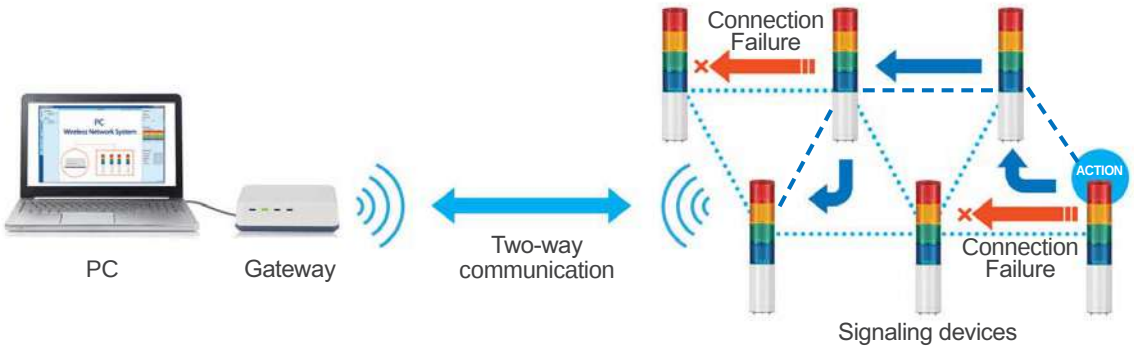
- **What is ZigBee?**

  ZigBee is a representative technology for low-power, low-cost wireless sensor network and has standardized the top layer Protocol and Application based on the IEEE 802.15.4 working group and PHY / MAC layer in 2003. IEEE802.15.1(Bluetooth),IEEE802.15.3(UWB), IEEE802.15.4(ZigBee) are the most common standards for Wireless Personal Area Network(WPAN). ZigBee uses three types of frequency bands: 2.4GHz, 868MHz, and 915MHz, with transmission rates of 250kbps, 20kbps, and 40kbps. Qlight network products uses 2.4GHz frequency band which has the fastest transmission speed.

Wireless Network System Application

◆Routing function that automatically navigates the optimum communication path

- Mesh network selects the strongest signal path for traffic and automatically steers signals around interference to ensure high availability of mesh links.
- Once there's a problem with wireless communication, the signaling device will find a new communication route in order to maintain smooth communication.



◆Building an advanced production network system with a low cost

- Combining a new network system to existing production lines can be easily done by connecting wireless signal devices.
- Cost-effective by requiring no additional cable when change the layout of production lines





Wireless Network System Concept

· Components

Application	Gateway	USB Dongle	Signaling Devices
			

1. Connection Types

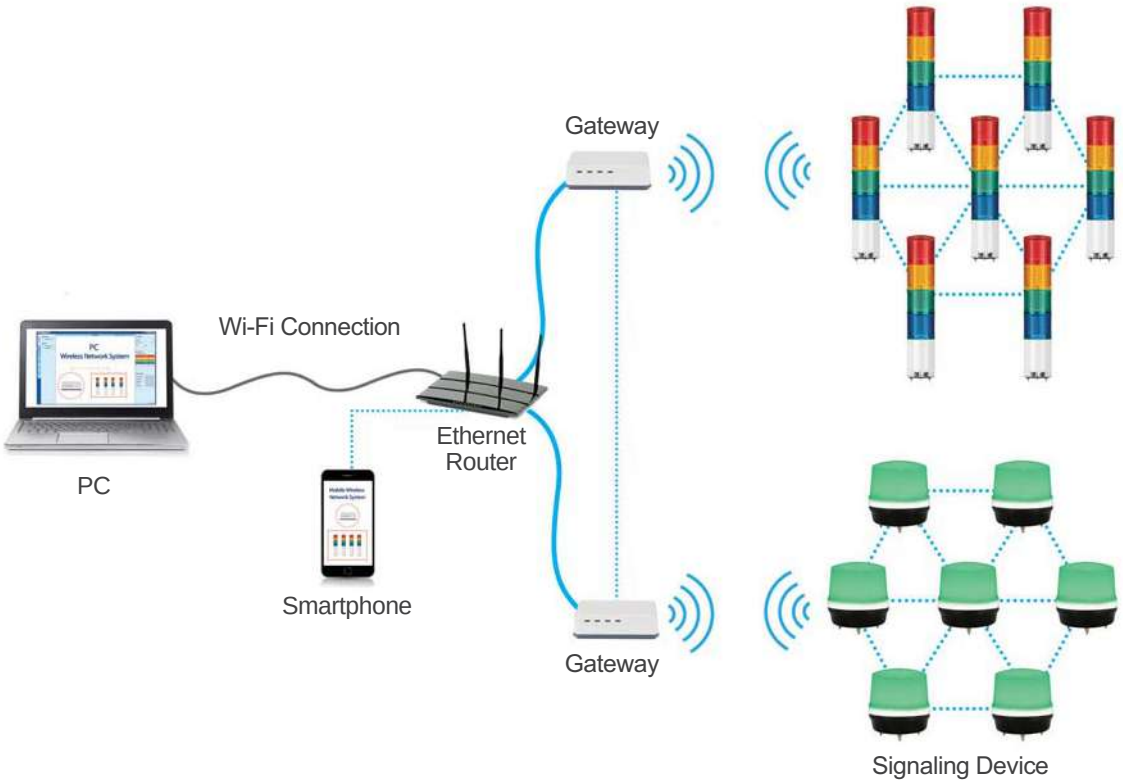
1) Connection via USB Dongle

- Easy installation and operation by plugging it to a PC, controls and monitors up to 32 wireless devices.
- Suitable for a single or small-scaled wireless network connection needs.



2) Connection via Gateway

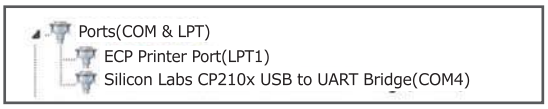
- Connecting multiple gateways allows 768 wireless signaling devices to be connected to the network, suitable for large-scaled production facilities.
- Can monitor or control the status of signaling devices with smartphones.



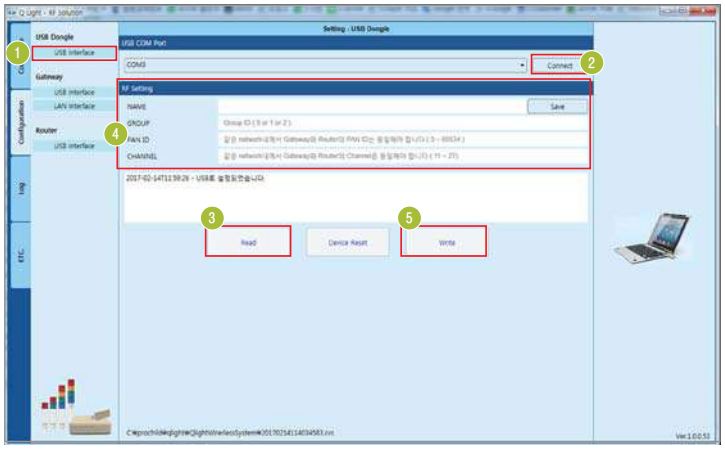
2. Connection Instructions

1) USB Dongle

- PC program allows you to configure wireless devices such as gateways, USB dongles and signaling devices, and can also monitor or control the status of the signaling devices.
- Check the COM port after the USB Dongle is connected(RS-232).
- Click Start -> Control Panel -> Device Manager -> Port (COM & LPT)

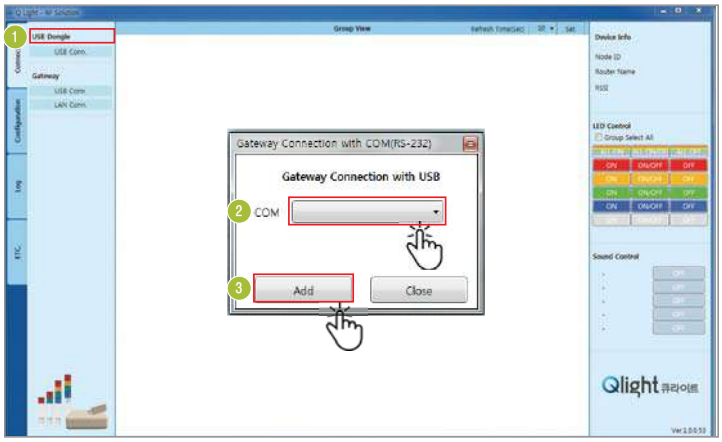


- USB Dongle Setting



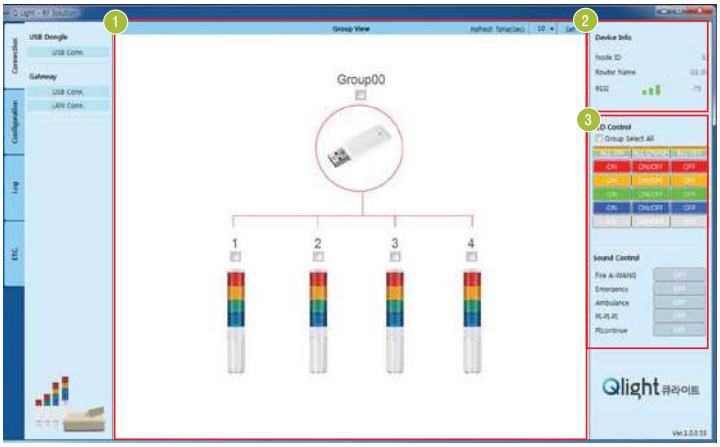
1. Config>USB DONGLE>Select “USB Interface”
2. Check the COM port of your PC and press “Connect” button to connect to the USB Dongle
3. Select “Read” to read RF information of the currently set USB dongle
4. Check and modify RF information of the USB dongle (RF info includes “NAME”, “PANID”, “CHANNEL”, “GROUP”, etc.)
5. Press “Write” button to save the modified information.

- USB Dongle Connection



1. Connection>USB DONGLE>Press “USB Interface” Button
2. Select COM port in the pull down window
3. Press “ADD” button to connect USB dongle

- Device Monitoring & Control



1. Identify devices that are connected wirelessly via USB dongle
   - Select a connected device (can select individually or in group)
2. Check the information of selected device (ID, Name, Signal strength)
3. Can control operation of selected devices individually or in group

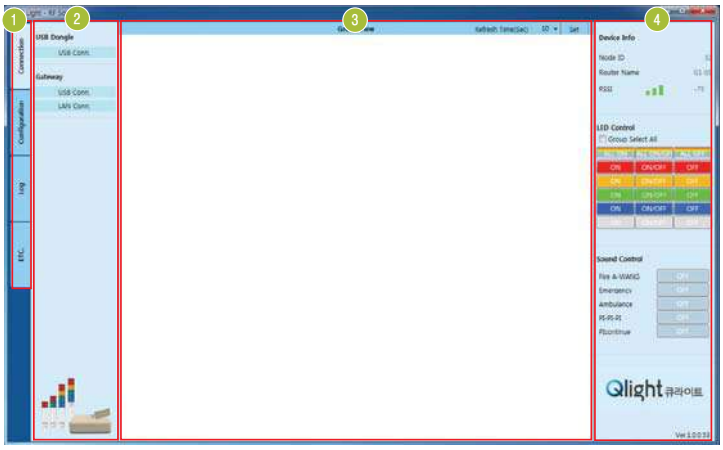
2) Gateway

• The PC program allows you to configure wireless devices such as gateways, USB dongles and signaling devices, and can also monitor or control the status of the signaling devices.

• Setting and Usage

- The PC program allows you to configure wireless devices such as gateways, USB dongles and signaling devices, and can also monitor or control the status of the signaling devices.
- With the Gateway linked to the Ethernet Network users can check or control the operation status of devices by smartphone. The control PC uses IIS function to enable access to the smartphone in WINDOW XP or later versions.

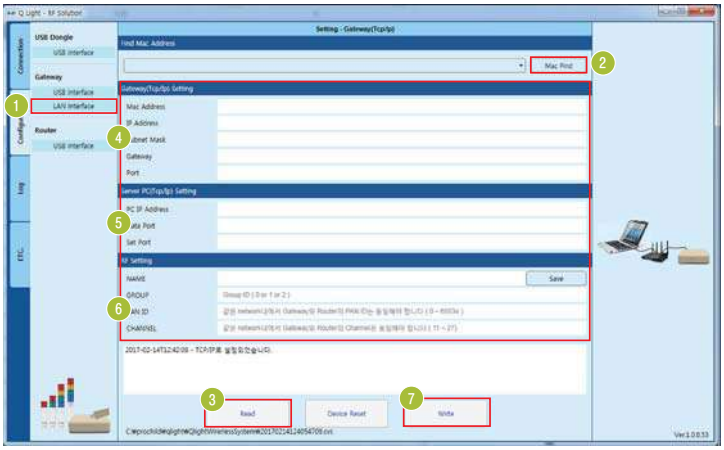
■ What is IIS? IIS stands for Microsoft's Internet information Services which is a WINDOWS service used for web service. With IIS, services such as FTP, SMTP, NNTP, and HTTP/ HTTPS are available.



※ Please refer to the separate manual for detailed settings and instruction

1. Tab
   - Connection : USB dongle, gateway connection setup
   - Configuration : USB dongle, gateway, router setup
   - Log : Stores log data and displays status of router through data viewer
   - Manual : User's guide for sample PC tool
2. Menu
   Provides detailed menu selections for each tab
3. Wireless network viewer
   Displays network status of the wireless devices
4. Status
   Displays the operation status and enables control of the wireless devices

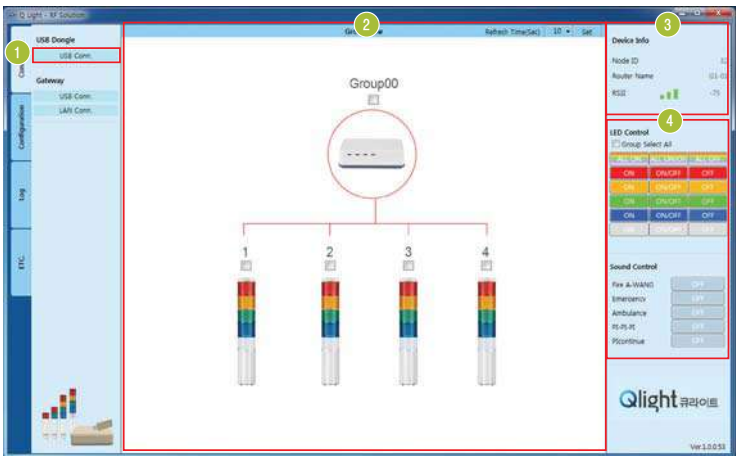
• Gateway Setting



1. Config>Gateway>Select "Lan Interface"
2. Click "Mac Find" to search the mac address of gateway
3. Press "Read" to check the current setting using the mac address of the gateway
4. Check and modify the network information of the gateway
5. Check and modify the network information of the PC server
6. Check and modify RF information of gateway
7. Save the modified settings

Wireless Network System Instructions

• Gateway Connection

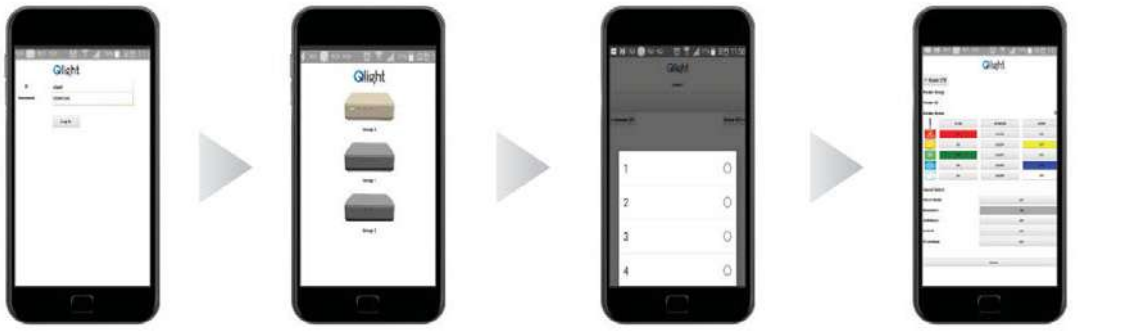


※ The method of USB connection using the Gateway is same with the method of USB connection using USB DONGLE

1. Connection>Gateway>Select “Lan Interface”
2. Select wireless device
   - Can select individually or in groups
   - Can check the operation status of the currently operating wireless devices
3. Can check the wireless setting of the selected devices
4. Can control selected individual device or group of devices

3) Smartphone

- In order to use smartphone the gateway and wired/wireless router should be connected.
- Access to the web page from smartphone using the IP address of the administrator’s PC with IIS set up.
- Log into your account in the login page and select the connected Gateway.
- Monitor or control the selected device by selecting the signaling device connected to the selected gateway.



Connect to web page → Connect to web page → Select connected wireless device → Monitor or control the status of selected device

Specification List For Wireless Products

Wireless LED Tower Lights



Model number		QTG60ML-WIZ	QTG60L-WIZ	QTG70ML-WIZ	QTG70L-WIZ
Voltage		AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V	AC/DC12V, AC/DC24V AC110V-220V
Dimension (mm)	Diameter	Ø60	Ø60	Ø70	Ø70
	Height	199-399	435-625	199-399	357-557
	Depth				
Material		Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS	Lens-PC Housing-ABS
Layers		1-5 Layers	1-5 Layers	1-5 Layers	1-5 Layers
Light source & Operation	Bulb Steady/ Flashing				
	LED Steady				
	LED Steady/ Flashing	•	•	•	•
	LED Strobe				
	LED Simulated revolving				
Sound & Volume	1 buzzer sound	Max. 85dB at 1m	Max. 85dB at 1m	Max. 85dB at 1m	Max. 85dB at 1m
	5 signal sounds				
Layer color change		Yes	Yes	Yes	Yes
Mount bracket		Direct mount	Pole mount	Direct mount	Pole mount
Bracket		TWS45, TWA45	LB18, LW18, QZ18, SZ18, QL18, SL18, QLA18	TWS80, TWA80	LB24, LW24, QZ24, SZ24, QL24, SL24, QLA24
Protection rating		IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)	IP54(Buzzer type), IP65(Standard)
Customization		2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing	2 buzzer sounds, Wall mount bracket, Strong buzzer, Black housing	2 buzzer sounds, Pole length adjustment, Strong buzzer, Black housing
Transistor		NPN	NPN	NPN	NPN
Communication		Wireless(ZIGBEE)	Wireless(ZIGBEE)	Wireless(ZIGBEE)	Wireless(ZIGBEE)
Page		P389	P390	P391	P392

Wireless LED Signal Lights



Model number		QMCL125-WIZ
Voltage		DC12V, DC24V
Dimension (mm)	Diameter	Ø116
	Height	110
Volume		Max. 80dB at 1m
Material		Lens-AS Housing-ABS
Mount bracket		Self stand
Protection rating		IP65
Customization		Wall mount
Transistor		NPN
Communication		Wireless(ZIGBEE)
Page		P397

QTG60ML-WIZ

Wireless LED Steady/ Flashing Tower Light

IP54 IP65 -30~+50℃ BUZZER 85dB NPN RoHS WIRELESS



QTG60ML-WIZ series



QTGA60ML-WIZ series

· PC Connection Components

 USB Dongle	Suitable for single or small-scaled network Can connect up to 32 devices
 Gateway	Suitable for large-scaled network One gateway unit is a single group, can connect up to 24 groups (each group can connect to 32 devices) ※ Network router is required for group communication.

Common Specifications (QTG60ML-WIZ/ QTG60L-WIZ/ QTG70ML-WIZ/ QTG70L-WIZ)

Can remotely monitor and control the status of tower lights using a PC or smartphone

- Allows you to build an advanced production network system with a low cost
- Uses a Mesh Topology that operates in 2.4 GHz Short-Range wireless technology which ensures the communication reliability in harsh environments
  - ※ Multi-hop function of the signaling device enables a stable long-distance communication (with up to 100M between devices)
  - ※ Cost-effective by requiring no additional cable when change the layout of production lines
- Wireless communication standard : ZigBee(IEEE802.15.4)

QTG60ML-WIZ Ø60mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificate	Weight	Color
QTG60ML-WIZ Steady QTG60ML-WIZ-BZ Steady /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.170A 0.100A Max. 0.061A	-	0.29kg 0.29kg 0.39kg	● R-Red
QTG60MLF-WIZ Steady/Flashing QTG60MLF-WIZ-BZ Steady/Flashing /w built-in buzzer	2	AC/DC12V AC/DC24V AC110V-220V	0.260A 0.150A Max. 0.083A		0.37kg 0.37kg 0.47kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.350A 0.200A Max. 0.105A		0.46kg 0.46kg 0.56kg	● R-Red ● A-Amber ● G-Green
QTGA60ML-WIZ Steady QTGA60ML-WIZ-BZ Steady /w built-in buzzer	4	AC/DC12V AC/DC24V AC110V-220V	0.440A 0.250A Max. 0.126A		0.54kg 0.54kg 0.64kg	● R-Red ● A-Amber ● G-Green ● B-Blue
QTGA60MLF-WIZ Steady/Flashing QTGA60MLF-WIZBZ Steady/Flashing /w built-in buzzer	5	AC/DC12V AC/DC24V AC110V-220V	0.530A 0.300A Max. 0.148A		0.62kg 0.62kg 0.72kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 394-396 for detailed wiring information.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS45**



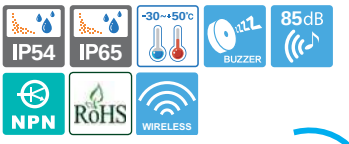
Wall Mount Bracket **TWA45**

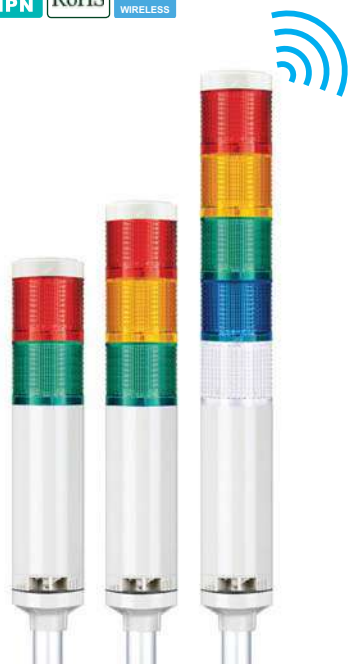
Ordering Specification

QTG60ML-WIZ	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTG60ML-WIZ • QTG60ML-WIZ-BZ • QTG60MLF-WIZ • QTG60MLF-WIZ-BZ • QTGA60ML-WIZ • QTGA60ML-WIZ-BZ • QTGA60MLF-WIZ • QTGA60MLF-WIZ-BZ		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

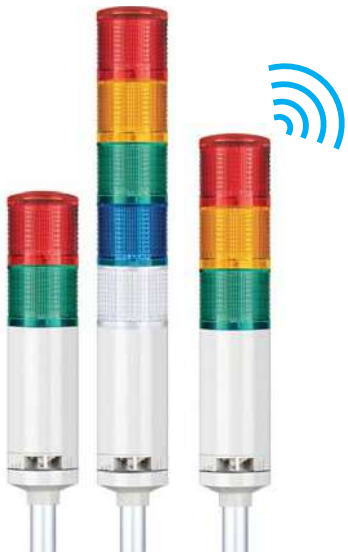
QTG60L-WIZ

Wireless LED Steady/ Flashing Tower Light





QTG60L-WIZ series



QTGA60L-WIZ series

QTG60L-WIZ Ø60mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificate	Weight	Color
QTG60L-WIZ Steady QTG60L-WIZ-BZ Steady /w built-in buzzer QTG60LF-WIZ Steady/Flashing QTG60LF-WIZ-BZ Steady/Flashing /w built-in buzzer QTGA60L-WIZ Steady QTGA60L-WIZ-BZ Steady /w built-in buzzer QTGA60LF-WIZ Steady/Flashing QTGA60LF-WIZBZ Steady/Flashing /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.170A 0.100A Max. 0.061A	-	0.44kg 0.44kg 0.54kg	● R-Red
	2	AC/DC12V AC/DC24V AC110V-220V	0.260A 0.150A Max. 0.083A		0.53kg 0.53kg 0.63kg	● R-Red ● G-Green
	3	AC/DC12V AC/DC24V AC110V-220V	0.350A 0.200A Max. 0.105A		0.61kg 0.61kg 0.56kg	● R-Red ● A-Amber ● G-Green
	4	AC/DC12V AC/DC24V AC110V-220V	0.440A 0.250A Max. 0.126A		0.70kg 0.70kg 0.80kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.530A 0.300A Max. 0.148A		0.78kg 0.78kg 0.88kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 394-396 for detailed wiring information.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

Ordering Specification

QTG60L–WIZ	-	3	-	110/220	-	RAG	-	LW18
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTG60L-WIZ • QTG60L-WIZ-BZ • QTG60LF-WIZ • QTG60LF-WIZ-BZ • QTGA60L-WIZ • QTGA60L-WIZ-BZ • QTGA60LF-WIZ • QTGA60LF-WIZ-BZ		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None-Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

· PC Connection Components

 USB Dongle	Suitable for single or small-scaled network Can connect up to 32 devices
 Gateway	Suitable for large-scaled network One gateway unit is a single group, can connect up to 24 groups (each group can connect to 32 devices) ※ Network router is required for group communication.

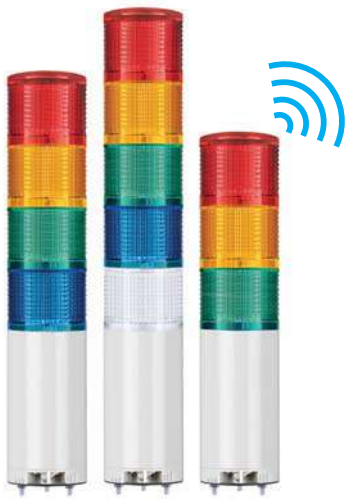
QTG70ML-WIZ

Wireless LED Steady/ Flashing Tower Light

IP54 IP65 -30~+50°C BUZZER 85dB NPN RoHS WIRELESS



QTG70ML-WIZ series



QTGA70ML-WIZ series

QTG70ML-WIZ Ø70mm Direct Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificate	Weight	Color
QTG70ML-WIZ Steady QTG70ML-WIZ-BZ Steady /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.170A 0.100A Max. 0.061A	-	0.45kg 0.45kg 0.55kg	● R-Red
QTG70MLF-WIZ Steady/Flashing QTG70MLF-WIZ-BZ Steady/Flashing /w built-in buzzer	2	AC/DC12V AC/DC24V AC110V-220V	0.260A 0.150A Max. 0.083A		0.59kg 0.59kg 0.69kg	● R-Red ● G-Green
QTGA70ML-WIZ Steady QTGA70ML-WIZ-BZ Steady /w built-in buzzer	3	AC/DC12V AC/DC24V AC110V-220V	0.350A 0.200A Max. 0.105A		0.80kg 0.80kg 0.90kg	● R-Red ● A-Amber ● G-Green
QTGA70MLF-WIZ Steady/Flashing QTGA70MLF-WIZ-BZ Steady/Flashing /w built-in buzzer	4	AC/DC12V AC/DC24V AC110V-220V	0.440A 0.250A Max. 0.126A		0.95kg 0.95kg 0.95kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.530A 0.300A Max. 0.148A		1.10kg 1.10kg 1.20kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 394-396 for detailed wiring information.

Customization

- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **TWS80**



Wall Mount Bracket **TWA80**

· PC Connection Components

 USB Dongle	Suitable for single or small-scaled network Can connect up to 32 devices
 Gateway	Suitable for large-scaled network One gateway unit is a single group, can connect up to 24 groups (each group can connect to 32 devices) ※ Network router is required for group communication.

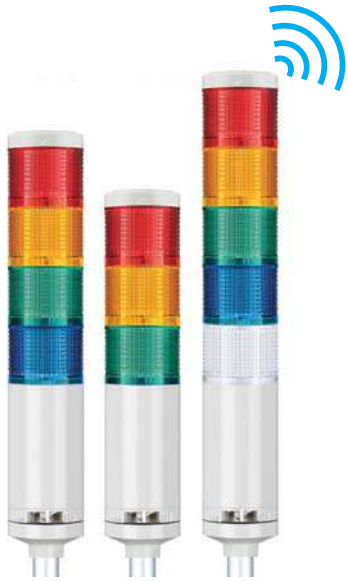
Ordering Specification

QTG70ML-WIZ	-	3	-	110/220	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
• QTG70ML-WIZ • QTG70ML-WIZ-BZ • QTG70MLF-WIZ • QTG70MLF-WIZ-BZ • QTGA70ML-WIZ • QTGA70ML-WIZ-BZ • QTGA70MLF-WIZ • QTGA70MLF-WIZ-BZ		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

QTG70L-WIZ

Wireless LED Steady/ Flashing Tower Light

IP54 IP65 -30~+50℃ BUZZER 85dB NPN RoHS WIRELESS



QTG70L-WIZ series



QTGA70L-WIZ series

· PC Connection Components

 USB Dongle	Suitable for single or small-scaled network Can connect up to 32 devices
 Gateway	Suitable for large-scaled network One gateway unit is a single group, can connect up to 24 groups (each group can connect to 32 devices) ※ Network router is required for group communication.

QTG70L-WIZ Ø70mm Pole Mount, LED Steady/Flashing Type

Model number	Layer	Voltage	Current	Certificate	Weight	Color
QTG70L-WIZ Steady QTG70L-WIZ-BZ Steady /w built-in buzzer	1	AC/DC12V AC/DC24V AC110V-220V	0.170A 0.100A Max. 0.061A		0.57kg 0.57kg 0.57kg	● R-Red
QTG70LF-WIZ Steady/Flashing QTG70LF-WIZ-BZ Steady/Flashing /w built-in buzzer	2	AC/DC12V AC/DC24V AC110V-220V	0.260A 0.150A Max. 0.083A		0.69kg 0.69kg 0.79kg	● R-Red ● G-Green
QTGA70L-WIZ Steady QTGA70L-WIZ-BZ Steady /w built-in buzzer	3	AC/DC12V AC/DC24V AC110V-220V	0.350A 0.200A Max. 0.105A	-	0.84kg 0.84kg 0.94kg	● R-Red ● A-Amber ● G-Green
QTGA70LF-WIZ Steady/Flashing QTGA70LF-WIZ-BZ Steady/Flashing /w built-in buzzer	4	AC/DC12V AC/DC24V AC110V-220V	0.440A 0.250A Max. 0.126A		0.99kg 0.99kg 1.09kg	● R-Red ● A-Amber ● G-Green ● B-Blue
	5	AC/DC12V AC/DC24V AC110V-220V	0.530A 0.300A Max. 0.148A		1.23kg 1.23kg 1.32kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White

※ AC type model has a free-voltage range of 100V-240V.

Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wiring with external contact and transistor

※ Please refer to page 394-396 for detailed wiring information.

Mounting Bracket

Standard	LB18	LW18	QZ18	SZ18	QL18	SL18	QLA18
							
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Customized pole length available
- High buzzer module equipped on top(Lens should be within 4 layers)
- Black housing tower lights

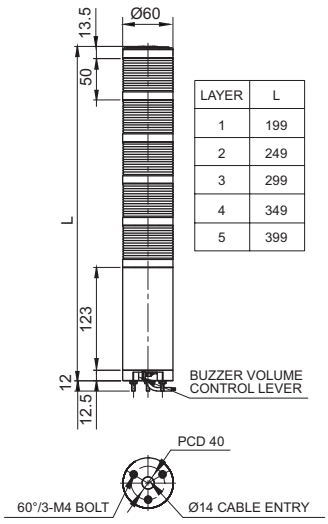
Ordering Specification

QTG70L–WIZ	-	3	-	110/220	-	RAG	-	LW24
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
• QTG70L-WIZ • QTG70L-WIZ-BZ • QTG70LF-WIZ • QTG70LF-WIZ-BZ • QTGA70L-WIZ • QTGA70L-WIZ-BZ • QTGA70LF-WIZ • QTGA70LF-WIZ-BZ		• 1-1 layer • 2-2 layers • 3-3 layers • 4-4 layers • 5-5 layers		• 12-DC12V • 24-DC24V • 110/220 -AC110V-220V		● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White		• None-Standard • Bracket -LB18 -LW18 -QZ18 -SZ18 -QL18 -SL18 -QLA18

Technical Diagram

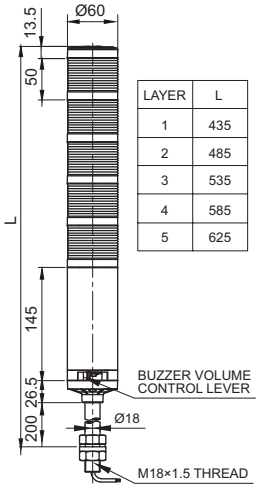
(Units : mm)

QTG60ML(F)-WIZ-Series



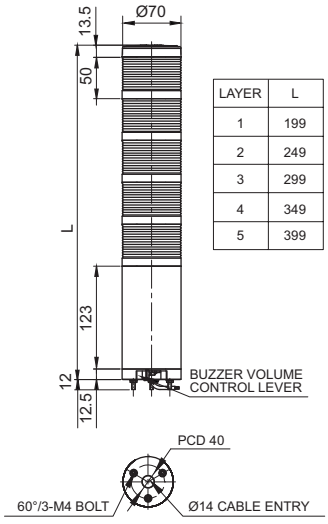
LAYER	L
1	199
2	249
3	299
4	349
5	399

QTG60L(F)-WIZ-Series



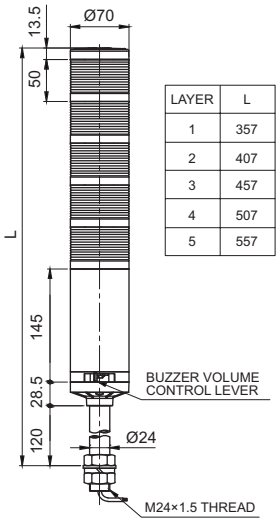
LAYER	L
1	435
2	485
3	535
4	585
5	625

QTG70ML(F)-WIZ-Series



LAYER	L
1	199
2	249
3	299
4	349
5	399

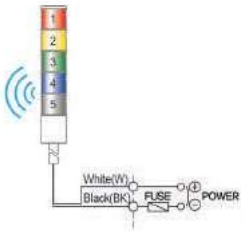
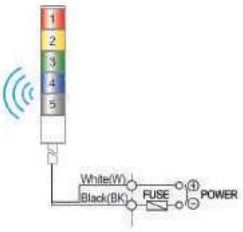
QTG70L(F)-WIZ-Series



LAYER	L
1	357
2	407
3	457
4	507
5	557

Wiring Instructions

• Please wire the product as followings when you control via wireless network

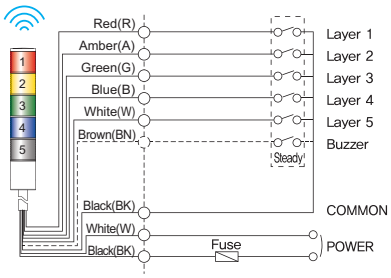
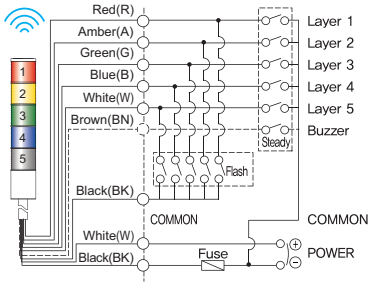
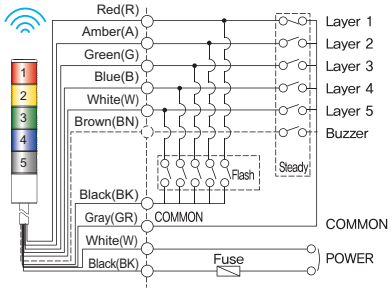
Applied products	Connection by USB
AC/DC Steady/ Flashing QTG60ML-WIZ QTG60L-WIZ QTG70ML-WIZ QTG70L-WIZ	Connection via USB Dongle   Connection via Gateway   Suitable for single or small-scaled network Can connect up to 32 devices

Applied products	Connection by Ethernet
AC/DC Steady/ Flashing QTG60MLF-WIZ QTG60LF-WIZ QTG70MLF-WIZ QTG70LF-WIZ	Ethernet connection via Gateway  Suitable for single or small-scaled network Can connect up to 32 devices Connection via Gateway and Ethernet Router  Suitable for large-scaled network One gateway unit is a single group, can connect up to 24 groups, 768 devices (each group can connect to 32 devices)

• AC Steady type, AC/DC Steady/ Flashing type : External power line standard : UL1015 AWG18(0.75sq)×2C 400mm

Wiring Instructions

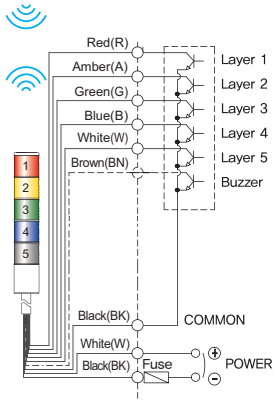
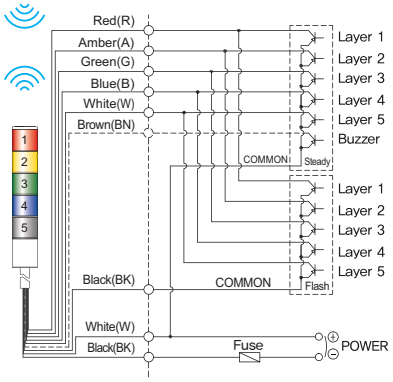
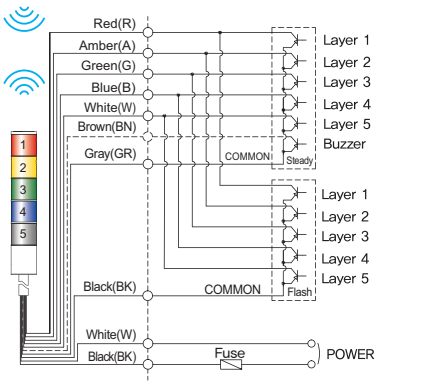
• Please wire the product by referring below instruction.
• You can monitor status of tower light and control them via wireless network.

Applied products	External Contact
AC/DC Steady/ Flashing QTG60ML-WIZ QTG60L-WIZ QTG70ML-WIZ QTG70L-WIZ	  • QTG(A) ☐☐(M)L - WIZ : Same wiring including buzzer type • QTG☐☐L └Lens diameter 60(60mm) : QTG60(M)L 70(70mm) : QTG70(M)L
AC/DC Steady/ Flashing QTG60MLF-WIZ QTG60LF-WIZ QTG70MLF-WIZ QTG70LF-WIZ	  • QTG(A) ☐☐(M)L - WIZ : Same wiring including buzzer type • QTG☐☐L └Lens diameter 60(60mm) : QTG60(M)L 70(70mm) : QTG70(M)L
AC Steady/ Flashing QTG60MLF-WIZ QTG60LF-WIZ QTG70MLF-WIZ QTG70LF-WIZ	  • QTG(A) ☐☐(M)L - WIZ : Same wiring including buzzer type • QTG☐☐L └Lens diameter 60(60mm) : QTG60(M)L 70(70mm) : QTG70(M)L

• DC Steady type External power line & Signal line standard : UL1007 AWG22(0.3sq) 400mm
• AC Steady, AC/DC Steady/ Flashing type External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
signal line standard : UL1007 AWG22(0.3sq) 400mm

Wiring Instructions

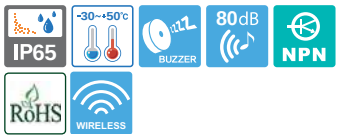
• Wiring to transistor, use the NPN transistor. Please wire properly based on wiring instructions below.

Applied products	External Contact
AC/DC Steady/ Flashing QTG60ML-WIZ QTG60L-WIZ QTG70ML-WIZ QTG70L-WIZ	  • QTG(A) □□(M)L - WIZ : Same wiring including buzzer type • QTG□□L └Lens diameter 60(60mm) : QTG60(M)L 70(70mm) : QTG70(M)L
AC/DC Steady/ Flashing QTG60MLF-WIZ QTG60LF-WIZ QTG70MLF-WIZ QTG70LF-WIZ	  • QTG(A) □□(M)L - WIZ : Same wiring including buzzer type • QTG□□L └Lens diameter 60(60mm) : QTG60(M)L 70(70mm) : QTG70(M)L
AC Steady/ Flashing QTG60MLF-WIZ QTG60LF-WIZ QTG70MLF-WIZ QTG70LF-WIZ	  • QTG(A) □□(M)L - WIZ : Same wiring including buzzer type • QTG□□L └Lens diameter 60(60mm) : QTG60(M)L 70(70mm) : QTG70(M)L

• DC Steady type External power line & Signal line standard : UL1007 AWG22(0.3sq) 400mm
• AC Steady, AC/DC Steady/ Flashing type External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
signal line standard : UL1007 AWG22(0.3sq) 400mm

QMCL-WIZ series

Wireless Multiple Color LED Steady Signal Lights





QMCL125-WIZ



Common Specifications

Can remotely monitor and control the status of light units using a PC or smartphone

- Allows you to build an advanced production network system with a low cost
- Uses a Mesh Topology that operates in 2.4 GHz Short-Range wireless technology which ensures the communication reliability in harsh environments

※ Multi-hop function of the signaling device enables a stable long-distance communication (with up to 100M between devices)

※ Cost-effective by requiring no additional cable when change the layout of production lines

- Wireless communication standard : ZigBee(IEEE802.15.4)
- Can generate 7 color light signals in one light unit
- Milky translucent color when off, the soft LED illuminates designated colors when on
- Materials : Lens-AS, Body-ABS
- Ambient operating temperature : -30°C to +50°C
- Protection rating : IP65
- Certificates : CE Compliant
- Compliant with RoHS directive

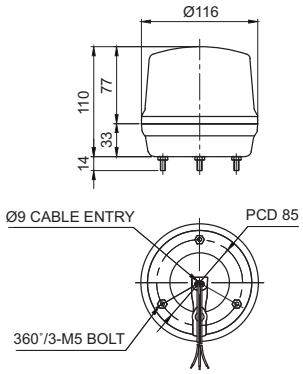
	Voltage	AC/DC12V	AC/DC24V
QMCL125-WIZ	Signal Line Power Consumption	0.320A	0.170A
	Buzzer Line Power Consumption	0.020A	0.020A

QMCL125-WIZ Ø125mm Wireless Multiple Color LED Steady Signal Lights

Model number	Voltage	Current	Certificate	Weight	Color
QMCL125-WIZ	DC12V	0.320A	-	0.34kg	7 Color
	DC24V	0.170A			

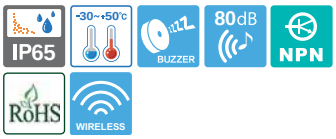
Technical Diagram (Units : mm)

QMCL125-WIZ



QMCL-WIZ series

Wireless Multiple Color LED Steady Signal Lights





QMCL125-WIZ

· PC Connection Components

 USB Dongle	Suitable for single or small-scaled network Can connect up to 32 devices
 Gateway	Suitable for large-scaled network One gateway unit is a single group, can connect up to 24 groups (each group can connect to 32 devices) ※ Network router is required for group communication.

Wiring Instructions

- External signal line standard : Signal line 4P(R,G,B,K) threading, signal line standard UL1007 AWG22(0.3sq) 400mm
- Please refer to Wiring Instructions diagram to properly configure color options

※ Please refer to page 155 for detailed wiring information.

Customization

- Wall mounting bracket options : Bracket structure allows for threading through the bracket hole or into the wall mount



Wall Mount Bracket **SWP125**



Wall Mount Bracket **SWM125**

Ordering Specification

QMCL125-WIZ	–	BZ	–	24
[Model number]		[Buzzer option]		[Voltage]
• QMCL125-WIZ		• None - No buzzer • BZ- Built-in buzzer		• 12-DC12V • 24-DC24V

Wiring Instructions

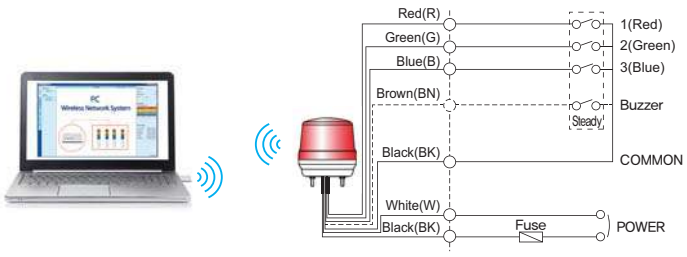
• Please refer to Wiring Instructions diagram to properly configure wireless network option.

Applied products	Connection by USB
QMCL125-WIZ	

Applied products	Connection by Ethernet
QMCL125-WIZ	Ethernet connection via Gateway / Connection via Gateway and Ethernet Router

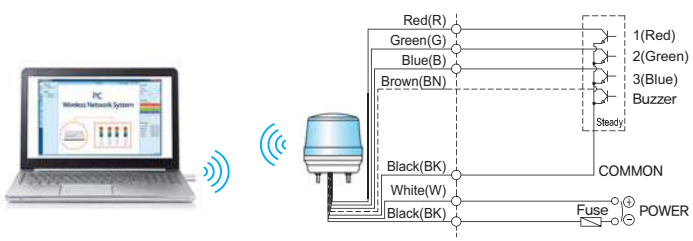


• Please refer to below wiring Instructions diagram to properly configure external contact and transistor options.

Applied products	External Contact
QMCL125-WIZ	

< Wiring Configuration for Signal Color >

No.	Color	Wiring
1	Red	1(Red)
2	Green	2(Green)
3	Blue	3(Blue)
4	Amber	1(Red)+2(Green)
5	Cyan	2(Green)+3(Blue)
6	Purple	1(Red)+3(Blue)
7	White	1(Red)+2(Green)+3(Blue)

Applied products	External Transistor
QMCL125-WIZ	

< Wiring Configuration for Signal Color >

No.	Color	Wiri
1	Red	1(Red)
2	Green	2(Green)
3	Blue	3(Blue)
4	Amber	1(Red)+2(Green)
5	Cyan	2(Green)+3(Blue)
6	Purple	1(Red)+3(Blue)
7	White	1(Red)+2(Green)+3(Blue)

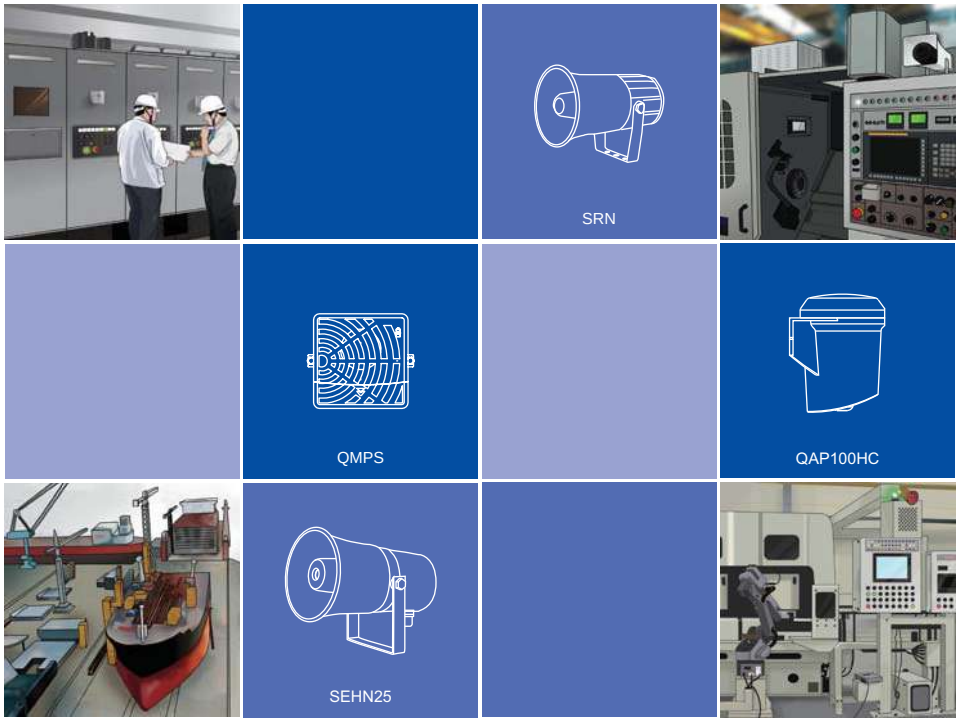


Qlight

TOTAL CATALOGUE

Electric Horns/ Speakers

INNOVATION IN ALARM & SIGNAL



Quick reference of volume 402

Technical information 404

References 405

Product specifications 407

Product Volume Quick Reference Guide

Qlight provides a wide range of audible products between 85dB – 130dB. Please take a look at the Product Volume Quick Reference Guide for the sound level of each of our audible products.


SANA700 SANA400 SANA200

130dB


QWH50 SMP50 SM400

123dB


SEWN50E SEWN50-2T SEWN50L SEHN50 SM200

120dB


SHDN30 SEWN30E SPNA

118dB


QAP125HC SMP35 QWH35 SEN25 SEHN25 SM40

115dB


SM30

110dB


SRN SEN15

108dB


QAP125BZC QAP100BZC QAP80BZC SN

105dB


QAP100HC QAP80HC S60ADH QMPS

100dB


SBE130 SBE150 SAB130 SAB200 SN-1

95dB

90dB


SPK

85dB



Air plane - 140dB

130dB Air Horn(SANA series)

Motor Siren(SM400)
Multifunctional Electric Horn(SMP50)
123dB Special Warning Electric Signal Horn(QWH50)



Motor Siren(SM200)
Heavy-Duty Electric Horn
120dB (SEHN50, SEWN50L, SEWN50-2T, SEWN50E)

Rock Concert - 120dB

Explosion proof Electric Horn(SPNA)
Heavy-Duty Electric Horn(SEWN30E)
118dB Full Duplex Heavy-Duty Electric Horn(SHDN30)

Motor Siren(SM40), Heavy-Duty Electric Horn(SEHN25)
Electric Signal Horn(SEN25)
Multifunctional Electric Horn(SMP35, QAP125HC)
115dB Special Warning Electric Horn(QWH35)



110dB Motor Siren(SM30)

Vehicle Horn - 100-110dB

Electric Horn(SEN15)
108dB Electric Horn(SRN)

Electric Signal Horn(SN)
Wall Mount High Sound Buzzer Horn
105dB (QAP80BZC, QAP100BZC, QAP125BZC)



Multifunctional Panel Type Speaker(QMPS)
Wall Mount High Sound Buzzer Horn(S60ADH)
100dB Multifunctional Electric Horn(QAP80HC, QAP100HC)

Plant / Train - 100dB

Electric Horn(SN-1)
Lamp Attached Alarm Bell(SAB130, SAB200)
95dB Explosion proof Alarm Bell(SBE130, SBE150)

90dB



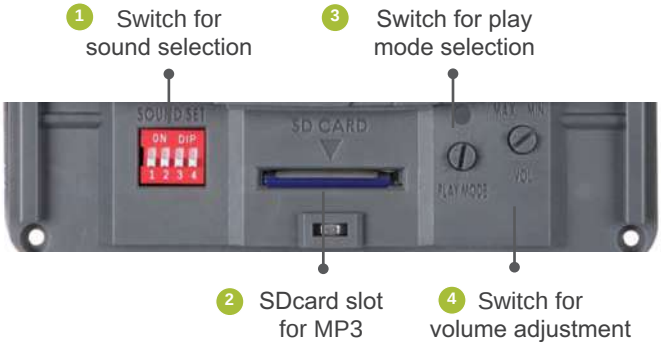
85dB Panel Type Speaker(SPK)

Vacuum Cleaner - 80dB

Technical Information for Multifunctional Electric Horns/ Speakers



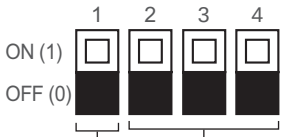
■ Features



What is Multifunctional Electric Horn/ Speaker?

1. Multifunctional electric horn/ speaker is a versatile horn which is able to play built-in 30 sound tones as well as MP3 file from SDcard.
2. User can designate the sound tone in the SDcard through a PC.

1 Sound setting switch



Bit input mode selection from 6 groups

001: WS(5 Warning sounds)
010: WP(5 Special warning sounds 1st group)
011: WM(5 Melodies)
100: WA(5 Alarms)
101: WO(5 Special warning sounds 2nd group)
110: WN(5 Special warning sounds 3rd group)

Selection between pre-recorded sound mode and SDcard sound mode

0: Pre-recorded sound mode
1: SDcard sound mode

- Switch No1. allows user to choose the option between Pre-Recorded sound and sound from the SDcard.
- Switch No.2 – 4 allows user to choose 1 group of 6 in the case of bit input mode.

2 SDcards

- The SDcard is a compact flash memory card for storing MP3 files.
- After saving the MP3 files in the SDcard with the specified format, insert the card into the SDcard slot and switch the sound setting switch to ON(1) so the sounds can be played from the SDcard.

3 PLAY MODE setting switch

- Play mode setting switch allows the user to chose the proper channel input method and playback mode. Please refer to the table below for a description of each setting switch features.
- Switch No.0 and No.9. are not used.

1	Bit Input Mode	5 sounds can be played from the selected group. (can choose 1 group among 6 groups) Play message one time and quit.(In case of Consecutive signal or pulse signal)
2	Binary Input Mode	Up to 31 sounds available for each model. Plays sound only once.(consecutive signal only)
3	Bit Input Hold Playback Mode	5 sounds can be played from the selected group. (can choose 1 group among 6 groups) The sound is repeated if the input signal is maintained.(Consecutive signal only) Sound will be suspended the STOP signal, otherwise the message is played repeatedly.
4	Binary Input Hold Playback Mode	Up to 31 sounds available for each model The sound is repeated if the input signal is maintained.(consecutive signal only) Sound will be suspended the STOP signal, otherwise the message is played repeatedly.
5	Bit Input Sound Reduction Mode	5 sounds can be played from the selected group. (can choose 1 group among 6 groups) Volume reduction signal line is able to decrease the volume by as much as 15dB.(can reduce input volume as well)
6	Binary Input Sound Reduction Mode	Up to 31 sounds available for each model Volume reduction signal line is able to decrease the volume by as much as 15dB.(can reduce input volume as well)
7	Bit Input Sequence Memory Playback Mode	5 sounds can be played from the selected group. (Can choose 1 group among 6 groups) Playback around 3 seconds for each sound in accordance with the sequence of input. Final input channel is fully played.(Bit input Mode ONLY)
8	Test Mode	In test mode, Ch1 of group is automatically played back repeatedly. Change to other modes in order to quit the test mode.

4 VOLUME

- Volume is adjustable with the sound dial included.

Reference for Electric Horn/ Speaker/ Motor Siren/ Buzzer Horn/ Bell









Model number(series)		SPK	QMPS	S60ADH	QAP80H	QAP80BZ	QAP100H	QAP100BZ
Voltage		DC12V, DC24V AC110V, AC220V	DC12V-24V AC110V-220V	DC12V, DC24V AC110V, AC220V	DC12V-DC24V	DC12V, DC24V	DC12V-24V AC110V-220V	DC12V, DC24V AC110V-220V
Dimension (mm)	Diameter	80×80	120×120	Ø75	Ø83	Ø83	Ø97	Ø97
	Height	-	-	158	129	129	137	137
	Depth	75	69	86	93	93	109	109
Materials		ABS	ABS	ABS	ABS	ABS	ABS	ABS
Sound & Volume	1 Tone Buzzer			Max 100dB at 1m		Max 105dB at 1m		Max 105dB at 1m
	5 Signal Sounds	Max 85dB at 1m						
	Voice							
	30 Signal Sounds		Max 98dB at 1m		Max 100dB at 1m		Max 100dB at 1m	
	31 Signal Sounds							
	MP3		Max 95dB at 1m				Max 95dB at 1m	
	Other Sound							
Mount bracket		Panel mount	Panel mount	Wall mount	Wall mount	Wall mount	Wall mount	Wall mount
Caple entry		-	-	-	Ø10	Ø10	Ø10	Ø10
Protection rating		IP23	IP54	IP54	IP65	IP65	IP65	IP65
Certificate		CE	CE, UL	CE	-	-	-	-
Customization		-	-	Strong buzzer 105dB	-	-	-	-
Transistor		NPN type	NPN type		NPN type	-	NPN type	-
Page		P405	P406	P408	P410	P410	P411	P411









Model number(series)		QAP125H	QAP125BZ	SRN	SEN15	SEN25	SMP35	SMP50
Voltage		DC12V-24V AC110V-220V	DC12V, DC24V AC110V-220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V-24V AC110V-220V	DC12V, DC24V AC110V-220V
Dimension (mm)	Diameter	Ø116	Ø116	Ø125	130	130	145×177	145×177
	Height	149	149	-	-	-	-	-
	Depth	132	132	185(Length)	200(Length)	200(Length)	216(Length)	216(Length)
Materials		ABS	ABS	ABS	ABS	ABS	ABS	ABS
Sound & Volume	1 Tone Buzzer		Max 105dB at 1m					
	5 Signal Sounds			Max 108dB at 1m	Max 108dB at 1m	Max 115dB at 1m		
	Voice			Max 98dB at 1m	Max 98dB at 1m	Max 108dB at 1m		
	30 Signal Sounds	Max 115dB at 1m					Max 115dB at 1m	Max 123dB at 1m
	31 Signal Sounds							
	MP3	Max 100dB at 1m					Max 113dB at 1m	Max 118dB at 1m
	Other Sound							
Mount bracket		Wall mount	Wall mount	Self stand	Self stand	Self stand	Self stand	Self stand
Caple entry		Ø10	Ø10	Ø10	Ø10	Ø10	Ø21	Ø21
Protection rating		IP65	IP65	IP55	IP55	IP55	IP65	IP65
Certificate		-	-	CE	CE	CE	-	-
Customization		-	-	External sound pattern signal line	External sound pattern signal line	External sound pattern signal line	External sound pattern signal line	External sound pattern signal line
Transistor		NPN type	-	NPN type	NPN type	NPN type	NPN type	NPN type
Page		P412	P412	P413	P413	P413	P415	P415

Reference for Electric Horn/ Speaker/ Motor Siren/ Buzzer Horn/ Bell








Model number(series)		SN	SEHN25	SEHN50	SN-1	SM30	SM40
Voltage		DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V
Dimension (mm)	Diameter	Ø119(Horn)	Ø158(Horn)	Ø167(Horn)	Ø135(Horn)	Ø77	Ø128
	Height						
	Depth	167(Length)	238(Length)	242(Length)	140(Length)	82(Length)	162(Length)
Materials		Housing-Steel	Housing-Steel	Housing-Steel	Housing-Steel	Housing-Steel	Housing-ABS
Sound & Volume	1 Tone Buzzer						
	5 Signal Sounds	Max 105dB at 1m	Max 115dB at 1m	Max 120dB at 1m	-	-	-
	Voice	Max 95dB at 1m	Max 108dB at 1m	Max 115dB at 1m	-	-	-
	30 Signal Sounds						
	31 Signal Sounds						
	MP3						
	Other Sound	-	-	-	Max 100dB at 1m	Max 110dB at 1m	Max 116dB at 1m
Mount bracket		Self stand	Self stand	Self stand	Self stand	Self stand	Self stand
Caple entry		Ø10	Ø21	Ø21	Ø10	Ø22	Ø22
Protection rating		IP55	IP55	IP55	IP55	IP44	IP44
Certificate		KIMM	KIMM	KIMM	-	-	-
Customization		External sound pattern signal line	External sound pattern signal line	External sound pattern signal line	-	-	-
Transistor		NPN type	NPN type	NPN type	-	-	-
Page		P185	P185	P186	P418	P192	P192








Model number(series)		SM200	SM400	SAB130	SAB200	QWH35	QWH50
Voltage		DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC24V AC110V, AC220V	DC12V-24V AC110V-220V	DC12V, DC24V AC110V-220V
Dimension (mm)	Diameter	Ø143	Ø165	Ø130(Bell)	Ø200(Bell)	136×179	168×222
	Height	-	-	238	269	-	-
	Depth	231(Length)	284(Length)	107	107	126	163
Materials		Housing-Steel	Housing-Steel	Bell-Steel Housing-ABS	Bell-Steel Housing-ABS	Horn-PC Housing-PC+ABS	Horn-PC HousingPC+-ABS
Sound & Volume	1 Tone Buzzer						
	5 Signal Sounds						
	Voice						
	30 Signal Sounds						
	31 Signal Sounds	-	-	-	-	Max 115dB at 1m	Max 123dB at 1m
	MP3	-	-	-	-	Max 113dB at 1m	Max 118dB at 1m
	Other Sound	Max 120dB at 1m	Max 123dB at 1m	Max 95dB at 1m	Max 95dB at 1m	-	-
Mount bracket		Direct mount	Direct mount	Wall mount	Wall mount	Wall mount	Wall mount
Caple entry		Ø9	Ø22	Ø26	Ø26	Ø21	Ø21
Protection rating		IP44	IP44	IP56	IP56	IP66	IP66
Certificate		CE				CE	CE
Customization		-	-	2 way cable entries	2 way cable entries	-	-
Transistor		-	-	-	-	NPN type	NPN type
Page		P193	P193	P194	P194	P183-184	P183-184

SPK Panel Mounted Speaker

IP23 | -25~+50°C | SPK | 85dB | NPN



SPK

SPK Max 85dB, Panel Mounted Speaker

- Panel mounted speaker that plays 8 clear and periodic sound tones
- General compatibility by adopting general equipment (62×62mm) mount holes
- Allowing volume control without dismantling the device
- Various sound patterns such as warning sound, melodies, and alarms can be chosen depending on the message use case
- Wiring terminal on the back side of the product
- Materials : ABS
- Sound volume : Max 85dB at 1m
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP23
- Certificates : CE Compliant

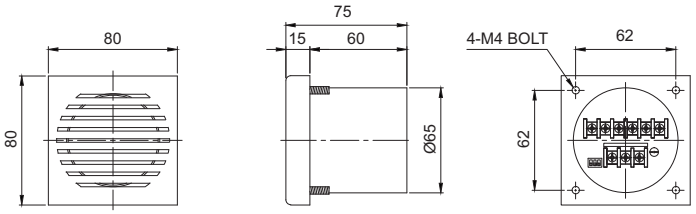
Model number	Pre-recorded Sound				Voltage/ Current	Certificate	Weight
	Sound Type	Ch	Sound Pattern	dB			
SPK	WS- 5 Warnings	1	Fire.A-ANG	85dB	DC12V / 0.288A DC24V / 0.155A AC110V / 0.036A AC220V / 0.018A	CE DC24V only	DC-0.19kg AC-0.21kg
		2	Emergency WA-U(Yelp)	85dB			
		3	Ambulance PI-PO(Hi-low)	85dB			
		4	Machinery Fault	85dB			
		5	High Expansion	83dB			
	WM- 5 Melodies	1	Sweet Home	85dB			
		2	For Elise	85dB			
		3	Cuckoo's Waltz	85dB			
		4	Piano Sonata	85dB			
		5	Turkish March	85dB			
	WA- 5 Alarms	1	Beep Intermittent	83dB			
		2	Door Chime	83dB			
		3	Phone Ring	85dB			
		4	PI.PI.PI Short	85dB			
		5	Tripping Beat	85dB			



Terminal box for power and sound (back side)

Technical Diagram (Units : mm)

SPK



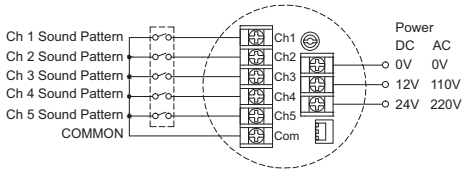
Ordering Specification

SPK	-	WM	-	220
[Model number]		[Sound]		[Voltage]
• SPK		• WS-Warning • WM-Melody • WA-Alarm		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V

Wiring Instructions

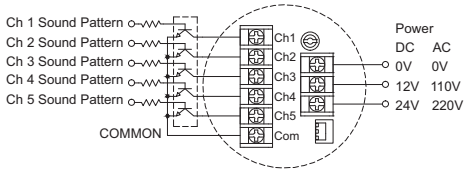
SPK-DC/AC

EXTERNAL CONTACT



SPK-DC/AC

EXTERNAL TRANSISTOR-NPN



Both built-in sounds and option for external sound input via SDcard (MP3) have 30 built-in sounds
Able to avoid signal confusion with a variety of tone options

- **Bit Input offers 5 channels with 6 sound outputs**
- **Binary Input offers 30 sound outputs**
- **SDcard (MP3) combination**

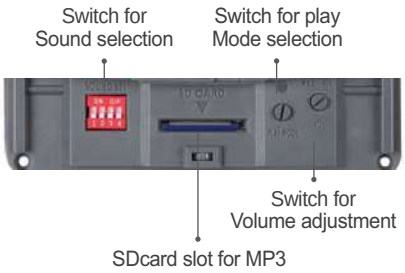




QMPS QMPS Panel Embedded Multifunctional Speaker (SDcard/ MP3 Type)

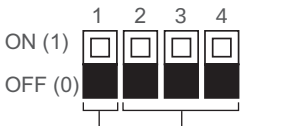
- Can prevent cross talk of different voice environments by selecting an audio signal fit for the specific environment and condition
- Offers both Binary and Bit input mode options with 30 pre-recorded sounds
- Binary input mode has built-in 30 messages that can be played with switch for sound selection
- Bit input mode is organized into 6 groups of 5 sound tones for a total of 30 sound tone options. Playback can be selected from one of the 5 tones in each group (MP3 file with bit input mode)
- Volume adjustment and sound selection switches located inside the unit
- SDcard type can play MP3 voice messages, user can select and change the sound message after record it
- Sound volume : Max 98dB at 1m
- Materials : Housing-ABS, Cover-ABS
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP54
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

• Features



Sound Selection Instruction for SDcard Type

You can select between pre-recorded sound mode and SDcard sound (MP3) mode with the SOUND selection switch



Bit input mode selection from 6 groups

001: WS(5 Warning sounds)
010: WP(5 Special warning sounds 1st group)
011: WM(5 Melodies)
100: WA(5 Alarms)
101: WO(5 Special warning sounds 2nd group)
110: WN(5 Special warning sounds 3rd group)

Selection between pre-recorded sound mode and SDcard sound mode

0: Pre-recorded sound mode
1: SDcard sound mode

SDcard(MP3) Type



You can easily rearrage the sound playback and group arrangement with PC. Capacity is 32Gbyte.

※ SDcard sold separately.

- 30 pre-recorded sounds offered (5 warning sounds, 5 special warning sounds 1st group, 5 melodies, 5 alarms, 5 special warning sounds 2nd group, 5 special warning sounds 3rd group)
- External MP3 sound support (SDcard)
- Binary input : 30 channels
- Bit input : 5 channels (6 sound groups)
- A multi-functional product that can use an SDcard for MP3 playback
- Details on how to setup the multi-functional speakerphone are on page 28

QMPS Panel Mounted Multifunctional Speaker

IP54 | -25~+50℃ | SPK 98dB | SD mp3 95dB | NPN | RoHS



QMPS







Terminal box for wiring both power and sound pattern(Rear)

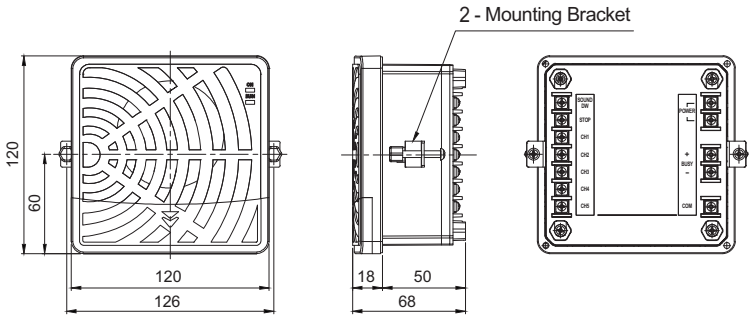
QMPS Max. 98dB, Panel Mounted Multifunctional Speaker

Model number	Voltage	Current	dB	Input Method/ No. of Ch	Certificate	Weight
QMPS	DC12V-24V	Max 0.750A	• Warning : 98dB • MP3 : 95dB	Bit Input : 5Ch Binary Input : 30Ch	CE DC only	0.35kg
	AC110V-220V	Max 0.100A			UL DC only	0.53kg

※ DC type model has a free-voltage range of DC10V-30V.
※ AC type model has a free-voltage range of AC100V-240V.

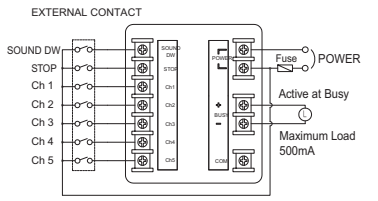
Technical Diagram (Units : mm)

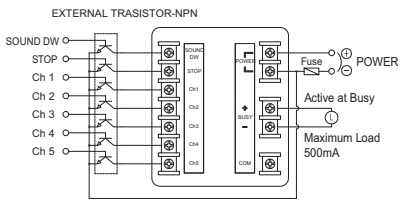
QMPS

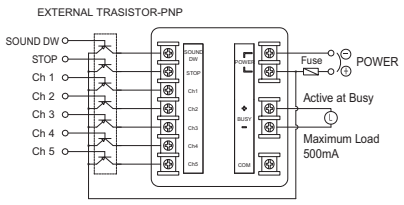


Wiring Instructions

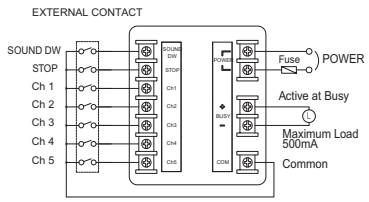
QMPS-DC

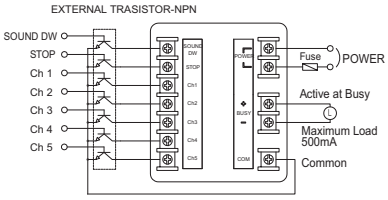


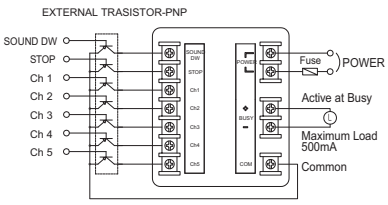




QMPS-AC







• In case of bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played.

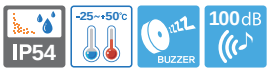
※ Please refer to page 28 for detailed channel input instructions.
(Wiring instruction is substituted for channel selection switch)

Ordering Specification

QMPS	-	12/24
[Model number]		[Voltage]
• QMPS		• 12/24-DC12V-24V • 110/220-AC110V-220V

S60ADH

Wall Mounted High Buzzer Horn





S60ADH

S60ADH Max 100dB, Wall Mounted Buzzer Horn

- Elegant wall mounted buzzer horn
- Horn resonance structure gives the product low power consumption and high sound tone
- Cone sound diffusion structure provides wide & excellent signal sound transmission effect
- Sound volume : Max 100dB at 1m
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP54
- Certificates : CE Compliant

Specification

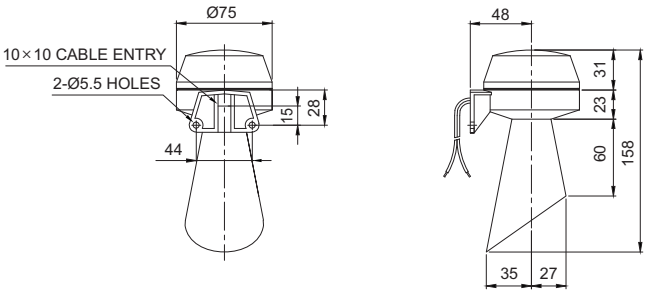
Model number	Pre-recorded Sound	Voltage	Current	Certificate	Weight
S60ADH	1 Buzzer tone	DC12V	0.083A	CE DC24V only	0.12kg
		DC24V	0.042A		0.12kg
		AC110V	0.016A		0.12kg
		AC220V	0.008A		0.12kg

Pre-recorded Sound	Sound Pattern	Channel	dB
1 Buzzer tone	Dududu(Consecutive)	Ch1	100dB

Technical Diagram

(Units : mm)

S60ADH



Customization

- 105dB strong buzzer type(Model number : S60ADH-HBZ)

Ordering Specification

S60ADH	-	220
[Model number]		[Voltage]
• S60ADH		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V

Wall mount multifunctional electric horn which supports 30 built-in sounds and 30 user defined sounds(MP3)

- **Bit input : 5Ch(6 groups)**
- **Binary input : 30Ch**
- **Support SDcard(MP3)**



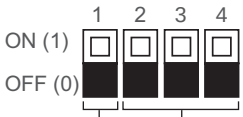


Common Specifications(QAP80/ QAP100/ QAP125)

- Signal sound diffusing structure with wall mount supports 30 Built-in sounds and 30 user defined sounds
- Buzzer type siren horn supports Max 105dB
- Volume control and tone selector switches are installed inside the unit
- User has the ability to enter voice tones directly into the unit via MP3 files from the SDcard
- This product has 30 Built-in sounds via binary input mode or bit input mode
- Binary input mode allows the user to select from 30 different sound options with the tone selection switch
- Bit input mode is organized into 6 groups of 5 sound tones for a total of 30 sound tone options. Playback can be selected from one of the 5 tones in each group (MP3 file with bit input mode)
- Supports both SDcard and MP3(QAP100HC/QAP125HC)
- Materials : Housing-ABS, Resonance chamber-ABS
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP65
- Compliant with RoHS directive

Sound Selection Instruction for SDcard Type

You can select between pre-recorded sound mode and SDcard sound (MP3) mode with the SOUND selection switch No.1



Bit input mode selection from 6 groups

001: WS(5 Warning sounds)
010: WP(5 Special warning sounds 1st group)
011: WM(5 Melodies)
100: WA(5 Alarms)
101: WO(5 Special warning sounds 2nd group)
110: WN(5 Special warning sounds 3rd group)

Selection between pre-recorded sound mode and SDcard sound mode

0: Pre-recorded sound mode
1: SDcard sound mode

- 30 pre-recorded sounds offered (5 warning sounds, 5 special warning sounds 1st group, 5 melodies, 5 alarms, 5 special warning sounds 2nd group, 5 special warning sounds 3rd group)
- External MP3 sound support (SDcard)
- Binary input : 30 channels
- Bit input: 5 channels (6 sound groups)
- A multi-functional product that can use an SDcard for MP3 playback
- Details on how to setup the multi-functional speakerphone are on page 28

• Features



1. Switch for Sound selection
2. SDcard slot for MP3
3. Switch for play mode selection
4. Switch for volume adjustment

SDcard(MP3) Type



You can easily rearrage the sound playback and group arrangement with PC. Capacity is 32Gbyte.

※ SDcard sold separately.

QAP series

Electric Horn/ High Siren Buzzer Horn

IP65 | -25~+50°C | HORN 100dB | BUZZER 105dB | NPN | RoHS

- **Bit input : 5Ch(6 groups)**
- **Binary input : 30Ch**



QAP80H/ QAP80BZ

QAP80 does not support SDcard.



QAP series' buzzer and electric sound signal is rich and clear because of the way the resonance chamber amplifies the sound.

QAP80H Electric Horn, Wall Mount Type

• Built-in sound

Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight
QAP80H	DC12V-24V	Max 0.450A	• Bit Input : 5Ch • Binary Input : 30Ch • Warning : Max 100dB	-	0.51kg

※ DC type model has a free-voltage range of 10V-30V.
※ Please refer to page 29 for detailed sound pattern information.

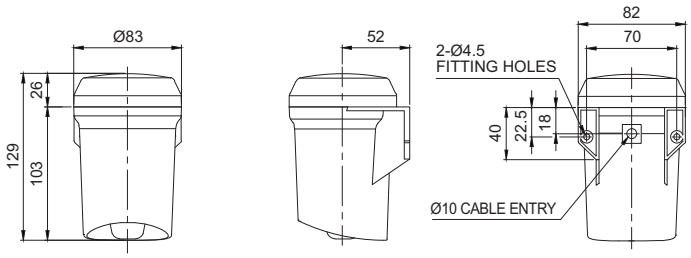
QAP80BZ High Siren Buzzer, Wall Mount Type

• Built-in high buzzer

Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight
QAP80BZ	DC12V	0.300A	• Buzzer Volume : Max 105dB	-	0.54kg
	DC24V	0.150A			0.59kg

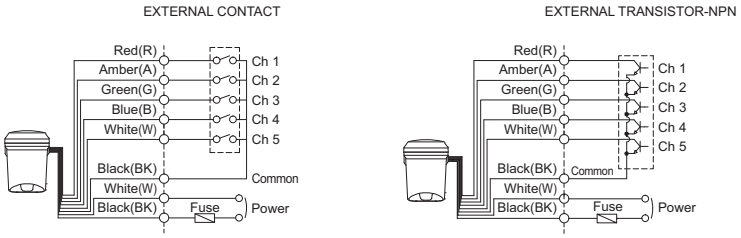
Technical Diagram (Units : mm)

QAP80H/ QAP80BZ



Wiring Instructions

QAP80H-DC



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- In case of bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played

※ Please refer to page 28 for detailed channel input instructions.
(Wiring instruction is substituted for channel selection switch.)

Ordering Specification

QAP80H	-	12/24
[Model number]		[Voltage]
• QAP80H		• 12/24-DC12V-24V
• QAP80BZ		• 12-DC12V • 24-DC24V

QAP series

Electric Horn/ High Siren Buzzer Horn

- **Bit input : 5Ch(6 groups)**
- **Binary input : 30Ch**
- **SDcard(MP3)**



QAP100H/ QAP100BZ



QAP series' buzzer and electric sound signal is rich and clear because of the way the resonance chamber amplifies the sound.

QAP100H Electric Horn, Wall Mount Type

• Built-in sound/ MP3

Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight
QAP100H	DC12V-24V	Max 0.800A	• Bit Input : 5Ch • Binary Input : 30Ch • Warning : Max 100dB • MP3 : Max 95dB	-	0.60kg
	AC110-220V	Max 0.290A			0.63kg

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.
※ Please refer to page 29 for detailed sound pattern information.

QAP100BZ High Siren Buzzer, Wall Mount Type

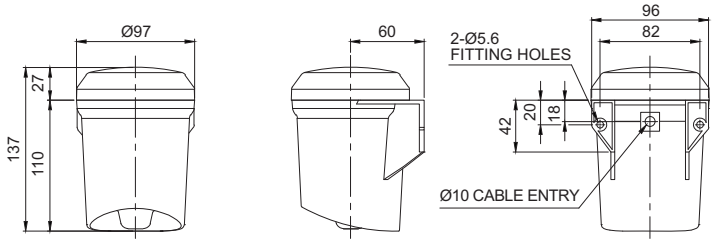
• Built-in high buzzer

Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight
QAP100BZ	DC12V	0.300A	• Buzzer Volume : Max 105dB	-	0.65kg
	DC24V	0.150A			
	AC110-220V	Max 0.033A			0.68kg

※ AC type model has a free-voltage range of 100V-240V.

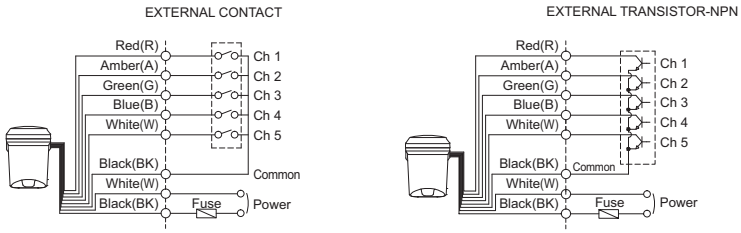
Technical Diagram (Units : mm)

QAP100H/ QAP100BZ



Wiring Instructions

QAP100H-DC/AC



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- In case of bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played

※ Please refer to page 28 for detailed channel input instructions.
(Wiring instruction is substituted for channel selection switch.)

Ordering Specification

QAP100H	-	110/220
[Model number]		[Voltage]
• QAP100H		• 12/24-DC12V-24V • 110/220-AC110V-220V
• QAP100BZ		• 12-DC12V • 24-DC24V • 110/220-AC110V-220V

QAP series

Electric Horn/ High Siren Buzzer Horn

- **Bit input : 5Ch(6 groups)**
- **Binary input : 30Ch**
- **SDcard(MP3)**



QAP125H/ QAP125BZ



QAP series' buzzer and electric sound signal is rich and clear because of the way the resonance chamber amplifies the sound.

QAP125H Electric Horn, Wall Mount Type

- Built-in sound/ MP3

Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight
QAP125H	DC12V-24V	Max 0.800A	• Bit Input : 5Ch • Binary Input : 30Ch • Warning : Max 115dB • MP3 : Max 100dB	-	0.70kg
	AC110-220V	Max 0.290A			0.73kg

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.
※ Please refer to page 29 for detailed sound pattern information.

QAP125BZ High Siren Buzzer, Wall Mount Type

- Built-in high buzzer

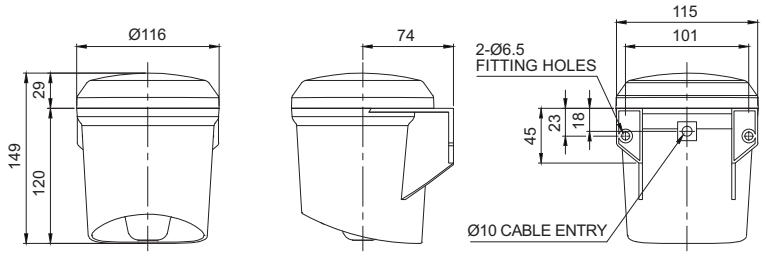
Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight
QAP125BZ	DC12V	0.300A	• Buzzer Volume : Max 105dB	-	0.75kg
	DC24V	0.150A			
	AC110-220V	Max 0.033A			0.78kg

※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram

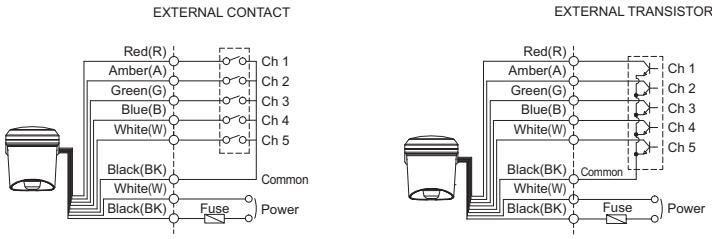
(Units : mm)

QAP125H/ QAP125BZ



Wiring Instructions

QAP125H-DC/AC



- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity
- In case of bits input, 5 sound tones can be played. For Binary input, 30 sound tones can be played

※ Please refer to page 28 for detailed channel input instructions.
(Wiring instruction is substituted for channel selection switch.)

Ordering Specification

QAP125H	-	110/220
[Model number]		[Voltage]
• QAP125H		• 12/24-DC12V-24V • 110/220-AC110V-220V
• QAP125BZ		• 12-DC12V • 24-DC24V • 110/220-AC110V-220V

SRN/ SEN15/ SEN25

General Electric Horns

IP55 | -25~+50°C | HORN | 108dB | 115dB | NPN

108dB



SRN

108dB



SEN15

115dB



SEN25

Common Specifications(SRN/ SEN15/ SEN25)

- Cost effective model with high signal sound
- A variety of sound selections between warning sounds, alarm sounds, melodies and voice messages to fit your sophisticated application needs
- User defined voice signal type(WV) shall be provided upon request
- Can adjust sound volume with the switch built inside the unit
- Materials : Housing-ABS(Standard Color : Red)
- Ambient operating temperature : -25°C to +50°C
- Protection rating : IP55
- Certificates : CE Compliant

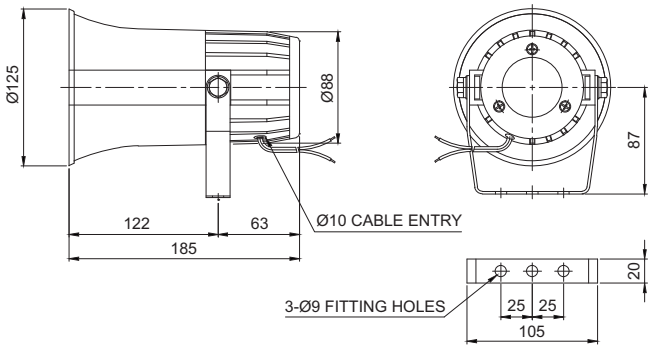
SRN Max 108dB

Model number	Built-in Sound		dB	Voltage	Current	Certificate	Weight
SRN	WS	5 Warnings	108dB	DC12V DC24V AC110V AC220V	0.322A 0.233A 0.073A 0.036A	CE DC only	DC-0.72kg AC-0.98kg
	WM	5 Melodies	108dB				
	WA	5 Alarms	105dB				
	WV	5 Voices	98dB				

Technical Diagram

(Units : mm)

SRN



SEN15 Max 108dB

Model number	Built-in Sound		dB	Voltage	Current	Certificate	Weight
SEN15	WS	5 Warnings	108dB	DC12V DC24V AC110V AC220V	0.366A 0.266A 0.077A 0.038A	CE DC only	DC-0.76kg AC-1.03kg
	WM	5 Melodies	108dB				
	WA	5 Alarms	105dB				
	WV	5 Voices	98dB				

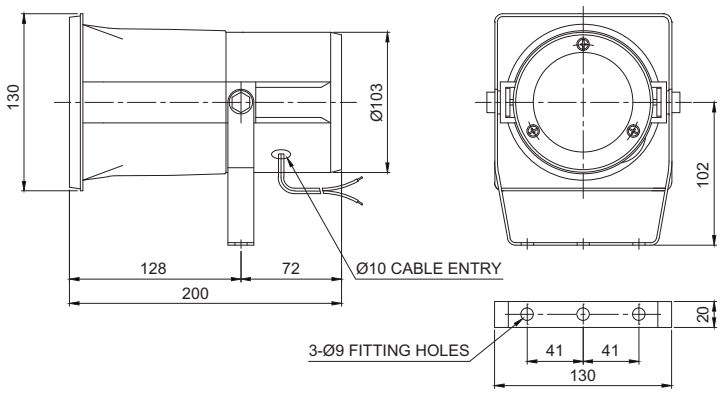
SEN25 Max 115dB

Model number	Built-in Sound		dB	Voltage	Current	Certificate	Weight
SEN25	WS	5 Warnings	115dB	DC12V DC24V AC110V AC220V	2.211A 1.022A 0.226A 0.113A	CE DC only	DC-0.95kg AC-1.23kg
	WM	5 Melodies	115dB				
	WA	5 Alarms	113dB				
	WV	5 Voices	108dB				



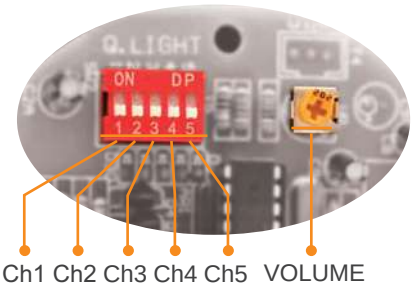
Technical Diagram (Units : mm)

SEN15/ SEN25



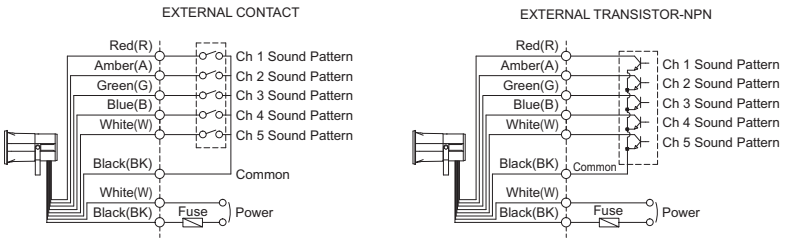
Sound Selection and Wiring Instructions

- Standard : Internal switch
- Internal switch allows to choose sound pattern for SRN/SEN15/SEN25 models



- External Power Line, Threading type : Standard VCTF(0.75sq×2C)×400mm
- LC type signal line : UL1007 AWG22(0.3sq) 400mm
- Product can be wired regardless of polarity

SRN/ SEN15/ SEN25-DC/AC



Customization

- Customized type: Select using the external contact(LC)
- You can select the audible sound pattern using external contacts or transistor with a customized external sound line(Model number : -LC)

Ordering Specification

SRN	-	WS	-	220	-	LC
[Model number]		[Sound]		[Voltage]		[Sound selection]
• SRN • SEN15 • SEN25		• WS-5 Warnings • WM-5 Melodies • WA-5 Alarms • WV-5 Voices		• 12-DC12V • 24-DC24V • 110-AC110V • 220-AC220V		• None - Internal Switch • LC - External Contact

SMP series

Self Stand Multi-Functional Electric Horns

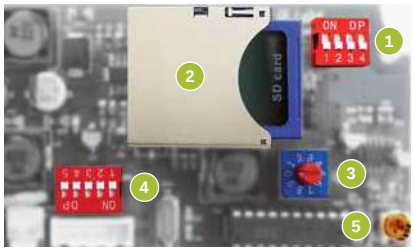
IP65 | -25~+50°C | HORN | 115dB | 123dB | SD mp3 | 113dB | 118dB | NPN | RoHS

123dB



SMP35/ SMP50

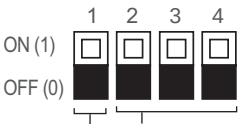
Channel Input Type of Multifunctional Product



1. Switch for sound pattern selection
2. SDcard slot for MP3
3. Switch for play mode selection
4. Switch for channel selection
5. Switch for volume adjustment

Switch for Sound

- Switch No1. allows choosing one option between pre-recorded sound and SDcard



Bit input mode selection from 6 groups

001: WS(5 Warning sounds)
010: WP(5 Special warning sounds 1st group)
011: WM(5 Melodies)
100: WA(5 Alarms)
101: WO(5 Special warning sounds 2nd group)
110: WN(5 Special warning sounds 3rd group)

Selection between pre-recorded sound mode and SDcard sound mode

0: pre-recorded sound mode
1: SDcard sound mode

- 30 pre-recorded sounds offered (5 warning sounds, 5 special warning sounds 1st group, 5 melodies, 5 alarms, 5 special warning sounds 2nd group, 5 special warning sounds 3rd group)
- External MP3 sound support (SDcard)
- Binary input : 30 Channels
- Bit input : 5 Channels (6 sound groups)
- A multi-functional product that can use an SDcard for MP3 playback
- Details on how to setup the multi-functional speakerphone are on page 28

Common Specifications(SMP35/ SMP50)

- Can prevent cross talk of different voice environments by selecting an audio signal fit for the specific environment and condition
- 30 pre-recorded sound type and supports Binary input mode and Bit input mode
- Binary input mode can playback 30 sound tones by using sound tone select switch
- Volume adjustment and sound selection switches located inside the unit. SDcard in the unit offers convenient operation
- SDcard type allows the user to input the proper voice messages for specific operating conditions
- Support MP3 file and user can input user defined sound
- Tightly sealed structure that blocks dust with IP65 protection rating- suitable for outdoor installation
- Materials : Housing-ABS, Resonance chamber-ABS, Bracket-STS
- Ambient operating temperature : -25°C to +50°C
- Protection rating: IP65
- Compliant with RoHS directive

SMP35 Multifunctional Self Stand Type Electric Signal Horn(Supports Warning Sound/ MP3)

- Volume : Max 115dB at 1m

Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight	Weight
SMP35	DC12V-24V	Max 0.800A	• Warning : 115dB • MP3 : 113dB	Bit Input : 5Ch Binary Input : 30Ch	-	0.76kg
	AC110V-220V	Max 0.290A				1.03kg

※ DC type model has a free-voltage range of 10V-30V.
※ AC type model has a free-voltage range of 100V-240V.

SMP50 Multifunctional Self Stand Type Electric Signal Horn(Supports Warning Sound/ MP3)

- Powerful 50W unit can generate high signal sound
- Volume : Max 123dB at 1m

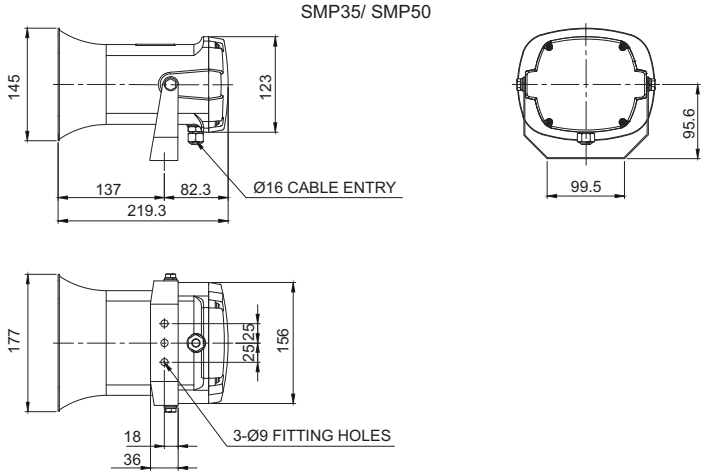
Model number	Voltage	Current	Built-in Sound and dB	Certificate	Weight	Weight
SMP50	DC12V	1.800A	• Warning : 123dB • MP3 : 118dB	Bit Input : 5Ch Binary Input : 30Ch	-	0.95kg
	DC24V	1.000A				
	AC110V-220V	Max 0.600A				1.23kg

※ AC type model has a free-voltage range of 100V-240V.

Technical Diagram

(Units : mm)

SMP35/ SMP50



SMP series

Self Stand Multi-Functional Electric Horns

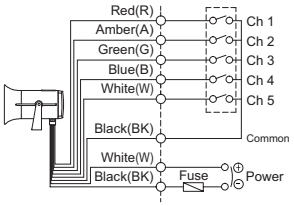
	Category	Ch	Sound
WS	5 Warning Sounds	Ch1	Fire.A-ANG
		Ch2	Emergency WA-U(Yelp)
		Ch3	Ambulance PI-PO(Hi-low)
		Ch4	Machinery Fault
		Ch5	High Expansion
WP	5 Special Warning Sounds (1st group)	Ch1	Fire.A-ANG
		Ch2	Abandon Alarm
		Ch3	Machinery Fault
		Ch4	High Expansion
		Ch5	7 Short PI. / 1 Long
WM	5 Melodies	Ch1	Sweet Home
		Ch2	For Elise
		Ch3	Cuckoo's Waltz
		Ch4	Piano Sonata
		Ch5	Turkish March
WA	5 Alarms	Ch1	Beep Intermittent
		Ch2	Door Chime
		Ch3	Phone Ring
		Ch4	PI.PI.PI Short
		Ch5	Tripping Beat
WO	5 Special Warning Sounds (2nd group)	Ch1	Phone Ring
		Ch2	Police
		Ch3	Emergency
		Ch4	Phone Ring 2
		Ch5	911 siren
WN	5 Special Warning Sounds (3rd group)	Ch1	Do-ong Do-ong
		Ch2	Di- Di-
		Ch3	PI.PI.PI long
		Ch4	Li long Li long
		Ch5	Siren

Sound Selection and Wiring Instructions

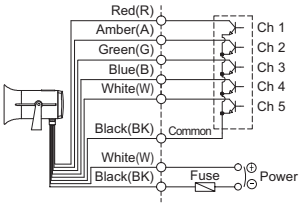
- Standard : Select using the switch inside of the unit
- Customized wiring in case of external contact or transistor wiring type as sound tone selector (Model name : -LC)

SMP35/ SMP50-DC/AC

EXTERNAL CONTACT



EXTERNAL TRANSISTOR-NPN



- DC type : Black output is negative(-)
- Channel selection, 5 sounds played for Bit input and 30 sound played for binary input

※ Please refer to page 28 for detailed channel input instructions.
(Wiring instruction is substituted for channel selection switch.)

Ordering Specifications

SMP50	-	110/220	-	LC
[Model number]		[Voltage]		[Sound selection]
• SMP35		• 12/24-DC12V-24V • 110/220-AC110V-220V		• Standard - Built-in Switch • LC - External contact
• SMP50		• 12-DC12V • 24-DC24V • 110/220-AC110V-220V		

SN-1

Small Size Electric Horn

IP55 | -25~+50℃ | HORN | 100dB



SN-1

Ordering Specification

SN-1	-	12
[Model number]		[Voltage]
• SN-1		• 12-DC12V • 24-DC24V

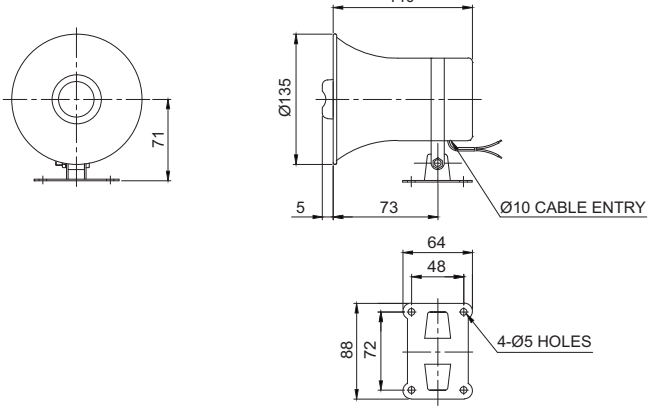
SN-1 Max 100dB

- 1 warning sound and cost effective model for DC only

Technical Diagram

(Units : mm)

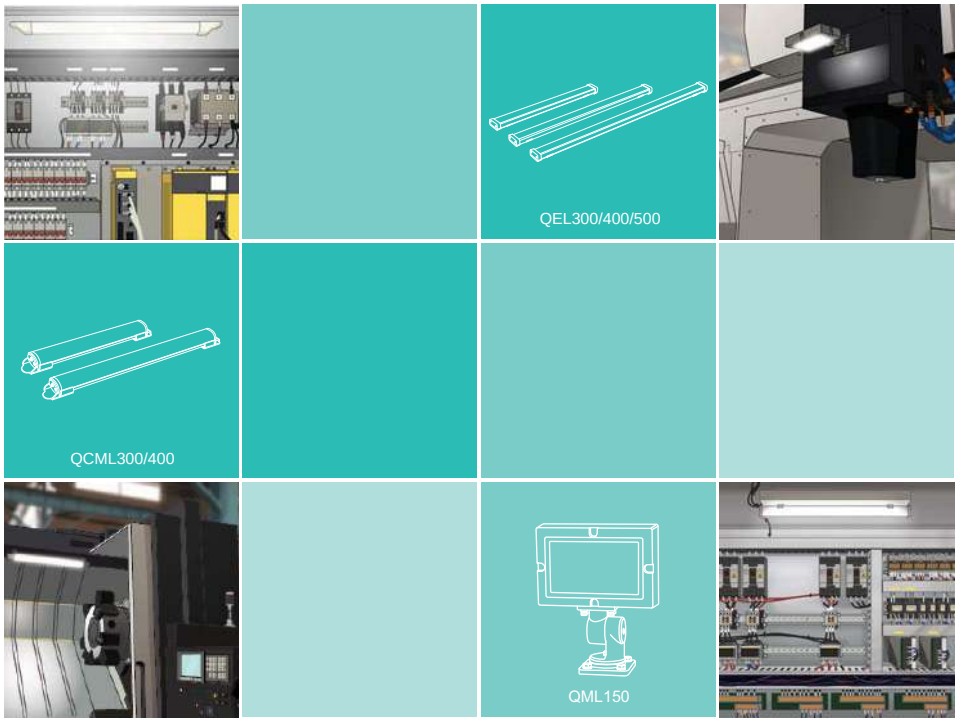
SN-1



TOTAL CATALOGUE

LED Work Lights for Industrial Purpose

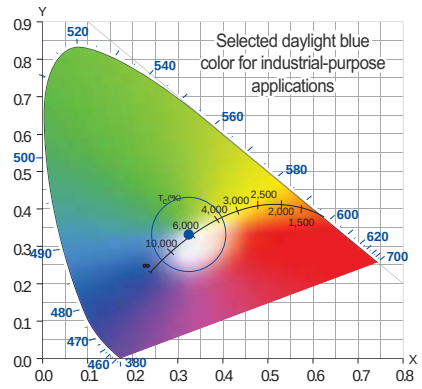
INNOVATION IN ALARM & SIGNAL



Technical information 418
References 420
Product specifications 422

Technical Information on LED Work Lights

CIE 1931 Color Space Chart



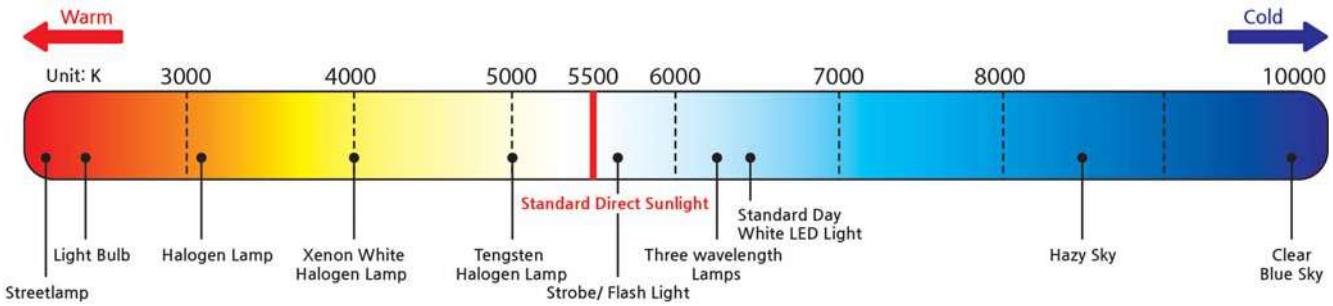
LED Colors are represented by the CIE 1931 RGB color space and CIE 1931 XYZ color space created by the International Commission on Illustration (CIE in 1931).

Color Space Chart is based on the brightness of the color. Green occupies the largest space since it has the largest effect on determining the brightness of colors, while blue color that shows the least effect occupies the smallest area. The mixing ratio of the brightness of the color is 3: 6: 1 (R: G: B), where the green portion occupies the largest space.

White color that is commonly used for work lights is composed of the color green, red, and blue. White color also varies due to the ratio of these three colors. The variationcolor ratios is referred as the color temperature.

Color Temperature

Unit : K (Kelvin)



The color temperature of a light source is the temperature of an ideal black-housing radiator that radiates light of comparable hue to that light source. The Temperature is conventionally stated in units of absolute temperature, known as Kelvin (K).

The black housing radiates red spectrum when it starts to heat up, and will radiate blue light when the temperature gets even higher.

- Before Sunset : 2,200K (Candlelight, incandescent lamp)
- 40minutes after sunset : 3,000K(Warm white fluorescent lamp, high pressure natrium lamp)
- 2 hours after sunset : 4,000K (White halogen fluorescent lamp)
- Sunlight at noon : 5,800K (Daylight fluorescent lamp)
- Cloudy day : 7,000K (Daylight blue, fluorescent mercury lamp)

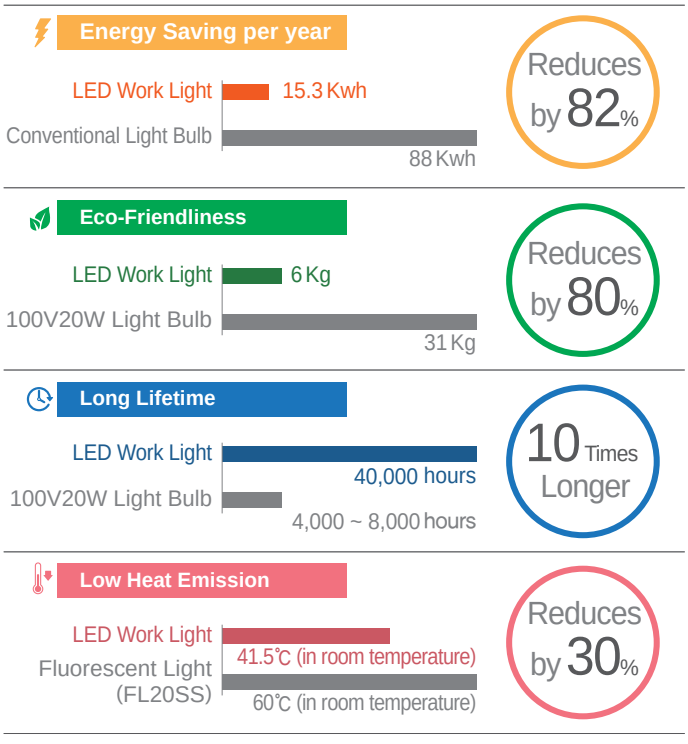
■ LED Color Wavelength

No.	Color	Wavelength(mm)
1	Red	618-632
2	Amber	585-595
3	Green	518-530
4	Blue	453-465

■ LED Color Temperature

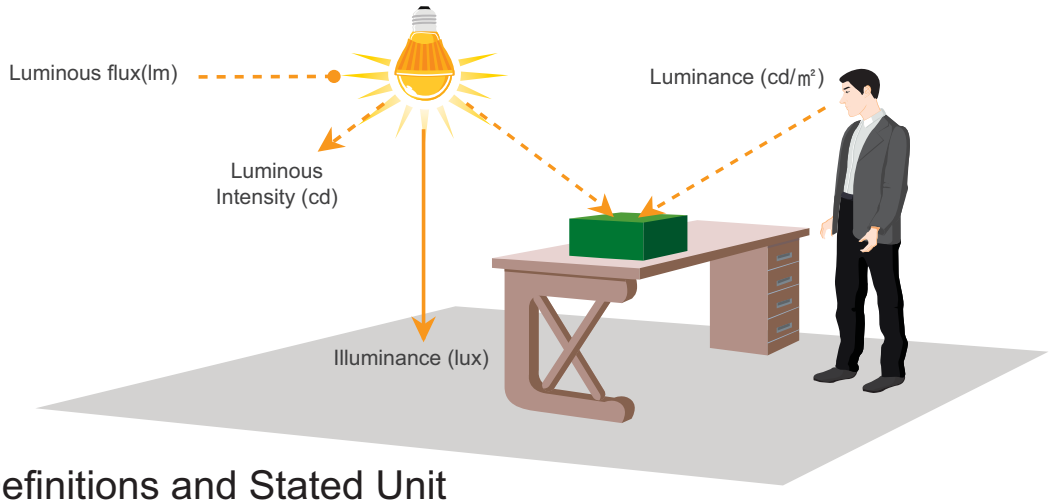
No.	Color	Color Temperature(K)
1	incandescent	2,500-3,500
2	warmwhite	3,500-4,500
3	daylight	4,500-5,500
4	cooldaylight	5,500-7,000

LED Light Energy Saving Chart



Technical Information on LED Work Lights

Understanding of Light Terms



Term Definitions and Stated Unit

Illuminance

Unit : lux

Illuminance is the total Luminous flux incident on a surface per unit area which is conventionally stated as a unit of lux. Specifically, 1 lux equals the amount of light that falls on a one-square-meter surface that is one meter away from a single candle with light speed of 1lm.

Luminous Intensity

Unit : cd

Luminous intensity is a measure of the wavelength-weighted power emitted by a light source in a particular direction per unit solid angle based on the luminosity function(a standardized model of the sensitivity of the human eye). The standard unit of luminous intensity is the candela.

Luminance

Unit : cd/㎡

Luminance is a measure of the luminous intensity per unit area of light travelling in a given direction. It describes the amount of light that passes through, emitted or reflected from a particular area, and falls within a given solid angle. The standard unit for luminance is cd(luminance intensity per square meter (cd/m2).

Luminous flux

Unit : lm

Luminous flux is the measure of the perceived power of light. Standard unit of Luminous flux is the lumen (lm). Usually Luminous flux may be understood as the power of light.

Color Rendering

Unit : Ra

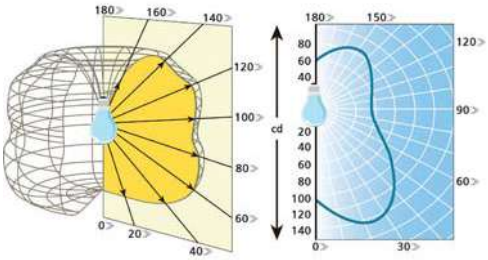
A color rendering index (CRI) is a quantitative measure of the ability of a light source to reveal the colors of various objects faithfully in comparison with an ideal or natural light source. Numerically, the highest possible CIE Ra value is 100, which would only be given to a source identical to standardized daylight or a body of black color, and its value drops to negative values for some light sources. The higher the CRI value is, the better the color rendering ability is. Light sources with a CRI of 85 to 90 are considered good at color rendering.


High Color Rendering(Ra80)


Low Color Rendering(Ra70)

Light Distribution Curve

Light distribution curve, provides information on how light is emitted from a lamp or light fixture. The diagram represents a section cut through the fixture and shows the intensity of light emitted in each direction. The portion of the graph above the horizontal 90°-270° line indicates light that shines above the fixture (indirect), while the portion of the graph below represents light shining down (direct). The straight lines radiating from the center point identify the angle of the light emitted while the circles represent the intensity.



LED Work Lights for Industrial Purpose Specification List






Model number(series)		QML-150	QML-250	QMHL-150	QMHL-250
Voltage		DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V
Consumption of electrical power		11-13W	23-29W	11-12W	23-25W
Dimension (mm)	Direct mount (D type)	155(W)×105(L)×36(H)	255(W)×115(L)×36(H)	155(W)×105(L)×36(H)	255(W)×115(L)×36(H)
	Bracket (K type)	155(W)×156(L)×36(H)	255(W)×166(L)×36(H)	155(W)×156(L)×36(H)	255(W)×166(L)×36(H)
	Bracket (MF type)	155(W)×191(L)×36(H)	255(W)×201(L)×36(H)	155(W)×191(L)×36(H)	255(W)×201(L)×36(H)
Material		Housing : Al, Lens : Tempered glass	Housing : Al, Lens : Tempered glass	Housing : Al, Lens : Tempered glass	Housing : Al, Lens : Tempered glass
Lens color		Translucent	Translucent	Transparent	Transparent
Lamp color		Cooldaylight	Cooldaylight	Cooldaylight	Cooldaylight
Intensity of illumination(at 1m)		620Lux	890Lux	1,000Lux	1,900Lux
Mounting		Direct mount(D type), Mount bracket(K type), Revolving mount bracket (MF Type)	Direct mount(D type), Mount bracket(K type), Revolving mount bracket (MF Type)	Direct mount(D type), Mount bracket(K type), Revolving mount bracket (MF Type)	Direct mount(D type), Mount bracket(K type), Revolving mount bracket (MF Type)
Protection rating		IP67/ IP69K	IP67/ IP69K	IP67/ IP69K	IP67/ IP69K
Certificate		CE, UL	CE, UL	CE, UL	CE, UL
Customization		M12 connector equipped	M12 connector equipped	M12 connector equipped	M12 connector equipped
Page		P422-425	P422-425	P422-425	P422-425





Model number(series)		QFL-200/ 300/ 400/ 500/ 600/ 1200	QFLC-200/ 300/ 400/ 500/ 600/ 1200	QMFLN-200/ 300/ 400/ 500/ 600	
Voltage		DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V	
Consumption of electrical power		5.5-53W	5.5-53W	5.6 - 25W	
Dimension (mm)	Length	240-1190	240-1190	190-600	
	Width	60	60	38	
	Height	63	63	67.4	
Material		Lens : PC, Side cover : Al	Lens : PC, Side cover : Al	Housing: Al, Lens : Tempered glass	
Lens color		Translucent	Transparent	Transparent	
Lamp color		Cooldaylight	Cooldaylight	Cooldaylight	
Intensity of illumination(at 1m)		120-1,200Lux	150-1,560Lux	270-1,300Lux	
Mounting		Mount bracket	Mount bracket	Mount bracket	
Protection rating		IP67	IP67	IP67/ IP69K	
Certificate		CE	CE	-	
Customization		M12 connector equipped	M12 connector equipped	M12 connector equipped	
Page		P426	P427	P428-429	






Model number(series)		QPL200/ 300/ 400/ 500	QPLC200/ 300/ 400/ 500	QPHL200/ 300/ 400/ 500	QPHLC200/ 300/ 400/ 500
Voltage		DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V
Consumption of electrical power		4-11W	4-11W	4.8-11W	4.8-11W
Dimension (mm)	Length	200-500	200-500	200-500	200-500
	Width	39.4	39.4	39.4	39.4
	Height	24.4	24.4	24.4	24.4
Material		Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS
Lens color		Translucent	Transparent	Translucent	Transparent
Lamp color		Cooldaylight	Cooldaylight	Cooldaylight	Cooldaylight
Intensity of illumination(at 1m)		50-215Lux	65-265Lux	80-290Lux	100-375Lux
Mounting		Direct mount	Direct mount	Direct mount	Direct mount
Protection rating		IP65	IP65	IP65	IP65
Certificate		CE, UL	CE, UL	CE, UL	CE, UL
Customization					
Page		P430	P430	P431	P431

LED Work Lights for Industrial Purpose Specification List



Model number(series)		QCML-200/ 300/ 400/ 500/ 600/ 900/ 1200/ 1500	QCMLC-200/ 300/ 400/ 500/ 600/ 900/ 1200/ 1500	QGL-200/ 300/ 400/ 500	QGLC-200/ 300/ 400/ 500
Voltage		DC24V	DC24V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V
Consumption of electrical power		5.5-28W	5.5-28W	4-12W	4-12W
Dimension (mm)	Length	257-1,557	257-1,557	200-500	200-500
	Width	33	33	38.4	38.4
	Height	26	26	33.6	33.6
Material		Lens : PC, Side cover : PC	Lens : PC, Side cover : PC	Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS
Lens color		Translucent	Transparent	Translucent	Transparent
Lamp color		Cooldaylight, Warm white, Red, Amber	Cooldaylight, Warm white, Red, Amber	Cooldaylight	Cooldaylight
Intensity of illumination(at 1m)		85-550Lux	100-600Lux	70-300Lux	85-370Lux
Mounting		Mount bracket	Mount bracket	Mount bracket	Mount bracket
Protection rating		IP67/ IP69K	IP67/ IP69K	Non Water-proof	Non Water-proof
Certificate		CE	CE	CE	CE
Customization					
Page		P434-435	P434-435	P436-437	P436-437



Model number(series)		QEL-200/ 300/ 400/ 500	QELT-200/ 300/ 400/ 500	QELS-200/ 300/ 400/ 500	QELTS-200/ 300/ 400/ 500
Voltage		DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V	DC24V, AC110V, AC220V
Consumption of electrical power		3.5-8.5 W	3.5-8.5W	3.5-8.5W	3.5-8.5W
Dimension (mm)	Length	220-520	249-549	249-549	278-578
	Width	34.6	34.6	34.6	34.6
	Height	30.7	30.7	33.1	33.1
Material		Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS	Lens : PC, Side cover : ABS
Lens color		Translucent	Translucent	Translucent	Translucent
Lamp color		Cooldaylight	Cooldaylight	Cooldaylight	Cooldaylight
Intensity of illumination(at 1m)		80-200Lux	80-200Lux	80-200Lux	80-200Lux
Mounting		Mount bracket	Mount bracket	Mount bracket	Mount bracket
Protection rating		Non Water-proof	Non Water-proof	Non Water-proof	Non Water-proof
Certificate		CE, KC	CE	CE, KC	CE
Customization					
Page		P438-440	P438-440	P438-440	P438-440

QML/ QMHL

Water, Vibration and Oil Resistant LED Work Lights with IP67/ IP69K Protection

IP67 IP69K -30~+60℃

Water, vibration and oil resistant LED work light, suitable for machine tools applications and high temperature water cleaning environments

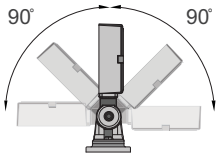
Common Specifications(QML/ QMHL)

- Excellent oil resistance with a special sealing structure with IP67 protection rating, suitable for machine tool applications with cutting fluids
- Suitable for high pressure and high temperature water cleaning environments(IP69K)
- Tempered glass prevents damage from machine tool chips
- Foreign substances do not accumulate on the shielding glass surface of the working light due to its flush structure to the housing structure of the product
- Can select between QML model (Anti-glare type) and QMHL model (High luminance type) depending on your work conditions
- An external power supply is not needed for the AC type product; AC voltage can be applied directly to the product
- Can select from a variety of bracket options from direct mount, tilt mount, and pan/ tilt mount type to fit your work environment or lighting condition needs
- Standard entry cable included. Can customize the product with the M12 connector if requested
- Customized oil resistant cable attached type available
- Certificates : CE, UL Compliant

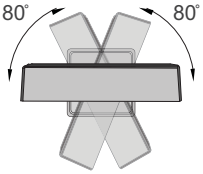


Tilt/ Pan Type MF Bracket, Water and Oil Resistant

SIDE VIEW



TOP VIEW

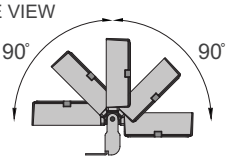




- Water and oil resistant MF type brackets protect output cable from cutting fluid and chips
- Has a tilt adjustment angle of 180° and a pan angle of 160°

Tilt Type K Bracket

SIDE VIEW



Has tilt adjustment with wide angle of 180°

M12 Connector Attached Type



Customized cable entry M12 connector attached type available, an additional connector cable will be also provided with this model.

Test Conditions/ Regulations

Vibration Resistance Test	• Acceleration : 20m/s^2 • Duration : 1 octave/min • Range of frequency : 10-150Hz • Amplitude : 10 times maximum 7.5mm, direction : test 10times in 3 directions(X, Y, Z)
Shock Resistance Test	• Acceleration : 20g • Directions : ±X, ±Y, ±Z • Numbers : 3 times each directions • Time period : 11ms for each direction • Waveform : Half sine
Oil Resistance Test	• General test : Tested in water soluble and non-water soluble flooded environments for 500 hours. • High temperature oil resistance test : Place the object in a constant temperature water bath at 80°C for two hours and then submerge the object in the room temperature oil diluent for 24hours.
Solid Particle Protection Test(IP6X)	• After reducing the pressure inside the test object, spray talcum powder with a nominal diameter of 50um for 2 hours at 40-60meters/hour inside the dust chamber. • IEC60529
Liquid Ingress Protection Test(IPX7)	• Test ingress by putting the object under 1000mm water with 2bar of pressure for 30 mins
High-pressure, High-temperature Wash-down Test (IP69K)	• Spray nozzle provides 80°C water with pressure of 80–100 bar and a flow rate of 14–16 L/min to the object • Distance between spray nozzle and the test object : 10-15cm • Water spray angle : 0˚, 30˚, 60˚, 90˚ • The nozzle is held at 4 of each angle for 30 seconds • DIN 40050 PART9

QML/QMHL

Water, Vibration and Oil Resistant LED Work Lights with IP67/ IP69K Protection

IP67 IP69K -30~+60°C

QML-150/ QML-250

- Equipped anti-glare filter
- Suitable for environments that require stable intensity illumination for improved visibility



QML-150-D



QML-250-D



QML-150-K



QML-250-K



QML-150-MF



QML-250-MF

QMHL-150/ QMHL-250

- High intensity illumination and condensor lens combination
- High intensity illumination allows for the environment both long distance and straightness are required



QMHL-150-D



QMHL-250-D



QMHL-150-K



QMHL-250-K



QMHL-150-MF

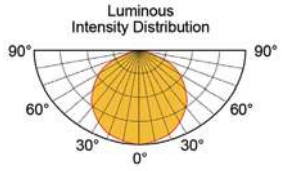
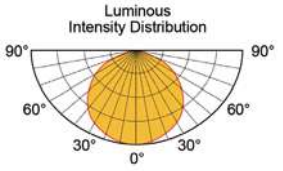
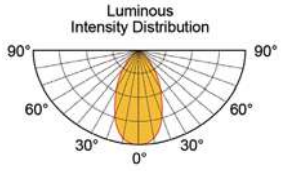
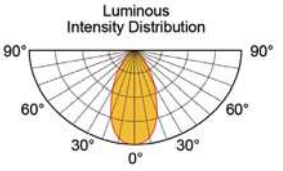
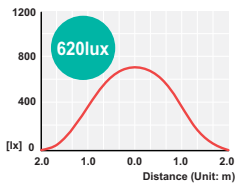
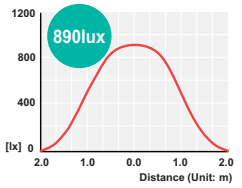
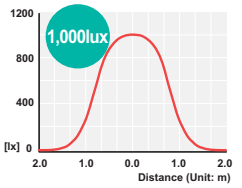
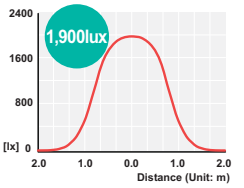


QMHL-250-MF

Optics Specifications				
Model	QML-150-D QML-150-K QML-150-MF	QML-250-D QML-250-K QML-250-MF	QMHL-150-D QMHL-150-K QMHL-150-MF	QMHL-250-D QMHL-250-K QMHL-250-MF
Lens color	Translucent	Translucent	Transparent	Transparent
Light color	Cooldaylight			
Color temperature	5,500-6,000K			
Luminous flux	875lm	2,014lm	884lm	1,892lm
Efficacy (lm/W)	620Lux	890Lux	1,000Lux	1,900Lux

Specifications				
Model	QML-150-D QML-150-K QML-150-MF	QML-250-D QML-250-K QML-250-MF	QMHL-150-D QMHL-150-K QMHL-150-MF	QMHL-250-D QMHL-250-K QMHL-250-MF
Voltage	DC24V	DC24V	DC24V	DC24V
	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V
Range for operation voltage	DC21.5V-26.5V / AC98V-121V / AC198V-245V			
Current	0.530A	1.180A	0.510A	1.020A
	0.110A / 0.054A	0.215A / 0.104A	0.105A / 0.051A	0.208A / 0.102A
Power consumption	13W	29W	12W	25W
	12W / 11W	24W / 23W	11.5W / 11W	23W / 23W
Insulation resistance	Min. 100MΩ(500V DC mega ohm meter)			
Withstanding voltage	DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute			
Operating temperature	-30°C to +60°C			
Protection rating	IP67/ IP69K			
Materials	Housing : Al, Lens : Tempered glass, Cover : Al, Bracket : K type-STS430/MF type-Al			
Certification	CE UL DC only			
Weight(Approx.)	QML-150-D : 0.75kg QML-150-K : 0.93kg QML-150-MF : 0.98kg	QML-250-D : 1.30kg QML-250-K : 1.46kg QML-250-MF : 1.52kg	QMHL-150-D : 0.95kg QMHL-150-K : 1.05kg QMHL-150-MF : 1.45kg	QMHL-250-D : 1.20kg QMHL-250-K : 1.30kg QMHL-250-MF : 1.70kg

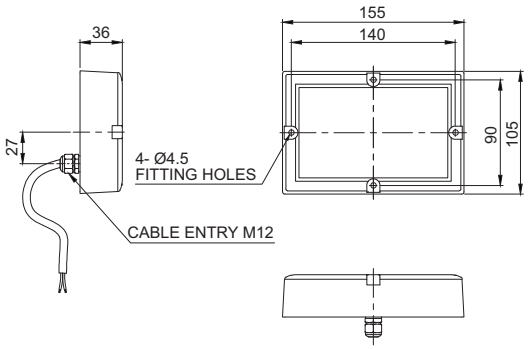
Light Distribution and Illumination

Model	QML-150-D QML-150-K QML-150-MF	QML-250-D QML-250-K QML-250-MF	QMHL-150-D QMHL-150-K QMHL-150-MF	QMHL-250-D QMHL-250-K QMHL-250-MF
Light Distribution Curve				
Illumination Feature				

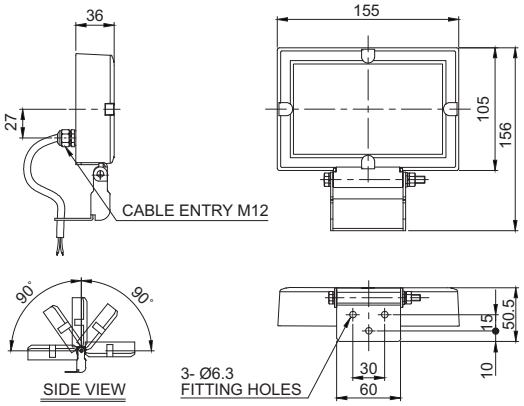
Technical Diagram

(Units : mm)

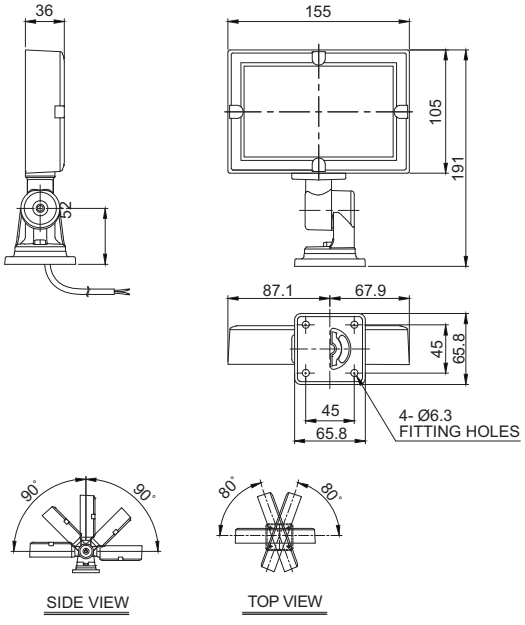
QML/ QMHL-150-D



QML/ QMHL-150-K



QML/ QMHL-150-MF

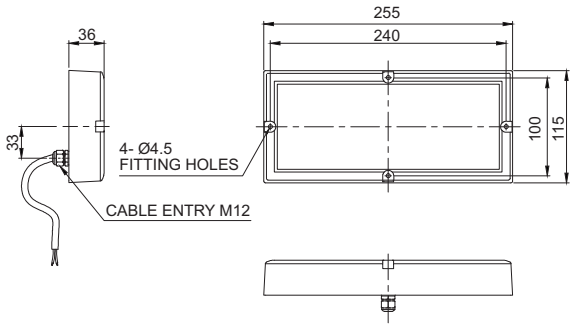


※ Power line standard : Dura & Flex-F VU (0.5sq) x 2C 550mm

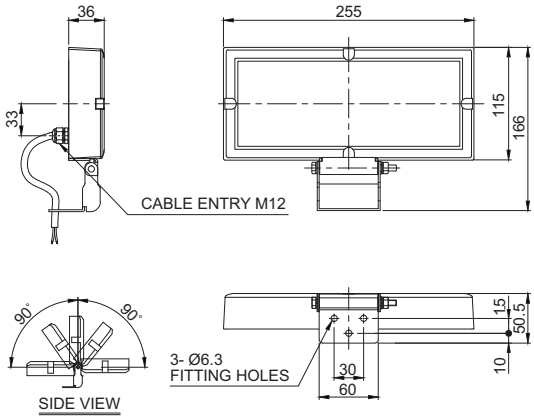
Technical Diagram

(Units : mm)

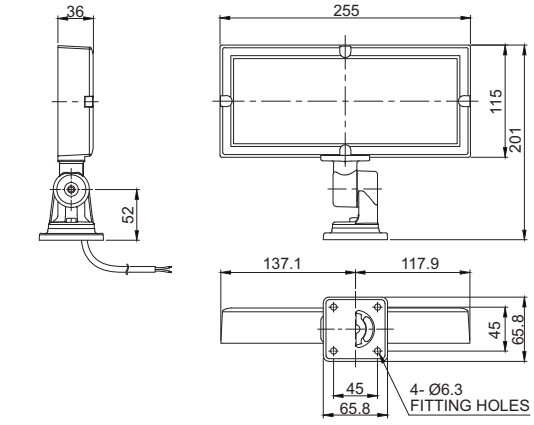
QML/ QMHL-250-D

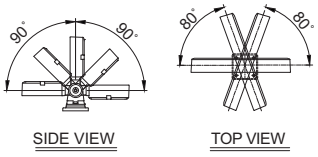


QML/ QMHL-250-K



QML/ QMHL-250-MF





※ Power line standard : Dura & Flex-F VU (0.5sq) x 2C 550mm

Ordering Specification

QML	-	150	-	D	-	24
[Model number]		[Product length]		[Mount bracket]		[Voltage]
• QML : Anti-Glare • QMHL : High illumination		• 150 : 155mm • 250 : 255mm		• D : Self stand • K : Vertical angle adjustment • MF : Vertical, horizontality angle adjustment		• 24-DC24V • 110-AC110V • 220-AC220V

Please check the safety manual before use, accidents such as fire or electric shock can occur if the safety manual is not followed.

This product can be changed without any notification. Latest information is on the website.

QFL/QFLC

Water and Vibration Resistant LED Light Bars with IP67 Protection

IP67 -30~+50℃

Common Specifications(QFL/ QFLC)

- Excellent front and side light distribution with the use of a special light distributing structure on the surface of the oval lens
- An external power supply is not needed for the AC type product; AC voltage can be applied directly to the product
- Excellent heat dissipation by using a heat dissipative material connected to the outer cover
- Water and vibration proof model (IP67), suitable for outdoors and places with dust and moisture
- Can select between QFL model (Anti-glare type) and QFLC model (High luminance type) depending on your work conditions
- Tilt bracket provides wide luminance angle adjustment of 130˚
- Superior durability with lens made of polycarbonate
- Standard entry cable included. Can customize the product with the M12 connector if requested
- Certificates: CE Compliant

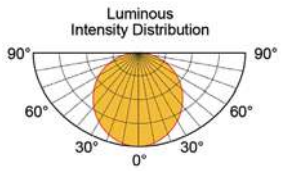


QFL Translucent Lens Type

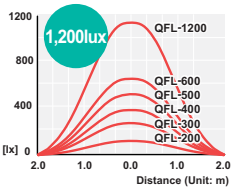


Light Distribution and Illuminance

Light Distribution Curve



Luminance Feature



Specifications on Luminance

Model		QFL-200	QFL-300	QFL-400	QFL-500	QFL-600	QFL-1200
Lens color		Translucent	Translucent	Translucent	Translucent	Translucent	Translucent
Light color		Cooldaylight					
Color temperature		6,000-7,000K					
Luminous flux	DC	395lm	828lm	1,087lm	1,474lm	1,815lm	3,338lm
	AC	481lm	940lm	1,172lm	1,602lm	1,862lm	3,545lm
Efficacy (lm/W)	DC	120lux	250lux	375lux	500lux	625lux	1,150lux
	AC	150lux	280lux	400lux	545lux	640lux	1,200lux

General Specifications

Model	QFL-200	QFL-300	QFL-400	QFL-500	QFL-600	QFL-1200
Voltage	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V
	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V
Range for operation voltage	DC21.5V-26.5V / AC98V-121V / AC198V-245V					
Current	0.180A	0.380A	0.520A	0.690A	0.820A	1.650A
	0.097A / 0.047A	0.220A / 0.107A	0.330A / 0.160A	0.410A / 0.200A	0.450A / 0.220A	0.910A / 0.450A
Power consumption	4.5W	9.5W	12.5W	17W	20W	40W
	5.5W / 5.5W	13W / 13W	20W / 19W	24W / 24W	27W / 26W	53W / 53W
Insulation resistance	Min. 100MΩ(500V DC mega ohm meter)					
Withstanding voltage	DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute					
Operating temperature	-30°C to +50°C					
Protection rating	IP67					
Materials	Lens : PC, Cover : Al, Heat sink : Al					
Certifications	CE DC24V Only					
Weight(Approx.)	0.40kg	0.49kg	0.58kg	0.73kg	0.82kg	1.28kg
	0.43kg	0.52kg	0.61kg	0.76kg	0.85kg	1.31kg

QFL/QFLC

Water and Vibration Resistant LED Light Bars with IP67 Protection

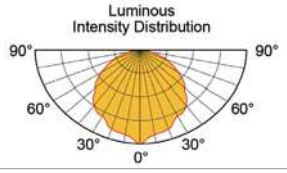
IP67 -30~+50℃

QFLC Transparent Lens

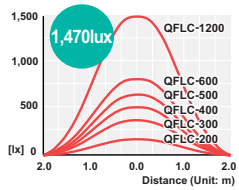


Light Distribution and Illuminance

Light Distribution Curve



Luminance Feature



Specifications on Luminance

Model		QFLC-200	QFLC-300	QFLC-400	QFLC-500	QFLC-600	QFLC-1200
Lens color		Transparent	Transparent	Transparent	Transparent	Transparent	Transparent
Light color		Cooldaylight					
Color temperature		6,000-7,000K					
Luminous flux	DC	462lm	975lm	1,282lm	1,739lm	2,084lm	3,970lm
	AC	565lm	1,109lm	1,384lm	1,893lm	2,198lm	4,221lm
Efficacy (lm/W)	DC	150Lux	310Lux	460Lux	620Lux	775Lux	1,470Lux
	AC	190Lux	350Lux	500Lux	670Lux	815Lux	1,500Lux

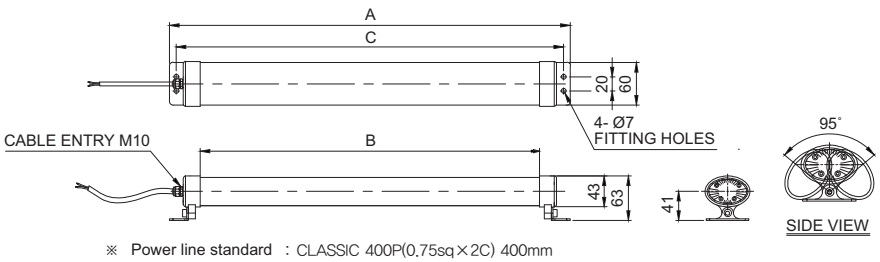
General Specifications

Model	QFLC-200	QFLC-300	QFLC-400	QFLC-500	QFLC-600	QFLC-1200
Voltage	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V
	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V	AC110V / 220V
Range for operation voltage	DC21.5V-26.5V / AC98V-121V / AC198V-245V					
Current	0.180A	0.380A	0.520A	0.690A	0.820A	1.650A
	0.097A / 0.047A	0.220A / 0.107A	0.330A / 0.160A	0.410A / 0.200A	0.450A / 0.220A	0.910A / 0.450A
Power consumption	4.5W	9.5W	12.5W	17W	20W	40W
	5.5W / 5.5W	13W / 13W	20W / 19W	24W / 24W	27W / 26W	53W / 53W
Insulation resistance	Min. 100MΩ(500V DC mega ohm meter)					
Withstanding voltage	DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute					
Operating temperature	-30°C to +50°C					
Protection rating	IP67					
Materials	Lens : PC, Side cover : Al, Heat sink : Al					
Certifications	CE DC24V Only					
Weight(Approx.)	0.47kg	0.57kg	0.67kg	0.77kg	0.86kg	1.32kg
	0.50kg	0.61kg	0.71kg	0.81kg	0.90kg	1.40kg

Technical Diagram

(Units : mm)

QFL/ QFLC-200/ 300/ 400/ 500/ 600/ 1200



※ Power line standard : CLASSIC 400P(0.75sq×2C) 400mm

MODEL	A	B	C
QFL/ QFLC-200	240	152	220
QFL/ QFLC-300	340	252	320
QFL/ QFLC-400	440	352	420
QFL/ QFLC-500	540	452	520
QFL/ QFLC-600	640	552	620
QFL/ QFLC-1200	1190	1102	1170

Ordering Specification

QFL	-	600	-	110
[Model number]		[Product length]		[Voltage]
• QFL : Translucent lens • QFLC : Transparent lens		• 200 : 240mm • 300 : 340mm • 400 : 440mm • 500 : 540mm • 600 : 640mm • 1200 : 1,190mm		• 24-DC24V • 110-AC110V • 220-AC220V

QMFLN

Water, Vibration and Oil Resistant LED Work Lights with IP67/ IP69K Protection

IP67 IP69K -30~+60°C

Suitable for machine tool equipment that needs excellent water and oil proof features

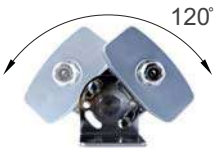
Common Specifications

- Special sealing structure provides excellent oil resistance, suitable for environments with high temperature cutting oil
- Suitable for high pressure and high temperature water cleaning environments(IP69K)
- Tempered glass prevents damage from machine tool chips
- Bracket included has tilt adjustment with angle of 120°
- Can select from variety of body length of 200/ 300/ 400/ 500/ 600mm to fit your application needs
- Can choose anti-glare lens type depending on work environment needs
- High illumination type (QMFHLN) is available as customization



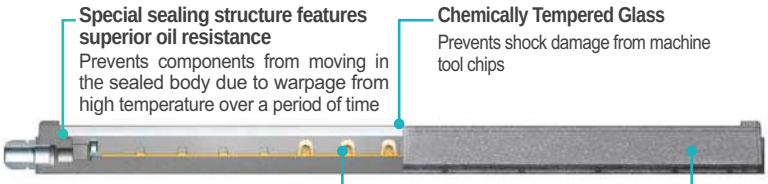


Tilt Type K Bracket



The standard bracket included enables tilt adjustment with angle of 120°

Structural Features



Special sealing structure features superior oil resistance
Prevents components from moving in the sealed body due to warpage from high temperature over a period of time

Chemically Tempered Glass
Prevents shock damage from machine tool chips

Special Micro Lens
Provides high luminance with superior light focusing capability, suitable for work environments that need long distance direct visibility

Aluminum Heat-Radiant Housing
Adopted special heat-radiant structure to provide stable luminance in high temperature sealed environment

M12 Connector Attached Type



Customized cable entry M12 connector attached type available, an additional connector cable will be also provided with this model.

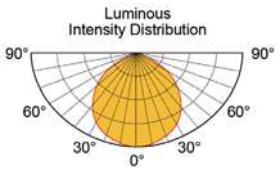
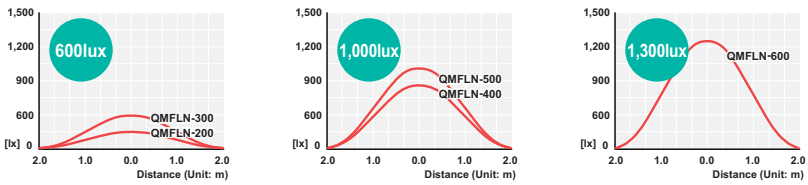
Test Conditions/ Regulations

Vibration Resistance Test	• Acceleration : 20m/s^2 • Duration : 1 octave/min • Range of frequency : 10-150Hz • Amplitude : Maximum 7.5mm, Direction : tested 10times each 3 directions(X, Y, Z)
Shock Resistance Test	• Acceleration : 20g • Directions : ±X, ±Y, ±Z • Numbers : 3 times each directions • Time period : 11ms for each direction • Waveform : Half sine
Oil Resistance Test	• General test : Tested in water soluble and non-water soluble flooded environments for 500 hours. • High temperature oil resistance test : Place the object in a constant temperature water bath at 80°C for two hours and then submerge the object in the room temperature oil diluent for 24hours.
Solid Particle Protection Test(IP6X)	• After reducing the pressure inside the test object, spray talcum powder with a nominal diameter of 50um for 2 hours at 40-60meters/hour inside the dust chamber. • IEC60529
Liquid Ingress Protection Test(IPX7)	• Test ingress by putting the object under 1000mm water with 2bar of pressure for 30 mins
High-pressure, High-temperature Wash-down Test (IP69K)	• Spray nozzle provides 80°C water with pressure of 80–100 bar and a flow rate of 14–16 L/min to the object • Distance between spray nozzle and the test object : 10-15cm • Water spray angle : 0˚, 30˚, 60˚, 90˚ • The nozzle is held at 4 of each angle for 30 seconds • DIN 40050 PART9

QMFLN

Water, Vibration and Oil Resistant LED Work Lights with IP67/ IP69K Protection

Light Distribution and Illuminance

Model	Light Distribution Curve	Illumination Feature
QMFLN		

Optics Specifications

Model		QMFLN-200	QMFLN-300	QMFLN-400	QMFLN-500	QMFLN-600
Lens color		Translucent	Translucent	Translucent	Translucent	Translucent
Light color		Cooldaylight				
Color temperature		6,000-7,000K				
Luminous flux	DC	732lm	1,626lm	2,411lm	2,710lm	3,523lm
Efficacy (lm/W)	DC	270Lux	600Lux	890Lux	1,000Lux	1,300Lux

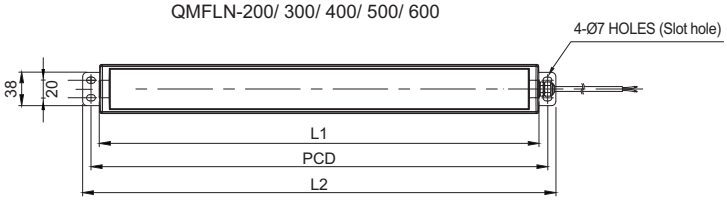
Specifications

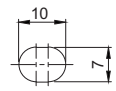
Model	QMFLN-200	QMFLN-300	QMFLN-400	QMFLN-500	QMFLN-600
Voltage	DC24V				
Range for operation voltage	DC22V-30V				
Current	0.235A	0.520A	0.816A	0.816A	1.050A
Power consumption	5.6W	12.5W	20W	20W	25W
Power consumption	Min. 100MΩ(500V DC mega ohm meter)				
Withstanding voltage	500V AC, 60Hz, 1 minute				
Operation temperature	-30°C to +60°C				
Protection rating	IP67/ IP69K				
Materials	Housing: Al, Lens : Tempered glass, Bracket : Spc-1				
Certificates	-				
Weight (Approx.)	0.57kg	0.80kg	1.03kg	1.26kg	1.49kg

Technical Diagram

(Units : mm)

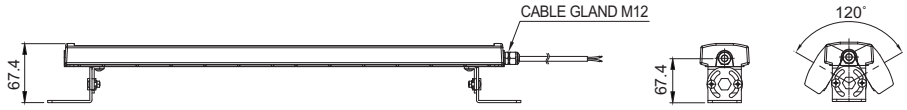
QMFLN-200/ 300/ 400/ 500/ 600





FITTING HOLES

MODEL	L1	PCD	L2
QMFLN - 200	190	210	230
QMFLN - 300	290	310	330
QMFLN - 400	400	420	440
QMFLN - 500	500	520	540
QMFLN - 600	600	620	640



SIDE VIEW

※ Power line standard : Dura & Flex-F VU (0.5sq)X2C 450mm

Ordering Specification

QMFLN	-	600	-	24
[Model number]		[Product length]		[Voltage]
• QMFLN		• 200 : 190mm • 300 : 290mm • 400 : 400mm • 500 : 500mm • 600 : 600mm		• 24-DC24V

QPL/ QPLC/ QPHL/ QPHLC

Basic Waterproof LED Light Bars

IP65 -30~+50°C

Waterproof LED light bars, suitable for dusty and moisture environments



Common Specifications(QPL/QPLC/QPHL/QPHLC)

- Fully enclosed structure with protection rating of IP65, suitable for environments which have lingering dust or moisture
- Maintains bright intensity illumination from dust resistant lens
- Beautiful appearance with dome type lens
- Slim thickness 24mm adopted AC direct LED control system
- 4 kinds of products length 200/300/400/500mm
- Selectable lens between translucent and transparent based on condition
- Certificates : CE, UL Compliant

QPL Translucent Lens



QPLC Transparent Lens



Optics Specifications

Model		QPL200	QPLC200	QPL300	QPLC300	QPL400	QPLC400	QPL500	QPLC500
Lens color		Translucent	Transparent	Translucent	Transparent	Translucent	Transparent	Translucent	Transparent
Light color(Standard)		Cooldaylight							
Color temperature(Standard)		6,000-7,000K							
Luminous flux	DC	168lm	187lm	248lm	309lm	387lm	436lm	515lm	587lm
	AC	-	-	381lm	433lm	527lm	600lm	696lm	792lm
Illumination (at 1m)	DC	50Lux	65Lux	80Lux	100Lux	120Lux	145Lux	160Lux	195Lux
	AC	-	-	120Lux	135Lux	160Lux	200Lux	215Lux	265Lux

Specifications

Model	QPL200/ QPLC200	QPL300/ QPLC300	QPL400/ QPLC400	QPL500/ QPLC500
Rated voltage	DC24V	DC24V	DC24V	DC24V
		AC110V / 220V	AC110V / 220V	AC110V / 220V
Range for operation voltage	DC21.5V-26.5V	DC21.5V-26.5V / AC98V-121V / AC198V-245V		
Current	0.155A	0.155A	0.230A	0.308A
		0.052A / 0.025A	0.070A / 0.034A	0.093A / 0.045A
Power consumption	4W	4W	5.5W	7.5W
		6W / 5.5W	8W / 7.5W	11W / 10W
Insulation resistance	Min. 100MΩ(500V DC mega ohm meter)			
Withstanding voltage	DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute			
Operating temperature	-30°C to +50°C			
Waterproof	IP65			
Materials	Lens : PC, Side cover : ABS, Heat sink : Al			
Certificates	CE UL DC only			
Weight(approx.)	0.13kg	0.15kg	0.21kg	0.24kg
		0.15kg	0.21kg	0.24kg

QPL/ QPLC/ QPHL/ QPHLC

Basic Waterproof LED Light Bars

IP65 -30~+50℃

QPHL Translucent Lens



QPHLC Transparent Lens



Optics Specifications

Model		QPHL200	QPHLC200	QPHL300	QPHLC300	QPHL400	QPHLC400	QPHL500	QPHLC500
Lens color		Translucent	Transparent	Translucent	Transparent	Translucent	Transparent	Translucent	Transparent
Light color(Standard)		Cooldaylight							
Color temperature(Standard)		6,000-7,000K							
Luminous flux	DC	289lm	344lm	460lm	529lm	668lm	768lm	803lm	907lm
	AC	-	-	505lm	582lm	714lm	814lm	927lm	1,094lm
Illumination (at 1m)	DC	80Lux	100Lux	120Lux	150Lux	190Lux	230Lux	250Lux	310Lux
	AC	-	-	135Lux	170Lux	200Lux	250Lux	290Lux	375Lux

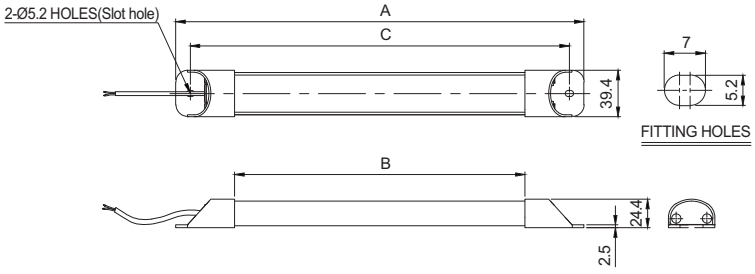
Specifications

Model	QPHL200/ QPHLC200	QPHL300/ QPHLC300	QPHL400/ QPHLC400	QPHL500/ QPHLC500
Rated voltage	DC24V	DC24V	DC24V	DC24V
		AC110V / 220V	AC110V / 220V	AC110V / 220V
Range for operation voltage	DC21.5V-26.5V	DC21.5V-26.5V / AC98V-121V / AC198V-245V		
Current	0.200A	0.210A	0.310A	0.400A
		0.062A / 0.030A	0.076A / 0.037A	0.095A / 0.046A
Power consumption	4.8W	5W	7.5W	9.5W
		7W / 6.5W	8.5W / 8W	11W / 10W
Insulation resistance	Min. 100MΩ(500V DC mega ohm meter)			
Withstanding voltage	DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute			
Operating temperature	-30°C to +50°C			
Waterproof	IP65			
Materials	Lens : PC, Side cover : ABS, Heat sink : Al			
Certificates	CE UL DC only			
Weight(approx.)	0.13kg	0.22kg	0.31kg	0.41kg
		0.23kg	0.32kg	0.42kg

Technical Diagram

(Units : mm)

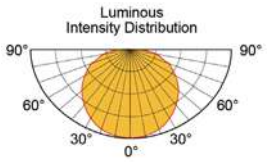
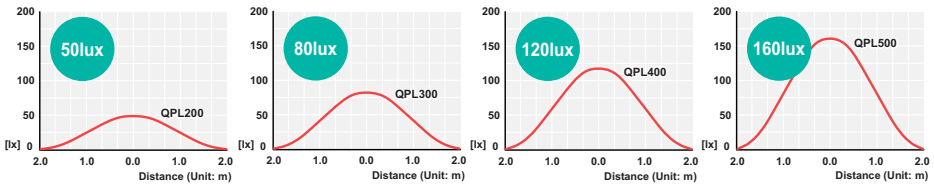
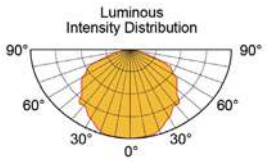
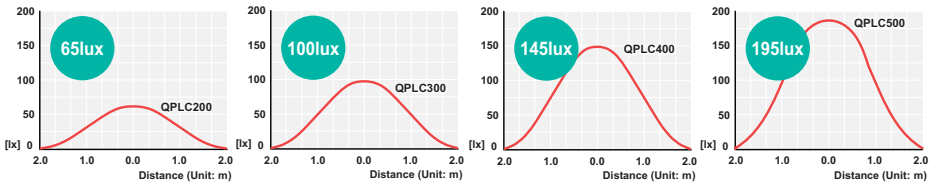
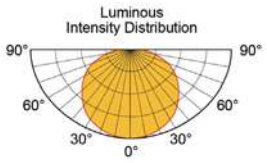
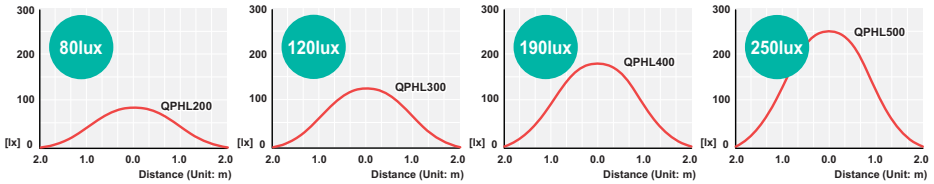
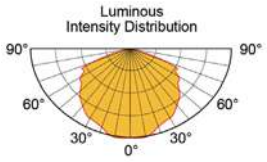
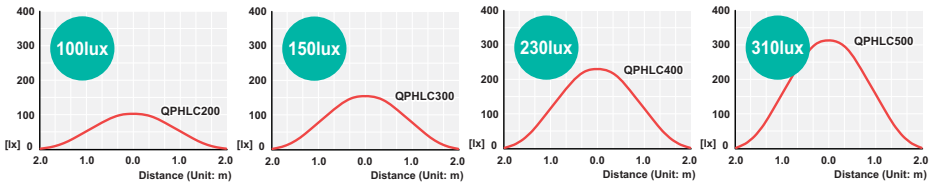
QPL/ QPHL 200/ 300/ 400/ 500
QPLC/ QPHLC 200/ 300/ 400/ 500



MODEL	A	B	C
QPL/ QPHL/ QPLC/ QPHLC 200	200	100	175
QPL/ QPHL/ QPLC/ QPHLC 300	300	200	275
QPL/ QPHL/ QPLC/ QPHLC 400	400	300	375
QPL/ QPHL/ QPLC/ QPHLC 500	500	400	475

※ Power line standard : DC TYPE – UL2464 AWG22(0.3sq×2C) 400mm
AC TYPE – VCTFK(0.75sq×2C) 400mm

Light Distribution and Luminance

Model	Light Distribution Curve	Illumination Feature
QPL		
QPLC		
QPHL		
QPHLC		

Ordering Specification

QPHL	500	-	24
[Model number]	[Product length]		[Voltage]
• QPL : Translucent lens • QPLC : Transparent lens • QPHL : High illumination translucent lens • QPHLC : High illumination transparent lens	• 200 : 200mm • 300 : 300mm • 400 : 400mm • 500 : 500mm		• 24-DC24V • 110-AC110V • 220-AC220V

QCML/ QCMLC

Waterproof LED Light Bars for Multi-use with Protection of IP67/ IP69K

IP67 IP69K -30~+50℃

High seal and high waterproof light bars that can be used in high temperature wash down applications
Can select from a variety of light colors from cooldaylight, incandescent, amber and red color lights to fit your application needs

Common Specifications(QCML/ QCMLC)

- Side cover and lens is integrated together with a multi silicon rubber sealing structure for superior protection from water
- Aesthetically pleasing with slim and compact housing
- Polycarbonate material provides superior heat and shock resistance
- Features great seal and durability in food processing, pharmaceutical, and beverage processing machine that needs high temperature wash down
- Can select from light colors of Cooldaylight, warm white, amber and red color lights depending on your application needs such as semiconductor manufacturing equipment, machine tools and test equipment
- Can select between transparent lens type and translucent lens type depending on your application needs
- Detachable mounting bracket structure enables to adjust mounting hole space freely
- Protection rating : IP67, IP69K
- Certificates : CE Compliant



QCML Series Specifications

Lens Type	Length	Cooldaylight	Incandilight	Red	Amber
Translucent Lens					
	200mm	QCML-200-W	QCML-200-PY	QCML-200-R	QCML-200-A
	300mm	QCML-300-W	QCML-300-PY	QCML-300-R	QCML-300-A
	400mm	QCML-400-W	QCML-400-PY	QCML-400-R	QCML-400-A
	500mm	QCML-500-W	QCML-500-PY	QCML-500-R	QCML-500-A
	600mm	QCML-600-W	QCML-600-PY	QCML-600-R	QCML-600-A
	900mm	QCML-900-W	QCML-900-PY	QCML-900-R	QCML-900-A
	1,200mm	QCML-1200-W	QCML-1200-PY	QCML-1200-R	QCML-1200-A
	1,500mm	QCML-1500-W	QCML-1500-PY	QCML-1500-R	QCML-1500-A
Transparent Lens					
	200mm	QCMLC-200-W	QCMLC-200-PY	QCMLC-200-R	QCMLC-200-A
	300mm	QCMLC-300-W	QCMLC-300-PY	QCMLC-300-R	QCMLC-300-A
	400mm	QCMLC-400-W	QCMLC-400-PY	QCMLC-400-R	QCMLC-400-A
	500mm	QCMLC-500-W	QCMLC-500-PY	QCMLC-500-R	QCMLC-500-A
	600mm	QCMLC-600-W	QCMLC-600-PY	QCMLC-600-R	QCMLC-600-A
	900mm	QCMLC-900-W	QCMLC-900-PY	QCMLC-900-R	QCMLC-900-A
	1,200mm	QCMLC-1200-W	QCMLC-1200-PY	QCMLC-1200-R	QCMLC-1200-A
	1,500mm	QCMLC-1500-W	QCMLC-1500-PY	QCMLC-1500-R	QCMLC-1500-A
Features		• Bright and transparent color temperature that is most commonly used • Color temperature : 6,000-7,000K	• Less eye fatigue with color temperature similar to incan-descent lamp • Color temperature : 2,500-3,500K	• Red color light for special use • Wavelength : 618nm-632nm	• Amber color light for special use • Wavelength : 585nm-595nm
Applications		• Machine tools • Factory facilities • Image test • Panel boards	• Food processing facilities • Cosmetics manufacturing facility • Pharmaceutical equipment and facilities • Chemical facilities	• Semiconductor manufacturing equipment (in clean room) • Print and light exposure manufacturing facilities • Growing plants with artificial lights	• Semiconductor manufacturing equipment • Testing equipment

QCML/ QCMLC

Waterproof LED Light Bars for Multi-use with Protection of IP67/ IP69K

IP67 IP69K -30~+50°C

QCML Translucent Lens Type



QCMLC Transparent Lens Type



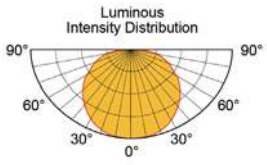
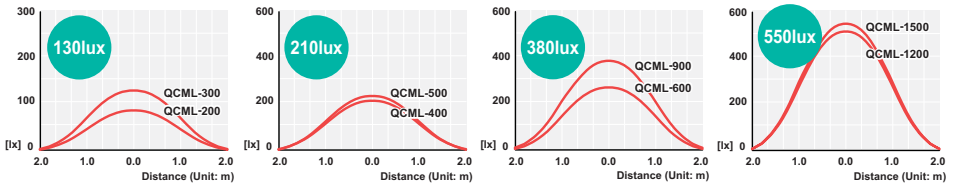
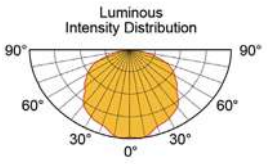
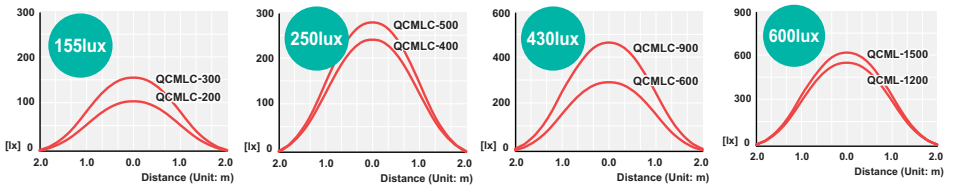
Optics Specifications									
Model		QCML-200/ QCMLC-200	QCML-300/ QCMLC-300	QCML-400/ QCMLC-400	QCML-500/ QCMLC-500	QCML-600/ QCMLC-600	QCML-900/ QCMLC-900	QCML-1200/ QCMLC-1200	QCML-1500/ QCMLC-1500
Lens color		Translucent/ Transparent	Translucent/ Transparent	Translucent/ Transparent	Translucent/ Transparent	Translucent/ Transparent	Translucent/ Transparent	Translucent/ Transparent	Translucent/ Transparent
Light color/ Color temperature	Cooldaylight	6,000-7,000K							
	Incandescent	2,500-3,500K							
	Red	618-632nm							
	Amber	585-632nm							
Luminous flux (Cooldaylight)		276lm/ 322lm	381lm/ 436lm	729lm/ 833lm	742lm/ 849lm	754lm/ 863lm	1,126lm/ 1,291lm	1,492lm/ 1,691lm	1,855lm/ 2,105lm
Illumination(at 1m) (Cooldaylight)		85Lux/ 100Lux	130Lux/ 155Lux	200Lux/ 245Lux	210Lux/ 250Lux	250Lux/ 295Lux	380Lux/ 430Lux	500Lux/ 560Lux	550Lux/ 600Lux
Specifications									
Model		QCML-200/ QCMLC-200	QCML-300/ QCMLC-300	QCML-400/ QCMLC-400	QCML-500/ QCMLC-500	QCML-600/ QCMLC-600	QCML-900/ QCMLC-900	QCML-1200/ QCMLC-1200	QCML-1500/ QCMLC-1500
Rated voltage		DC24V							
Range for operation voltage		DC21.5V-26.5V							
Current		0.230A	0.235A	0.460A	0.465A	0.465A	0.700A	0.925A	1.160A
Power consumption		5.5W	6W	11W	11.5W	11.5W	17W	22W	28W
Insulation resistance		Min. 100MΩ(500V DC mega ohm meter)							
Withstanding voltage		DC : 500V AC, 60Hz, 1 minute							
Operating temperature		-30°C to +50°C							
Waterproof		IP67/ IP69K							
Materials		Lens : PC, Side cover : PC, Heat sink : Al, Bracket : PC							
Certificate		CE DC24V only							
Weight(approx.)		0.16kg	0.20kg	0.26kg	0.33kg	0.40kg	0.56kg	0.76kg	0.94kg

QCML/ QCMLC

Waterproof LED Light Bars for Multi-use with Protection of IP67/ IP69K

Qlight

Light Distribution and Luminance

Model	Light Distribution Curve	Illumination Feature
QCML		
QCMLC		

Mounting Bracket







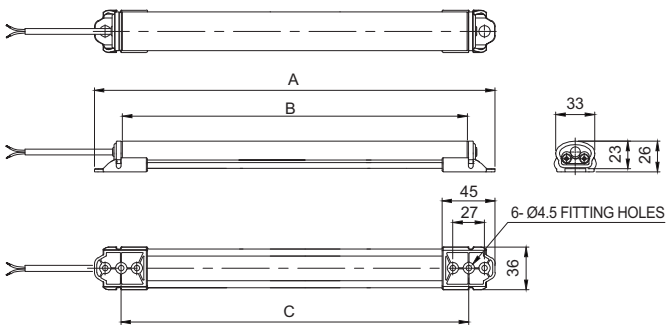
※ Adopts removable mounting bracket and sliding structure, adjustable mounting distance.(patent)

※ mounting bracket is arranged on edge or middle of body, in case of edge of body, mounting bracket space is kept.

Technical Diagram

(Units : mm)

QCML/ QCMLC-200/ 300/ 400/ 500/ 600/ 900/ 1200/ 1500



MODEL	A	B	C	D
QCML/ QCMLC-200	257	226	45~212	2
QCML/ QCMLC-300	357	326	45~312	2
QCML/ QCMLC-400	457	426	45~412	2
QCML/ QCMLC-500	557	526	45~512	2
QCML/ QCMLC-600	657	626	45~612	2
QCML/ QCMLC-900	957	926	45~912	3
QCML/ QCMLC-1200	1257	1226	45~1212	4
QCML/ QCMLC-1500	1557	1526	45~1512	4

※D : Recommended quantity of mounting brackets

※ Power line standard : UL2464–AWG22(0.3sq×2C) 400mm

Ordering Specification

QCML	-	300	-	PY	-	24
[Model number]		[Product length]		[Light color]		[Voltage]
• QCML : Translucent lens • QCMLC : Transparent lens		• 200 : 257mm • 300 : 357mm • 400 : 457mm • 500 : 557mm • 600 : 657mm • 900 : 957mm • 1200 : 1,257mm • 1500 : 1,557mm		• W-Cooldaylight • PY-Incandilight • R-Red • A-Amber		• 24-DC24V

QGL/QGLC

LED Light Bars for Indoor

-30~+50℃

General lights for built-in AC power converter in compact structure



Common Specifications(QGL/ QGLC)

- Using aluminum base that protects against heat and stable illumination
- Suitable alternative to fluorescent lighting for situations that require a compact structure with high illumination
- LED direct AC connect system, no need other power device
- 4 kinds of products length 200/300/400/500mm
- Lens options available based on use case- Transparent lens(QGLC) or translucent lens(QGL)
- Removable mount bracket where mounting distance can be adjusted
- Certificates : CE Compliant

QGL Translucent Lens



QGLC Transparent Lens



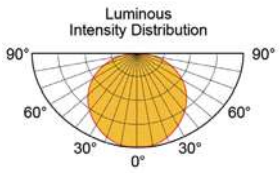
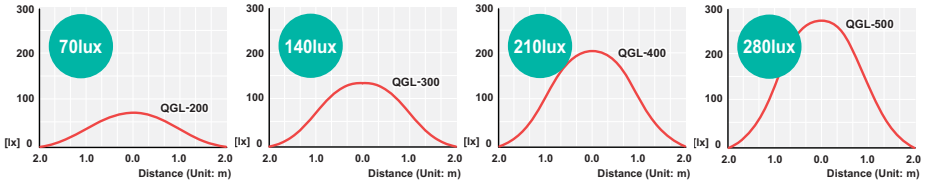
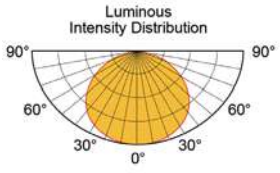
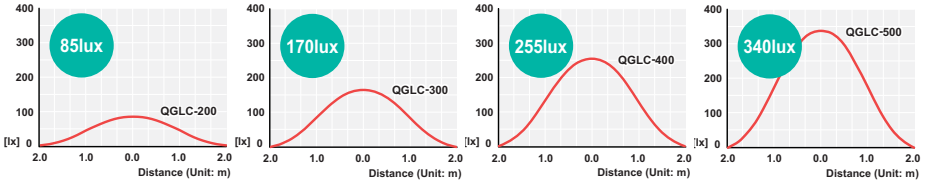
Optics Specifications

Model		QGL-200	QGLC-200	QGL-300	QGLC-300	QGL-400	QGLC-400	QGL-500	QGLC-500
Lens color		Translucent	Transparent	Translucent	Transparent	Translucent	Transparent	Translucent	Transparent
Light color(Standard)		Cooldaylight							
Color temperature(Standard)		6,000-7,000K							
Luminous flux	DC	265lm	332lm	397lm	498lm	595lm	748lm	872lm	997lm
	AC	316lm	358lm	530lm	602lm	720lm	818lm	952lm	1,080lm
Illumination (at 1m)	DC	70Lux	85Lux	140Lux	170Lux	210Lux	255Lux	280Lux	340Lux
	AC	85Lux	90Lux	185Lux	205Lux	255Lux	280Lux	310Lux	370Lux

Specifications

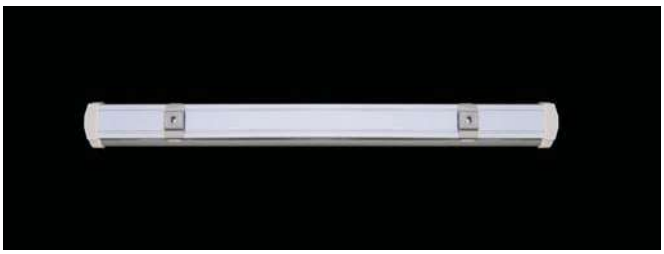
Model	QGL-200/QGLC-200	QGL-300/QGLC-300	QGL-400/QGLC-400	QGL-500/QGLC-500
Rated voltage	DC24V	DC24V	DC24V	DC24V
	AC110V / AC220V	AC110V / AC220V	AC110V / AC220V	AC110V / AC220V
Range for operation voltage	DC21.5V-26.5V / AC98V-121V / AC198V-245V			
Current	0.125A	0.210A	0.310A	0.430A
	0.035A / 0.016A	0.062A / 0.030A	0.083A / 0.040A	0.110A / 0.053A
Power consumption	3W	5W	7.5W	10.5W
	4W / 3.5W	7W / 6.5W	9W / 9W	12W / 11.5W
Insulation resistance	Min. 100MΩ(500V DC mega ohm meter)			
Withstanding voltage	DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute			
Operating temperature	-30°C to +50°C			
Waterproof	Non water-proof			
Materials	Lens : PC, Side cover : ABS, Heat sink : Al, Bracket : STS201			
Certificate	CE			
Weight(approx.)	0.12kg	0.17kg	0.23kg	0.28kg
	0.12kg	0.17kg	0.23kg	0.28kg

Light Distribution and Luminance

Model	Light Distribution Curve	Illumination Feature
QGL		
QGLC		

Mounting Bracket







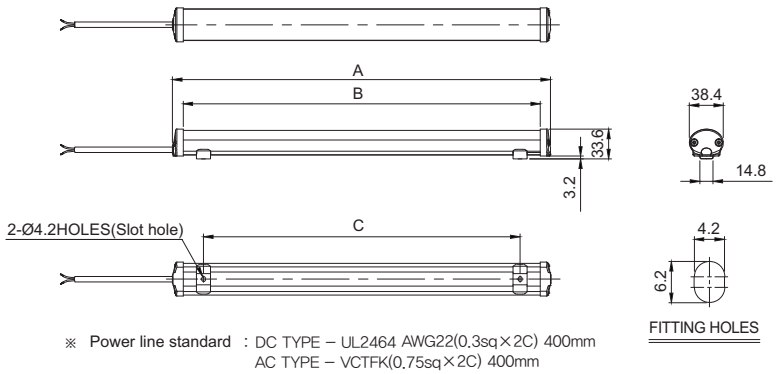
※ Adopts removable mounting bracket and sliding structure, adjustable mounting distance.

※ Standard bracket : STS201(2pcs included)

Technical Diagram

(Units : mm)

QGL/ QGLC-200/ 300/ 400/ 500



MODEL	A	B	C
QGL/ QGLC-200	200	177	16~130
QGL/ QGLC-300	300	277	16~230
QGL/ QGLC-400	400	377	16~330
QGL/ QGLC-500	500	477	16~430

※ Power line standard : DC TYPE – UL2464 AWG22(0.3sq×2C) 400mm
AC TYPE – VCTFK(0.75sq×2C) 400mm

Ordering Specification

QGL	-	300	-	220
[Model number]		[Product length]		[Voltage]
• QGL : Translucent lens • QGLC : Transparent lens		• 200 : 200mm • 300 : 300mm • 400 : 400mm • 500 : 500mm		• 24-DC24V • 110-AC110V • 220-AC220V

QEL/ QELT/ QELS/ QELTS

LED Light Bars for Distribution Panel

-30~+50℃

Common Specifications(QEL/ QELT/ QELS/ QELTS)

- Wide direct light distribution for high illumination in the distribution panel
- Options for operation are power line threading type, terminal box equipped type, on-off switch equipped type
- LED direct AC connect system, no need other power device
- Adopts constant current circuit for stable illumination in unstable power
- 4 kinds of products length 200/300/400/500mm for each condition
- Removable mount bracket that adjust mount distance
- Certificates : CE, KC Compliant



QEL External Power Line



QELT Terminal Box Equipped



QELS External Power Line, Switch Equipped



QELTS Terminal Box Equipped, Switch Equipped



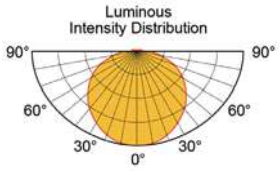
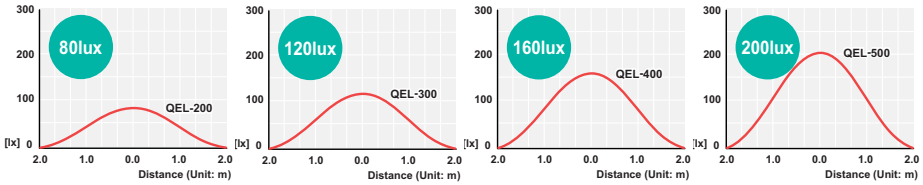
Optics Specifications					
Model		QEL-200/ QELT-200 QELS-200/ QELTS-200	QEL-300/ QELT-300 QELS-300/ QELTS-300	QEL-400/ QELT-400 QELS-400/ QELTS-400	QEL-500/ QELT-500 QELS-500/ QELTS-500
Lens color		Translucent	Translucent	Translucent	Translucent
Light color(Standard)		Cooldaylight			
Color temperature(Standard)		6,000-7,000K			
Luminous flux	DC	254lm	383lm	509lm	606lm
	AC	268lm	384lm	479lm	575lm
Illumination (at 1m)	DC	80Lux	120Lux	160Lux	200Lux
	AC	85Lux	120Lux	150Lux	190Lux

Specifications					
Model		QEL-200/ QELT-200 QELS-200/ QELTS-200	QEL-300/ QELT-300 QELS-300/ QELTS-300	QEL-400/ QELT-400 QELS-400/ QELTS-400	QEL-500/ QELT-500 QELS-500/ QELTS-500
Rated voltage		DC24V	DC24V	DC24V	DC24V
		AC110V/AC220V	AC110V/AC220V	AC110V/AC220V	AC110V/AC220V
Range for operation voltage		DC21.5V-26.5V / AC98V-121V / AC198V-245V			
Current		0.145A	0.215A	0.285A	0.358A
		0.196A / 0.095A	0.202A / 0.098A	0.206A / 0.100A	0.216A / 0.105A
Power consumption		3.5W	5W	7W	8.5W
		4W / 3.5W	5.5W / 5.5W	7W / 7W	8.5W / 8W
Insulation resistance		Min. 100MΩ(500V DC mega ohm meter)			
Withstanding voltage		DC : 500V AC, 60Hz, 1 minute / AC : 1,500V AC, 60Hz, 1 minute			
Operating temperature		-30°C to +50°C			
Waterproof		Non water-proof			
Materials		Lens : PC, Side cover : ABS, Bracket : STS201			
Certificate		CE KC			
Weight(approx.)		0.08kg	0.10kg	0.13kg	0.15kg
		0.10kg	0.12kg	0.15kg	0.17kg

QEL/ QELT/ QELS/ QELTS

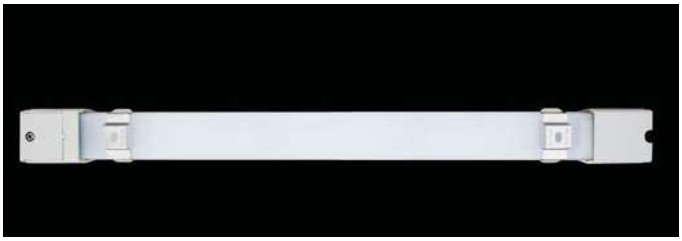
LED Light Bars for Distribution Panel

Light Distribution and Luminance

Model	Light Distribution Curve	Illumination Feature
QEL QELT QELS QELTS		

Mounting Bracket







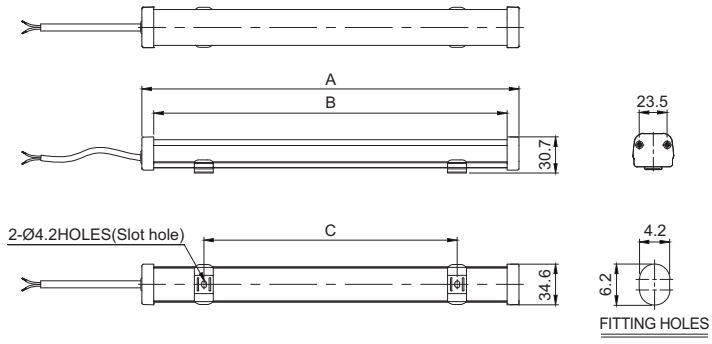
※ Adopts removable mounting bracket and sliding structure, adjustable mounting distance.

※ Standard bracket : STS201(2pcs included)

Technical Diagram

(Units : mm)

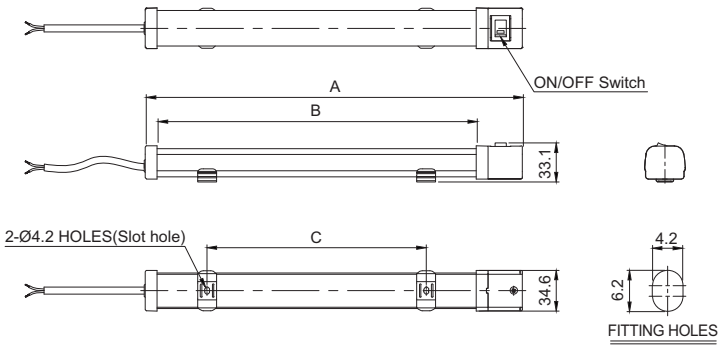
QEL(Standard type)



MODEL	A	B	C
QEL-200	220	200	16~170
QEL-300	320	300	16~270
QEL-400	420	400	16~370
QEL-500	520	500	16~470

※ Power line standard : DC TYPE – UL2464 AWG22(0.3sq×2C) 400mm
AC TYPE – VCTFK(0.75sq×2C) 400mm

QELS(Built-in on/off switch type)



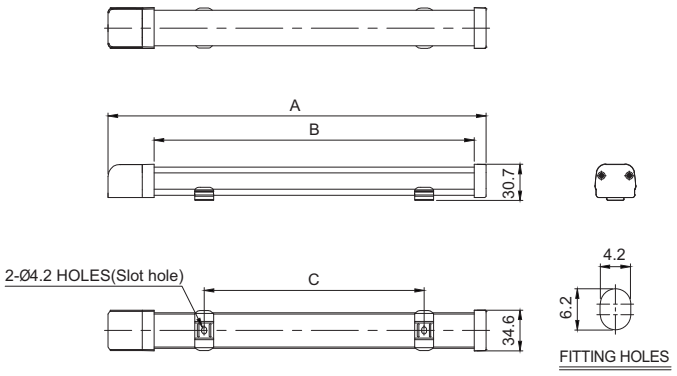
MODEL	A	B	C
QELS-200	249	200	16~170
QELS-300	349	300	16~270
QELS-400	449	400	16~370
QELS-500	549	500	16~470

※ Power line standard : DC TYPE – UL2464 AWG22(0.3sq×2C) 400mm
AC TYPE – VCTFK(0.75sq×2C) 400mm

Technical Diagram

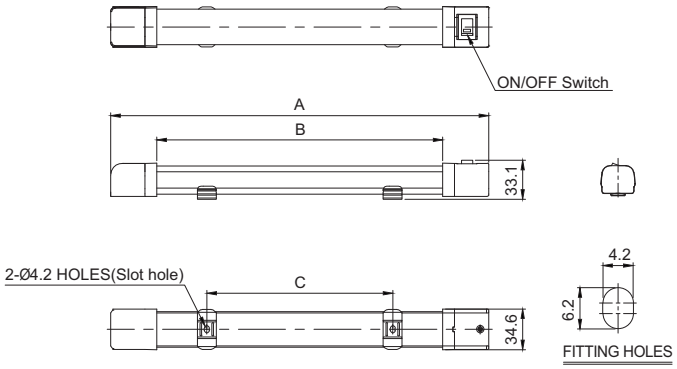
(Units : mm)

QELT(Built-in terminal type)



MODEL	A	B	C
QELT-200	249	200	16~170
QELT-300	349	300	16~270
QELT-400	449	400	16~370
QELT-500	549	500	16~470

QELTS(Built-in on/off switch and terminal type)



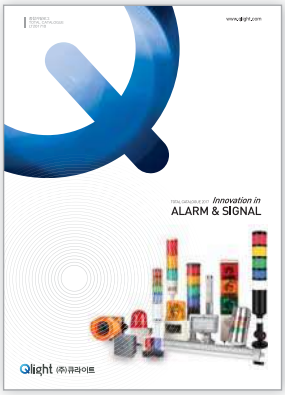
MODEL	A	B	C
QELTS-200	278	200	16~170
QELTS-300	378	300	16~270
QELTS-400	478	400	16~370
QELTS-500	578	500	16~470

Ordering Specification

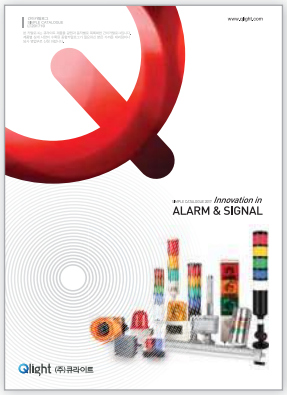
QEL	-	300	-	220
[Model number]		[Product length]		[Voltage]
• QEL : External power line • QELT : Terminal box equipped • QELS : External power line, Switch equipped • QELTS : Terminal box, Switch equipped		• 200 : 200mm • 300 : 300mm • 400 : 400mm • 500 : 500mm		• 24-DC24V • 110-AC110V • 220-AC220V

Qlight Catalogue Introduction

Qlight produces a wide variety of product categories which offers the customer the ability to select the suitable device for their application needs and environments.
There are warning/signal lights, electric signal horns, signal tower lights, warning light bars, PC control tower lights, industrial LED lights, aviation obstruction lights, and limit switches.



Total Catalogue



Simple Catalogue



Brochure



Module Type Tower Light



PC Control Tower Light



LED Floodlight/ Work Light



Warning Lights for Vehicle/ Road Safety



Limit Switch



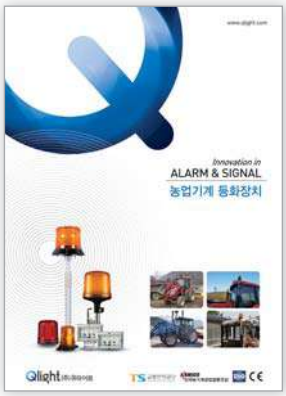
For Steel Manufacturing Facilities



Built-in Signal Sound Type



PC Control Tower Light



Agriculture Machine Warning Light

FOR YOUR SAFETY

Specification and dimensions listed in this catalogue are subject to change without prior notice for product quality improvement. The newest product information is available on our web site. (www.qlight.com)
Please read the Instruction Manual attached to the product carefully before installation and use.

Qlight Co., Ltd. www.qlight.com | qlightkr@qlight.com
Head Office | A-412, 579, Gyeongin-ro, Guro-gu, Seoul, Korea Tel. +82-80-328-2222 Fax : +82-2-2679-6154
Factory | 185-25, Mukbang-Ro, Sangdong-Myeon, Gimhae-si, Gyeongsangnamdo, Korea Tel. +82-80-328-1111
Qlight Public Relations & Marketing Team Office | Nakdong-daero, Sasang-gu, Busan, Korea(Eomgung-Dong) Tel : +82-51-245-0017

Qlight USA, Inc. www.qlight.com www.qlightusa.com | sales@qlightusa.com
3003 North First Street, Suite #341, San Jose, CA 95134 USA Tel. +1.408.519.5740 Fax. +1.408.519.5739

SHANGHAI Qlight Electronic Co., Ltd. www.qlight.com www.qlightcn.com | qlightcn@qlight.com
China Factory/ Shanghai Sales Office | #19, Nanda Road, Baoshan Area, Shanghai, China Tel. +86.21.6651.7100 Fax. +86.21.6315.3929



Qlight

WARNING LIGHT | ELECTRONIC HORN | SIGNAL TOWER LIGHT | EMERGENCY LIGHT BAR | LED OBSTRUCTION LIGHT | LED WORK LIGHT