

Total Catalogue 2018C

Tower Light
Signal Light
Panel Lamp
Wall Mount Signal Light
Speaker
LED indicators



About us



Since our establishment in June 1988, we've continued development in the trials and challenging times. And reached today thanks to constant guidance and cooperation from our customers.

We are doing our best to secure competitiveness and improve corporate value with the best technology and quality in the domestic market as well as the world market. We have acquired ISO9001 quality system and KS certification standards, CE and UL to increase the value of our products and keep putting our efforts to ensure global competitiveness.

It is based on our accumulated technology and abundant experience, we will supply the best products with the best technology and quality, developing new products such as warning lights, automatic control switches, semiconductors and peripheral devices to automation parts, terminal sockets, molds.

All of MENICS staffs are putting effort into the safety of property and efficiency. To achieve our best goal to realize customer satisfaction, we will continue our efforts for ever.

Thank you

Product Features

1. Polycarbonate Lens

- Strong against impacts.

2. Various Colors

- Red / Yellow / Green / Blue / Clear (White)

3. Diverse Design

- Customized for your business

4. Semi-Permanent

- Economically efficient.

5. Great Appearance

- Contributes to apply in electronic equipments widely.

6. Visible in Various Sides

- Designed to projected in various sides.

Table of contents



LED Panel Lamp

- 03 MPL series**
General Purpose LED Panel Lamp
- Bar type

LED Tower Lights

05	PY7L series	70mm
07	PY7M series	70mm multi color
09	PY7T series	70mm multi channel
11	PTE series	56mm modular
13	PTM series	56mm multi color
14	PTD series	56mm dome head
15	PL4 series	45mm
17	PME series	45mm modular
18	MP8 series	86mm plastic body
19	ML8 series	86mm aluminum body
21	PLD series	25mm
22	MSGT series	130mm (cubic type speaker)



PY7 series
70mm LED Signal Tower Light

Bulb Tower Lights

23	MT5C/8C series	56/86mm
25	MT4B/5B/8B	45/56/86mm
26	PS series	45mm
27	PR series	56mm
29	SL series	86mm
30	MSGS series	130mm (cubic type speaker)

LED Signal Lights

31	MS56L series	56mm
32	MS56M series	56mm multi color
33	MS66 series	66mm
35	MS66LT series	66mm economical
36	MS70LT series	70mm flashing light
37	MS70M series	70mm multi color
40	MW86M series	86mm wall mount (multi color)
41	MW86T series	86mm wall mount
43	MS86LT series	86mm high brightness
44~48	MS86 series	86mm (L, W, T, M, S series)
49~53	MS115 series	115mm (L, T, M, C, S series)
54	MS135T series	135mm



MS135T series
135mm LED Large Warning Signal Light

LED Wall Mount

55	PWE series	90mm
56	MWE series	90mm multi color
57	MWET series	90mm multi channel
58	MQVL series	95mm cubic
59	MQVM series	95mm multi color

Bulb Signal Lights

38	MS70S series	70mm xenon lamp
60	MQVX series	95mm xenon lamp
65	ML series	66mm
66	ASG/APG series	86mm
67	AVG series	135mm
68	MS135B series	135mm



MQV series
Combination with signal lights

Speaker

61	MQVH series	95mm 15W horn speaker
62	MQVS series	95mm 5W speaker
69	MW86N series	wall mount
70	MSP-H series	horn speaker
71	MSP-T series	electronic sounder
72	MSP-L series	electronic sounder

ETC

73	LED indicators
75	Digital switch



70~72 MSP series
Horn speaker electronic sounder

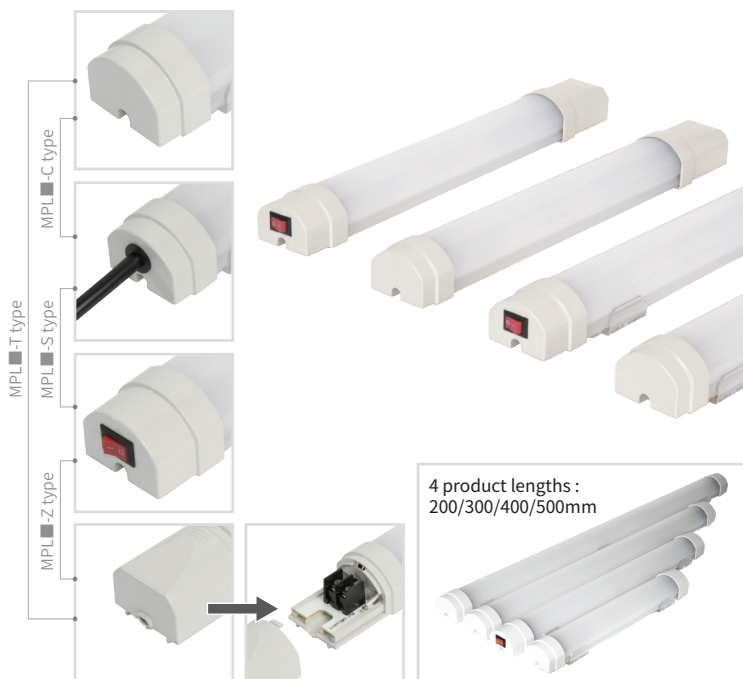
To ensure correct use of these products,
read the Instruction Manual prior to use.
Failure to follow all safeguards can result
in fire, electric shock or other accidents.

MENICS
SIGNALTECHNOLOGY

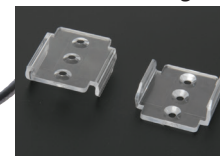
MPL Series Universal LED Panel Lamp - Bar type NEW



MPL series bar type LED lamp provide bright lighting inside panel light(enclosures) with long service life and easy installation. Models are available for 110V, 220VAC or 12V, 24VDC with options for either screw mount or magnet mount (for steel), and ON/OFF switch option and power cable type or terminal block type options.

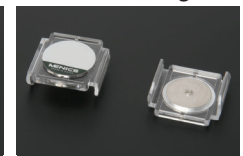


Rear mounting brackets for various usage



Screw mounting type

Definite attachment from end to end. You can lock it in any part of the product body.



Magnet mounting type

Easy attachment by fixing with it's strong magnet on the surface of steel etc.

Material - Polycarbonate resin

Number of brackets required*

product length 200/300mm (2L, 3L) - 2ea
product length 400/500mm (4L, 5L) - 3ea

*Enclosed in package



MPLN type
Daylight - Natural light (app.6200K)



MPLY type
Warm white (app.3850K)

Product Feature

- Wide angle direct light for high illumination inside the distribution panel
- Uses a constant current circuit for stable illumination with unstable power conditions
- Slide rail enables easy attachment and detachment
- Movable mount bracket for easy mounting distance adjustment
- Excellent vibration and impact resistance with use of polycarbonate lens
- On/Off switch equipped for MPL-S, MPL-Z type
- Terminal box equipped for MPL-T, MPL-Z type
- Materials : Lens - PC, Side Cover - ABS
- Protection Rating : None waterproof

Ordering information

MPL **N** - **S** **20** - **2L** - **(M)**

※ option

① LED Color

N	Daylight-Natural light
Y	Warm white

⑤ Fixing bracket option

No mark	Screw fixing type
(M)	Magnet fixed type

② Product model type

C	External power cable type
S	External power cable + Built-in ON / OFF switch type
T	Power terminal block type
Z	Power terminal block + Built-in ON / OFF switch type

③ Power Supply

01	12VDC
02	24VDC
10	110VAC
02	220VAC

④ Product Length

2L	200mm
3L	300mm
4L	400mm
5L	500mm

Specifications

Application	Working light, Enclosure box, Semiconductor machinery
Type	Bar type lamp
Power supply	12/24VDC $\pm 5V$, 110/220VAC $\pm 10V$ (AC50/60Hz)
Light color	N type-Natural light (app.6200K) Y type-Warm white (app.3850K)

MPLN type	Current / Power ($\pm 10\%$)		2L series	3L series	4L series	5L series
			12V: 0.60A / 7.6W	0.56A / 7.3W	0.80A / 9.6W	0.85A / 10.2W
			24V: 0.34A / 8.0W	0.26A / 6.4W	0.50A / 12.0W	0.46A / 11.0W
			110V: 0.08A / 3.3W	0.07A / 3.7W	0.13A / 11W	0.12A / 10.5W
			220V: 0.10A / 5.2W	0.10A / 6.4W	0.14A / 10W	0.15A / 14W
MPLY type	Illuminance (1M)		12V: 180 lux	12V: 160 lux	12V: 295 lux	12V: 300 lux
			24V: 180 lux	24V: 170 lux	24V: 370 lux	24V: 355 lux
			110V: 100 lux	110V: 110 lux	110V: 243 lux	110V: 240 lux
			220V: 140 lux	220V: 210 lux	220V: 270 lux	220V: 360 lux
			12V: 565 lm	12V: 495 lm	12V: 926 lm	12V: 942 lm
MPLY type	Luminous flux		24V: 565 lm	24V: 535 lm	24V: 1160 lm	24V: 1115 lm
			110V: 305 lm	110V: 395 lm	110V: 763 lm	110V: 753 lm
			220V: 440 lm	220V: 660 lm	220V: 848 lm	220V: 1130 lm
			12V: 623 lm	12V: 520 lm	12V: 754 lm	12V: 900 lm
			24V: 560 lm	24V: 520 lm	24V: 942 lm	24V: 952 lm
MPLY type	Luminous flux		110V: 310 lm	110V: 380 lm	110V: 706 lm	110V: 672 lm
			220V: 452 lm	220V: 554 lm	220V: 763 lm	220V: 1074 lm

Connection	60227 KS IEC 53, 2CX0.7-Exposure length: 400mm
Material	Housing - PC resin (milky white), Cover - ABS resin (ivory), Bracket - PC resin (transparent)
Ambient temperature	-20 ~ 50°C
Storage ambient temperature	-20 ~ 70°C
Ambient humidity	45~85% RH

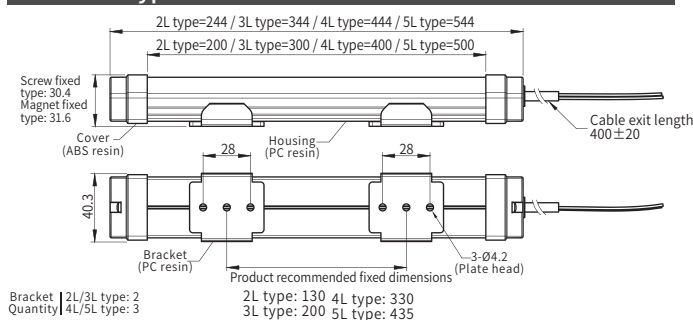
(Lamp depends on operating conditions and environment)

Withstand voltage	AC: 1500VAC 60Hz for 1 minute / DC: 500VAC 60Hz for 1 minute
Insulation resistance	100MΩ or more (500VDC Mega between all terminals and case)
Vibration	10~55Hz (cycle 1 minute) Amplitude 0.75mm X, Y, Z 1hour
Protection structure	IP 60
Approval	RoHS

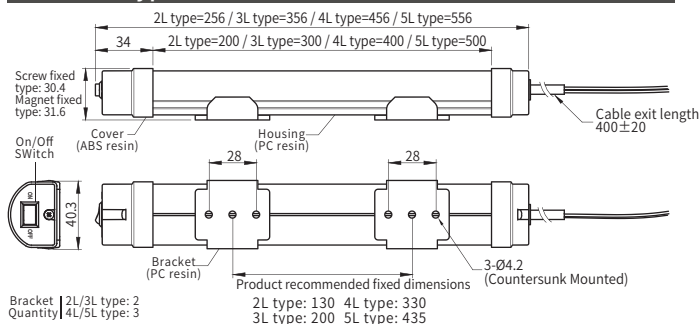
	2L series	Screw fixed	Magnet fixed	3L series	Screw fixed	Magnet fixed
Weight (220VAC standard)	MPL■-C type	app. 113g	app. 142g	MPL■-C type	app. 141g	app. 162g
	MPL■-S type	app. 120g	app. 136g	MPL■-S type	app. 145g	app. 165g
	MPL■-T type	app. 110g	app. 133g	MPL■-T type	app. 140g	app. 161g
	MPL■-Z type	app. 112g	app. 133g	MPL■-Z type	app. 140g	app. 161g
	4L series	Screw fixed	Magnet fixed	5L series	Screw fixed	Magnet fixed
	MPL■-C type	app. 183g	app. 215g	MPL■-C type	app. 211g	app. 243g
	MPL■-S type	app. 186g	app. 218g	MPL■-S type	app. 214g	app. 246g
	MPL■-T type	app. 175g	app. 207g	MPL■-T type	app. 203g	app. 235g
	MPL■-Z type	app. 178g	app. 210g	MPL■-Z type	app. 206g	app. 238g

Dimensions <Unit: mm>

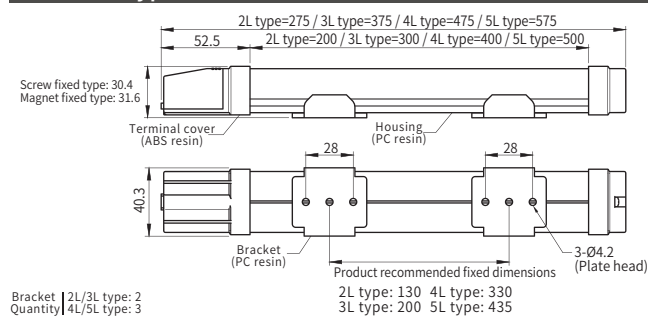
MPL■-C type



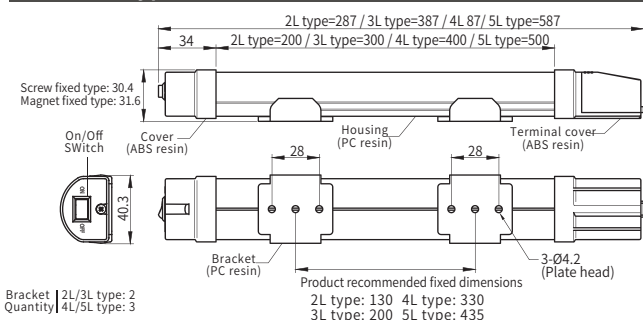
MPL■-S type



MPL■-T type

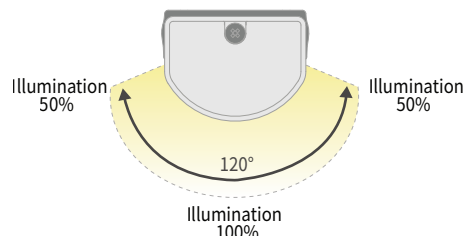


MPL■-Z type



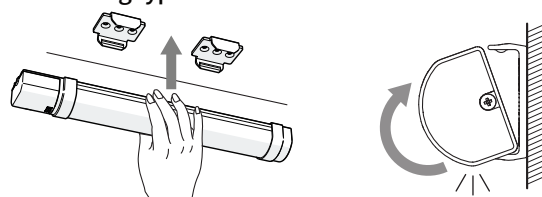
Illumination range drawing

By removing the surface unevenness, the light distribution balance can spread more uniformly. And with an all translucent material construction, it raises the uniformity of the luminousity more. The illumination angle fills a large 120 degree area and illuminated it uniformly from a fixed position.



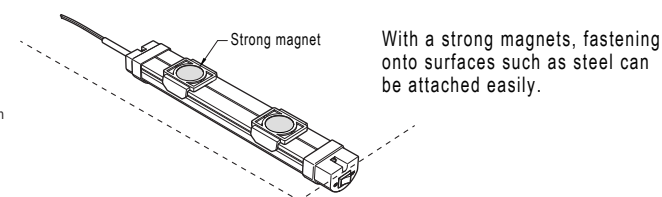
Installation location

● Screw fixing type



Just by after attaching the bracket to a set position, the main body can be easily be assembled and removed with one touch. Moreover, even after the main body in installed on the slide rail, adjusting the right and left mount is possible.

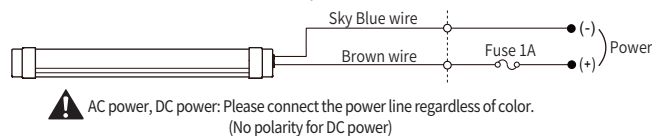
● Back side magnet fixing type



Connection Diagram

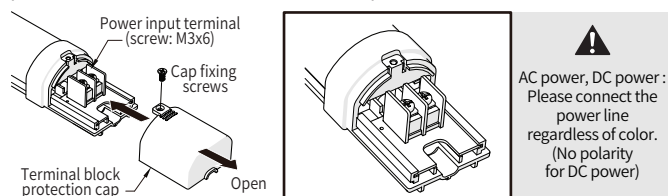
Power cable type MPL■-C, MPL■-S model

The MPL■-C or MPL■-S model has a power cable connected.



Terminal block type MPL■-T, MPL■-Z model

MPL■-T, MPL■-Z models are equipped with terminal box as shown in the picture below. (Recommended screw torque : 0.5 N.m)



Built-in ON / OFF switch type MPL■-S, MPL■-Z model



MPL■-S and MPL■-Z models are equipped with on/off switch.

PY7L Series D70mm LED Signal Tower Light NEW



Except
buzzer type

24V Only

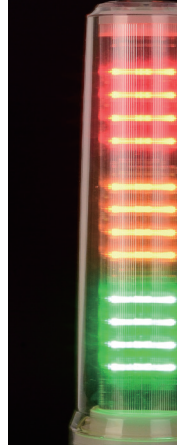
The PY7 series is a circular 70mm LED tower light which can be utilized for many purposes with low maintenance cost and excellent energy saving effect. The entire upper LED display is made transparent and smooth that minimizes the adsorption of water and dust. So it is very efficient for maintenance. Also, the LED display state transmitted through the inner lens has excellent visibility for long distance.

Product Feature

- Fixing method of 4 products
- 3 body colors (ivory, black, silver)
- LED 3, 4, 5 stages are available
- Buzzer tone: Continuous / intermittent sound can be selected
- Variety power specifications



3 LED Lights



4 LED Lights



5 LED Lights



Ordering information

PY7L **P** - **Z** **3** **0** **2** - **R** **Y** **G** - **B**

① ② ③ ④ ⑤ ⑥

① Mounting Type

P	Aluminium pipe + Fixation using aluminum mounting base
M	Secure the product body directly onto the control panel (1/2 " NPT) with a plastic nut
G	Two surface mounts on the body ensure that the body is fixed directly to the control panel
L	Directly fasten aluminum pipe with screws - Using nut (M20)

② Light Style

No mark	Steady
B	Steady + Buzzer
F	Steady + Flashing
Z	Steady + Flashing + Buzzer

③ Number of Stack

3	3 LED Lights
4	4 LED Lights
5	5 LED Lights

④ Power Supply

02	24VDC
FF	110~220VAC

⑥ Body Color

I	Ivory
B	Black
C	Silver matte coating

⑤ LED Color (Top to Bottom)

RYG	Red + Yellow + Green
RGB	Red + Blue + Green
RYGB	Red + Yellow + Green + Blue
RYGBW	Red + Yellow + Green + Blue + White

Specifications

Function	Steady, Flashing, Buzzer
Power supply	24VDC, 110~220VAC (50~60Hz)
Allowable voltage range	24VDC: 21.6~26.4VDC 110~220VAC: 100~240VAC
Flashing rate	24VDC ☐ 75±5/min 110~220VAC ☐
Buzzer volume	Continuous sound: 80±5dB ☐ (at 1M) Intermittent sound: 80±5dB ☐ ※You can select only one of two buzzer sounds to use.
Lens color	Transparent (inner and outer) - PC Resin
Mounting method	Vertical only
Connection method	Exposed wire connection method
Ambient temperature	-20°C ~ 50°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH
Withstand voltage	500VAC 50/60Hz for 1 minute
Insulation resistance	100MΩ or more (500VDC Megger basis)
Vibration	10 ~ 55Hz (1 min.cycle) Double amplitude 0.75mm X, Y, Z
Connection	UL1007/22AWG
Protection structure	IP65 (with Buzzer type: IP62)
Approval	CE(24V Only), RoHS
Weight (DC type) (Buzzer type)	PY7LP type: app. 555g PY7LL type: app. 520g PY7LG type: app. 320g PY7LM type: app. 310g

Note: Life of the LED varies according to operating conditions and environment

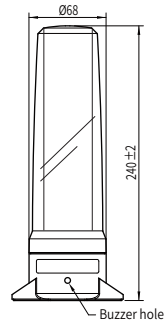
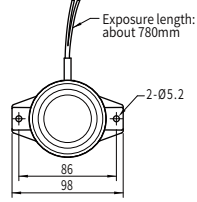
Current consumption (RMS±10%)

Stack	LED Color	24VDC		110~220VAC	
		General	Buzzer	General	Buzzer
3 Lights	R+Y+G	0.14A	0.16A	0.08A	0.09A
3 Lights	R+B+G	0.20A	0.22A	0.10A	0.11A
4 Lights	R+Y+G+B	0.23A	0.25A	0.11A	0.11A
5 Lights	R+Y+G+B+W	0.25A	0.27A	0.11A	0.11A

Dimensions (unit: mm)

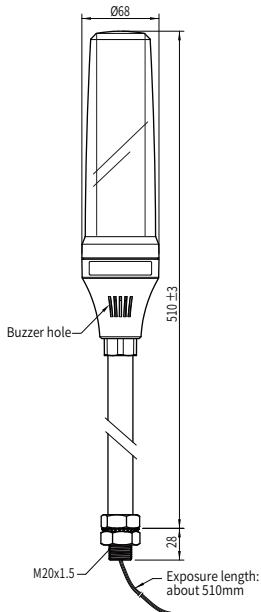
▼ PY7LG type

<Mounting hole>

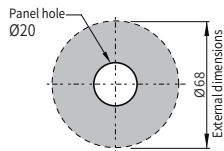


▼ PY7LL type

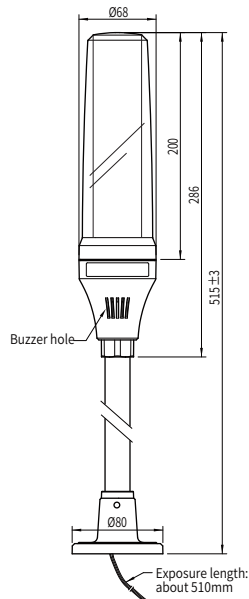
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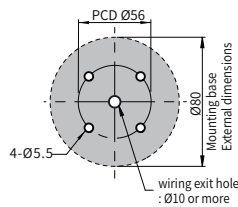
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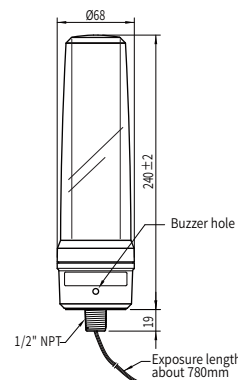
▼ PY7LP type



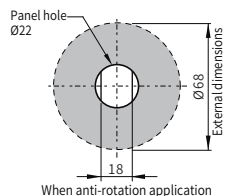
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▼ PY7LM type

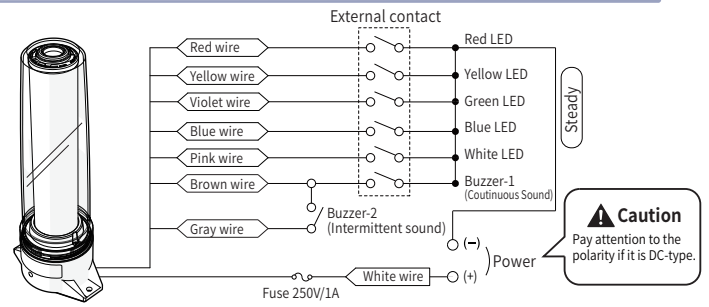


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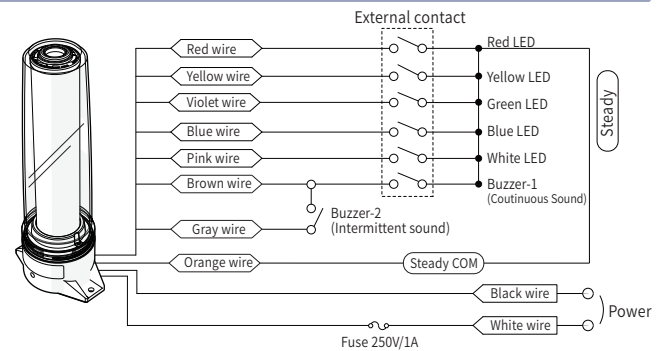


Connection diagram

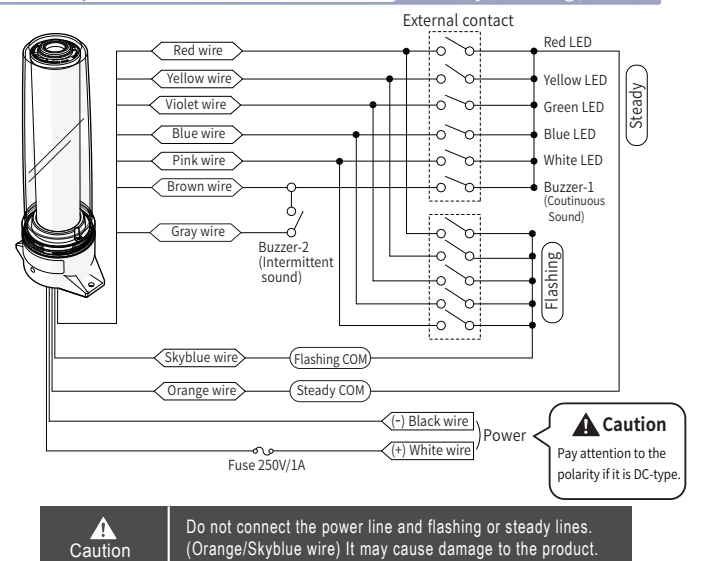
24VDC



110~220VAC



24VDC, 110~220VAC



Optional Parts

Wall Mounting Bracket

PY7■L type only

MAM-DS25
Steel



PY7■G/P type only

MAM-DS38
Steel



PY7■P/M type only

MAM-DS10
Steel



See Page 80 ~ 81 >> for Mounting Options and Accessories.

PY7M Series D70mm multi-colored LED Signal tower light NEW



Except
Buzzer type

The PY7M series is an economical 70mm LED tower light that can transmit 7 colors of signals in one stage. The entire upper LED display is made transparent and smooth that minimizes the adsorption of water and dust. So it is very efficient for maintenance. Also, the LED display state transmitted through the inner lens has excellent visibility for long distance.



Product Feature

- Fixing method of 4 products
- 3 body colors (ivory, black, silver)
- RBG color products - 7 color combinations available
- Buzzer tone: Cintermittent sound
- Variety power specifications

RBG Color Possibilities (7 colors)



Ordering information

PY7M P - Z 02 - RBG - B

① ② ③ ④ ⑤

① Mounting Type

P	Aluminium pipe + Fixation using aluminum mounting base
M	Secure the product body directly onto the control panel (1/2 " NPT) with a plastic nut
G	Two surface mounts on the body ensure that the body is fixed directly to the control panel
L	Directly fasten aluminum pipe with screws - Using nut (M20)

② Light Style

No mark	Steady
B	Steady + Buzzer
F	Steady + Flashing
Z	Steady + Flashing + Buzzer

③ Power Supply

02	24VDC
FF	110~220VAC

⑤ Body Color

I	Ivory
B	Black
C	Silver matte coating

④ LED Colors

RBG	Red + Blue + Green
RYG	Red + Yellow + Green

소비전류 (RMS ±10%)

LED color	24VDC		110~220VAC	
	General	Buzzer	General	Buzzer
RYG	0.20A	0.22A	0.04~0.09A	0.05~0.09A
RBG	0.22A	0.23A	0.05~0.10A	0.06~0.10A

Specifications

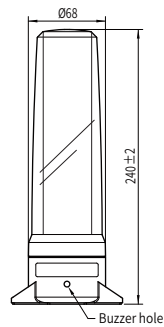
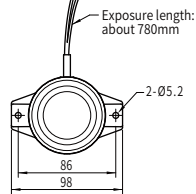
Function	Steady, Flashing, Buzzer
Power supply	24VDC, 110~220VAC (50~60Hz)
Allowable voltage range	24VDC: 21.6~26.4VDC 110~220VAC: 100~240VAC
Flashing rate	24VDC 70±5/min 110~220VAC
Buzzer volume	Intermittent sound: 75±5dB (at 1M)
Lens color	Transparent (inner and outer) - PC Resin
Mounting method	Vertical only
Connection method	Exposed wire connection method
Ambient temperature	-20°C ~ 50°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH
Withstand voltage	500VAC 50/60Hz for 1 minute
Insulation resistance	100MΩ or more (500VDC Megger basis)
Vibration	10 ~ 55Hz (1 min.cycle) Double amplitude 0.75mm X, Y, Z
Connection	UL1007/22AWG
Protection structure	IP65 (with Buzzer type: IP62)
Approval	RoHS
Weight (DC type) (Buzzer type)	PY7MP type: app. 555g PY7ML type: app. 520g PY7MG type: app. 320g PY7MM type: app. 310g

Note: Life of the LED varies according to operating conditions and environment

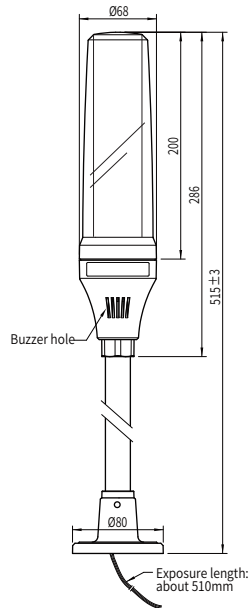
Dimensions (unit: mm)

▼ PY7MG type

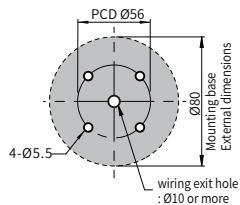
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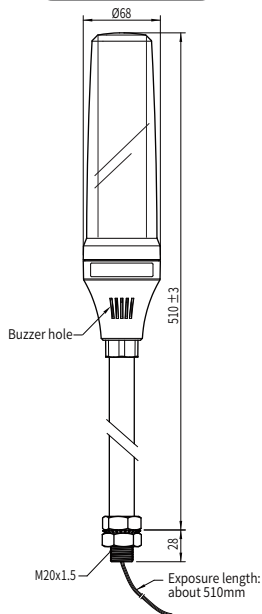
▼ PY7MP type



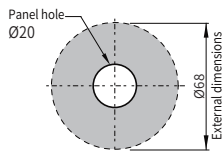
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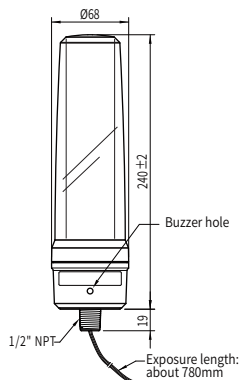
▼ PY7ML type



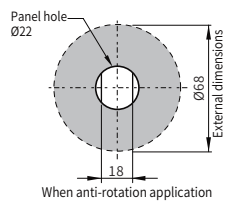
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▼ PY7MM type



<Mounting hole>



Optional Parts

Wall Mounting Bracket

PY7■L type only

MAM-DS25
Steel



PY7■G/P type only

MAM-DS38
Steel



PY7■P/M type only

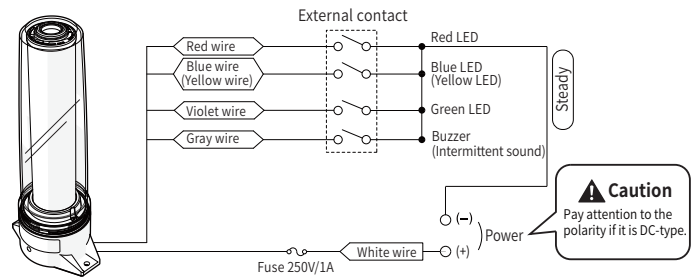
MAM-DS10
Steel



See Page 80 ~ 81 >> for Mounting Options and Accessories.

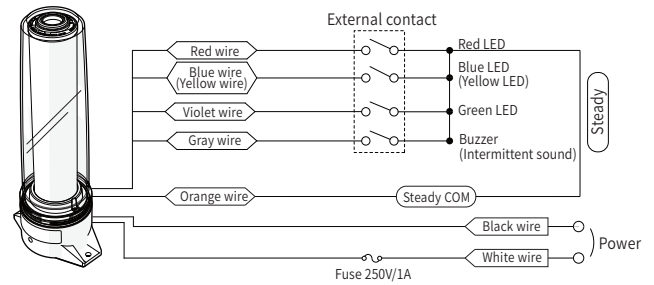
Connection diagram 24VDC

Steady / Buzzer



110~220VAC

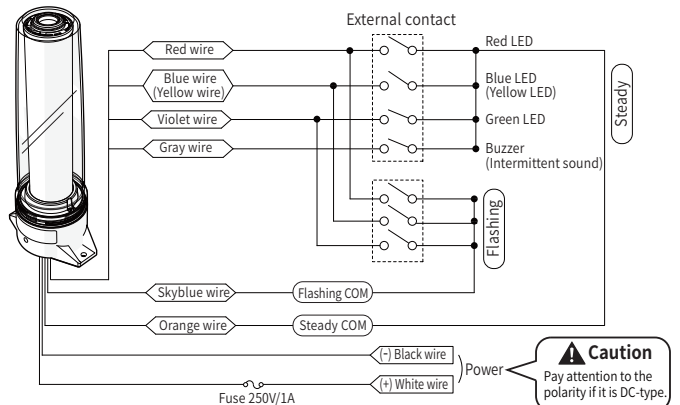
Steady / Buzzer



Do not connect the power line and flashing or steady lines.
(Orange wire) It may cause damage to the product.

24VDC, 110~220VAC

Steady / Flashing / Buzzer



Do not connect the power line and flashing or steady lines.
(Orange/Skyblue wire) It may cause damage to the product.

RBG LED color chart

Condition	Wiring	LED Color
1	Red wire	Red
2	Violet wire	Green
3	Blue wire	Blue
4	Red + Violet wire	Yellow
5	Red + Blue wire	Pink
6	Violet + Blue wire	Cyan
7	Red + Violet + Blue wire	White

PY7T Series D70mm multi-colored LED Signal tower light NEW



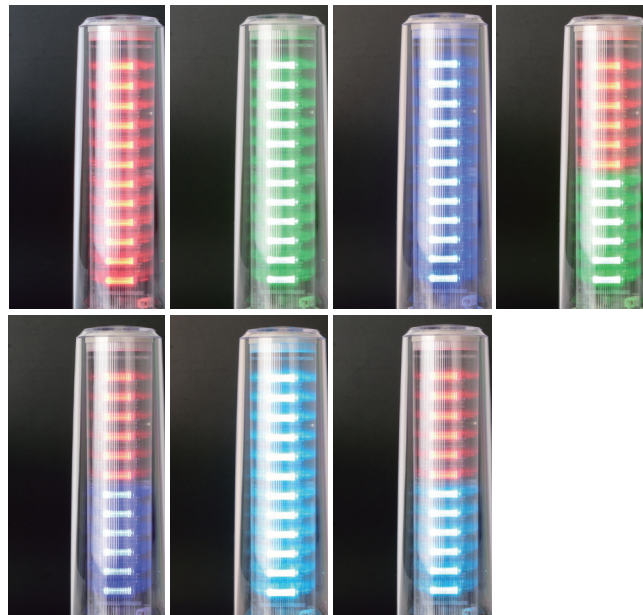
Except
Buzzer type



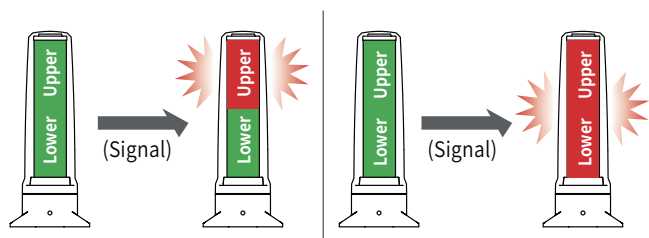
This 3 colors in 1 signal light offers wide visibility and multi-channel analog input. When one signal line is activated the LEDs illuminate the entire screen, and when the second line is activated the screen splits in two showing two different colors.

Product Feature

- Fixing method of 4 products
- 3 body colors (ivory, black, silver)
- Buzzer tone: Cintermittent sound
- Variety power specifications



“New concept LED indicator
that can transmit 1 or 2 color signals on one display window”



Ordering information

PY7T **P** - **F02** - **RBG** - **B**

① ② ③ ④ ⑤

① Mounting Type

P	Aluminium pipe + Fixation using aluminum mounting base
M	Secure the product body directly onto the control panel (1/2 " NPT) with a plastic nut
G	Two surface mounts on the body ensure that the body is fixed directly to the control panel
L	Directly fasten aluminum pipe with screws - Using nut (M20)

② Light Style

No mark	Steady
B	Steady + Buzzer
F	Steady + Flashing
Z	Steady + Flashing + Buzzer

③ Power Supply

02	24VDC
FF	110~220VAC

④ LED Color

RBG	Red + Blue + Green
-----	--------------------

⑤ Body Color

I	Ivory
B	Black
C	Silver matte coating

Specifications

Function	Steady, Flashing, Buzzer
Power supply	24VDC, 110~220VAC (50~60Hz)
Allowable voltage range	24VDC: 21.6~26.4VDC 110~220VAC: 100~240VAC
Flashing rate	24VDC _____ 110~220VAC: 70±5/min
Buzzer volume	Intermittent sound: 75±5dB (at 1M)
Lens color	Transparent (inner and outer) - PC Resin
Mounting method	Vertical only
Connection method	Exposed wire connection method
Ambient temperature	-20°C ~ 50°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH
Withstand voltage	500VAC 50/60Hz for 1 minute
Insulation resistance	100MΩ or more (500VDC Megger basis)
Vibration	10 ~ 55Hz (1 min.cycle) Double amplitude 0.75mm X, Y, Z
Connection	UL1007/22AWG
Protection structure	IP65 (with Buzzer type: IP62)
Approval	RoHS
Weight (DC type) (Buzzer type)	PY7TP type: app. 555g PY7TL type: app. 520g PY7TG type: app. 320g PY7TM type: app. 310g

Note: Life of the LED varies according to operating conditions and environment

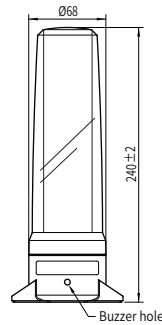
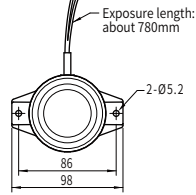
Current consumption (RMS±10%)

LED Color	24VDC		110~220VAC	
	General type	Buzzer type	General type	Buzzer type
RBG Products	0.22A	0.23A	0.05~0.10A	0.06~0.10A

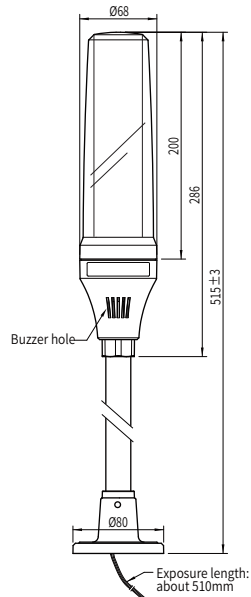
Dimensions (unit: mm)

▼ PY7TG type

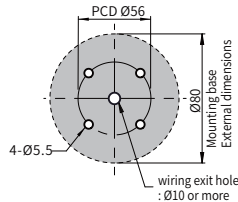
<Mounting hole>



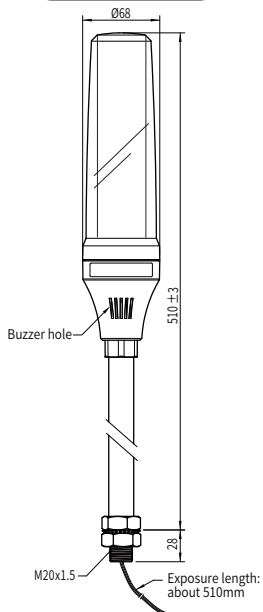
▼ PY7TP type



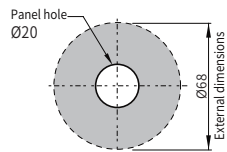
<Mounting hole>



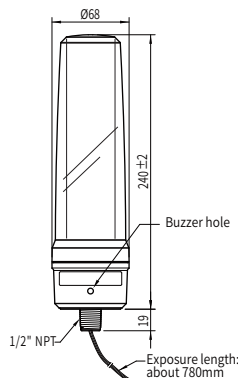
▼ PY7TL type



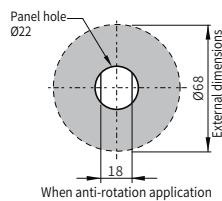
<Mounting hole>



▼ PY7TM type



<Mounting hole>



Optional Parts

Wall Mounting Bracket

PY7■L type only

MAM-DS25
Steel



PY7■G/P type only

MAM-DS38
Steel



PY7■ P/M type only

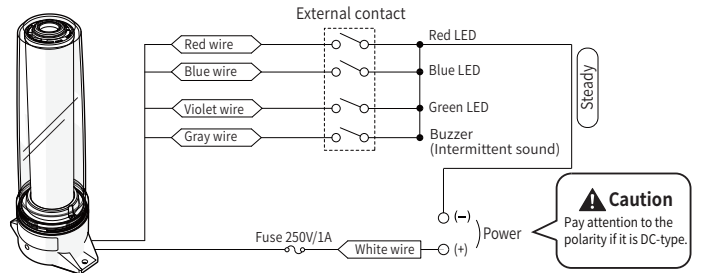
MAM-DS10
Steel



See Page 80 ~ 81 >> for Mounting Options and Accessories.

Connection diagram 24VDC

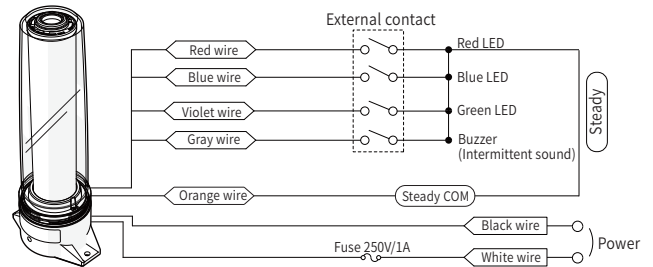
Steady / Buzzer



Caution
Pay attention to the polarity if it is DC-type.

110~220VAC

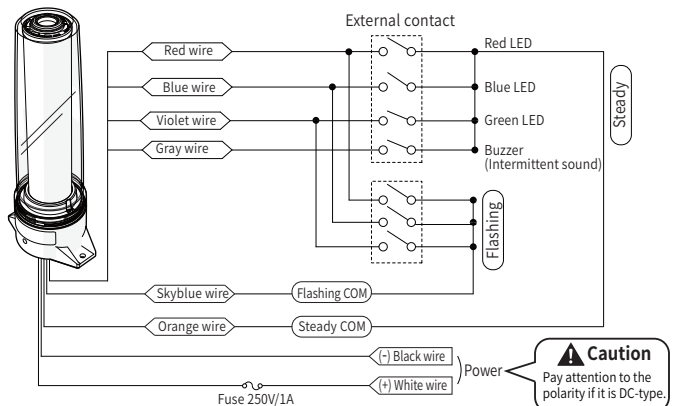
Steady / Buzzer



Caution
Do not connect the power line and flashing or steady lines. (Orange wire) It may cause damage to the product.

24VDC, 110~220VAC

Steady / Flashing / Buzzer



Caution
Do not connect the power line and flashing or steady lines. (Orange/Skyblue wire) It may cause damage to the product.

Operating condition

RGB Light-Output truth table

Conditions	Input condition			LED Output color	
	Red LED (Red wire)	Blue LED (Blue wire)	Green LED (Violet wire)	Upper Display	Lower Display
Condition-1	0	1	1	Red	
Condition-2	1	0	1	Blue	
Condition-3	1	1	0	Green	
Condition-4	0	1	0	Red	Green
Condition-5	0	0	1	Blue	Red
Condition-6	1	0	0	Sky blue	
Condition-7	0	0	0	Blue	Sky blue
Condition-8	1	1	1	OFF	
Remark	0: Orange wire (-) COM ----> Connection status 1: Open condition				

PTE Series D56mm Modular Style LED Tower Light



PTE series tower lights combine the latest LED technology with UL safety technology. With a new concept and innovative design, PTE series tower lights are ideal for factory automation and many applications.

Ordering information

PTE - **A** **P** **F** - **3** **02** - **RYG** - **B** (H) **W**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Body Style

		Apply to Mounting Type
S	Flat mounting long body	C
A	Pole mount long body	G / P / R / M / W / D / J
D	Pole mount short body (24V only)	P / R / M / W / D / J
L	Flat mounting short body (24V only)	C

② Mounting Type

C	Body direct fixed (M20 Screw)
G	Plastic mount base (MAM-B070F)
P	Aluminum Pole + Plastic mount base (MAM-B070D)
R *	Aluminum Pole + Plastic rotation mount base (MAM-B070R)
M	Aluminum Pole + M20 screw Plastic mount base (MAM-I025)
W	Aluminum Pole + Wall mount bracket (MAP-DS40)
D	Aluminum Pole + Aluminum mount base (MAM-DS32)
J	Aluminum Pole adjustable length + Plastic mount base

* NOTE : "R" type Mount base - 180-degree revolution

③ Light Style

No mark	Steady	④ Number of Stack
F	Steady + Flashing	1 1 Stack
B	Steady + Buzzer (Fixed Sound)	2 2 Stacks
V	Steady + Buzzer (Adjustable Sound)	3 3 Stacks
Z	Steady + Flashing + Buzzer (Fixed Sound)	4 4 Stacks
X	Steady + Flashing + Buzzer (Adjustable Sound)	5 5 Stacks **

**Buzzer inapplicable

⑤ Power Supply

02	24VAC/DC
FF	90~240VAC

⑥ Lens Color (Top to bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

⑦ Body Color (Option)

B	Black
---	-------

⑧ Functional option (Option)

(H)	Adjustable Sound - 100dB type - Model: MPZ-56H
(C)	Continuous sound
(V)	Continuous flashing - 240times/minute

⑨ Lens Color (Option)

W	All Lens Colors - Clear
---	-------------------------

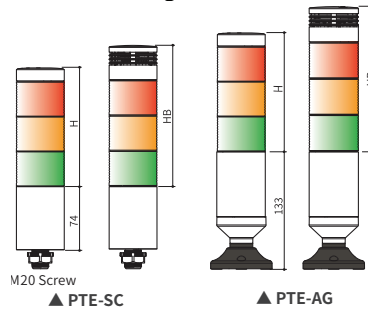
Product Feature

- Stylish design
- LED modular components
- Bright & even light distribution through prism-cut lenses
- Fast & easy assembly with inter-locking construction
- 7 mounting options
- Optional 80dB Buzzer (fixed or adjustable volume)
- IP65 rated

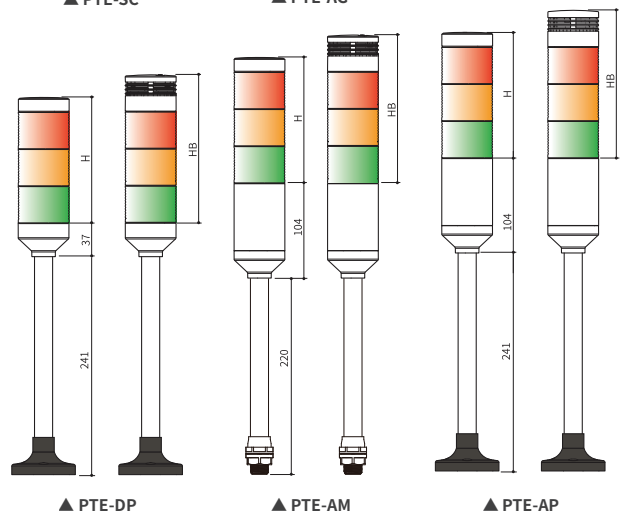


Dimensions <Unit: ±2mm>

Standard Pole Length : 225mm

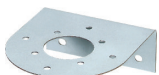


	H	HB
1 Stack	56	81
2 Stacks	97	122
3 Stacks	138	163
4 Stacks	179	204
5 Stacks	220	



Optional Parts

Wall Mounting Bracket



MAM-DS28
Steel



MAM-DS25
Steel



MAP-DS30
Plastic

See Page 80 ~ 81 >> for Mounting Options and Accessories.

LED Module



▲ PTE-02-R

▲ PTE-02-Y

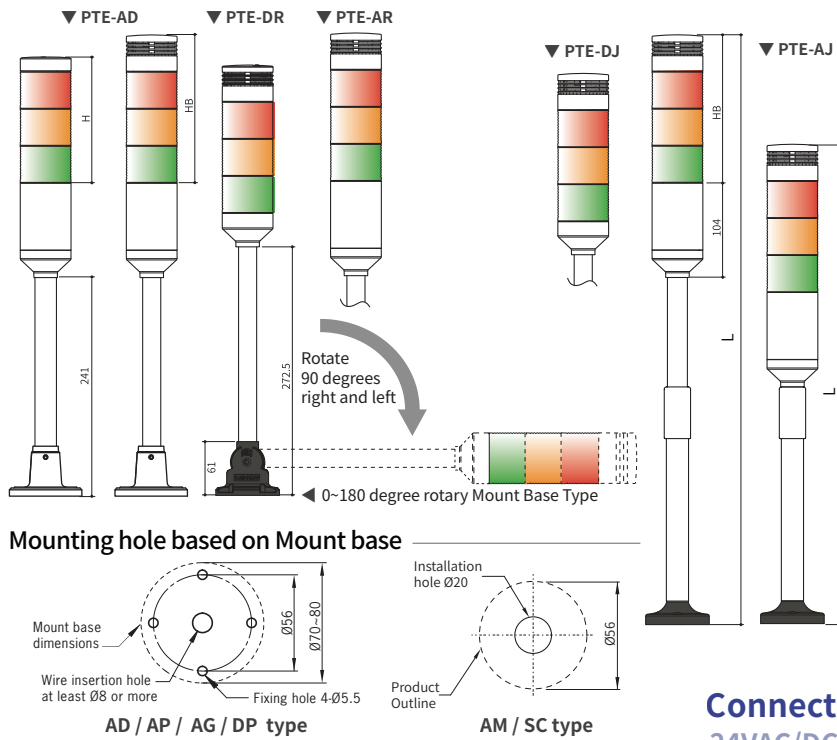
▲ PTE-02-G

▲ PTE-02-B

▲ PTE-02-C

LED Module Current Consumption

LED color	Red	Yellow	Green/Blue/Clear
Current / Power (24V) ±10%	33mA / 0.77W	27mA / 0.62W	42mA / 1.00W
Weight	App. 43.0g		



PTE - AJ type

(The chart data based on Buzzer type)

Type	Product Length (Min ~ Max ±5mm)			Adjusting range	Exposed wiring (±50mm)
	2s	3s	4s		
A	370~410	410~450	450~490	40mm	732~622
B	395~460	435~500	475~540	65mm	692~752
C	440~520	480~560	520~600	80mm	622~702
D	525~710	565~750	605~790	185mm	432~617
E	665~960	705~1000	745~1040	295mm	183~477

PTE - DJ type

(The chart data based on Buzzer type)

Type	Product Length (Min ~ Max ±5mm)			Adjusting range	Exposed wiring (±50mm)
	2s	3s	4s		
A	302~342	344~384	384~424	40mm	649~689
B	327~392	368~433	409~474	65mm	609~669
C	372~425	414~494	454~534	80mm	539~619
D	457~642	499~684	539~724	185mm	604~704
E	597~892	639~934	679~974	295mm	250~544

Specifications

Function	Steady, Flashing, Buzzer
Power Supply	24VAC/DC, 90~240VAC (AC 50/60Hz)
LED color	Red, Yellow, Green, Blue, White
Dimension	56mm
Maximum stacked quantity	Standard type: 5 stacks (Buzzer type: 4 stacks)
Flashing rate	80±5 times/minute
Lens color	Red, Yellow, Green, Blue, Clear
Mounting method	Vertical only
Connection method	Lead wire connection
Ambient temperature	-15 ~ 40°C
Storage temperature	-20 ~ 70°C
Ambient humidity	45~85% RH
Vibration	0.75mm at 10~55Hz
Connection	UL1007 / 22AWG
Approval	UL, CE, RoHS
Protection structure	IP65 (Buzzer type: IP50)

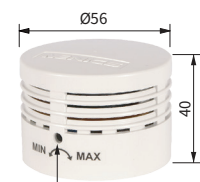
Note: Life of LED varies according to operating conditions and environment.

Current Consumption (RMS ±10%)

Stack	LED Colors	Power supply			
		24VAC/DC		90~240VAC	
		General	Buzzer	General	Buzzer
1s	R	33mA	65mA	17mA	47mA
2s	R+G	75mA	105mA	39mA	70mA
3s	R+Y+G	102mA	135mA	56mA	90mA
4s	R+Y+G+B	144mA	180mA	75mA	105mA
5s	R+Y+G+B+W	186mA	-	97mA	-

Buzzer Kits

Sound type	Standard Buzzer Sound - pi pi pi pi		
Model	MPZ-56F	MPZ-56G	MPZ-56H
Sound style	Fixed Sound	Adjustable Sound Level	
Sound volume	80±5dB at 1M	10~80±5dB at 1M	10~100±5dB at 1M
Current	30mA		150mA

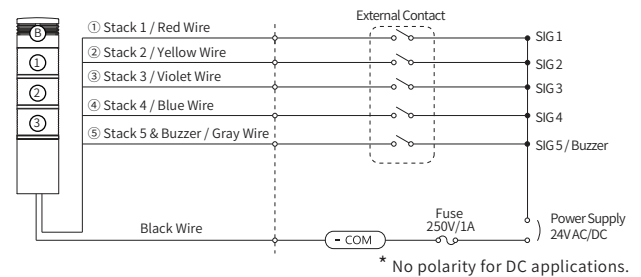


Sound Level Adjuster
Model: MPZ-56G, MPZ-56H

Connection Diagram

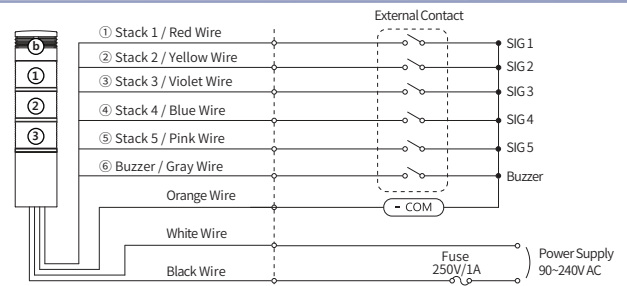
24VAC/DC

Steady / Buzzer



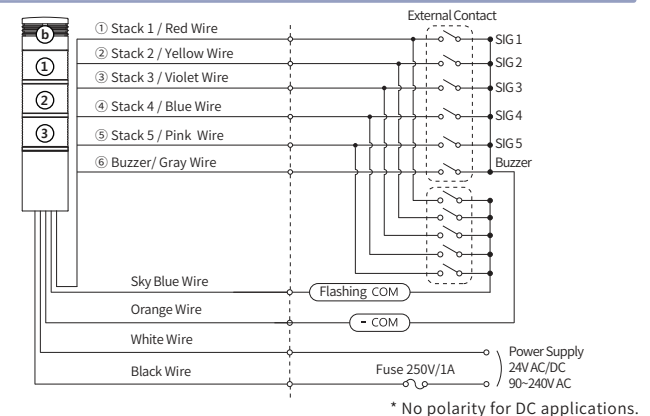
90~240VAC

Steady / Buzzer



24VAC/DC, 90~240VAC

Steady / Flashing / Buzzer



Do not connect the power line and flashing or steady lines. (Orange/Skyblue wire) It may cause damage to the product.

PTM Series D56mm LED 3 Colors in 1 Tower Light



Buzzer - IP50

Product Feature

- Bright & even light distribution through prism-cut lenses
- Fast & easy assembly with inter-locking construction
- Optional 80dB Buzzer (fixed or adjustable volume)
- 3 colors in 1 LED modular components
- 4 mounting options
- IP65 rated



Ordering information

PTM - **A** **P** **F** - **1** **02** - **RYG** - **B**

① ② ③ ④ ⑤ ⑥ ⑦

① Body Style

		Apply to Mounting Type
S	Flat mounting long body	C
A	Pole mount long Body	G / P / R / M / W / D / J
D	Pole mount short Body (24V only)	P / R / M / W / D / J
L	Flat mounting Short body (24V only)	C

② Mounting Type

C	Body direct fixed (M20 Screw)
G	Plastic mount base (MAM-B070F)
P	Aluminum Pole + Plastic mount base (MAM-B070D)
M	Aluminum Pole + M20 screw plastic mount (MAM-I025)
W	Aluminum Pole + Wall mount bracket (MAP-DS40)

③ Light Style

No mark	Steady
F	Steady + Flashing
B	Steady + Buzzer (Fixed Sound)
V	Steady + Buzzer (Adjustable Sound)
Z	Steady + Flashing + Buzzer (Fixed Sound)
X	Steady + Flashing + Buzzer (Adjustable Sound)

④ Number of Stack

1	1 Stack
---	---------

⑤ Power Supply

02	24VAC/DC
FF	90~240VAC

⑥ LED Color

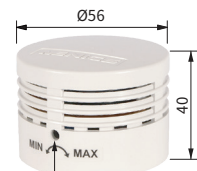
RYG	Red + Yellow + Green
RGB	Red + Green + Blue

⑦ Body Color (Option)

B	Black
---	-------

Buzzer Kits

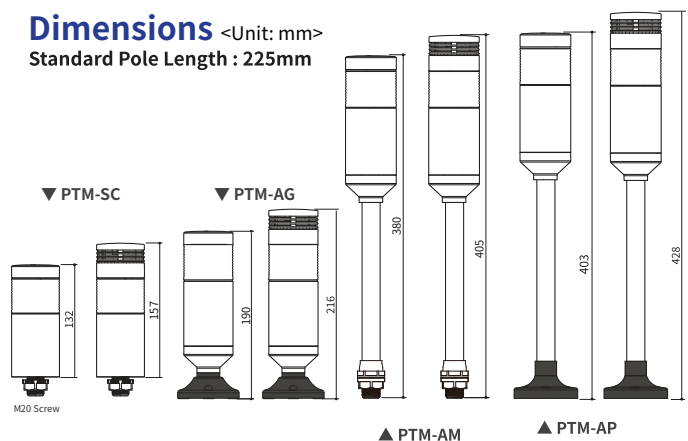
Sound type	Standard Buzzer Sound - pi pi pi pi		
Model	MPZ-56F	MPZ-56G	MPZ-56H
Sound Style	Fixed Sound	Adjustable Sound Level	
Sound Volume	80±5dB at 1M	10-80±5dB at 1M	10-100±5dB at 1M
Current	30mA		150mA



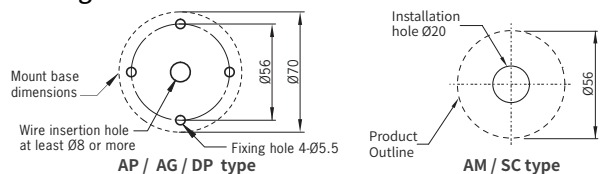
Sound Level Adjuster
Model: MPZ-56G, MPZ-56H

Dimensions <Unit: mm>

Standard Pole Length : 225mm



Mounting hole based on Mount base



Specifications

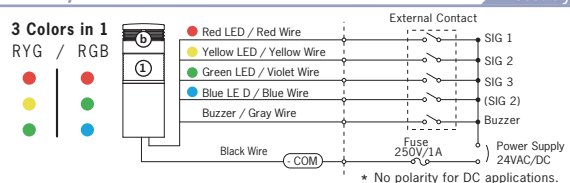
Function	Steady, Flashing, Buzzer		
Power Supply	24VAC/DC, 90~240VAC (AC 50/60Hz)		
Current consumption	Standard type : 24VAC/DC - 35mA, 90~240VAC - 16mA Buzzer type : 24VAC/DC - 80mA, 90~240VAC - 22mA		
Flashing rate	80±5times/minute		
LED color	RYG (Red, Yellow, Green), RGB (Red, Green, Blue)		
Lens color	Clear	Maximum stacked quantity	Max 1 stack
Mounting method	Vertical only	Connection method	Lead Wire connection
Ambient temperature	-15 ~ 40°C	Storage ambient temperature	-20 ~ 70°C
Ambient humidity	45~85% RH	Vibration	0.75mm at 10~55Hz
Connection	UL1007/22AWG	Approval	UL, CE, RoHS
Protection structure	IP65 (Buzzer type: IP50)		

Note: Life of LED varies according to operating conditions and environment.

Connection diagram

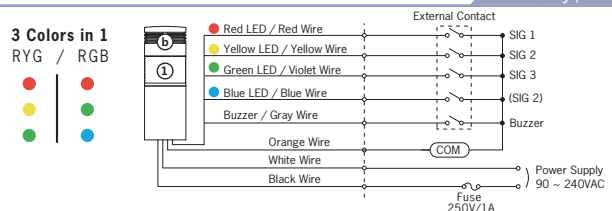
24VAC/DC

Steady / Buzzer



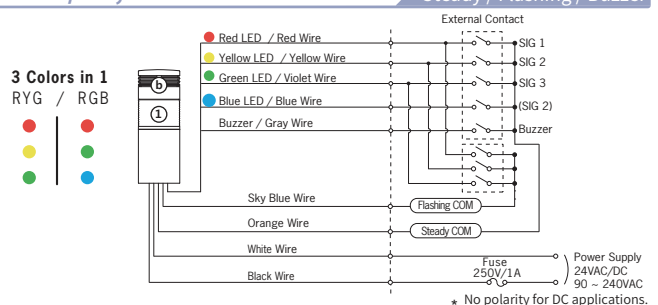
90~240VAC

Steady / Buzzer



24VAC/DC, 90~240VAC

Steady / Flashing / Buzzer



PTD Series D56mm LED Dome Head type Tower Light



Dome shape LED Signal Light featuring enhanced visibility and maintenance free operation.



Ordering information

PTD - A P F - 1 0 2 - R - B

① ② ③ ④ ⑤ ⑥ ⑦

① Body Style

S	Flat mounting long body	C
A	Pole mount long Body	G / P / R / M / W / D
D	Pole mount short Body (24V only)	P / R / M / W / D
L	Flat mounting Short body (24V only)	C

Apply to Mounting Type

② Mounting Type

C	Body direct fixed (M20 Screw)
G	Plastic mount base (MAM-B070F)
P	Aluminum Pole + Plastic mount base (MAM-B070D)
M	Aluminum Pole + M20 screw plastic mount (MAM-I025)
W	Aluminum Pole + Wall mount bracket (MAP-DS40)
D	Aluminum Pole + Aluminum Pole mount base (MAM-DS32)

③ Light Style

No mark	Steady
F	Steady + Flashing

④ Number of Stack

1	1 Stack
---	---------

⑤ Power Supply

02	24VAC/DC
FF	90~240VAC

⑥ Lens Color

R	Red	1 Color
Y	Yellow	
G	Green	
B	Blue	
C	Clear	3 Color in 1 (LED color)
RYG	Red + Yellow + Green (All lens color-clear)	
RGB	Red + Green + Blue (All lens color-clear)	

⑦ Body Color (Option)

B	Black
---	-------

Optional Parts

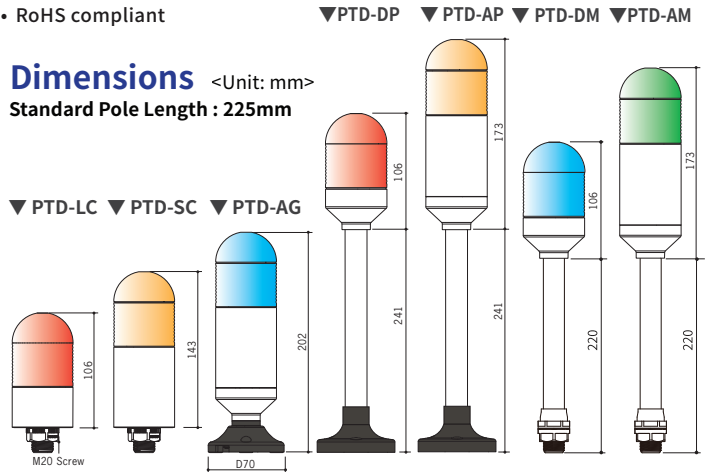
Wall Mounting Bracket



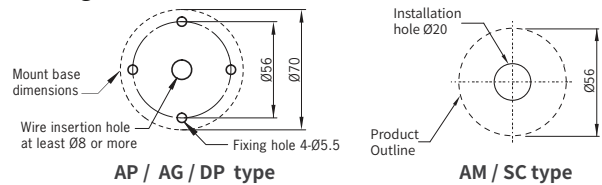
See Page 80 ~ 81 >> for Mounting Options and Accessories.

Product Feature

- LED modular components
- Bright & even light distribution through prism-cut lenses
- Fast & easy assembly with inter-locking construction
- 4 mounting options
- IP65 rated
- RoHS compliant



Mounting hole based on Mount base



Specifications

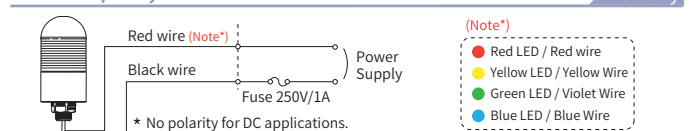
Function	Steady, Flashing		
Power supply	24VAC/DC, 90~240VAC (50/60Hz)		
Lens color	Red, Yellow, Green, Blue, Clear		
Lens diameter	56 mm	Maximum stacked quantity	Max 1 stack
Flashing rate	80±5 times/min		
Vibration	0.75mm at 10~55Hz		
Ambient temperature	-15°C ~ 40°C	Storage ambient Temperature	-20°C ~ 70°C
Ambient humidity	45 ~ 85% RH	Protection structure	IP65
Approval	CE, UL, RoHS	Connection	UL1007 / 22AWG

Current consumption (±10%)

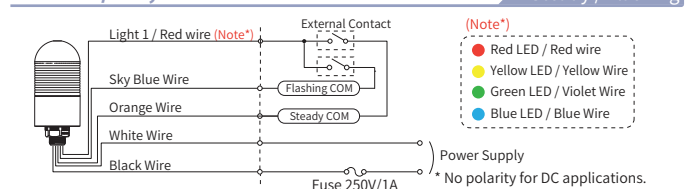
Power supply	24VAC/DC	90~240VAC
1 Color Lens	65mA	32mA
3 Colors in 1 LED	52mA	26mA

Connection Diagram

24VAC/DC, 90~240VAC



24VAC/DC, 90~240VAC



NOTE : Refer PTM Wiring Diagram for RGB, RYG 3 colors

PL4 Series D45mm LED Tower Light



PL4 Series is multifunctional 45mm LED Tower Light. It features low maintenance and high energy efficiency.

Product Feature

- 1~5 Stacks
- Built-in Buzzer: 75±5dB
- Various operating voltages
- High visibility from every angle through prism-cut lens
- Various mounting options and accessories

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12VAC/DC, 24VAC/DC, 12~24VAC/DC 110~220VAC (AC 50/60Hz)
LED color	Red, Yellow, Green, Blue, Clear
Dimension	45mm
Maximum stacked quantity	Up to 5 Stacks
Flashing rate	12VDC - 75±5 times/minute 12VAC, 24VAC/DC _____ 80±5 times/minute 110~220VAC _____
Buzzer volume (Maximum)	Intermittent sound : 75±5dB (pi- pi- pi-) Continuous sound : 75±5dB (pi- - -)
Lens color	Red, Yellow, Green, Blue, Clear
Mounting method	Vertical only
Connection method	Lead wire connection
Ambient temperature	-20°C ~ 40°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH
Vibration	0.75mm at 10~55Hz
Connection	UL1007 / 22AWG
Approval	CE, RoHS
Protection structure	IP63 (Buzzer type: IP52)

Ordering information

PL4 - **G** **Z** - **3** **FF** - **RYG** - **W** (BC)

① ② ③ ④ ⑤ ⑥ ⑦

※ option

① Mounting Type

M	Aluminum Pole + M20 screw plastic mount
P	Aluminum Pole + Plastic mount base
G	Plastic mount base

② Light Style

No mark	Steady
B	Steady + Buzzer
F	Steady + Flashing
Z	Steady + Flashing + Buzzer

⑤ Lens Color (Top to bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

③ Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

④ Power Supply

01	12VAC/DC (Steady, Buzzer function only)
02	24VAC/DC (Steady, Buzzer function only)
00	12 ~ 24VAC/DC
FF	110 ~ 220VAC

⑥ Lens Color

W	All Lens Colors-Clear
---	-----------------------

⑦ Option

(B)	Black Body
(C)	Buzzer continuous sound(pi- - -)

Current Consumption (RMS value ±10%)

Stacks	LED Colors	Single power			
		12VAC/DC		24VAC/DC	
		General	Buzzer	General	Buzzer
1S	R	0.05A	0.07A	0.03A	0.08A
2S	R+G	0.10A	0.12A	0.06A	0.10A
3S	R+Y+G	0.15A	0.15A	0.09A	0.13A
4S	R+Y+G+B	0.20A	0.20A	0.12A	0.16A
5S	R+Y+G+B+C	0.25A	0.25A	0.15A	0.20A

Stacks	LED Colors	Free voltage power			
		12~24VAC/DC		110~220VAC/DC	
		General	Buzzer	General	Buzzer
1S	R	0.22A	0.25A	0.03A	0.03A
2S	R+G	0.30A	0.32A	0.05A	0.06A
3S	R+Y+G	0.38A	0.38A	0.07A	0.07A
4S	R+Y+G+B	0.46A	0.46A	0.09A	0.09A
5S	R+Y+G+B+C	0.52A	0.52A	0.11A	0.11A

Optional Parts

Wall Mounting Bracket



MAM-DS28
Steel



MAM-DS25
Steel

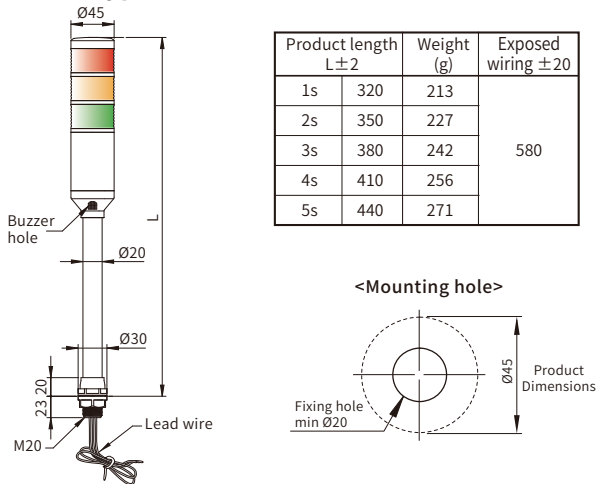


MAP-DS30
Plastic

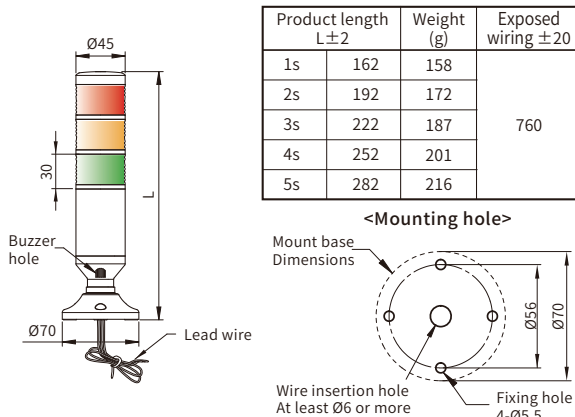
See Page 80 ~ 81 >> for Mounting Options and Accessories.

Dimensions <Unit: mm>

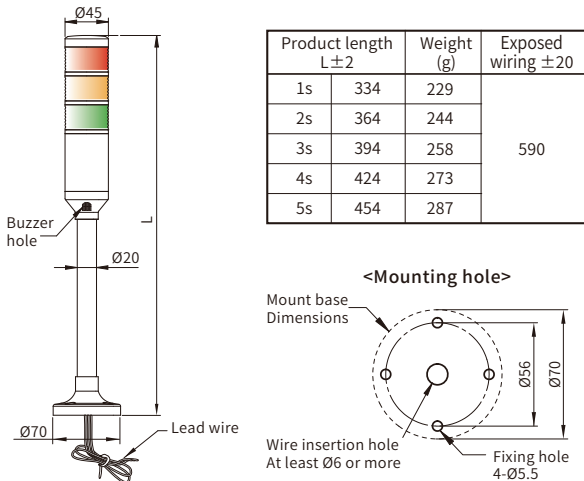
▼ PL4M type



▼ PL4G type

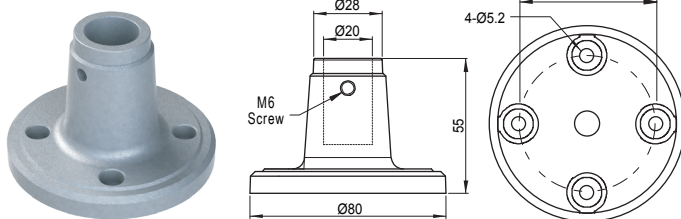


▼ PL4P type



Optional Parts

Aluminum Mount base



MAM-DS32
aluminum

※ In case of PL4P type, there is no change in total length although the Aluminum mount base is replaced.

Connection Diagram

12VAC/DC
24VAC/DC

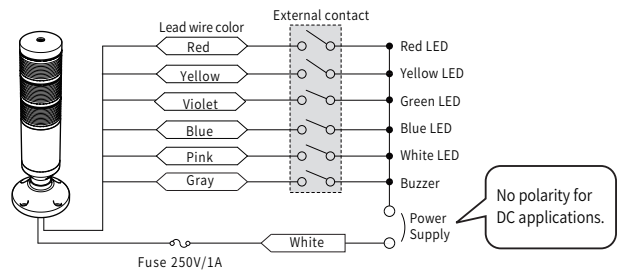
Steady , Steady + Buzzer

PL4■-■01

PL4■-■02

PL4■B-■01

PL4■B-■02



12~24VAC/DC
110~220VAC

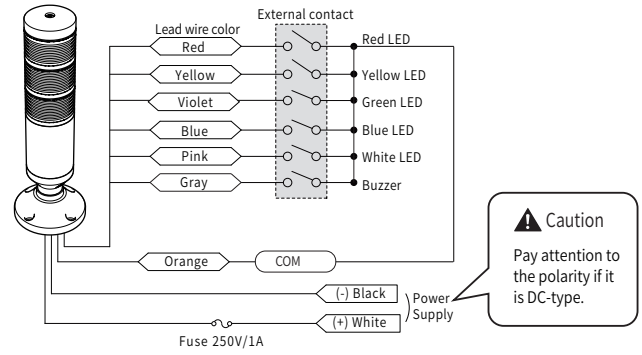
Steady , Steady + Buzzer

PL4■-■00

PL4■B-■00

PL4■-■FF

PL4■B-■FF



Attention

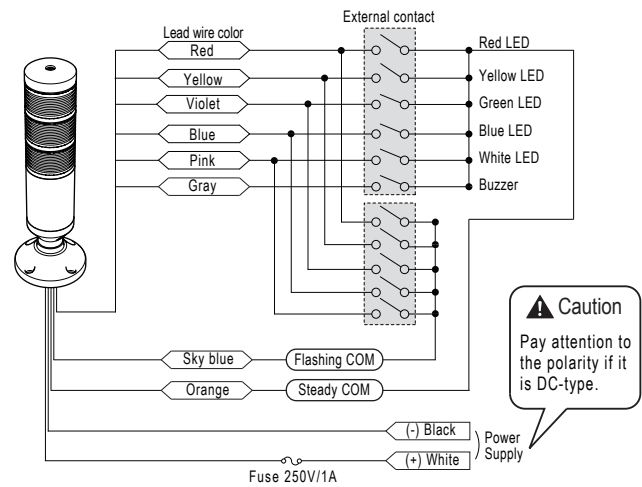
Do not connect the power line and flashing or steady lines.
(Orange wire)
It may cause damage to the product.

12~24VAC/DC
110~220VAC

Steady + Flashing + Buzzer

PL4■Z-■00

PL4■Z-■FF



Attention

Do not connect the power line and flashing or steady lines.
(Orange wire, Sky blue wire)
It may cause damage to the product.

PME Series D45mm Moduler Style LED Tower Light



12/24V Only

PME Series features low maintenance and energy efficiency using the latest in LED technology.



Ordering information

PME GF-302-RYG

① Mounting Type

M	Aluminum Pole + M20 screw plastic mount
P	Aluminum Pole + Plastic mount base
G	Plastic mount base

② Light Style

No mark	Steady
B	Steady + Buzzer
F	Steady + Flashing
Z	Steady + Flashing + Buzzer

Note: Buzzer type - 12, 24V only

③ Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

④ Power Supply

01	12VAC/DC
02	24VAC/DC
FF	90 ~ 240VAC

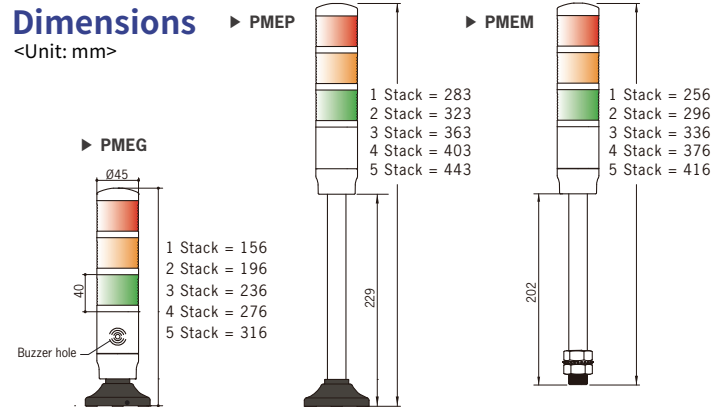
⑤ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

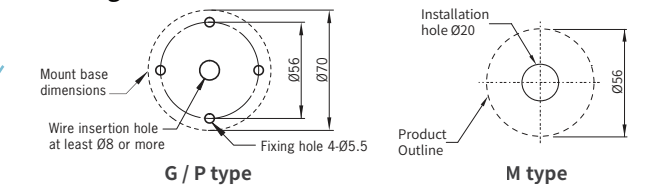


Dimensions

<Unit: mm>



Mounting hole based on Mount base



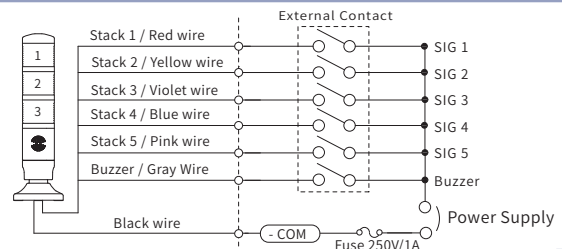
Current Consumption (RMS value ±10%)

Power supply		1stack	2stacks	3stacks	4stacks	5stacks
12V	General	0.06A	0.10A	0.17A	0.20A	0.24A
	Buzzer	0.07A	0.11A	0.18A	0.21A	0.25A
24V	General	0.03A	0.07A	0.11A	0.15A	0.18A
	Buzzer	0.06A	0.09A	0.14A	0.17A	0.20A
90 ~ 240V	General	0.02A	0.05A	0.07A	0.10A	0.12A

Connection Diagram

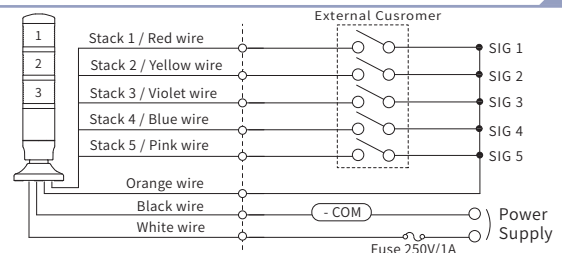
12/24VAC/DC

Steady / Buzzer



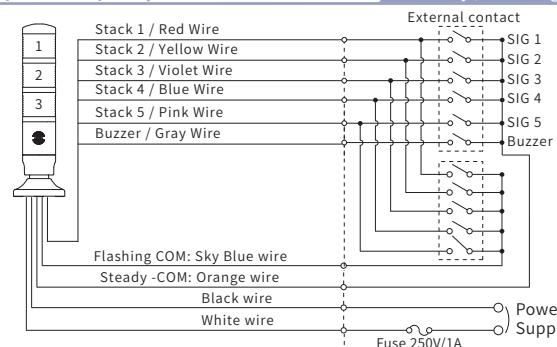
90~240VAC

Steady



12/24VAC/DC, 90~240VAC

Steady / Flashing / Buzzer

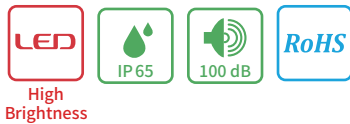


Specifications

Dimension	45mm
Power supply	12VAC/DC, 24VAC/DC, 90~240VAC (50/60Hz)
Maximum stacked quantity	Up to 5 Stacks
Flashing rate	80±5 times/minute
Buzzer volume	80±5dB at 1M - (12V, 24V only available)
Lens color	Red, Yellow, Green, Blue, Clear
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH (no condensation)
Insulation resistance	100MΩ minimum (500VDC megger)
Vibration	0.75mm at 10~55Hz
Material	Body: ABS resin Lens: PC resin Pole: Aluminum Mount base: PA6 resin
Mounting method	- Pole mount - Direct Mount
Approval	CE, RoHS
Protection structure	IP52
Connection	UL1007 / 22AWG

Note: Life of the LED varies according to operating conditions and environment

MP8 Series D86mm LED Tower Light - Plastic Body type



The unique prism-cut globe provides wide radiance, high intensity, bright color and higher quality than other similar type products.

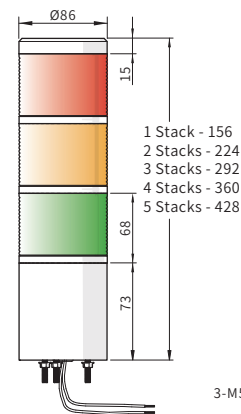
Product Feature

- Menics Exclusive Hybrid Prism Cut Lens.
- Enhanced Illumination: Special high intensity illumination design.
- Installation: Base direct mount, Plastic Mount base
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission
- Available Colors: Red / Yellow / Green / Blue / Clear
- Mounting : Upright Only
- This product complies with the RoHS Directive

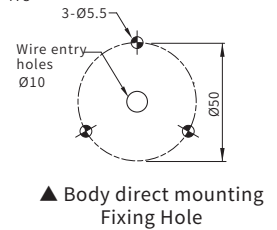
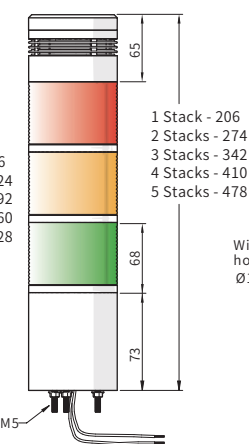
Dimensions <Unit: mm>

MP8C

MP8C-F

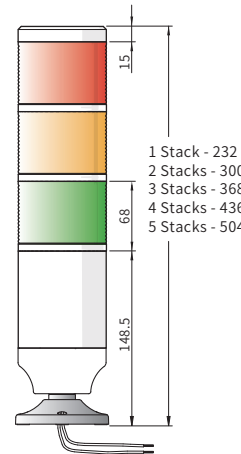


MP8C-B

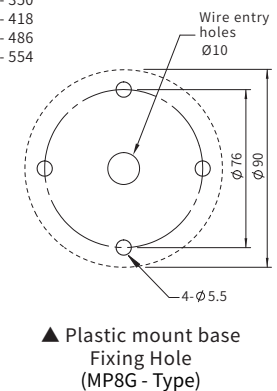
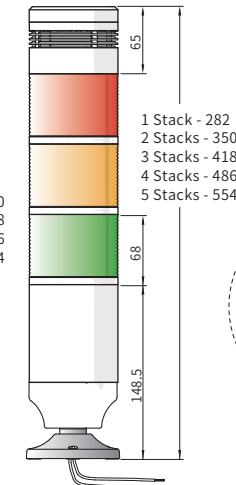


MP8G

MP8G-F



MP8G-B



Ordering information

MP8 C - F 3 00 - RYG - B

① ② ③ ④ ⑤ ⑥

① Mounting Type

C	Body direct fixed
G	Plastic mount base

④ Power Supply

00	12 ~ 24VAC/DC
FF	90 ~ 240VAC

② Light Style

No mark	Steady
F	Steady + Flashing
B	Steady + Flashing + Buzzer

⑤ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

③ Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

⑥ Body Color

No mark	Ivory
B	Black

Specifications

Dimension	86mm
Power supply	12~24VAC/DC, 90~240VAC (50/60Hz)
Function	Steady, Flashing, Buzzer
Lens Color	Red / Yellow / Green / Blue / Clear
Maximum stacked quantity	1 ~ 5 can be stacked
Mounting method	Body direct mounting, Plastic mount base
Flashing rate	80±10 times / minute
Buzzer volume	min 10 ~ max 100 ±5dB (at 1M), Volume adjustable
Body color	White / Black (option)
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH
Insulation resistance	100MΩ minimum (500VDC megger)
Vibration	0.75mm at 10~55Hz
Protection structure	IP65 / IP40 (with Buzzer)
Connection	UL1007/22AWG

Note : Life of the LED varies according to operating conditions and environment.

Current Consumption

See Page 20 >> for Current Consumption

Connection Diagram

See Page 20 >> for Connection Diagram

Optional Parts

Wall Mounting Bracket



MAP-DS30
ABS resin



MAM-DS26
Steel



MAM-DS28
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

ML8 Series 86mm LED Tower Light - Aluminum Body type



High Brightness

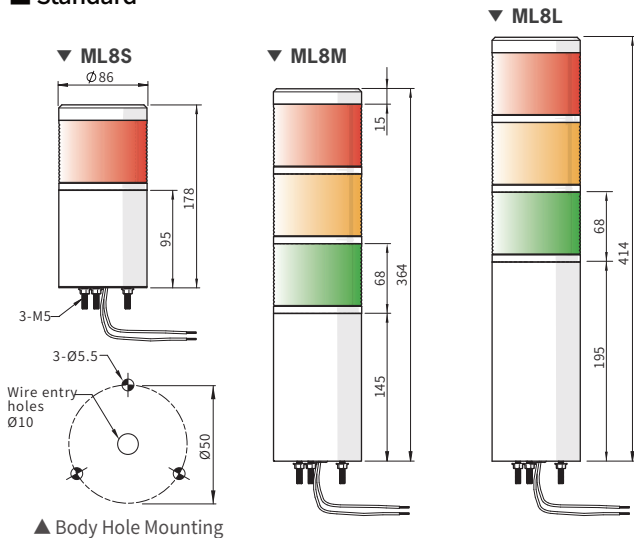
The ML8 Series are direct mounted LED Tower light with rust free aluminum body.

Product Feature

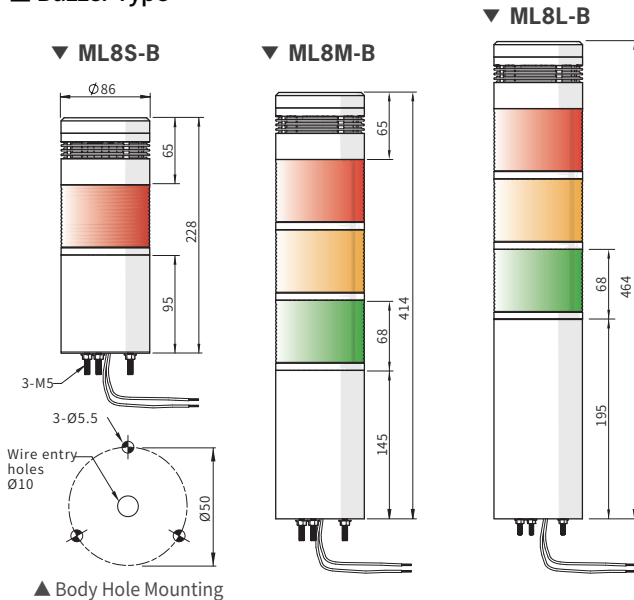
- Menics Exclusive Hybrid Prism Cut Lens.
- Enhanced Illumination: Special high intensity illumination design.
- Installation: Direct mount
- Main Body: Corrosion resistant anodizing aluminum.
- Lens: Superior impact and heat resistant polycarbonate resin for durability and light transmission
- Available Colors: Red / Yellow / Green / Blue / Clear
- 3 types of Body Length
- Mounting : Upright Only
- This product complies with the RoHS Directive

Dimensions <Unit: mm>

Standard



Buzzer Type



Product Length

	Model	1 Stack	2 Stacks	3 Stacks	4 Stacks	5 Stacks
Standard Type	ML8S	178	246	314	382	450
	ML8M	228	296	364	432	500
	ML8L	278	346	414	482	550
Buzzer Type	ML8S-B	228	296	364	432	500
	ML8M-B	278	346	414	482	550
	ML8L-B	328	396	464	532	600

Ordering information

ML8 M - F 3 00 - RYG - B

① Body Length

S	100mm Aluminum body
M	150mm Aluminum body
L	200mm Aluminum body

② Light Style

No mark	Steady
F	Steady + Flashing
B	Steady + Flashing + Buzzer

③ Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

④ Power Supply

00	12 ~ 24VAC/DC
FF	90 ~ 240VAC

⑤ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

⑥ Body Color

No mark	Ivory
B	Black

Specifications

Dimension	86mm
Power supply	12~24VAC/DC, 90~240VAC (50/60Hz)
Function	Steady, Flashing, Buzzer
Lens color	Red / Yellow / Green / Blue / Clear
Maximum stacked quantity	1 ~ 5 can be stacked
Mounting method	Body direct mounting
Flashing rate	80±10 times / minute
Buzzer volume	min 10 ~ max 100 ±5dB (at 1M), Volume adjustable
Body color	White / Black (option)
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-20°C ~ 70°C
Ambient humidity	45~85% RH
Insulation resistance	100MΩ minimum (500VDC megger)
Vibration	0.75mm at 10~55Hz
Protection structure	IP65 / IP40 (with Buzzer)
Connection	UL1007/22AWG

Note : Life of the LED varies according to operating conditions and environment.

Current Consumption

See Page 20 >> for Current Consumption

Connection Diagram

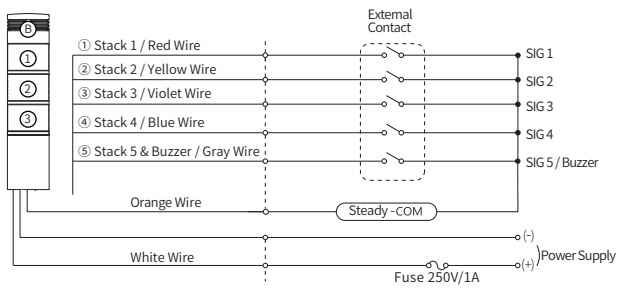
See Page 20 >> for Connection Diagram

Connection Diagram

MP8/ML8 Series

12~24VAC/DC, 90~240VAC

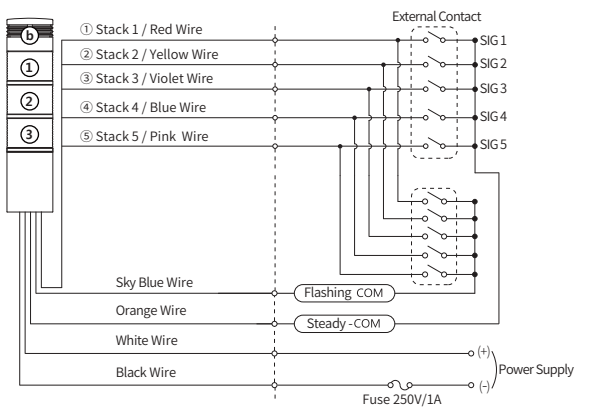
Steady / Buzzer



* The case of the DC power Polarity attention

12~24VAC/DC, 90~240VAC

Steady / Flashing



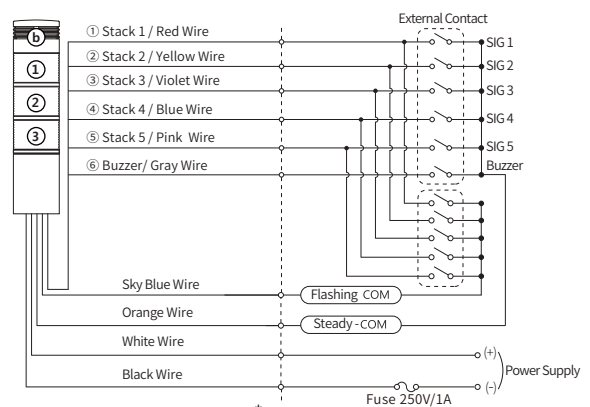
* The case of the DC power Polarity attention



Do not connect the power line and flashing or steady lines. (Orange/Skyblue wire) It may cause damage to the product.

12~24VAC/DC, 90~240VAC

Steady / Flashing / Buzzer



* The case of the DC power Polarity attention



Do not connect the power line and flashing or steady lines. (Orange/Skyblue wire) It may cause damage to the product.

MP8/ML8 series Current Consumption (RMS value $\pm 10\%$)

Power supply		1stack	2stacks	3stacks	4stacks	5stacks
12~24V	General	0.15A	0.30A	0.40A	0.50A	0.60A
	Buzzer	0.17A	0.32A	0.42A	0.52A	0.62A
90~240V	General	0.02A	0.04A	0.05A	0.06A	0.07A
	Buzzer	0.03A	0.04A	0.05A	0.06A	0.07A

ML8 Series Optional Parts

Wall Mounting Bracket



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for detail dimensions.

PLD Series D25mm LED Tower Light-Aluminum Body type



Super slim 25mm Tower Light with aluminum body, ideal for small devices.



Ordering information

PLD M - F 3 02 - RYG (W)

① ② ③ ④ ⑤ ⑥

① Body Length

S	65mm Aluminum Body
M	100mm Aluminum Body
L	200mm Aluminum Body

② Light Style

No mark	Steady
F	Steady + Flashing

③ Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

④ Power Supply

01	12VDC
02	24VDC

⑤ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

⑥ Lens color (option)

(W)	All lens color - Clear
-----	------------------------

Specifications

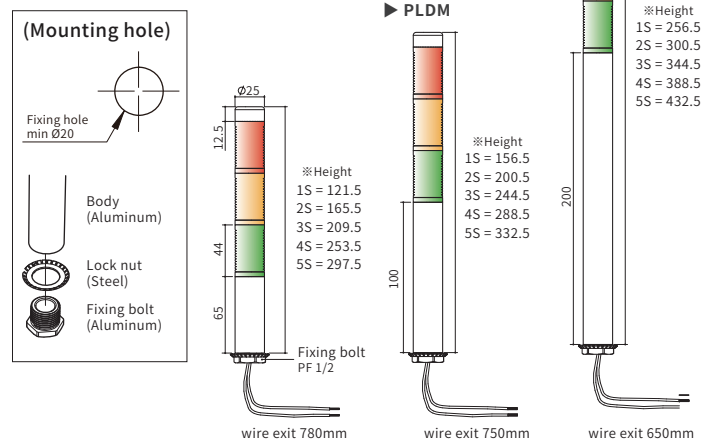
Dimension	25mm	
Power supply	12VDC, 24VDC	
Function	Steady, Flashing	
Flashing rate	80±5 times/minute	
Maximum stacked quantity	Up to 5 Stacks	
Lens color	Red, Yellow, Green, Blue, Clear	
Ambient temperature	-15°C ~ 40°C	
Storage ambient temperature	-20°C ~ 70°C	
Ambient humidity	45~85% RH (no condensation)	
Insulation resistance	100MΩ minimum (500VDC megger)	
Vibration	0.75mm at 10~55Hz	
Material	Pole Body: Aluminum Fixing bolt: Aluminum	Lens: PC resin Lock Nut: Steel
Mounting method	Body direct mount	
Approval	CE, RoHS	
Protection structure	IP52	
Connection	UL1007 / 22AWG	

Note: Life of the LED varies according to operating conditions and environment

Product Feature

- Hybrid Prism Cut Lens
- Enhanced Illumination: Special high intensity illumination design.
- Installation: Direct mount with a single hole.
- Main Body: Corrosion resistant anodizing aluminum.
- Lens: polycarbonate resin
- Body Length: PLDS 60mm / PLDM 100mm / PLDL 200mm
- Mounting : Indoor & Upright Only
- This product conforms to the CE requirements and shows the CE Marking
- This product complies with the RoHS Directive

Dimensions (Unit:mm)



Current Consumption

(RMS ±10%)

Number of stack	12VDC	24VDC
1stack	0.07A	0.03A
2stacks	0.14A	0.07A
3stacks	0.21A	0.10A
4stacks	0.28A	0.13A
5stacks	0.35A	0.16A

Optional Parts Wall Mounting Bracket



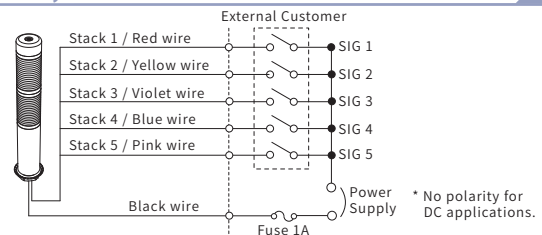
MAM-DS25
Steel

See Page 80 ~ 81 >>
for Mounting Options
and Accessories.

Connection Diagram

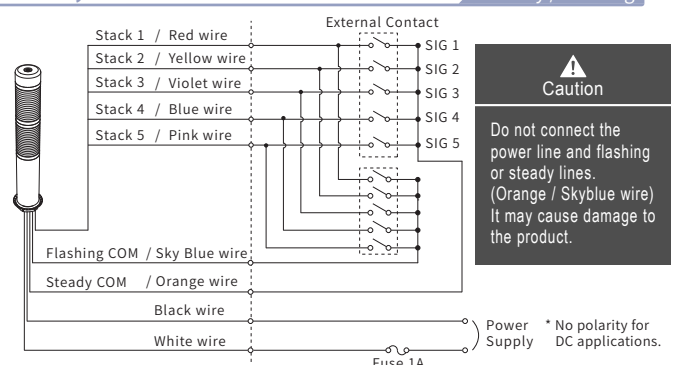
12VDC, 24VDC

Steady



12VDC, 24VDC

Steady / Flashing

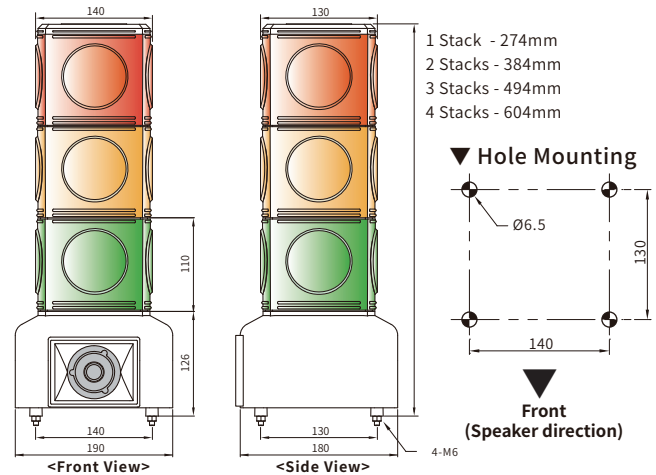


MSGT Series Cubic Tower LED Warning Light with 5 Sounds



MSGT Series has excellent visibility and brightness with a dual reflection system both indoors and outdoors regardless of LED functions. You can easily control each LED functions with the built-in mode change switches. MSGT Series features more than 100dB(1M) volume, high quality sound and maintenance free operation.

Dimensions <Unit: mm>



Ordering information

MSGT - 3 20 - RYG

① Number of Stack			② Power Supply		
1	1 Stack	3	01	12VDC	110VAC
2	2 Stacks	4	02	24VDC	220VAC

③ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	G	Green

Specifications

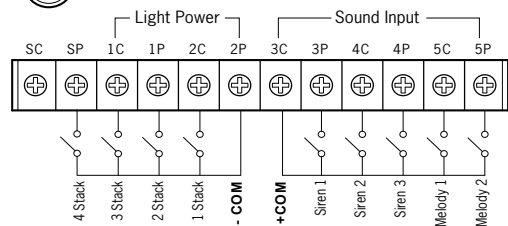
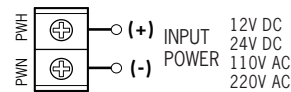
Function	Steady, Flashing, Rotation
Power supply	12VDC $\pm 5\%$, 24VDC $\pm 5\%$ 110VAC $\pm 10\%$, 220VAC $\pm 10\%$ (AC: 50/60Hz)
Replacement fuse	Glass tube fuse : 51NR, 250V/1A In case of 12VDC & 4 stacks : 250V/2A
Dimension	190 x 180 mm (Body Size)
Maximum stacked quantity	Fixed frame, 1~3 stack versions available (4 stack : option)
Flashing rate	Continuous flashing (emergency signal) 240 ± 10 times per minute
Rotating rate	250 ± 10 rpm (Clockwise Rotation)
Sound volume	Speaker 15W / App. 100 ± 5 dB at 1 meter
Sound type	Siren - 3types, Melody - 2 types
Ambient humidity	45 ~ 85% RH
Ambient temperature	-15 ~ 40°C
Storage ambient temperature	-20 ~ 70°C
Vibration	0.75mm at 10 ~ 55Hz
Withstand voltage	500VAC 50/60 Hz for 1 minute
Insulation resistance	More than 100M Ω (500VDC)
Protection structure	IP23 (Upright)
Weight	App. [1S: 2.7Kg] [2S: 3.3Kg] [3S: 4.0Kg]
Approval	RoHS

Note: Life of the LED varies according to operating conditions and environment

Current Consumption (Maximum current consumption when LED is lit)

Number of Stacks	LED Color	※ Standard type-Only LED				※ Speaker-Both LED and Speaker			
		12VDC		24VDC		110VAC		220VAC	
1 Stack	Red	0.25A	0.47A	0.14A	0.36A	0.11A	0.15A	0.05A	0.07A
	Yellow	0.37A	0.49A	0.15A	0.37A	0.12A	0.15A	0.07A	0.09A
	Green	0.33A	0.53A	0.19A	0.4A	0.12A	0.16A	0.06A	0.08A
2 Stacks	RG	0.52A	0.69A	0.3A	0.51A	0.15A	0.19A	0.07A	0.1A
	RY	0.47A	0.66A	0.26A	0.48A	0.14A	0.18A	0.07A	0.09A
3 Stacks	RYG	0.68A	0.84A	0.42A	0.64A	0.19A	0.23A	0.09A	0.11A
	RBG	0.68A	0.84A	0.42A	0.64A	0.19A	0.23A	0.09A	0.11A
4 Stacks	RYGB	1.50A	1.50A	0.57A	1.50A	0.31A	0.38A	0.16A	0.2A

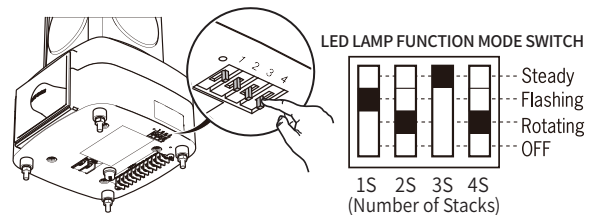
Connection Diagram



Sound List

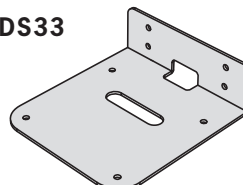
3P / Siren 1 - An ambulance siren
4C / Siren 2 - Police car siren
4P / Siren 3 - Fire car siren
5C / Melody 1 - Home Sweet Home
5P / Melody 2 - For Elise

⚠ Be careful of wiring Light COM and Sound Com.
It may cause product damage.



Optional Parts Wall Mounting Bracket

MAM-DS33
Steel



See Page 80 ~ 81 >>
for Mounting Options
and Accessories.

MT5C/8C Series D56/D86mm Bulb Type Tower Light(Steady, Flashing, Buzzer)



Multi-layer tower light that features an outstanding vibration resistance and a long service life.

Product Feature

- Selectable Steady or Flashing Modes
- Prism-cut lenses for even light distribution
- Surface, Pole or Wall Mounted
- Add-on Buzzer (80dB) kit available
- IP54 rated

Specifications

Function	Steady + Flashing + Buzzer
Maximum stacked quantity	May be ordered as 1, 2, 3, 4 or 5 Stacks
Lens color	Red / Yellow / Green / Blue / Clear
Protection structure	IP 54 / IP 50 (with Buzzer)
Buzzer volume	80±5dB (1M)
Flashing rate	80±10times / minute
Wire size	UL3266/22AWG
Approval	UL, CE, RoHS

Current Consumption (RMS value ±10%)

Power supply		1stack	2stacks	3stacks	4stacks	5stacks
24V	General	0.4A	0.8A	1.3A	1.7A	2.0A
	Buzzer	0.43A	0.83A	1.33A	7.73A	2.03A
110V	General	0.09A	0.18A	0.27A	0.36A	0.45A
	Buzzer	0.12A	0.21A	0.30A	0.39A	0.48A
220V	General	0.04A	0.08A	0.12A	0.16A	0.20A
	Buzzer	0.07A	0.11A	0.15A	0.19A	0.23A

Ordering information

MT 5C 3 A L G B - RY G

① ② ③ ④ ⑤ ⑥ ⑦

① Product Diameter & Light Style

5C	56mm type - Steady + Flashing + Buzzer
8C	86 mm type - Steady + Flashing + Buzzer (*note)

*NOTE: 8C is mounted on G type only

② Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

③ Power Supply

A	24VAC/DC
B	110VAC
C	220VAC

④ Connection

L	Lead Wire type
---	----------------

⑤ Mounting Type

G	Plastic mount base
P	Aluminum Pole + Plastic mount base
M	M20 Screw Aluminum Pole mount

The unique vibration absorbing structure using new material reduces vibration and impact from all machines and devices, greatly extending bulb life.

⑥ Buzzer Option

No mark	Non Buzzer
B	Buzzer

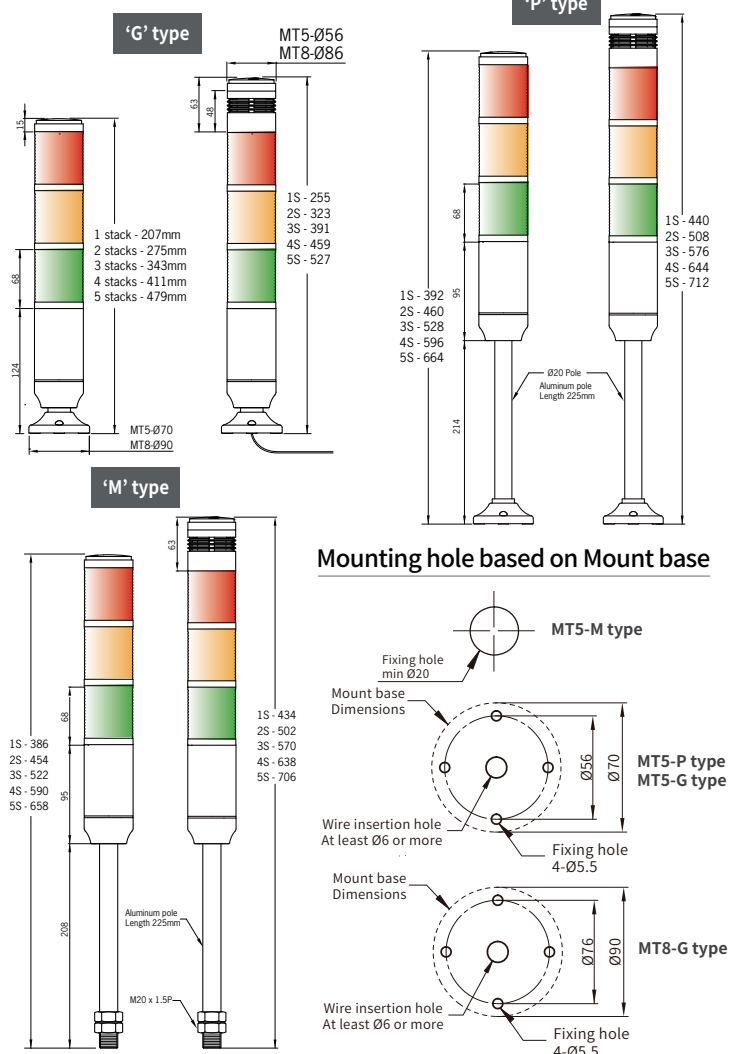
⑦ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

► MT5C/8C Bulb Replacement Parts

	Energy Used: 10 watt	Input Voltage	Bulb	Part no.
	Base Type: Double Contact (BA15D)	12V type	12V 10W	MAM-T15-D-012-10
	Color / Finish: Clear	24V type	24V 10W	MAB-T15-D-024-10
	Length: 45mm	110V type	120V 10W	MAB-T15-D-120-10
	Width: 16mm	220V type	240V 10W	MAB-T15-D-240-10

Dimensions <Unit: mm>

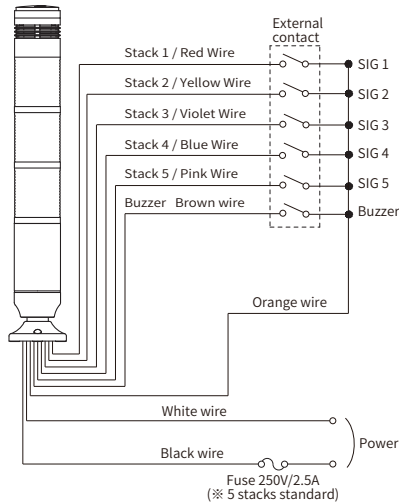


Connection Diagram

MT5C/8C Series

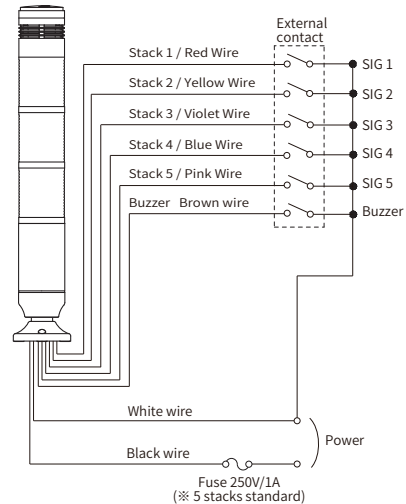
24VAC/DC

Steady / Flashing / Buzzer

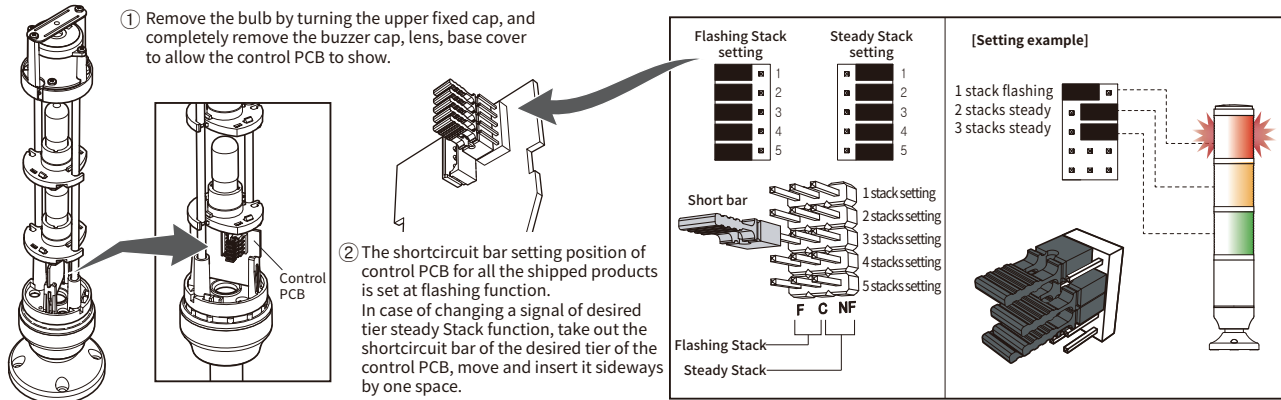


110VAC, 220VAC

Steady / Flashing / Buzzer



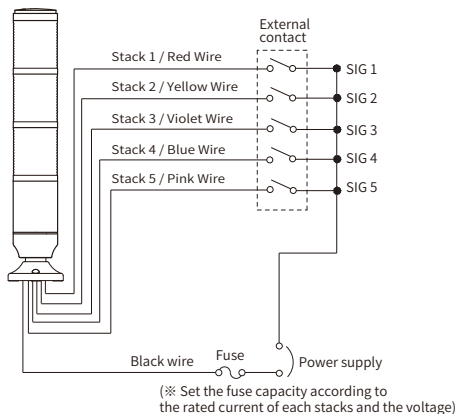
► MT5C/8C Series Steady/Flashing lights Changing Method



MT4B/5B/8B Series

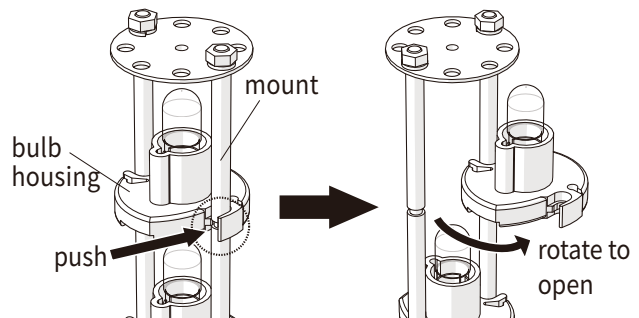
12VAC/DC, 24VAC/DC, 110VAC, 220VAC

Steady



MT4B-Bulb Replacement Method

Push to open the bulb housing fixed inside the mount groove using hands or tools. This allows easily replacing the bulb.



Optional Parts

Wall Mounting Bracket



apply MT4/5-G/P type only
MAM-DS28
Steel



apply MT4/5-M type only
MAM-DS25
Steel



apply MT4/5-G/P type only
MAP-DS30
Plastic



apply MT8-G type only
MAM-DS28
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MT4B / 5B / 8B Series (Only Steady Light) D45/D56/D86mm Bulb Type Tower Light



Low-priced multi-layer tower light that features an outstanding Vibration resistance and a long service life.

Product Feature

- Long life and reliability
- Prism-cut lenses for even light distribution
- MT5/MT8 Options to use LED bulb
- Surface, Pole or Wall Mounted
- MT4B Approvals - CE, UL, RoHS
- MT5B/8B Approvals - UL, RoHS

Replacement Parts

► MT4B Bulb Replacement Parts

Energy Used: 5 watt Base Type: Single Contact (BA9S) Color / Finish: Clear Length: 28mm Width: 10mm	Input Voltage	Bulb	Part no.
	12V type	12V 5W	MAB-T09-S-012-05
	24V type	24V 5W	MAB-T09-S-024-05
	110V type	130V 5W	MAB-T09-S-130-05
	220V type	240V 5W	MAB-T09-S-240-05

► MT5B/8B Bulb Replacement Parts

Energy Used: 10 watt Base Type: Double Contact (BA15D) Color / Finish: Clear Length: 45mm Width: 16mm	Input Voltage	Bulb	Part no.
	12V type	12V 10W	MAM-T15-D-012-10
	24V type	24V 10W	MAB-T15-D-024-10
	110V type	120V 10W	MAB-T15-D-120-10
	220V type	240V 10W	MAB-T15-D-240-10

Ordering information

MT 4B 3 A L G - RYG

① ② ③ ④ ⑤ ⑥

① Product Diameter & Light Style

4B	D45mm type - Steady Light
5B	D56 mm type - Steady Light
8B	D86 mm type - Steady Light(*note)

*NOTE: 8B is mounted on G type only

② Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

⑤ Mounting Type

G	Plastic mount base
P	Aluminum Pole + Plastic mount base
M	M20 Screw Aluminum Pole mount

③ Power Supply

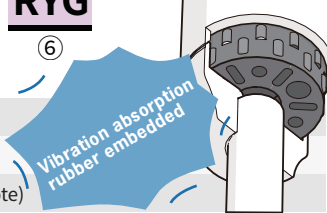
A	24VAC/DC	C	220VAC
B	110VAC	D	12VAC/DC

④ Connection

L	Lead Wires
---	------------

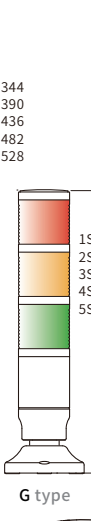
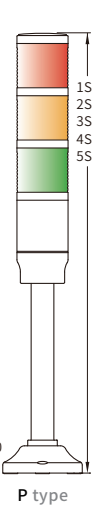
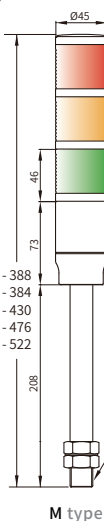
⑥ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

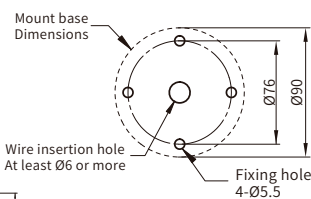
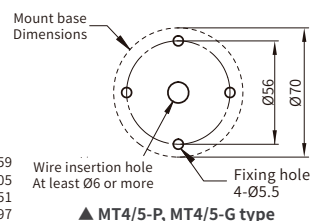


Dimensions <Unit: mm> Standard Pole Length : 225mm

■ MT4B Series



Mounting hole based on Mount base



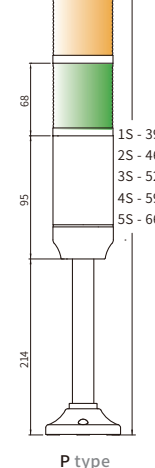
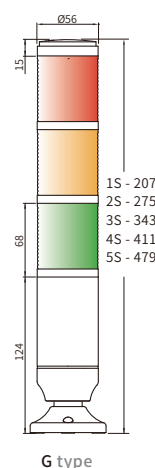
Specifications

Power supply	12VAC/DC, 24VAC/DC, 110~120VAC, 220~240VAC
Function	Steady
Maximum stacked quantity	May be ordered as 1, 2, 3, 4 or 5 stacks
Lens color	Red / Yellow / Green / Blue / Clear
Protection structure	IP54

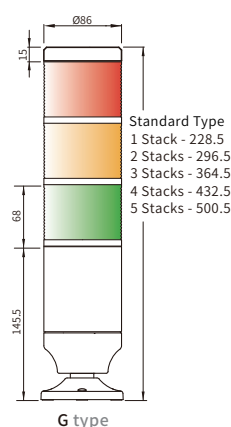
Power Supply	12VAC/DC	24VAC/DC	110VAC	220VAC
MT4B				
Current				
Consumption (±10%)				
1 Stack	0.4A	0.2A	0.04A	0.02A
2 Stacks	0.8A	0.4A	0.09A	0.04A
3 Stacks	1.2A	0.6A	0.13A	0.06A
4 Stacks	1.6A	0.8A	0.16A	0.08A
5 Stacks	2.0A	1.0A	0.20A	0.1A

Power Supply	12VAC/DC	24VAC/DC	110VAC	220VAC
MT5B/8B				
Current				
Consumption (±10%)				
1 Stack	0.8A	0.4A	0.08A	0.04A
2 Stacks	1.7A	0.8A	0.16A	0.08A
3 Stacks	2.5A	1.2A	0.24A	0.12A
4 Stacks	3.3A	1.6A	0.32A	0.16A
5 Stacks	4.2A	2.0A	0.4A	0.2A

■ MT5B Series



■ MT8B Series



See Page 24 >> for Connection Dimension

PS Series D45mm Bulb type Tower Light



Ordering information

PS P - 3 20 - RYG

① ② ③ ④

① Mounting style

P	D18mm Aluminum pole + Plastic mount base
G	Plastic mount base
M	M18 Screw Aluminum pole

② Number of Stack

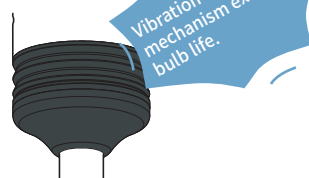
1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

③ Power Supply

01	12VAC/DC
02	24VAC/DC
10	110VAC
20	220VAC

④ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		



Specifications

Function	Steady
Power supply	12VAC/DC, 24VAC/DC, 110VAC, 220VAC
Maximum stacked quantity	May be ordered as 1, 2, 3, 4 or 5 stacks
Lens color	Red, Yellow, Green, Blue, Clear
Ambient temperature	-15 ~ 40°C
Storage ambient temperature	-25 ~ 70°C
Ambient humidity	45~85% RH
Protection structure	IP20
Approval	RoHS
Connection	110/220VAC: VSF/0.75mm (Power supply wire only) 12/24VAC/DC: 1007UL/220AWG

Current Consumption

Power Supply	12VAC/DC	24VAC/DC	110VAC	220VAC
Current Consum-ption (±10%)				
1 Stack	0.4A	0.2A	0.04A	0.02A
2 Stacks	0.8A	0.4A	0.08A	0.04A
3 Stacks	1.2A	0.6A	0.12A	0.06A
4 Stacks	1.6A	0.8A	0.16A	0.08A
5 Stacks	2.0A	1.0A	0.20A	0.1A

Steady light only.
Vibration-absorption technology to extend bulb life.

Product Feature

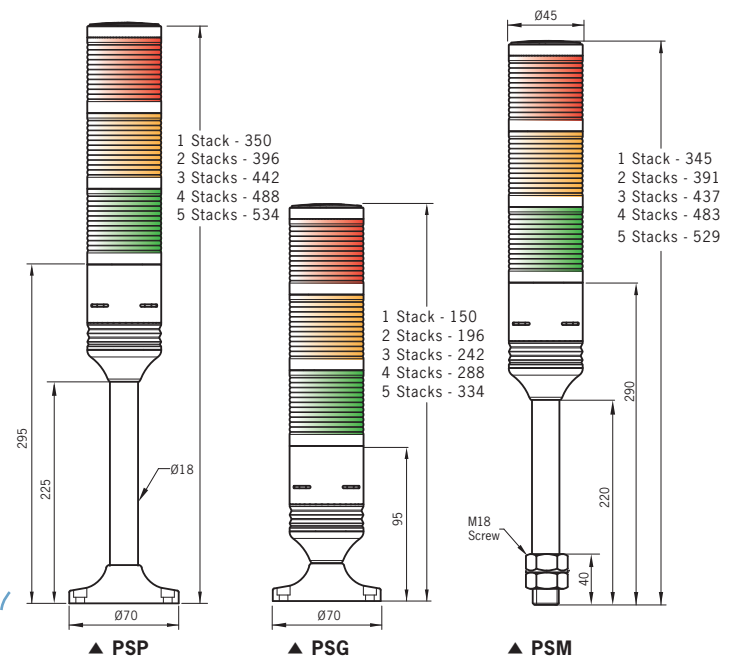
- Ø45mm lens diameter & Five lens colors available
- Prism-cut lenses for even light distribution
- Various Operating Voltage

Replacement Parts

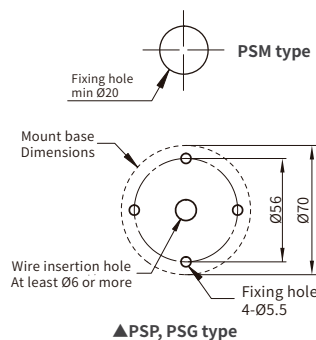
►PS series Bulb Replacement Parts

Energy Used: 5 watt Base Type: Single Contact (BA9S) Color / Finish: Clear Length: 28mm Width: 10mm	Input Voltage	Bulb	Part no.
	12V type	12V 5W	MAB-T09-S-012-05
	24V type	24V 5W	MAB-T09-S-024-05
	110V type	130V 5W	MAB-T09-S-130-05
	220V type	240V 5W	MAB-T09-S-240-05

Dimensions <Unit: mm>



Mounting hole based on Mount base



Optional Parts

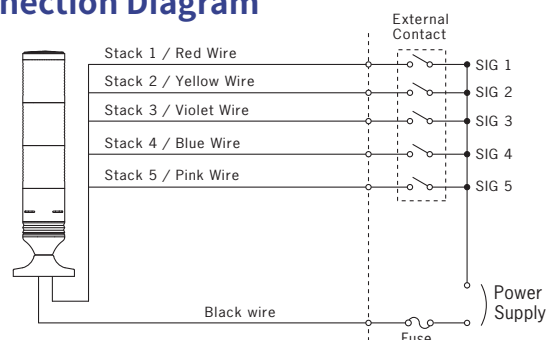
Wall Mounting Bracket



apply PSM type only
MAM-DS25 Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

Connection Diagram



* No polarity for DC applications.

PR Series D56mm Bulb type Tower Light



The unique vibration absorbing structure using new material reduces vibration and impact from all machines and devices, greatly extending bulb life.



Suitable for displaying the operation status of machines tools, industrial machines, special purpose machines, automatic production line, robot, etc.

Product Feature

- Shock and Vibration Tolerant
- Option to use LED bulb
- Shock and Vibration Tolerant & IP20 Ingress Protection

Ordering information

PR P F - 3 02 - RYG

① Mounting Style

P	D18mm Aluminum pole + Plastic mount base
G	Plastic mount base
M	M18 Screw Aluminum pole

② Light Style

No mark	Steady
F	Flashing
B	Steady + Buzzer
Z	Steady + Flashing + Buzzer

④ Power Supply

01	12VAC/DC
02	24VAC/DC
10	110VAC
20	220VAC

③ Number of Stack

1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

⑤ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12VAC/DC, 24VAC/DC, 110VAC, 220VAC(50~60Hz)
Maximum stacked quantity	May be ordered as 1, 2, 3, 4 or 5 stacks
Lens color	Red, Yellow, Green, Blue, Clear
Buzzer volume	80±5dB at 1M, Buzzer Continuous sound (pi - -)
Flashing rate	80±10 times / minute
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-25°C ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP20
Connection	110/220VAC: VSF/0.75mm (Power supply wire only) 12/24VAC/DC: 1007UL/220AWG

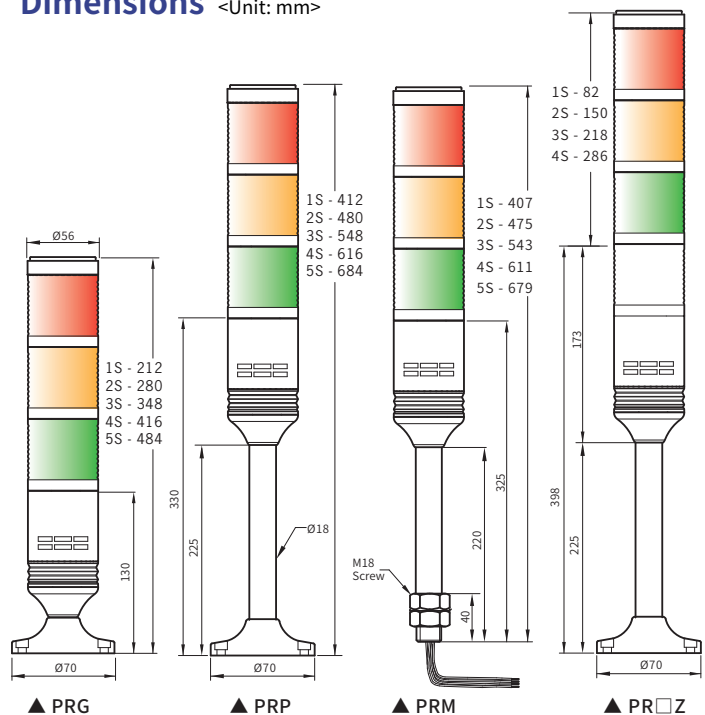
Current Consumption

Power Supply		12VAC	24VAC	110VAC	220VAC
Current Consumption (±10%)	1 Stack	0.8A	0.4A	0.08A	0.04A
	2 Stacks	1.7A	0.8A	0.17A	0.08A
	3 Stacks	2.5A	1.2A	0.25A	0.12A
	4 Stacks	3.3A	1.7A	0.33A	0.17A
	5 Stacks	4.2A	2.1A	0.40A	0.20A

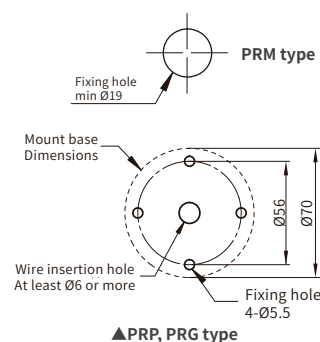
► PR series Bulb Replacement Parts

Energy Used: 8 watts Base Type: Single Contact (BA15S) Color / Finish: Clear Length: 45mm Width: 16mm	Input Voltage	Bulb	Part no.
	12V type	12V 8W	MAM-T15-S-012-08
	24V type	24V 8W	MAB-T15-S-024-08
	110V type	130V 8W	MAB-T15-S-130-08
	220V type	240V 8W	MAB-T15-S-240-08

Dimensions <Unit: mm>



Mounting hole based on Mount base



Optional Parts Wall Mounting Bracket



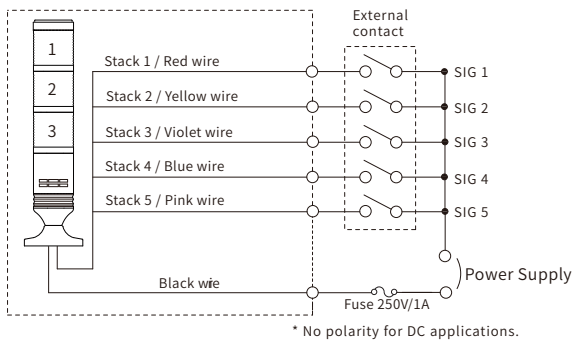
apply PRM type only
MAM-DS25
Steel

See Page 80 ~ 81 >>
for Mounting Options
and Accessories.

Connection Diagram

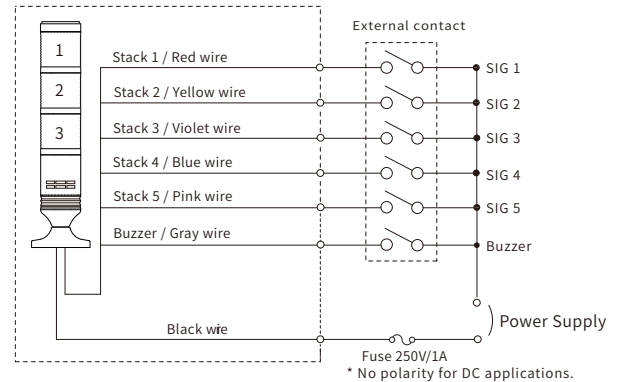
12VAC/DC, 24VAC/DC, 110VAC, 220VAC

Steady



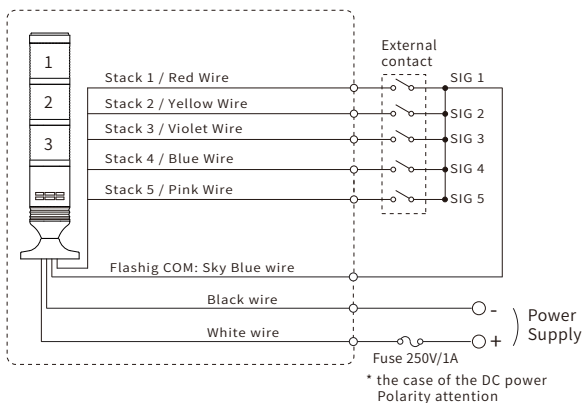
12VAC/DC, 24VAC/DC, 110VAC, 220VAC

Steady / Buzzer



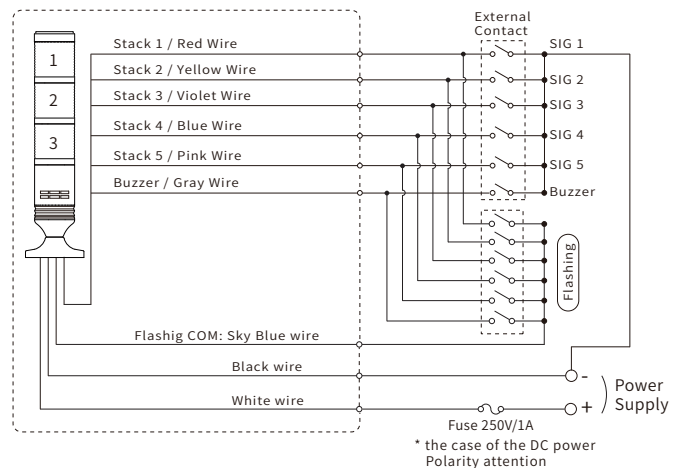
12VAC/DC, 24VAC/DC, 110VAC, 220VAC

Flashing



12VAC/DC, 24VAC/DC,
110VAC, 220VAC

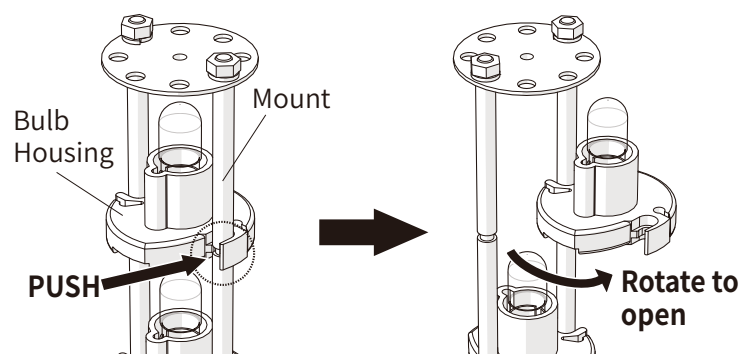
Steady / Flashing / Buzzer



45mm PS Series

Bulb Replacement Method

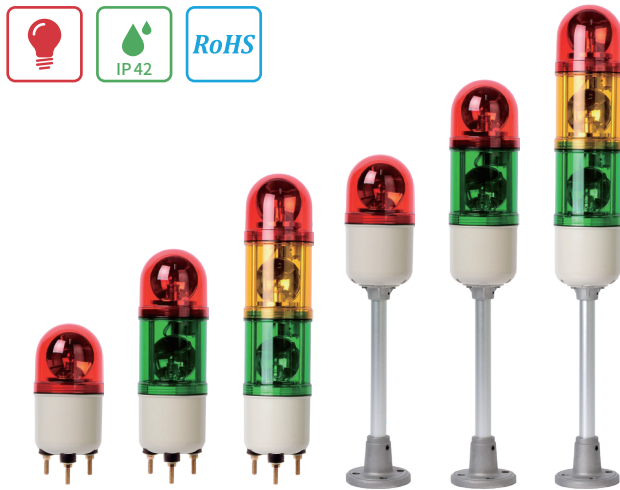
Push to open the bulb housing fixed inside the mount groove using hands or tools.
This allows easily replacing the bulb.



Caution

Wear protective gloves, replace the bulb after shutting off the power.
There is a risk of breakage of the glass.

SL Series D86mm Bulb type Dome Style Tower Light



Ordering information

SL G F - 3 20 - RYG

① ② ③ ④ ⑤

① Mounting Type

G	Body direct fixed
P	Aluminum Pole + Aluminum mount base

② Light Style

No mark	Rotating
F	Flashing - (DC power only)
	(Rotating mirror - AC 220V, AC 110V combined products)
K	1 Light - 110V, 220VAC
	2 Light - 110V, 220VAC

③ Number of Stack

1	1 Stack	3	3 Stacks
2	2 Stacks		

⑤ Lens Color (Top to Bottom)

R	Red	G	Green
Y	Yellow	B	Blue

④ Power Supply

01	12VDC	20	220VAC
02	24VDC	FF	110/220VAC
10	110VAC		Except for Flashing type - F function

Specifications

Function	Rotating, Flashing
Power supply	12VAC/DC, 24VAC/DC, 110VAC, 220VAC
Maximum stacked quantity	May be ordered as 1, 2, or 3 stacks
Lens color	Red, Yellow, Green, Blue
Rotating rate	130±10 rpm
Flashing rate	80±5 times / minute
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-25°C ~ 70°C
Ambient humidity	45~85% RH
Protection structure	IP42
Vibration	0.75mm at 10~55Hz
Connection	110, 220VAC: VSF/0.75mm (Power supply wire only) 12, 24VAC/DC: 1007UL/220AWG

Current Consumption (RMS ±10%)

	12VAC/DC	24VAC/DC	110VAC	220VAC
1 Stack	0.6A	0.3A	0.04A	0.02A
2 Stacks	1.2A	0.6A	0.08A	0.04A
3 Stacks	1.8A	0.9A	0.12A	0.06A

► SL series Bulb Replacement Parts (only Flashing type)

	Energy Used: 8 watt	Input Voltage	Bulb	Part no.
	Base Type: Single Contact (BA15S)	12V type	12V 8W	MAM-T15-S-012-08
	Color / Finish: Clear	24V type	24V 8W	MAB-T15-S-024-08
	Length: 45mm	110V type	130V 8W	MAB-T15-S-130-08
	Width: 16mm	220V type	240V 8W	MAB-T15-S-240-08

Tower Warning Light Which can transmit plural signals by using only one fitting space.

Product Feature

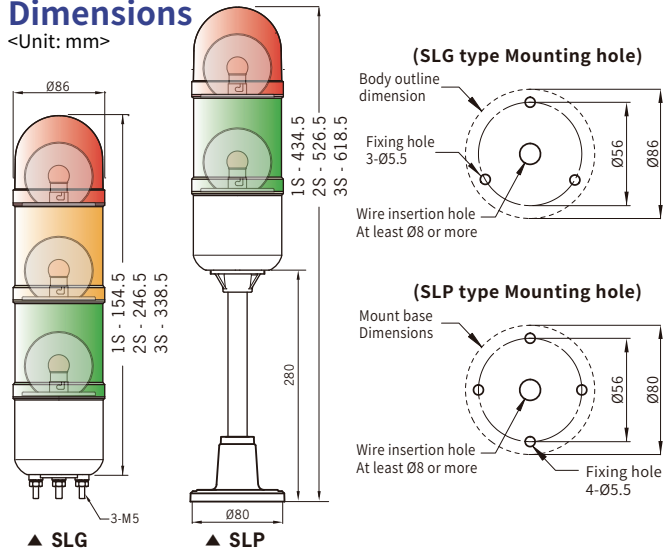
- Ø86mm lens diameter & Rotating, Flickering model
- Protection Class: IP42
- 4 lens colors available & Various operating voltage
- Possible to catch several signals at a time and make signals separate

► SL series Bulb Replacement Parts (only Rotating type)

	Energy Used: 8 watt	Input Voltage	Bulb	Part no.
	Base Type: Single Contact (BA15S)	12V type	12V 8W	MAM-T15-S-012-08
	Length: 45mm	24V type	24V 8W	MAB-T15-S-024-08
	Width: 16mm	110V type	12V 5W	MAB-T15-S-012-05
		220V type	12V 5W	MAB-T15-S-012-05

Dimensions

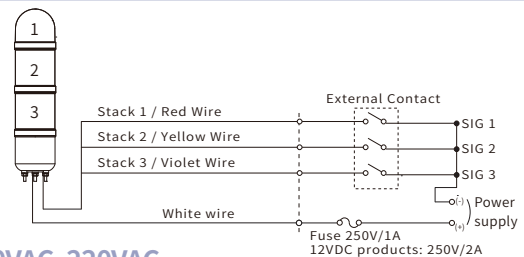
<Unit: mm>



Connection Diagram

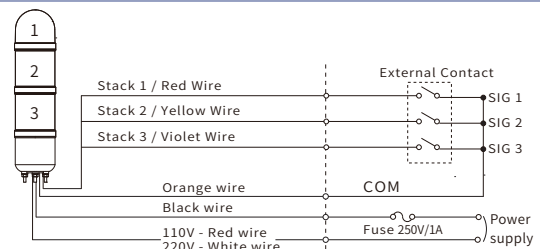
12VAC/DC, 24VAC/DC

Rotating



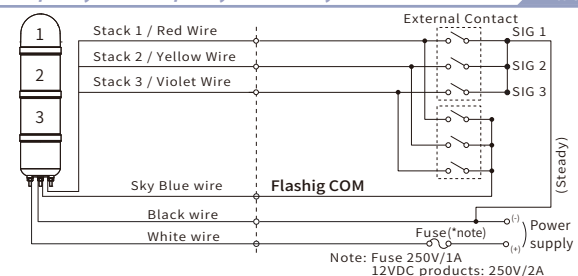
110VAC, 220VAC

Rotating



12VAC/DC, 24VAC/DC, 110VAC, 220VAC

Flashing



MSGS Series Large size Square Type Tower Light (horn speaker type)



The MSGS Series is a larger beacon that uses a mirrored parabolic reflector for increased visibility



Ordering information

MSGS - 3 20 - RYG

① ② ③

① Number of Stack

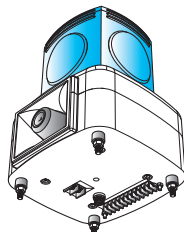
1	1 Stack	4	4 Stacks
2	2 Stacks	5	5 Stacks
3	3 Stacks		

② Power Supply

01	12VDC	10	110VAC
02	24VDC	20	220VAC

③ Lens Color (Top to Bottom)

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		



Specifications

Dimension	190 x 180 mm (Body Size)
Function	Rotating with 5 sounds (2 - melody, 3 - siren)
Power supply	12VDC, 24VDC, 110VAC, 220VAC (AC 50/60Hz)
Maximum stacked quantity	Fixed frame, 1, 2, 3, 4 or 5-stack version available
Lens color	Red, Yellow, Green, Blue, Clear
Rotating rate	max. 150±10rpm/minute
Sound volume	100±5dB at 1m
Vibration	0.75mm at 10~55Hz
Ambient temperature	-15 ~ 40°C
Storage ambient temperature	-25 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	indoor (upright) IP20
Approval	RoHS
Connection	VSF / 0.75mm ² (Power supply wire only)

Current Consumption (RMS value ±10%)

Power Supply	12VDC	24VDC	110VAC	220VAC
Current (1 light+Sound)	2.4A	1.3A	0.4A	0.2A

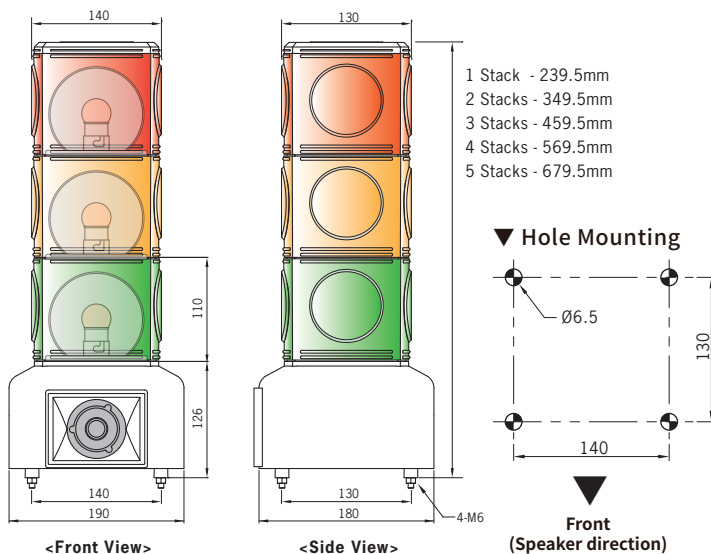
► Bulb Replacement Parts

	Energy Used: 25 watt	Input Voltage	Bulb	Part no.
	Base Type: Double Contact (BA15D)	12V type	12V 25W	MAM-T15-D-012-25
	Color / Finish: Clear	24V type	24V 25W	MAB-T15-D-024-25
	Length: 54mm	110V type	12V 25W	MAB-T15-D-012-25
	Width: 22mm	220V type	12V 25W	MAB-T15-D-012-25

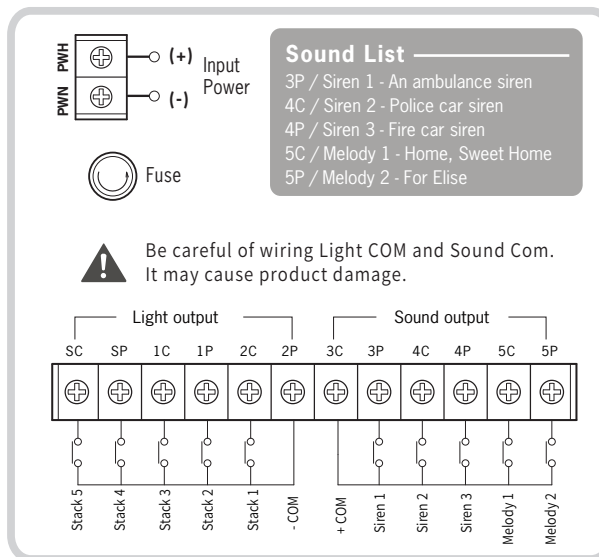
Product Feature

- Incandescent type
- Outstanding visibility by magnified lens
- Red, Yellow, Green, Blue or Clear lens available
- Large rotating reflector
- Selectable audio sounds: 2-melody, 3-siren (100dB)
- Stud mounted

Dimensions <Unit: mm>



Connection Diagram

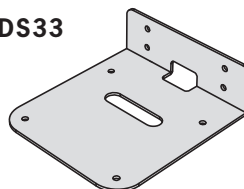


Optional Parts

Wall Mounting Bracket

MAM-DS33

Steel



See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS56L Series D56mm LED Signal Light



Compact LED Warning Light featuring enhanced illumination. Ideal for use with conveyors and electrical control panels.



Ordering information

MS56L - F02 - R

① Light Style

No mark	Steady
F	Steady + Flashing
R	Rotating

② Power Supply

01	12VAC/DC
02	24VAC/DC
10	110VAC
20	220VAC

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

Function	Steady, Steady + Flashing, Rotating
Power supply	12VAC/DC, 24VAC/DC 110VAC, 220VAC (AC: 50/60Hz)
Dimension	56mm
Flashing control	Dip switch in the internal PCB board controls
Rotating control	Volume in the internal PCB board controls (40~300rpm)
Lens Color	Red, Yellow, Green, Blue, Clear
Material	Lens - PC resin, Body - ABS resin
Vibration	0.75mm at 10~55Hz
Ambient temperature	-15 ~ 40°C
Storage ambient temperature	-25 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65 (front)
Approval	CE, RoHS
Connection	UL1007 / 22AWG

Flashing Rate (±10 times/minute)

Rated Voltage	AC Power	DC Power
12V	110 times/minute	60 times/minute
24V	80 times/minute	80 times/minute
110V	80 times/minute	
220V	80 times/minute	

Current Consumption (RMS ±10%)

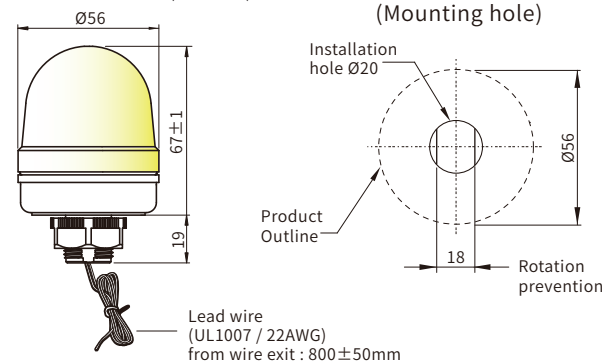
	12VAC/DC	24VAC/DC	110VAC	220VAC
Steady type	0.1A	0.12A	0.03A	
Rotating type	0.8A	0.07A	0.03A	0.04A

Note: 12V, 24VDC Current Consumption: 0.06A

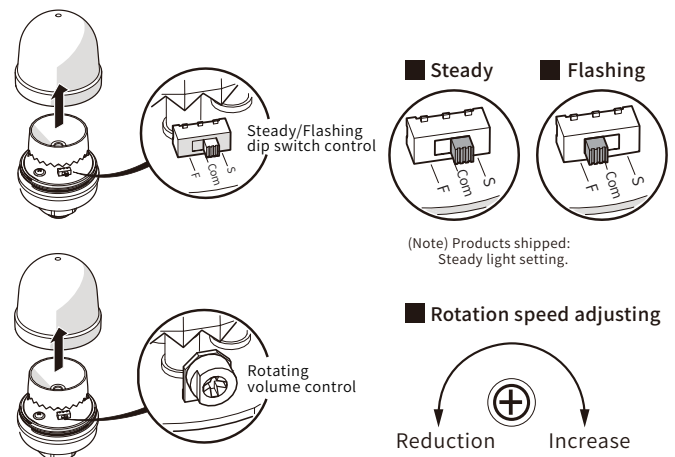
Product Feature

- Steady + Flashing Light, Rotating Light
- Power Supply: 12/24VAC/DC, 110/220VAC
- M20 Plastic nut panel mounting
- Rotating speed is adjustable
- IP65 rated

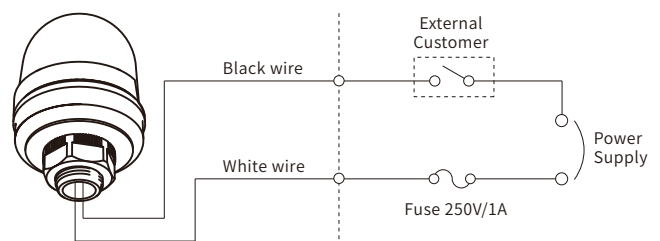
Dimensions (unit: mm)



Feature Setting



Connection Diagram



Optional Parts

Wall mounting Bracket



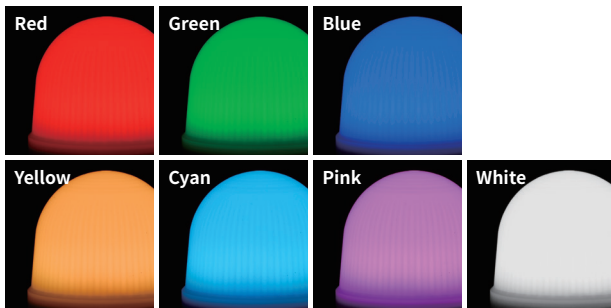
MAM-DS11
Steel

See Page 80 - 81
for Mounting Options and Accessories.

MS56M Series D56mm Dome head Multi color LED Signal Light



With one indicator light, it is possible to output 7 types of signal light. There are two kinds of external contact (wire drawing) type that can be easily applied in any environment and switch type that can easily change the color. When turned off, the color of the lens is milky white. And when lit, blinks and emits gentle light.



Ordering information

MS56M - 02 - SW

① Power Supply

01	12VDC
02	24VDC
FF	100~240VAC

②

Output Method

SW	Internal dip switch type
LC	External contact type -Lead Wire type

Specifications

Function	Steady, Flashing
Power supply	12VDC, 24VDC 100~240VAC (AC. 50/60Hz)
Dimension	56mm
Flashing rate	80±5times/minute
LED color	Red, Yellow, Green, Cyan, Blue, Pink, White
Lens color	Milky white
Material	Lens - PC resin, Body - ABS resin
Vibration	0.75mm at 10~55Hz
Ambient temperature	-15 ~ 40°C
Storage ambient temperature	-25 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65 (front)
Approval	CE, RoHS
Connection	UL1007 / 22AWG

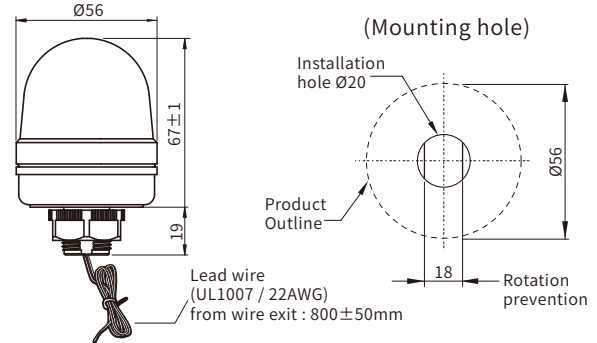
Current Consumption (RMS ±10%)

	12VDC	24VDC	100~240VAC
Steady Light	0.13A	0.08A	0.08A

Product Feature

- Steady, Flashing type
- 2 types of product : Wire draw-out type and internal switch type
- Various power supply
- Plastic M20 nut panel mounting type

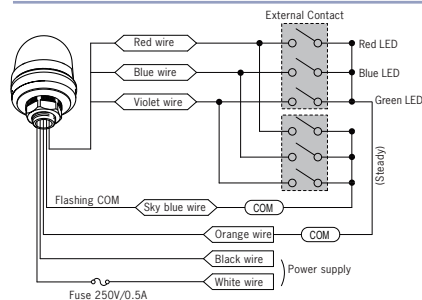
Dimensions (unit: mm)



Connection Diagram

100~240VAC

Lead wire type - LC

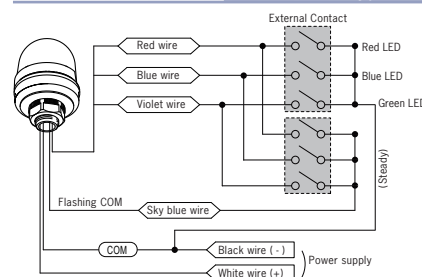


LED color wiring chart

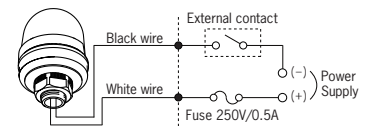
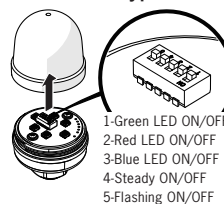
Condition	Wiring Line color	Lens color
1	Red	Red
2	Violet	Green
3	Blue	Blue
4	Red+Violet	Yellow
5	Red+Blue	Pink
6	Violet+Blue	Cyan
7	Red+Violet+Blue	White

12/24VDC

Lead wire type - LC



<Internal switch type-SW>

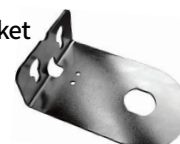


LED Colors	Steady	Flashing
No.1 Green	ON 1 2 3 4 5	ON 1 2 3 4 5
No.2 Red	ON 1 2 3 4 5	ON 1 2 3 4 5
No.3 Blue	ON 1 2 3 4 5	ON 1 2 3 4 5

LED Colors	Steady	Flashing
No.4 Yellow	ON 1 2 3 4 5	ON 1 2 3 4 5
No.5 Cyan	ON 1 2 3 4 5	ON 1 2 3 4 5
No.6 Pink	ON 1 2 3 4 5	ON 1 2 3 4 5
No.7 White	ON 1 2 3 4 5	ON 1 2 3 4 5

Optional Parts

Wall mounting Bracket
MAM-DS11
Steel



See Page 80 - 81
for Mounting Options
and Accessories.

MS66 Series D66mm LED Signal Light



Compact, Dome-head, Long life Signal Light with Red, Yellow, Green, Blue and White lens.



Ordering information

MS66 G - B 00 - R (V)

① Mounting Type

P	Aluminum Pole + Plastic mount base
G	Plastic mount base
M	Body direct fixed (M20 Screw)

② Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer
R	Rotating
T	Rotating + Buzzer

③ Power Supply

00	12 ~ 24VAC/DC
FF	110 ~ 220VAC

④ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

⑤ Light style (option)

(V)	Emergency signal flashing 240±5times/minute
-----	--

Specifications

Function	Steady, Flashing, Buzzer or Rotating, Buzzer
Power supply	12 ~ 24VAC/DC, 110 ~ 220VAC(AC 50/60Hz)
Dimension	68mm
Lens color	Red, Yellow, Green, Blue, Clear
Light source	LED
Rotating rate	Volume Control : 60~300rpm (Clockwise Rotation)
Operating condition	When the power is on, LED Rotation and Buzzer will be operated immediately
Buzzer volume	80±5dB (Alternating Buzzer : pi- pi- pi) (Buzzer type : Only indoor)
Mounting method	MS66M / MS66P type - Upward only MS66G type - Forward, Reverse, Moving direction
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Insulation resistance	100MΩ min. at 500VDC
Vibration	0.75mm at 10~55Hz
Connection	UL1007 / 22AWG
Approval	CE, RoHS
Protection structure	IP65 (IP52-Buzzer type)
Weight (AC + Buzzer type)	MS66M - App.168g, MS66G - App.180g, MS66P - App.233g

Note : Life of the LED varies according to operating conditions and environment.

Product Feature

- Steady + Flashing, Rotating
- Rotating speed is adjustable
- Built-in high-powered Buzzer
- Various operating voltages
- 3 mounting options
- Lead wire connection



Current consumption (RMS value at AC type ±10%)

R/Y/G/B/C	12 ~ 24VAC		110 ~ 220VAC	
	General	Buzzer	General	Buzzer
Steady / Flashing type	0.30A	0.32A	0.03A	0.04A
Rotating type	0.20A	0.22A	0.03A	

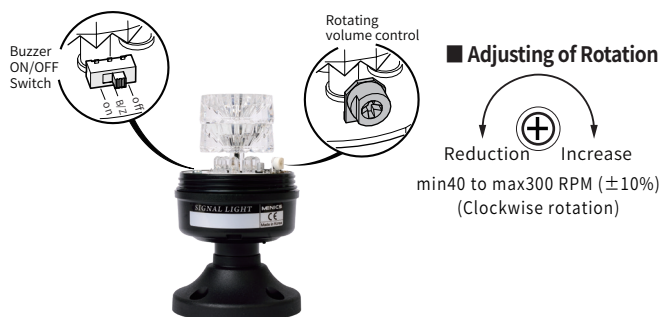
Note (Current consumption) : Steady / Flashing type, 12VDC : 0.08A, 24VDC : 0.06A

Note (Current consumption) : Rotating type, 12VDC : 0.06A, 24VDC : 0.04A

Flashing Rate

	General type	Emergency Flashing type option (V) type
12 ~ 24VAC/DC 110 ~ 220VAC	80±5times/minute	240±5times/minute

Rotating Speed Change



Optional Parts

1. Wall mounting Bracket



MS66M type only
MAM-DS11
Steel



MS66P/G type only
MAM-DS28
Steel



MS66P/G type only
MAP-DS30
Plastic

2. Aluminum mount base



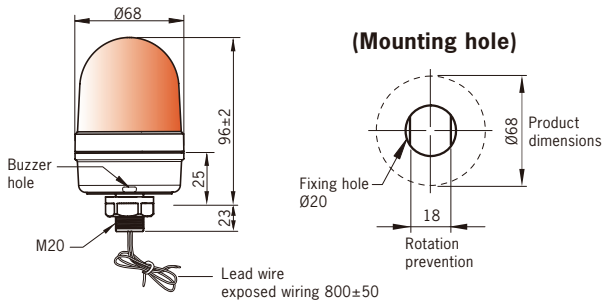
MS66P only apply
MAM-DS32
Aluminum

See Page 80 - 81
for Mounting Options
and Accessories.

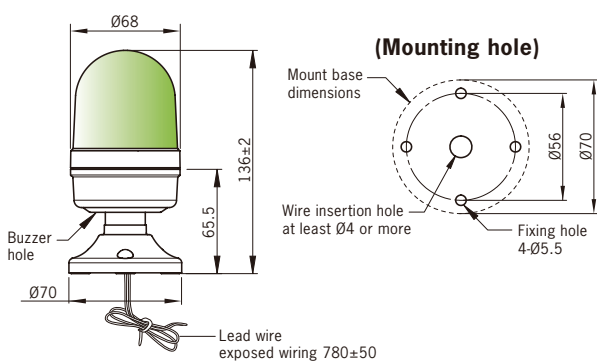
*Note : In case of P type, there is no change in total length if the Aluminum mount base replaces the Plastic mount base

Dimensions (unit: mm)

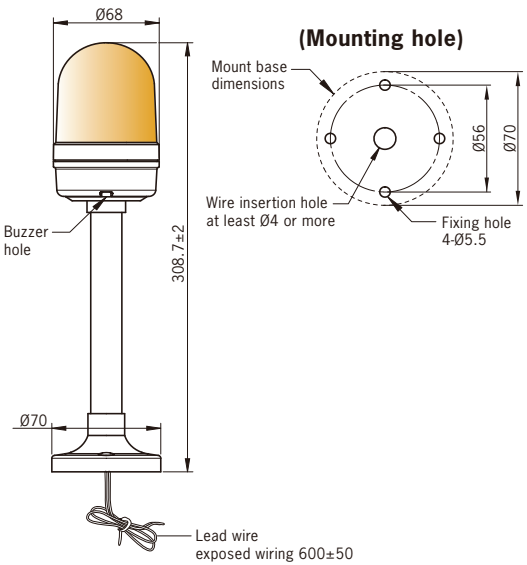
▼ MS66M type



▼ MS66G type



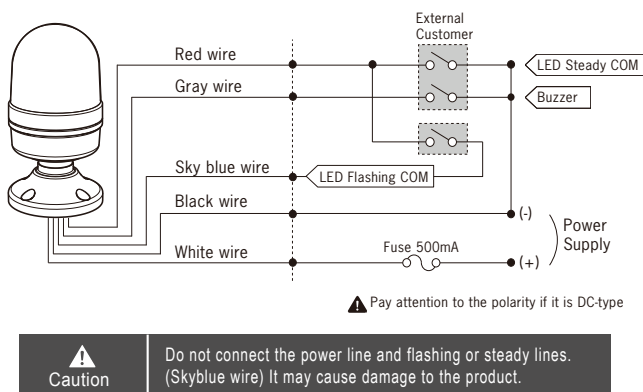
▼ MS66P type



Connection Diagram

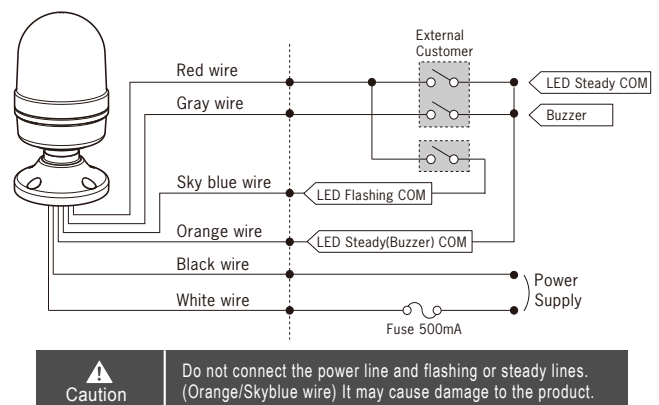
12~24VAC/DC

Steady / Flashing / Buzzer



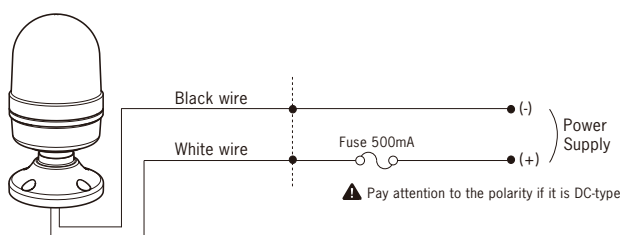
110~220VAC

Steady / Flashing / Buzzer



12~24VAC/DC, 110~220VAC

Rotating / Buzzer



※Note : Buzzer type

When the power is on, LED Rotating or Buzzer will be operated immediately.

(on/off switch built-in)

MS66LT Series D66mm Economical LED Signal Light



Except
AC type

The MS66 series is an LED light structure that is ideal for conveyor and electrical control panels with high visibility and bright light. It is suitable for forklifts and other material handling industrial applications and is ideal for a wide range of industrial applications



Ordering information

MS66LT **G** - **B** **00** - **R** (**V**)

① Mounting Type

P	Aluminum Pole + Plastic mount base
G	Plastic mount base
M	Body direct fixed (M20 Screw)

② Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

③ Power Supply

01	12VDC
02	24VDC
FF	110 ~ 220VAC

④ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

⑤ Option

(V)	Emergency signal flashing 240±5times/minute
-----	--

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12VDC, 24VDC, 110~220VAC (AC: 50/60Hz)
Dimension	68mm
Lens color	Red, Yellow, Green, Blue, Clear
Light source	LED
Function control	Select by internal switch
Buzzer volume (maximum sound)	70±5dB at 1M (Continuous sound : beep-----) (Buzzer type : Only indoor)
Mounting	MS66M / MS66P type - Upward only MS66G type - Forward, Reverse, Moving direction
Connection method	Lead wire connection
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Insulation resistance	100MΩ min. at 500VDC
Vibration	0.75mm at 10~55Hz
Connection	UL1007 / 22AWG
Approval	CE(12/24V only), RoHS
Protection structure	IP65 (IP52-Buzzer type)
Weight (AC + Buzzer type)	M type - App.168g, G type - App.180g, P type - App.233g

Note : Life of the LED varies according to operating conditions and environment.

Product Feature

- On / off switch built-in
- Built-in buzzer
- Various power specifications
- Three mounting specifications
- Lead wire connection

Flashing Rate / Emergency flashing type

Power supply	<General type>	Power supply	<Option (V) type>
12/24VDC	80 ± 5times flashing per minute	12/24VDC	240 ± 5times flashing per minute
110~220VAC		110~220VAC	

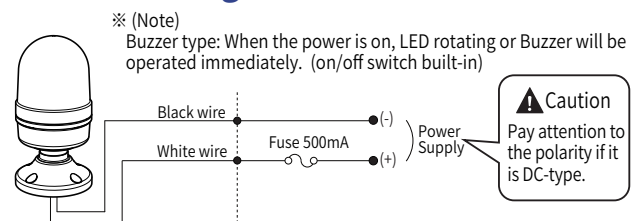
Current Consumption (RMS value ±10%)

PowerSupply	12VDC		24VDC		110~220VAC	
LED Color	General	Buzzer	General	Buzzer	General	Buzzer
Red	120mA	140mA	60mA	70mA	50mA	
Yellow	120mA	140mA	60mA	70mA	50mA	
Green	60mA	80mA	30mA	40mA	40mA	
Blue	80mA	100mA	40mA	50mA	40mA	
White	80mA	100mA	40mA	50mA	40mA	

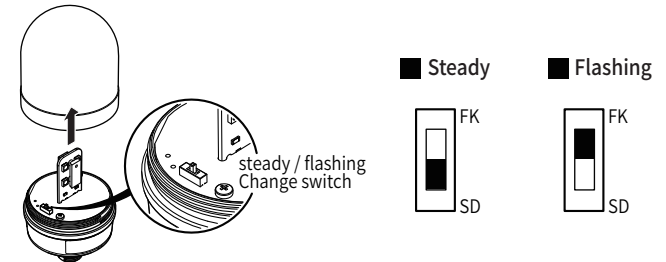
Dimension

<< See previous Page 34

Connection Diagram



Steady / Flashing setting



Optional Parts

1. Wall mounting Bracket



M type only
MAM-DS11
Steel



P/G type only
MAM-DS28
Steel



P/G type only
MAP-DS30
Plastic

2. Aluminum mount base



P only apply
MAM-DS32A
Aluminum

See Page 80 - 81
for Mounting Options
and Accessories.

※ Note : In case of P type, there is no change in total length
if the Aluminum mount base replaces the Plastic mount base

MS70LT Series D70mm LED Strobe Light



Except
AC type

MS70LT Series flashing light offer a high quality yet economical lighting solution specifically intended for use in material handling and other electric vehicle applications. These lights are ideal for a broad range of industrial type purposes.



Ordering information

MS70LT - G B 00 - R

① ② ③ ④

① Mounting Type

G	Plastic mount base (Two Surface mounts)
M	Body direct fixed (1/2 " NPT Plastic nut)
P	Aluminium pipe + Aluminum mounting base

② Light Style

F	Flashing
B	Flashing + Buzzer

③ Power Supply

00	12~24VDC
FF	110 ~ 220VAC

④ Lens Color

R	Red	B	Blue	G	Green
Y	Yellow	C	Clear		

Specifications

Function	Flashing, Buzzer	
Power supply	12 ~ 24VDC, 110 ~ 220VAC(AC 50/60Hz)	
Dimension	68mm	
Color	Lens - Red, Yellow, Green, Blue, Clear Body - Black	
Light source	LED	
Flashing rate (2 patterns)	- Normal flashing : 75±5 time/minute - 3 pattern flashing (Emergency signal) : 130±5 time/minute	
Buzzer volume	min 50 ~ max 80±5dB	
Current consumption	Flashing type	Flashing + Buzzer type
	12~24VDC: 0.12~0.16A 110~220VAC: 0.04~0.05A	12~24VDC: 0.16~0.21A 110~220VAC: 0.05~0.06A
Connection	UL2464 / 18AWG	AWM, 2C, 300V
Material	Body - ABS resin	Lens - PC resin
Ambient temperature	-20 to 50°C	
Storage ambient temperature	-20 to 70°C	
Ambient humidity	45~85% RH	
Insulation resistance	500VAC 50 / 60Hz for 1 minute	
Vibration	10 to 55Hz (cycle 1 minute) Amplitude 0.75mm X, Y, Z 1 hour in each direction	
Approval	CE(DC products only), RoHS	
Protection structure	IP65 (IP50-Buzzer type)	
Weight (DC type)	G type: app.196g M type: app.195g P type: app.198g	

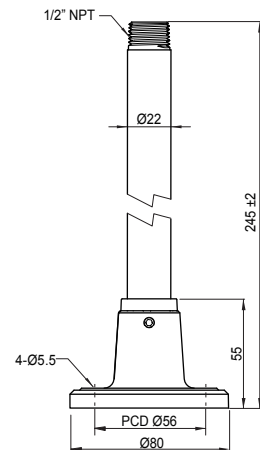
Note : Life of the LED varies according to operating conditions and environment.

Product Feature

- Compact and high brightness LED flashing light
- Three mounting specifications
- Two flashing patterns can be easily changed (built-in slide switch)
- Rugged glass filled nylon base and polycarbonate lens
- High degree of protection IP65 construction (buzzer type -IP50)

Optional Parts

Aluminum mount base



apply P-type only

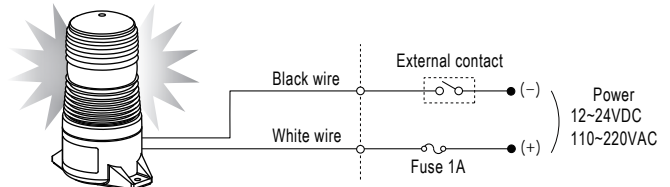
SAM-TP-1/2S

Aluminum

Dimensions

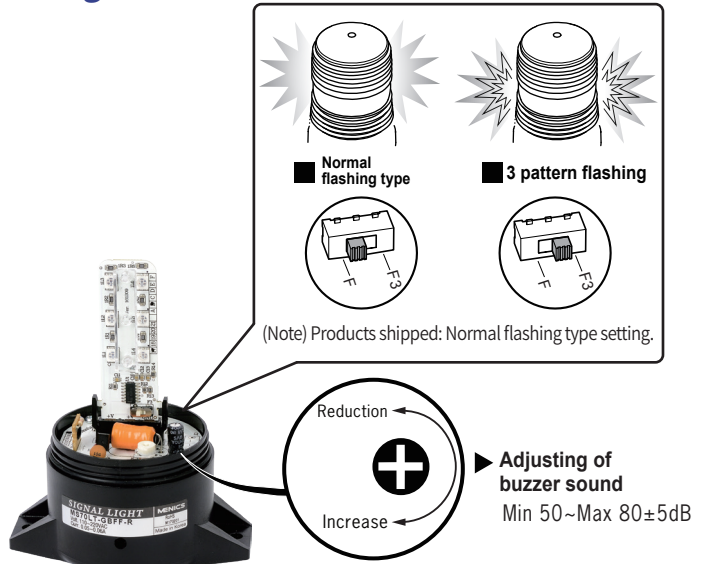
See Page 39 >>

Connection Diagram



(Note) buzzer type : When power is applied,
LED flashing and buzzer operate simultaneously

Change Function



MS70M series D70mm Multicolored LED Signal Light



The MS70M series is a compact 70mm LED indicators that can deliver 7 colors. It is suitable for forklifts and other material handling / industrial applications and is ideal for a wide range of industrial applications



Ordering information

MS70M - G Z 00 - RBG (M)

① Mounting Type

G	Plastic mount base (Two Surface mounts)
M	Body direct fixed (1/2" NPT Plastic nut)
P	Aluminium pipe + Aluminum mounting base

② Light Style

F	Flashing
B	Flashing + Buzzer
Z	Steady + Flashing + Buzzer

③ Power Supply

00	12~24VDC
FF	110 ~ 220VAC

④ LED Color

RBG	Red + Blue + Green
RYG	Red + Yellow + Green

⑤ Lens Color

No mark	Clear lens
(M)	Milky lens

Specifications

Function	LED Steady + Flashing Buzzer : min 50 to max 75±5dB	
Power supply	12 ~ 24VDC, 110 ~ 220VAC(AC 50/60Hz)	
Diameter	68mm	
Color	Lens - Clear / Milky white Body - Black	
Light source	LED	
Flashing rate	12VDC : 65±5 times per minute 24VDC : 60±5 times per minute 110~220VAC : 70±5times per minute	
Current consumption	LED Steady 12~24VDC: 0.22A 110~220VAC: 0.04~0.06A	LED Steady+Buzzer 12~24VDC: 0.26A 110~220VAC: 0.05~0.06A
Connection	UL1007/22AWG	
Material	Body - ABS resin	Lens - PC resin
Operating temperature	-20 to 50°C	
Storage ambient temperature	-20 to 70°C	
Ambient humidity	45~85% RH	
Insulation resistance	500VAC 50 / 60Hz for 1 minute	
Vibration	10 to 55Hz (cycle 1 minute) Amplitude 0.75mm X, Y, Z 1 hour in each direction	
Approval	RoHS	
Protection structure	IP65 (IP50-Buzzer type)	
Weight (DC type)	G type: app.196g M type: app.195g P type: app.198g	

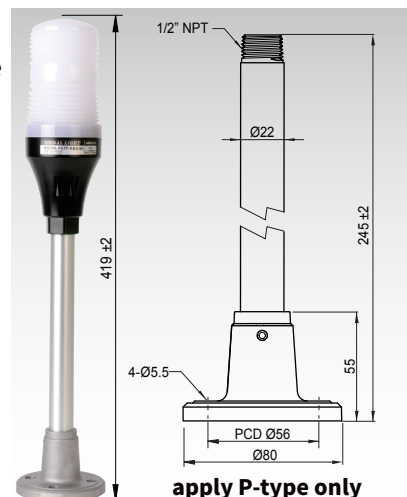
Note : Life of the LED varies according to operating conditions and environment.

Product Feature

- Three fixed mount bases
- 3 body colors (ivory, black, silver paint)
- For RBG color, 7 color combinations are available.
- Polycarbonate lens
- High degree of protection: IP65 (buzzer type -IP50)

Optional Parts

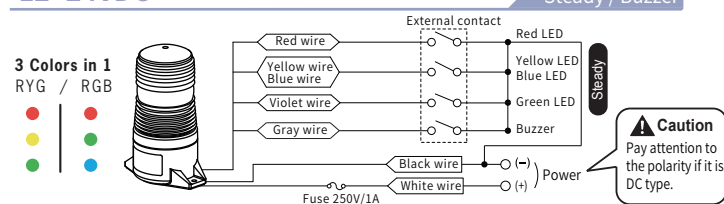
Aluminum mount base



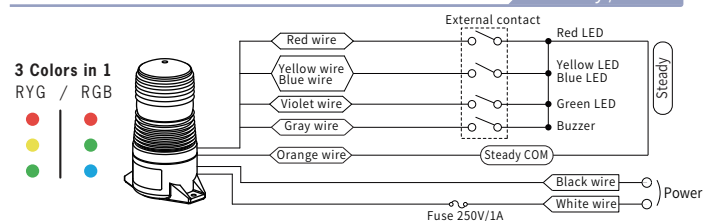
Dimensions & Light colors

See Page 39 >>

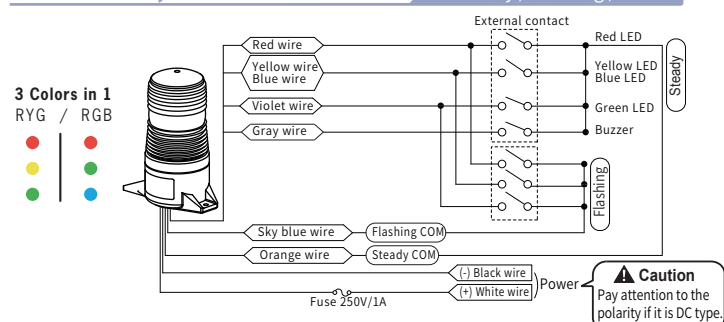
Connection Diagram 12~24VDC



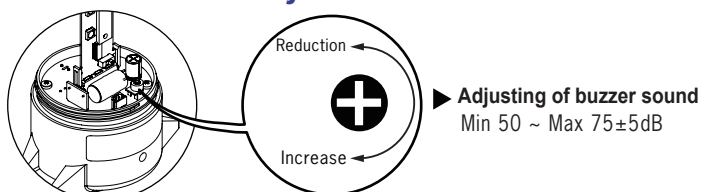
110~220VAC



12~24VDC , 110~220VAC



Buzzer volume adjustment



MS70S Series D70mm Xenon Lamp Strobe Light



Except
AC type

MS70S Series strobes offer a high quality yet economical lighting solution specifically intended for use in material handling and other electric vehicle applications. These lights are ideal for a broad range of industrial type purposes.



Ordering information

MS70S - G 20 - R

① Mounting Type

G	Plastic mount base (Two Surface mounts)
M	Body direct fixed (1/2 " NPT Plastic nut)
P	Aluminium pipe + Aluminum mounting base

② Power Supply

00	12~48VDC
10	110VAC
20	220VAC

③ Lens Color

R	Red	B	Blue
Y	Yellow	G	Green

Specifications

Function	Flashing
Power supply	12 ~ 48VDC, 110VAC, 220VAC(AC 50/60Hz)
Dimension	68mm
Color	Lens - Red, Blue, Yellow, Green Body - Black
Light source	Xenon Lamp
Flashing rate	12~48VDC : 80±5 times per minute 110VAC : 77±5 times per minute 220VAC : 60±5times per minute
Current consumption	12~48VDC : 0.08~0.2A 110VAC : 0.07A 220VAC : 0.04A
Connection	UL2464/18AWG, AWM, 2C, 300V
Material	Body - ABS resin Lens - PC resin
Ambient temperature	-20 to 50°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Insulation resistance	500VAC 50 / 60Hz for 1 minute
Vibration	10 to 55Hz (cycle 1 minute) Amplitude 0.75mm X, Y, Z 1 hour in each direction
Approval	RoHS
Protection structure	IP65
Weight (DC type)	G type: app.196g M type: app.195g P type: app.198g

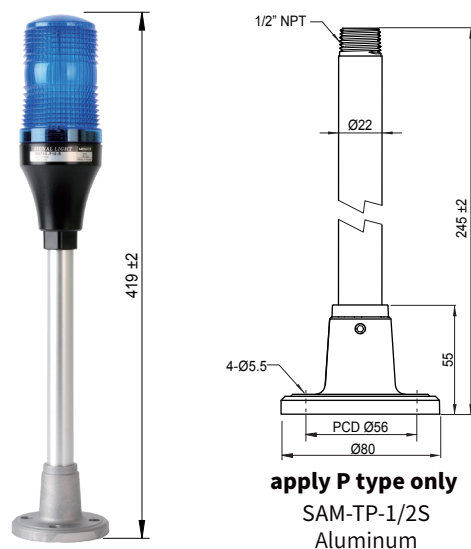
Note : Lifetime of the lamp varies according to operating conditions and environment.

Product Feature

- Compact and economical low intensity strobe ideal for industrial applications
- Three mounting specifications
- Field replaceable snap-fit flashing lamp
- Rugged glass filled nylon base and polycarbonate lens
- High degree of protection IP65 construction

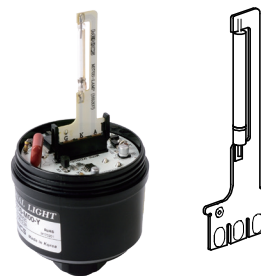
Optional Parts

Aluminum mount base



apply P type only
SAM-TP-1/2S
Aluminum

Replacement Parts



Part name.

MS70S-LAMP-AL

Xenon lamp

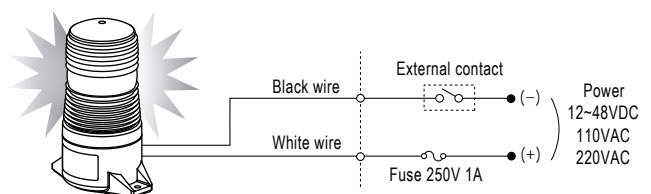
type: 3W

Lamp life: App 2,000 hours

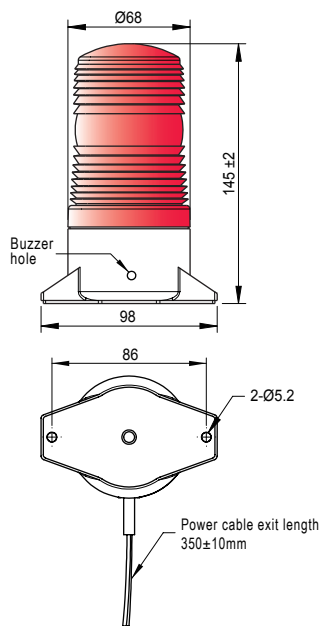
Dimensions

See Page 39 >>

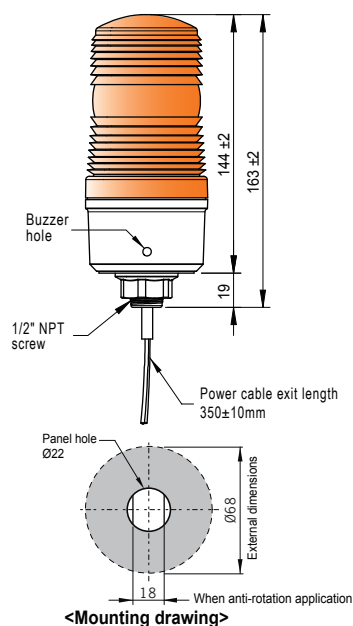
Connection Diagram



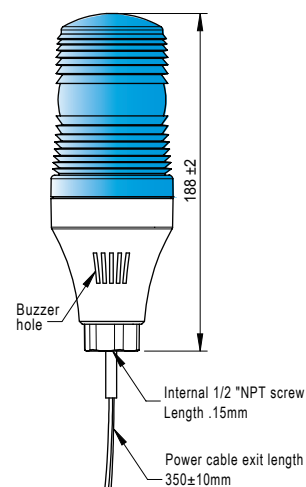
MS70 series - G type



MS70 series - M type



MS70 series - P type



Optional Parts

Wall Mounting Bracket

See Page 80 ~ 81 >> for Mounting Options and Accessories.



MS70 - G/P type only

MAM-DS38
Steel



MS70 - P/M type only

MAM-DS10
Steel

MS70M series LED Light colors



Clear lens

high intensity LEDs and prism-cut lens provides great visibility at long distance (Long distance applications)



Milky white lens

offers a softer light brightness helping prevent eye exhaustion from the light (short distance applications)



MW86M Series D86mm Wall Mount LED 3 Colors in 1 Signal Light (Multi Sound)



MW86M Series combines LED Signal Light and Sound. It can be easily fixed on the wall without extra equipments.



Ordering information

MW86M - F 00 - RYG - M3 (B)

① ② ③ ④ ⑤

① Light Style

F Steady + Flashing

② Power Supply

00 12~24VDC

FF 90~240VAC

③ LED Color

RYG Red + Yellow + Green

RGB Red + Green + Blue

④ Sound Type

M3 3 Melody channels

M4 4 Melody channels

S3 3 Siren channels

► Melody
For Elise — M3 type
Home, Sweet Home
Cuckoo Walts
Love me tender — M4 type

► 3 Siren
Fire siren
Police siren
Ambulance siren

⑤ Body Color

No mark Ivory
(B) Black

Specifications

Function	Steady, Flashing	
Power supply	12~24VDC, 90~240VAC(AC 50/60Hz)	
Light source	LED	
Connection method	Lead wire	
Flashing rate (Internal PCB board dip switch)	F1: 80±5 flashing per minute F3: 240±10 flashing per minute (Emergency signal)	
Mounting method	Wall mounting (upright only)	
Material	Body - ABS resin	Lens - PC (Lens Color : Clear)
Ambient temperature	-20~40°C	
Storage ambient temperature	-20~70°C	
Ambient humidity	45~85% RH	
Vibration	10 to 55Hz (cycle 1 minute) Amplitude 0.75mm X, Y, Z 1 hour in each direction	
Approval	UL, RoHS	
Connection	1007UL/22AWG, Sound wire - 2464UL/22AWG	
	General Type	Horn Type
Sound volume (1m)	55 ~ 85±5dB	55 ~ 90±5dB
Protection structure	IP43	IP54
Weight (AC type standard)	App. 286g	App. 313g

Note : Life of the LED varies according to operating conditions and environment.

Connection Diagram Sound Setting table

See Page 42 >>

Product Feature

- 3 Colors in 1 Signal Light
- Steady, Flashing functions from high-bright LED
- 2 Types of Flashing functions
 - Regular flashing / Urgency signal flashing
- Built-in Speaker for 3~4 sounds
- Removable Horn is offered

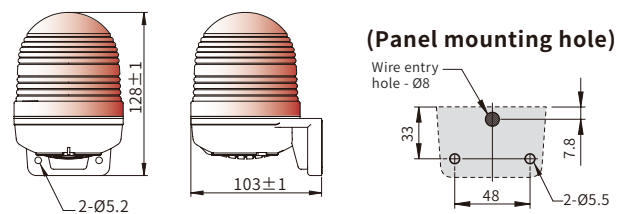
Current consumption

LED Colors	Power supply				
	12VDC	24VDC	90VAC	110VAC	220VAC
Red	0.35A	0.18A	0.10A	0.09A	0.06A
Yellow	0.35A	0.18A	0.10A	0.09A	0.06A
Green	0.39A	0.20A	0.12A	0.09A	0.07A

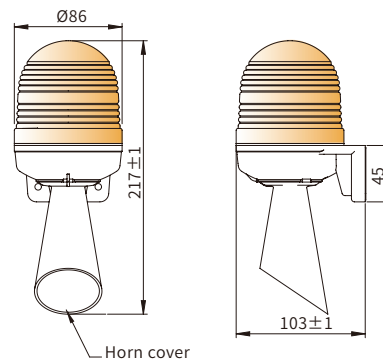
▲ Combined current consumption of both LED Steady light and sound

Dimensions (unit: mm)

▼ General type



▼ Horn type



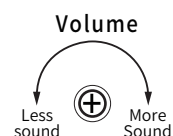
Feature setting

■ Flashing function selection switch

F1: 80±5 flashing per minute

F3: 240±10 flashing per minute

■ Adjustment of sound volume



Sound Volume Adjustment hole

Less sound More Sound

Screwdriver (Screwdriver of about 0.5mm in width)

MW86T Series D86mm Wall Mount Multi Function LED Signal light (Multi Sound)



General type

Horn type



Ordering information

MW86T - R 00 - R - M3 (B)

① ② ③ ④ ⑤

① Light Style

R Steady + Flashing + Rotating

② Power supply

00 12~24VDC
FF 90~240VAC

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

④ Sound Type

M3 3 Melody channels

M4 4 Melody channels

S3 3 Siren channels

► Melody
For Elise
Home, Sweet Home M3 type
Cuckoo Walts M4 type
Love me tender

► 3 Siren
Fire siren
Police siren
Ambulance siren

⑤ Body Color

No mark Ivory
(B) Black

Specifications

Function	Steady, Flashing, Rotating
Power supply	12 ~ 24VDC, 90 ~ 240VAC(AC 50/60Hz)
Connection method	Lead wire
Rotating rate	Internal PCB board dip switch / volume control mode min60 ~ max300±10 rpm (Clockwise rotation)
Flashing rate	F1 : 80±5 flashing per minute F3 : 240±10 flashing per minute
Mounting method	Wall mounting (upright only)
Material	Body - ABS resin Lens - PC
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Vibration	10 to 55Hz (cycle 1 minute) Amplitude 0.75mm X, Y, Z 1 hour in each direction
Approval	UL, RoHS
Connection	1007UL/22AWG, Sound wire - 2464UL/22AWG
	General Type
Sound volume (1m)	55 ~ 85±5dB
Protection structure	IP43
Weight (AC type standard)	App. 279g
	Horn Type
Sound volume (1m)	55 ~ 90±5dB
Protection structure	IP54
Weight (AC type standard)	App. 306g

Note : Life of the LED varies according to operating conditions and environment.

Current consumption

	12 ~ 24VDC	90 ~ 240VAC
3 Sound type	Max. 0.52A±10%	Max. 0.16A±10%
4 Sound type	Max. 0.65A±10%	Max. 0.18A±10%

Combined current consumption of both LED Steady light and sound

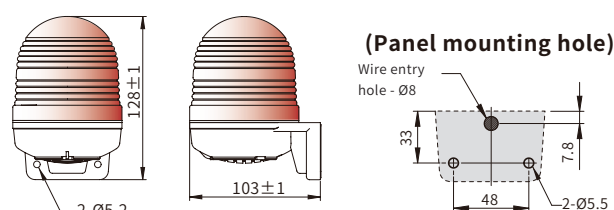
MW86T Series combines LED Signal Light and Sound. It can be easily fixed on the wall without extra equipments.

Product Feature

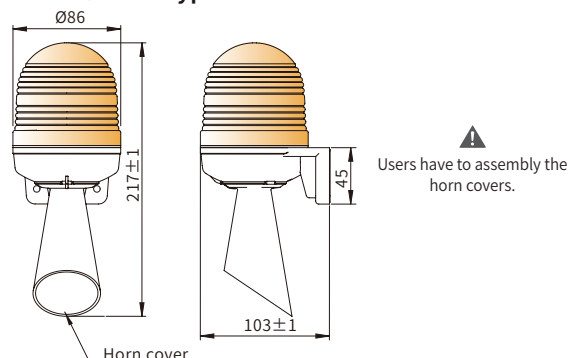
- Steady , Flashing , Rotating functions from high-bright LED
- 2 Types of Flashing function - Regular flashing , Urgency signal flashing
- Built-in Button for sound volume adjusting and rotating speed adjusting
- Built-in Speaker for 3~4 sounds
- Removable Horn is offered

Dimensions (unit: mm)

▼ General type



▼ Horn type



Feature setting

Flashing function selection switch

F1: 80±5 flashing per minute
F3: 240±10 flashing per minute

Rotating speed adjustment volume

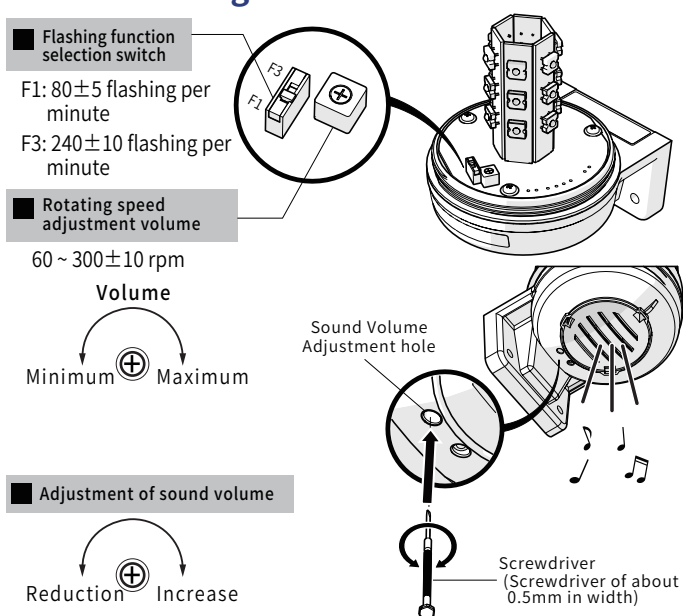
60 ~ 300±10 rpm

Volume

Minimum ⊕ Maximum

Adjustment of sound volume

Reduction ⊕ Increase



Connection Diagram Sound Setting table

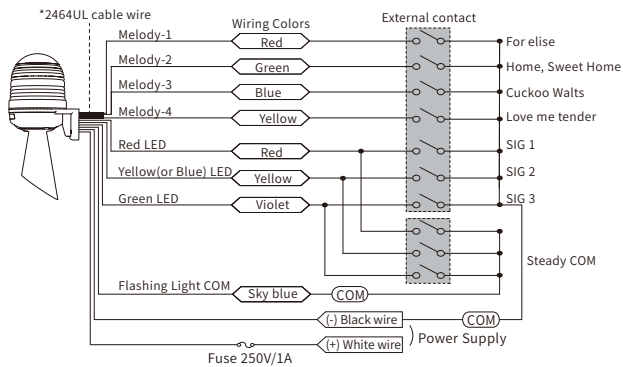
See Page 42 >>

Connection Diagram

MW86M Series

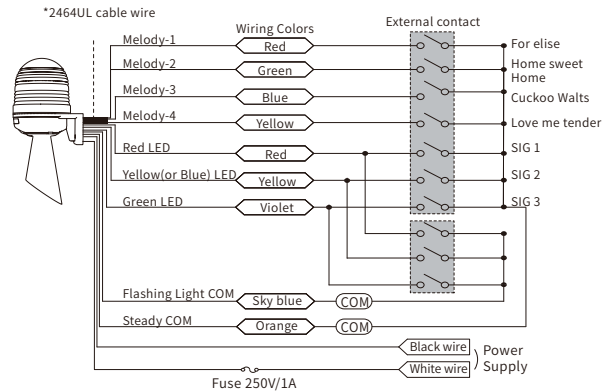
12~24VDC

Melody type



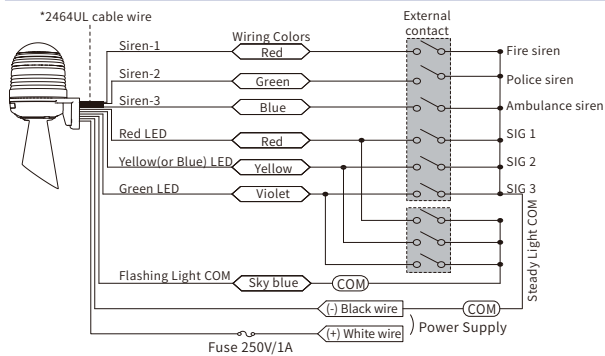
90~240VAC

Melody type



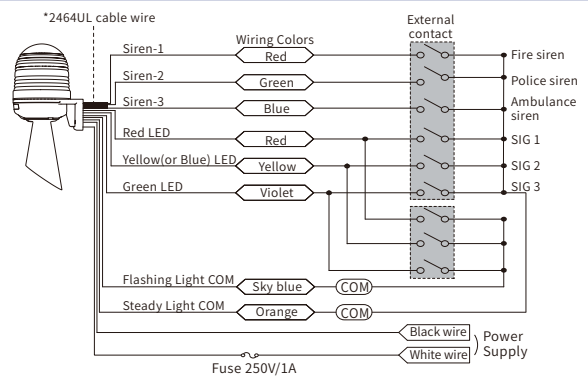
12~24VDC

Siren type



90~240VAC

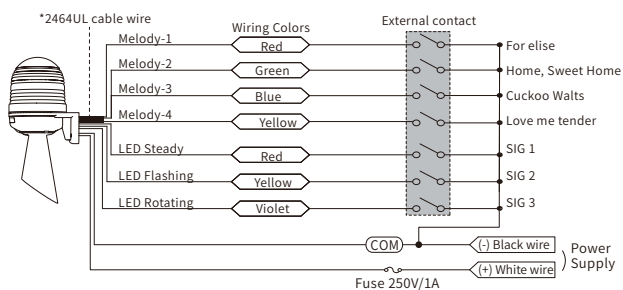
Siren type



MW86T Series

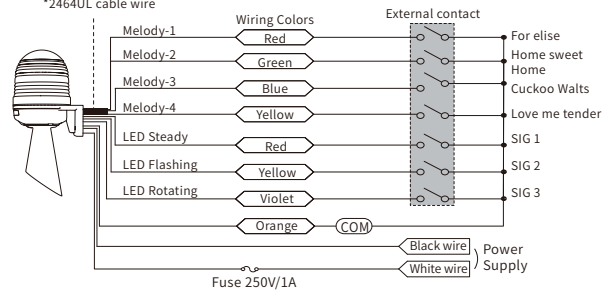
12~24VDC

Melody type



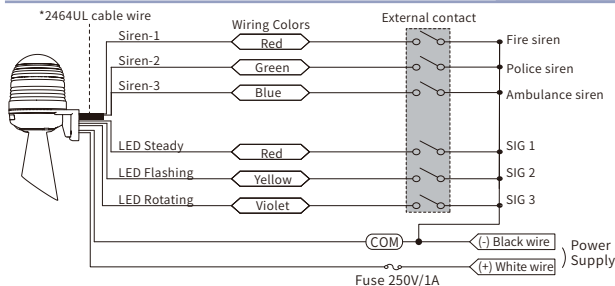
90~240VAC

Melody type



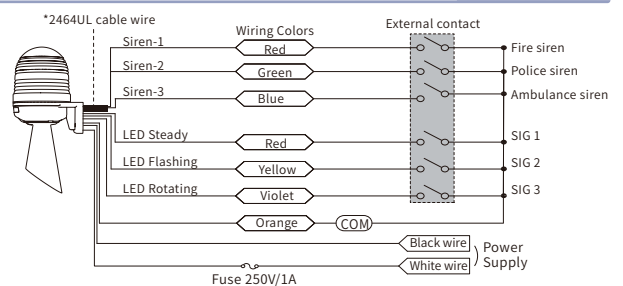
12~24VDC

Siren type



90~240VAC

Siren type



Sound setting and operation

Melody sound

※ it means the condition of '0' when connected with com wire.

Wiring Colors	Red	Green	Blue	Melody reaction	Notes
Normal entry conditions	1	1	1	No	1. If you don't select the signal(Under this condition, 111 is displayed) or select three signals at the same time(Under this condition, 000 is displayed), then the melody doesn't play.
	0	1	1	for elise	
	1	0	1	Home, Sweet Home	
	1	1	0	Cuckoo Walts	
Priority entry conditions	1	0	0	for elise (priority-1)	2. Priority order of melody-playback (1) Red Wire - for elise (2) Green Wire - Home, Sweet Home (3) Blue Wire - Cuckoo Walts
	0	1	0	Home, Sweet Home (priority-2)	
	0	0	1	Cuckoo Walts (priority-3)	

Siren sound

※ it means the condition of '0' when connected with com wire.

Wiring Colors	Red	Green	Blue	Siren reaction	Notes
Normal entry conditions	1	1	1	Notes	It's impossible to input two or three signals at the same time. ※ When connecting wiring at the same time, a sound is played equentially. Fire siren > Police siren > Ambulance siren
	0	1	1	Fire siren	
	1	0	1	Police siren	
	1	1	0	Ambulance siren	

MS86LT Series D86mm High brightness flashing LED signal light



Except
AC type

MS86LT series is 86mm LED lamp for multi-functional usages, which is designed to inject LED light effectively in indoor as well as in outdoor having excellent visibility day and night. It is composed of a long-life LED that is easy for maintenance.



Ordering information

MS86LT - F 00 - R (V)

① ② ③ ④

① Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

② Power Supply

00	12~24VDC
FF	100~220VAC

④ Option

(V)	Continuous flashing (emergency signal) 240±5times per minute
-----	---

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12 ~ 24VDC (±5%) , 100~220VAC(±10%) 50/60Hz
Light source	LED
Dimension	86mm
Flashing rate	70 ± 5times flashing per minute
Buzzer volume (built-in volume control)	Intermittent sound (beep-beep-beep) Sound Pressure: 80 ~ 100 ± 5dB (at 1M)
Lens color	Red, Yellow, Green, Blue, Clear
Mounting method	Direct mounting
Connection method	exposed wiring connections
Ambient temperature	-20 ~ 50°C Storage ambient temperature : -20 ~ 70°C
Ambient humidity	45~85% RH
Dielectric strength	500VAC 50 / 60Hz 1 min
Insulation resistance	Over 100MΩ (500VDC mega between terminals and case)
Vibration	0.75mm at 10~55Hz (cycle: 1 minute)
Protection structure	IP65
Connection	UL1007/22AWG
Approval	CE(Only 12~24VDC), UL, RoHS
Weight	App. 220g (Buzzer type basis)

Current consumption

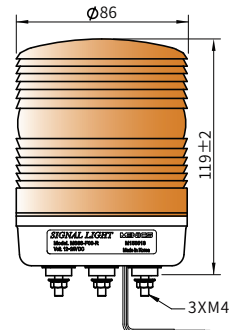
(Maximum current consumption when LED is lit.)

Product color	Standard type		Buzzer type		Buzzer operation only
	12~24VDC	100~220VAC	12~24VDC	100~220VAC	
Red	0.15A	0.07A	0.18A	0.08A	12~24VDC : 0.05A 100~220VAC : 0.02A
Yellow	0.15A	0.07A	0.18A	0.08A	
Green	0.10A	0.07A	0.13A	0.08A	
Blue	0.15A	0.07A	0.20A	0.08A	
Clear	0.10A	0.07A	0.13A	0.08A	

Product Feature

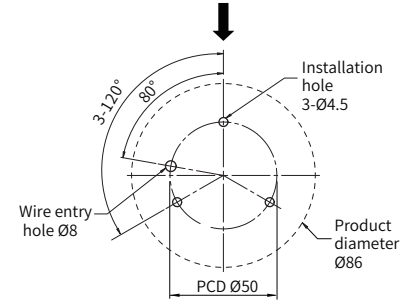
- Volume adjustable buzzer: up to 100 ± 5dB
- Replaceable LED module PCB type
- Emergency flashing patterns signal (option)

Dimension (Unit: mm)



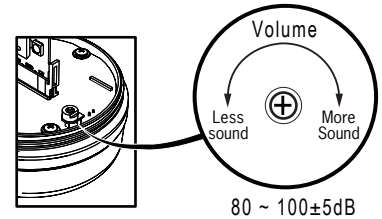
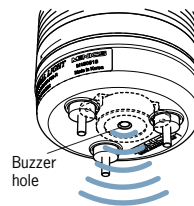
UL1007/22AWG, 800 ± 30mm

Front View (Product label directions)



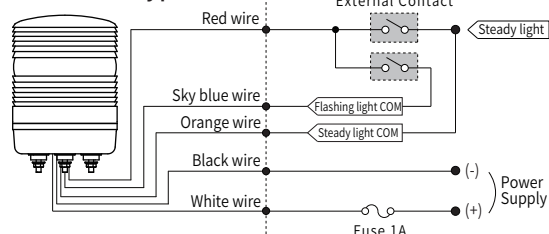
[Mounting hole]

Feature setting



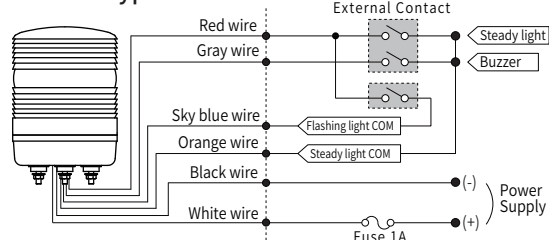
Connection Diagram

<Standard type>



Caution
Be careful of in case of DC power supply as it has polarity.

<Buzzer type>



Caution
Be careful of in case of DC power supply as it has polarity.

Optional Parts

Wall Mounting Bracket



MAM-DS26
Steel



MAP-DS30
Plastic

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS86L Series D86mm LED Signal Light



Except
AC type

MS86L series LED Dome indicator light .The dome shape provides increased visibility and the LEDs provide years of maintenance-free operation.

► Dome head type

► Low head type



Ordering information

MS86L - F 02 - R - F

① Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

② Power Supply

02	24VAC/DC
FF	90~240VAC

④ Lens Shape

No mark	Dome type lens cap
F	Low head type lens cap

Specifications

Function	Steady, Flashing, Buzzer
Power supply (50/60Hz)	24VAC/DC 90 ~ 240VAC
Dimension	86mm
Buzzer volume	App. 80±5 dB (at 1m)
Flashing rate	80±10 times flashing per minute
Vibration	0.75mm at 10~55Hz
Ambient temperature	-20 ~ 40°C
Storage ambient temperature	-20 ~ 70°C
Ambient humidity	45 ~ 85% RH
Withstand voltage	500V AC 50/60Hz for 1 minute
Protection structure	IP65
Approval	UL , CE(24V Only) , RoHS
Connection	UL2464, 22AWGx2C
Weight	App. 150g

Note: LED lifetime depends on operating condition or environment.

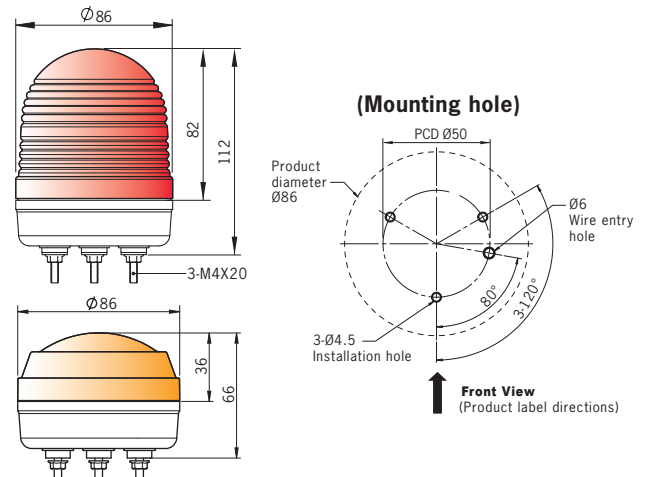
Current Consumption (RMS value ±10%)

PowerSupply	24VAC/DC		90~240VAC	
LED Color	General	Buzzer	General	Buzzer
Red	0.33A	0.36A	0.05A	0.08A
Yellow	0.33A	0.36A		
Green	0.46A	0.49A		
Blue	0.46A	0.49A		
White	0.46A	0.49A		

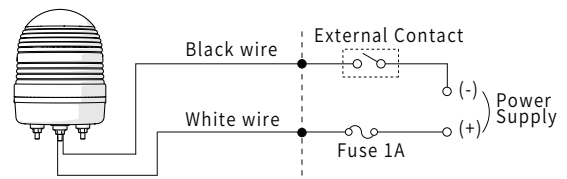
Product Feature

- Wide light distribution with prism-cut dome-shaped lens
- Outstanding visibility at distance
- Selectable Steady or Flashing Modes for LED lights
- Red, Yellow, Green, Blue and Clear lens available
- IP65 rated

Dimensions (unit: mm)

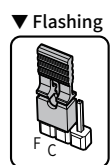
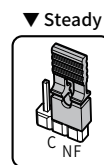
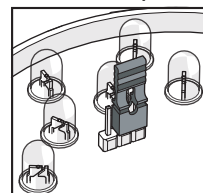


Connection Diagram



Feature setting

Steady or Flashing Conversion dip Switch



Optional Parts

1. Mounting Pole



SAM-T31



SAM-D31



SAM-M31

2. Wall Mount Brackets



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS86W Series D86mm low head multifunction LED Signal Light



The MS86W series is an LED beacon featuring three selectable light patterns of Flashing or rotation for diversified uses. The clear lens makes it easier to see the light, even in bright ambient conditions.



Product Feature

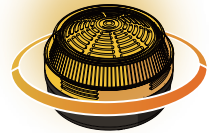
- Flashing, Rotation, Continuous
- Enhanced Illumination: Use of long-life, super bright LED.
- Energy Efficient: Low power consumption.
- Main Body: heat resistant ABS resin.
- Lens Cap: impact and heat resistant polycarbonate resin.
- Installation: Indoor & Outdoors
- Available Colors: Red, Yellow, Green, Blue, Clear



■ Steady light



■ Flashing light



■ Rotating light

Functional Specifications

Flashing Rate	80±10times per minute
Rotating Rate	Approx. 130 ±20 rpm (Clockwise rotation)
Buzzer sound level	80dB ±5dB (at 1M) - Only 24VDC

Note: Life of the LED varies according to operating conditions and environment.

Current Consumption (RMS value ±10%)

	Red	Yellow	Green	Blue	White
General	0.50A	0.50A	0.30A	0.35A	0.38A
Buzzer	0.53A	0.53A	0.34A	0.38A	0.40A

Ordering information

MS86W - **R** **00** - **R**

① ② ③

① Light Style

R	Steady + Flashing + Rotating
B	Steady + Flashing + Rotating + Buzzer (24V only)

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

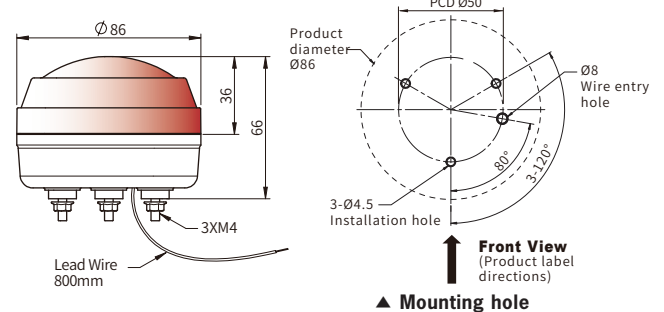
② Power supply

00	12~24VAC/DC
----	-------------

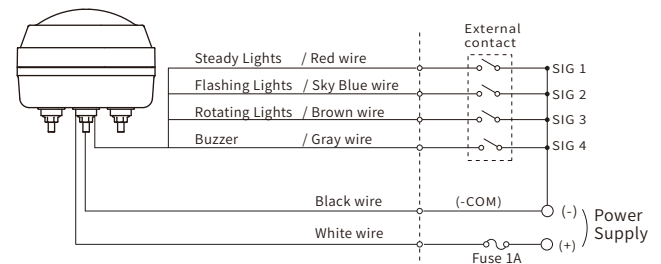
Specifications

Dimension	86mm
Power supply	12 ~ 24VAC/DC
Function	Steady, Flashing, Rotating, Buzzer
Ambient humidity	45 to 85% RH (no condensation)
Ambient temperature	-15 to 40°C (no freezing)
Storage temperature	-20 to 70°C (no freezing)
Insulation resistance	100MQ minimum (500VDC megger)
Vibration	10 to 55Hz, amplitude 0.75mm
Body color	Black
Material	- Body: ABS resin - Lens cap: PC resin - Fixing bolt: Steel
Mounting method	- Body direct mounting - L-shaped bracket - Installation: Indoor & Outdoor Use
Lens color	Red / Yellow / Green / Blue / Clear
Approval	UL, RoHS
Protection structure	IP65
Connection method	Lead wire
Connection	UL1007/22AWG
Weight	170g

Dimensions (Unit:mm)



Connection Diagram



Optional Parts

Wall Mount Brackets



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS86T Series D86mm Wall Mount Multi Function LED Signal light (Multi Sound)

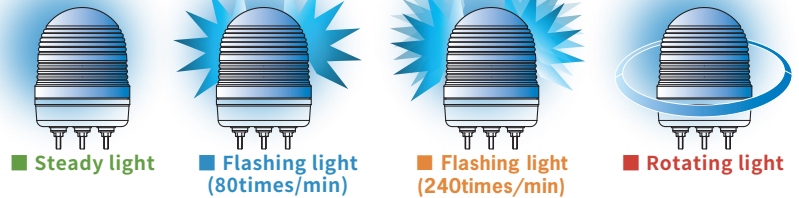


LED Strobe Light of High Brightness, Excellent Visibility from a Distance.
Improving Visibility by Employing Special Scattering Lens.



Product Feature

- Wide light distribution with prism-cut dome-shaped lens
- Outstanding visibility at distance
- Flashing Cycles: 2 patterns (Selectable by a switch)
- Built-in buzzer (adjustable volume)
- Adjustable flashing or rotating cycles
- Red, Yellow, Green, Blue and Clear lens available



Ordering information

MS86T - F 00 - R

① ② ③

① Light Style

F	Steady + Flashing
R	Steady + Flashing + Rotating
B	Steady + Flashing + Rotating + Buzzer

② Power Supply

00	12~24VAC/DC
FF	90~240VAC
04	48VDC

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

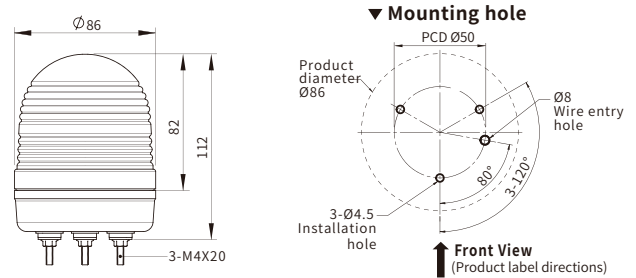
Function	Steady, Flashing, Rotating, Buzzer
Power supply	12~24VAC/DC, 48VDC, 90~240VAC (50/60Hz)
Dimension	86mm
Material	Lens : PC resin , Body : ABS resin
Buzzer volume	10~100±5dB (at 1m) volume adjustable
Flashing Rate (Internal PCB board is dip switch controls)	F1: 80±10 times per minute F3: 240±10 times per minute (Emergency Signal lights)
Rotating rate	Min.60 ~ Max.300±10rpm (Clockwise rotation)
Connection method	Lead wire Connection
Insulation Resistance	100MΩ minimum (500VDC megger)
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH (no condensation)
Protection structure	IP65 Vibration : 0.75mm at 10~55Hz
Approval	UL, RoHS
Connection	1007UL / 22AWG
Weight	Approx. 360g

Note: Life of the LED varies according to operating conditions and environment.

Current Consumption (RMS value ±10%)

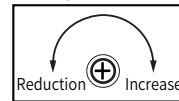
Power supply		Red	Yellow	Green	Blue	White
12~24V	General	0.4A	0.34A	0.3A	0.37A	0.28A
	Buzzer	0.55A	0.48A	0.45A	0.52A	0.42A
48V	General	0.06A	0.06A	0.04A	0.04A	0.04A
	Buzzer	0.20A	0.20A	0.20A	0.19A	0.19A
90~240V	General	0.06A	0.05A	0.05A	0.04A	0.45A
	Buzzer	0.20A	0.20A	0.20A	0.19A	0.19A

Dimensions (Unit:mm)

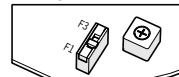


Feature setting

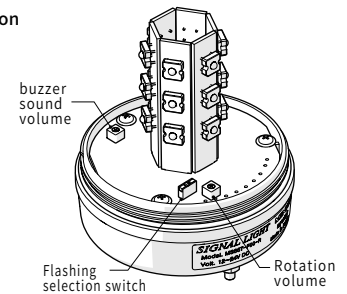
- Adjusting of buzzer sound / Rotation



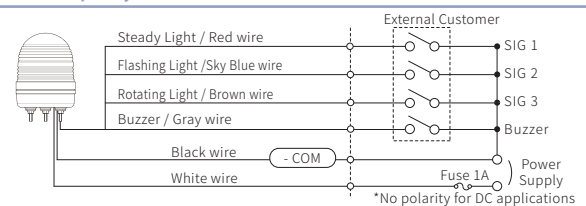
- Flashing feature selection



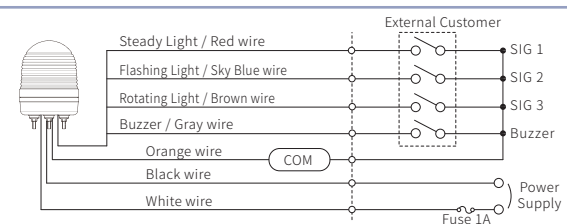
F1: 80±10 times per minute
F3: 240±10 times per minute (emergency signal display light)



Connection Diagram 12~24VAC/DC, 48VDC



90~240VAC

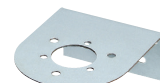


Optional Parts

Wall Mount Brackets



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS86M Series D86mm Wall Mount LED 3 Colors in 1 Signal Light (Multi Sound)

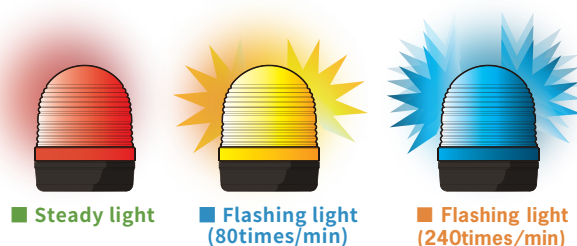


With high-brightness LED as its light source, the flashing light has a high effect of radiating signal light to ensure an accurate signal transmission even under worse conditions such as permanent fog and dust.



Product Feature

- 3 colors in 1 LED modular components
- High Brightness LED light distribution through prism-cut lenses
- The streamlined warning light is suitable for patrol cycles, emergency, vehicles and ambulance cars.
- Extremely high light intensity



Ordering information

MS86M - **F** **00** - **RYG**

① ② ③

① Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

② Power supply

00	12~24VAC/DC
FF	90~240VAC

③ LED Color

RYG	Red + Yellow + Green
RGB	Red + Green + Blue

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12~24VAC/DC, 90~240VAC
Buzzer volume	10~100±5dB (at 1M), volume adjustable
Dimension	86mm Lens color: Clear
Material	Body : ABS resin, Cap : PC resin
Flashing rate (Internal PCB board is dip switch controls)	F1: 80±10times/minute F3: 240±10times/minute (Emergency Signal lights)
Connection method	Lead wire Connection
Insulation resistance	100MΩ minimum (500VDC megger)
Vibration	0.75mm at 10~55Hz
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	UL, RoHS
Connection	1007UL/22AWG
Weight	Approx. 150g

Current Consumption (RMS value ±10%)

Power Spec	12V ~ 24V	90~240V AC	Buzzer
R/Y/G LED	400 ~ 600mA	30~80mA	150mA
R/G/B LED			(Momentary inrush current: up to 300mA)

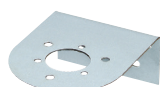
※ Maximum current consumption when LED is lit.

Optional Parts

Wall Mount Brackets



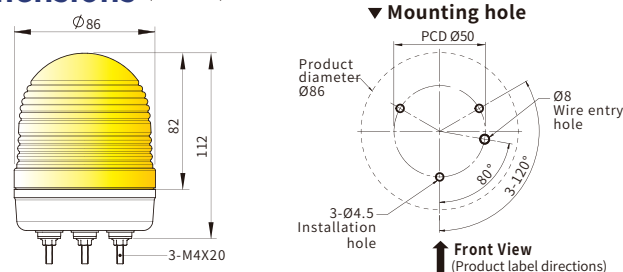
MAP-DS30
ABS resin



MAM-DS26
Steel

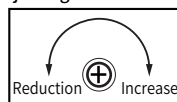
See Page 80 ~ 81 >> for Mounting Options and Accessories.

Dimensions (Unit:mm)



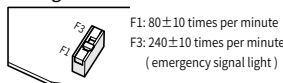
Feature setting

- Adjusting of buzzer sound

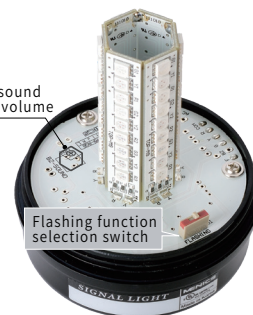


The buzzer sound adjustment volume

- Flashing feature selection

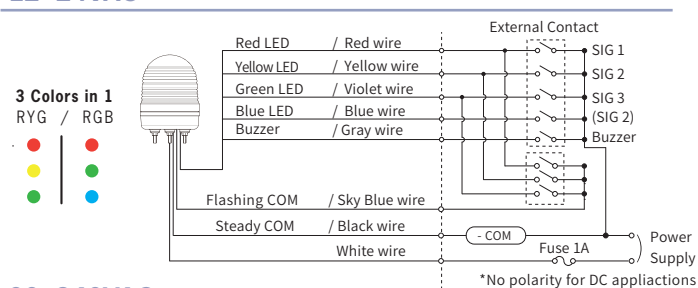


F1: 80±10 times per minute
F3: 240±10 times per minute (emergency signal light)

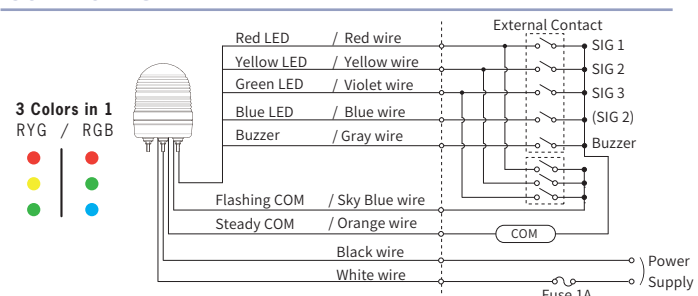


Connection Diagram

12~24VAC



90~240VAC



MS86S Series D86mm Xenon Lamp Strobe Light



Strobe Light of High Brightness, Excellent Visibility from a Distance
Improving Visibility by Employing Special Scattering Lens



Ordering information

MS86S - S 00 - R
① ② ③

① Body option

S	Molding type
N	Not molding type

② Power supply

00	12~24VAC/DC
10	110VAC (Molding not applicable)
20	220VAC (Molding not applicable)

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

Dimension	86mm
Light source	Xenon lamp
Power supply	12~24VAC/DC, 110VAC, 220VAC (50/60Hz)
Mounting method	Body direct mounting, L-shaped bracket
Lens color	Red, Yellow, Green, Blue, Clear (Material: PC resin)
Flashing rate	Approx. 80±10times/minute
Current consumption (±10%)	- 12~24V: 0.08~0.15A - 110V: 0.07A - 220V: 0.03A
Vibration	0.75mm at 10~55Hz
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Protection structure	IP65
Approval	UL, RoHS
Connection	UL2464/22AWGx2C
Weight	App.300g - Mold type, App.200g - Standard

Replacement Lamp Specifications

Supplier No.	MS86S-LAMP-02	Supplier No.	MS86S-LAMP-10
	Xenon Lamp I - Type, 3W 12~24V Lamp life: 1,000,000 Frequency. (2,000 hours)		Xenon Lamp U - Type, 6W AC110V Lamp life: 1,000,000 Frequency. (2,000 hours)

Product Feature

- Xenon Lamp type
- Wide light distribution with prism-cut dome-shaped lens
- Outstanding visibility at distance
- Application of replaceable lamp in PCB module
- Red, Yellow, Green, Blue and Clear lens available
- IP65 rated

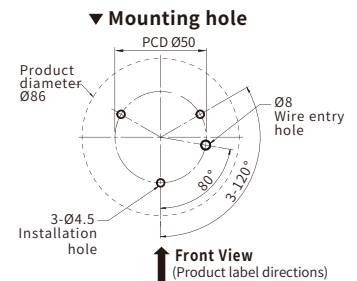
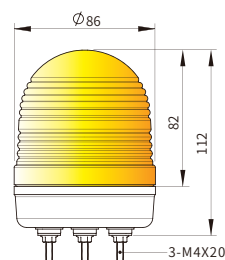


AC type



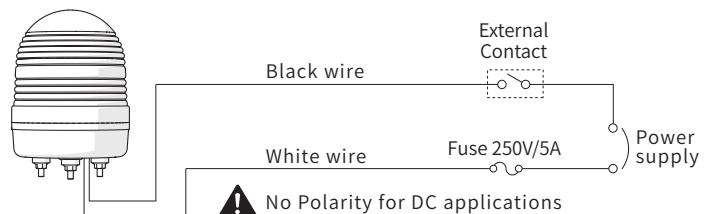
DC type
molding type

Dimensions (Unit:mm)



Front View
(Product label directions)

Connection Diagram



Optional Parts

1. Mounting Pole



SAM-T31



SAM-D31



SAM-M31



2. Wall Mount Brackets



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS115S Series D115mm Xenon Lamp Strobe Light



Strobe Light of High Brightness, Excellent Visibility from a Distance. Improving visibility by Employing Special Scattering Lens.



Ordering information

MS115S - S 20 - R

① Power Supply

00	12~24VAC/DC
10	110VAC
20	220VAC

② Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

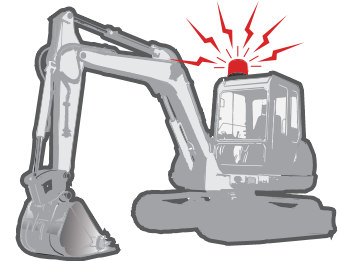
Dimension	115mm
Light source	Xenon Lamp
Power supply	12 ~ 24VAC/DC, 110VAC, 220VAC (OPTION : 48VAC/DC)
Mounting method	Body direct mounting , L-shaped bracket
Lens colors	Red, Yellow, Green, Blue, Clear (Material: PC resin)
Flashing rate	60±10 times/minute
Current Consumption (±10%)	- 12~24V: 0.08~0.15A - 110V: 0.07A - 220V: 0.03A
Vibration	0.75mm at 10~55Hz
Ambient temperature	-20 to 40℃
Storage ambient temperature	-20 to 70℃
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	UL, RoHS
Connection	UL 2464, 22AWGx2C
Weight	Approx.315g

Replacement Lamp Specifications

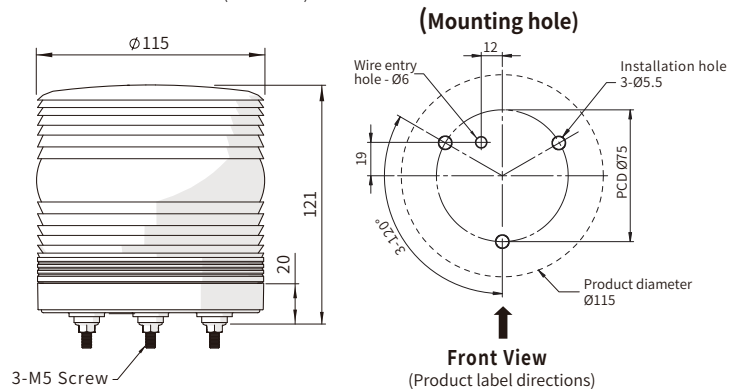
Supplier No.	MS86S-LAMP-02	Supplier No.	MS86S-LAMP-10
	Description. Xenon Lamp I - Type, 3W 12-24V Lamp life: 1,000,000 Frequency. (2,000 hours)		Description. Xenon Lamp U - Type, 6W AC110V Lamp life: 1,000,000 Frequency. (2,000 hours)

Product Feature

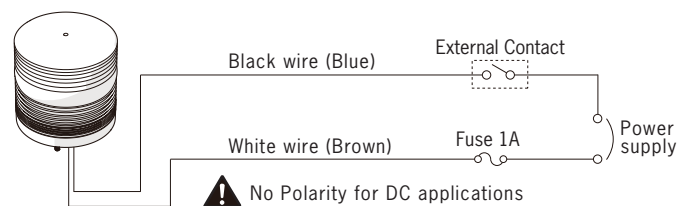
- Xenon Strobe light
- Wide light distribution with prism-cut dome-shaped lens
- Outstanding visibility at distance
- PCB module style Xenon lamp
- Fast and easy replacement of lamp
- Red, Yellow, Green, Blue and Clear lens available
- IP65 rated



Dimensions (unit: mm)

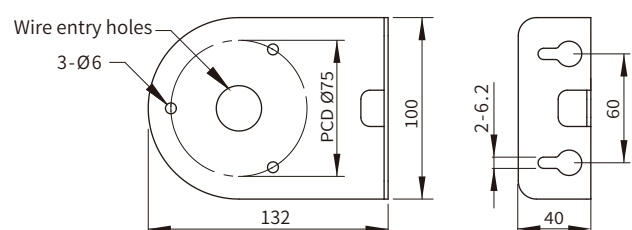


Connection Diagram



Optional Parts

Wall Mount Bracket (unit: mm)



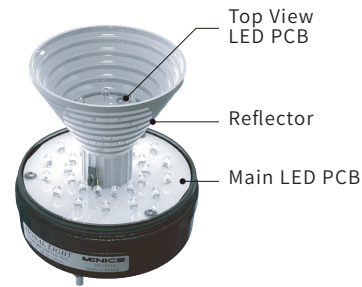
MS115L Series D115mm LED Signal Light



LED Multi Signal Light featuring two flashing patterns for diverse use.

Product Feature

- Newly Developed Triple-reflection System : For enhanced visibility and low power consumption
- Enhanced Illumination : Use of long-life, super bright LED
- Semi-permanent in the self-life of light source and suitable for machines having lots of vibration and impact
- Built-in Buzzer (80dB)
- Red, Yellow, Green, Blue and Clear lens available
- Energy Efficient : Low power consumption



Ordering information

MS115L - F 02 - R
① ② ③

① Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

② Power Supply

02	24VAC/DC
FF	90~240VAC

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

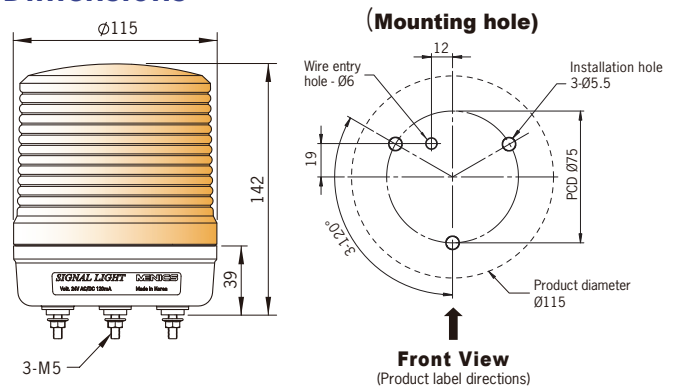
Function	Steady, Flashing, Buzzer
Power supply	24VAC/DC, 90~240VAC (50/60 Hz)
Buzzer volume	Approx. 80±5 dB (at 1M)
Lens color	Red, Yellow, Green, Blue & Clear
Dimension	115mm
Flashing rate	80±10 times/minute
Vibration	0.75mm at 10~55Hz
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Protection structure	IP65
Approval	UL, RoHS
Connection	UL2464/22AWGx2C
Weight	Approx. 325g

Note: Life of the LED varies according to operating conditions and environment

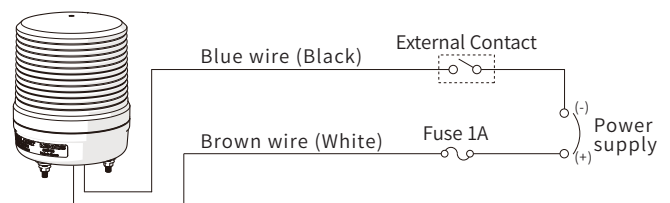
Current Consumption (RMS value ±10%)

PowerSupply	24VAC/DC		90~240VAC	
LED Color	General	Buzzer	General	Buzzer
Red	0.13A	0.16A		
Yellow	0.11A	0.14A		
Green	0.25A	0.28A	0.07A	0.10A
Blue	0.25A	0.28A		
White	0.29A	0.32A		

Dimensions

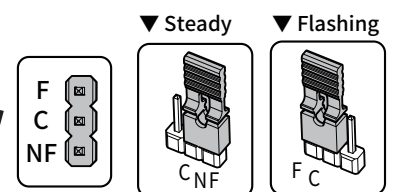
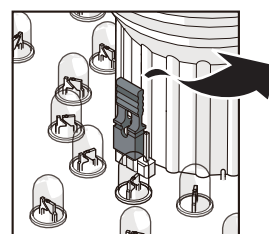


Connection Diagram



Feature setting

Steady or Flashing
Conversion dip Switch



Optional Parts Wall Mount Bracket



See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS115T Series D115mm Multi Function LED Signal Light



LED Strobe Light of High Brightness, Excellent Visibility from a Distance.
Improving Visibility by Employing Special Scattering Lens.



Ordering information

MS115T - F 00 - R - L

① Light Style

F	Steady + Flashing
R	Steady + Flashing + Rotating
B	Steady + Flashing + Rotating + Buzzer

② Power Supply

00	12~24VAC/DC
FF	90~240VAC

③ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

④ Base Type

No mark	20mm Body
L	40mm Body

Specifications

Function	Steady, Flashing, Rotating, Buzzer	
Power supply	12~24VAC/DC, 90~240VAC	
Dimension	115mm	
Material	Lens: PC resin, Body: ABS resin	
Buzzer volume	10~100±5dB (at 1m) volume adjustable	
Flashing rate (Internal PCB board is dip switch controls)	F1: 80±10 times per minute F3: 240±10 times per minute (Emergency Signal lights)	
Rotating rate	Min.60 ~ Max.300±10rpm (Clockwise rotation)	
Connection method	Lead wire Connection	
Insulation resistance	100MΩ minimum (500VDC megger)	
Ambient temperature	-20 to 40°C	
Storage ambient temperature	-20 to 70°C	
Ambient humidity	45~85% RH (no condensation)	
Protection structure	IP65	Vibration: 0.75mm at 10~55Hz
Approval	UL, RoHS	
Connection	1007UL / 22AWG	
Weight	App. 360g	

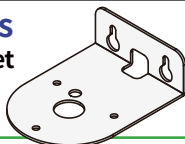
Note: Life of the LED varies according to operating conditions and environment.

Current Consumption (RMS value ±10%)

Power supply		Red	Yellow	Green	Blue	White
12~24V	General	0.54A	0.53A	0.25A	0.54A	0.24A
	Buzzer	0.69A	0.69A	0.39A	0.69A	0.39A
90~240V	General	0.08A	0.07A	0.04A	0.08A	0.04A
	Buzzer	0.23A	0.23A	0.19A	0.23A	0.19A

Optional Parts

Wall Mount Bracket
MAM-DS29
Steel

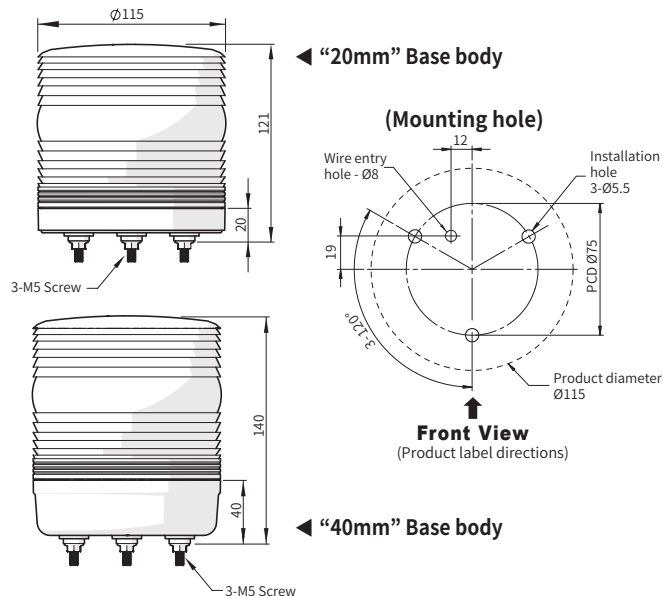


See Page 80 ~ 81 >>
for Dimensions

Product Feature

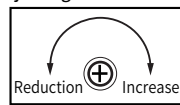
- Extremely high light output using unique LED technology
- Wide light distribution with prism-cut dome-shaped lens
- Outstanding visibility at distance
- Flashing Cycles : 2 patterns (Selected by a switch)
- Adjustable flashing or rotating cycles
- Built-in buzzer (adjustable volume)
- Red, Yellow, Green, Blue and Clear lens available

Dimensions (unit: mm)

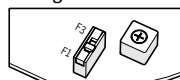


Feature setting

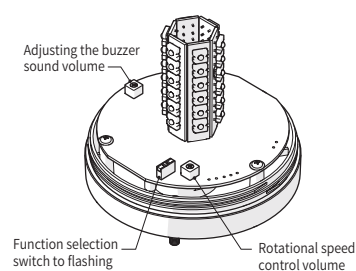
- Adjusting of buzzer sound / Rotation



- Flashing feature selection

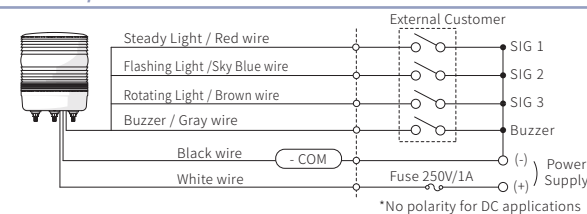


F1: 80±10 times per minute
F3: 240±10 times per minute
(emergency signal display light)

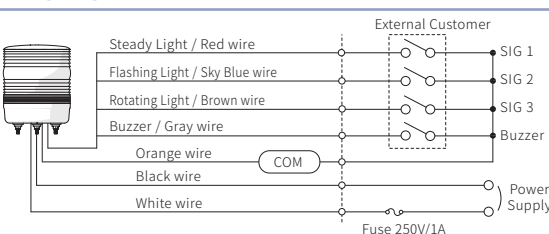


Connection Diagram

12~24VAC/DC



90~240VAC



MS115M Series D115mm LED 3 Colors in 1 Signal Light



LED Strobe Light of High Brightness, Excellent Visibility from a Distance.
Improving Visibility by Employing Special Scattering Lens.



Ordering information

MS115M - B FF - RYG - L

① ② ③ ④

① Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

② Power supply

00	12~24VAC/DC
FF	90~240VAC

③ LED Color

RYG	Red + Yellow + Green
RGB	Red + Green + Blue

④ Base type (base height)

No mark	20mm Base body
L	40mm Base body

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12~24VAC/DC, 90~240VAC
Buzzer volume	10~100±5dB (at 1M), volume adjustable
Dimension	115mm Lens color: Clear
Material	Body : ABS resin, Cap : PC resin
Flashing rate (Internal PCB board is dip switch controls)	F1: 80±10times/minute F3: 240±10times/minute (Emergency Signal lights)
Connection method	Lead wire Connection
Insulation resistance	100MΩ minimum (500VDC megger)
Vibration	0.75mm at 10~55Hz
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	UL, RoHS
Connection	1007UL/22AWG
Weight	App. 360g

Current consumption (RMS value ±10%)

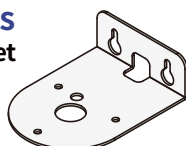
LED Colors	12V		12VDC		90VAC	110VAC	220VAC
	AC	DC	AC	DC			
Red	0.39A	0.21A	0.25A	0.11A	0.07A	0.06A	0.04A
Yellow	0.38A	0.20A	0.24A	0.11A	0.06A	0.06A	0.04A
Green	0.42A	0.25A	0.30A	0.14A	0.09A	0.07A	0.05A

⚠ Combined current consumption of both LED Steady light and sound

Optional Parts

Wall Mount Bracket

MAM-DS29
Steel



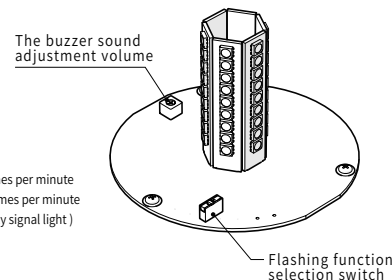
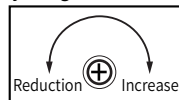
See Page 80 ~ 81 >>
for Dimensions

Product Feature

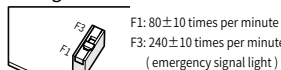
- 3 colors in 1 LED modular components
- Bright & even light distribution through prism-cut lenses
- Multi-functional LED signal light
- Flashing Cycles : 2 patterns (Selectable by a switch)
- Optional 100dB Buzzer (adjustable volume)
- IP65 rated
- RoHS compliant

Feature setting

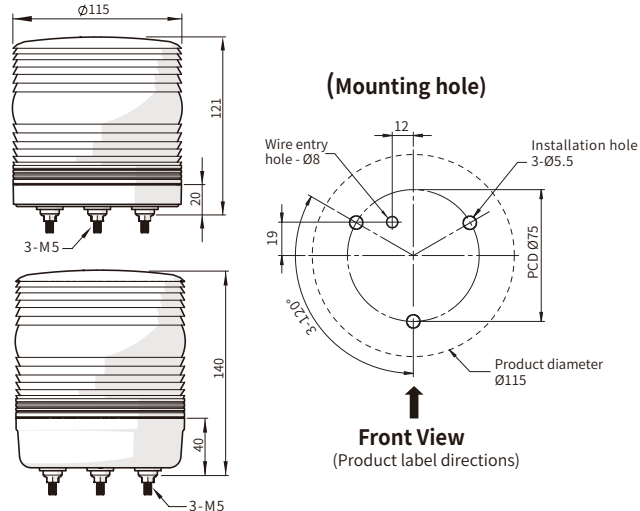
- Adjusting of buzzer sound



- Flashing feature selection

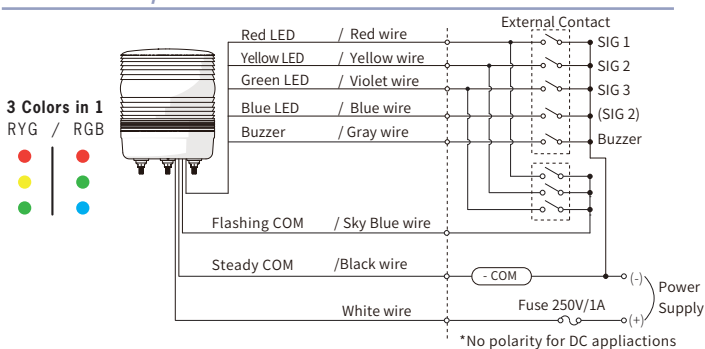


Dimensions (unit: mm)

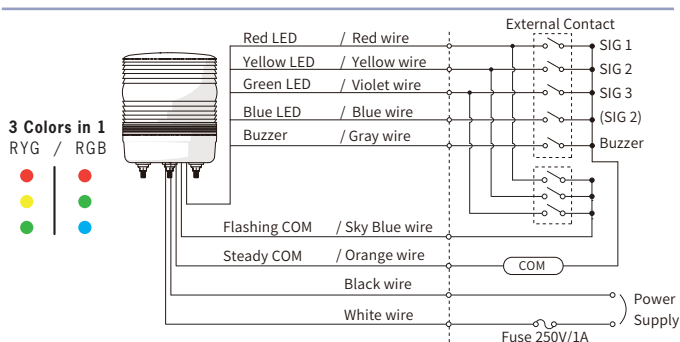


Connection Diagram

12 ~ 24VAC/DC



90 ~ 240VAC



MS115C Series D115mm Only Flashing LED Signal Light

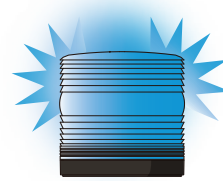


LED Strobe Light of High Brightness, Excellent Visibility from a Distance. Improving Visibility by Employing Special Scattering Lens. Semi-permanent in the lifespan of light source and suitable for machines having.

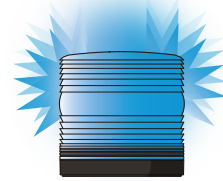


Product Feature

- Apply a low body (20mm)
- Semi-permanent in the lifespan of light source and suitable for machines having
- Wide light distribution with prism-cut dome-shaped lens
- Flashing Cycles : 2 patterns (Selectable by a switch)
- Red, Yellow, Green, Blue and Clear lens available
- Installation : upright, inverted, sideways
- IP65 rated



■ Flashing light (80times/min)



■ Flashing light (240times/min)

Ordering information

MS115C - F 00 - Y

① Power Supply

00 12~24VDC

② Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

Function	Flashing
Power supply	12~24VDC
Dimension	115mm
Material	Lens : PC resin , Body : ABS resin
Flashing rate (Internal PCB board is dip switch controls)	F1: 80±10 times per minute F3: 240±10 times per minute (Emergency Signal lights)
Ambient temperature	-20 to 40°C
Storage ambient temperature	-20 to 70°C
Ambient humidity	45~85% RH
Protection structure	IP65 Vibration: 0.75mm at 10~55Hz
Approval	UL, RoHS
Connection	1007UL/22AWG
Weight	App. 325g

Note: Life of the LED varies according to operating conditions and environment.

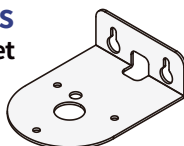
Current Consumption

Volt.	LED.	Red	Yellow	Green	Blue	Clear
12 ~ 24V		565 ~ 900mA				

Optional Parts

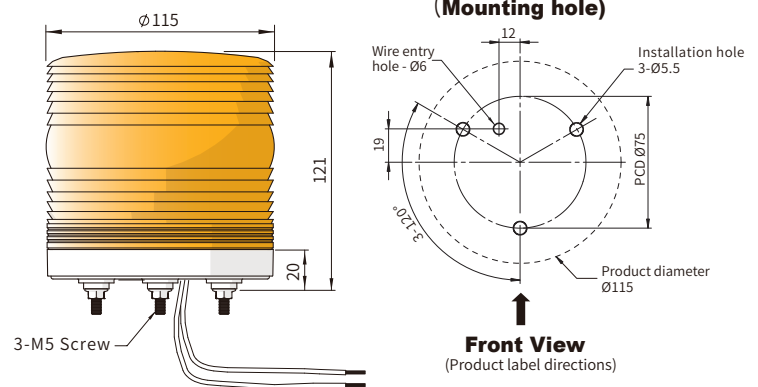
Wall Mount Bracket

MAM-DS29
Steel

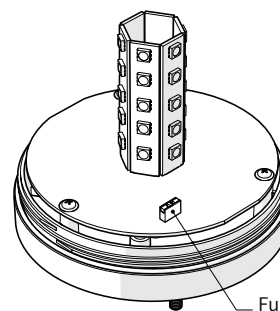


See Page 80 ~ 81 >>
for Dimensions

Dimensions (unit: mm)

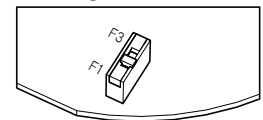


Feature setting



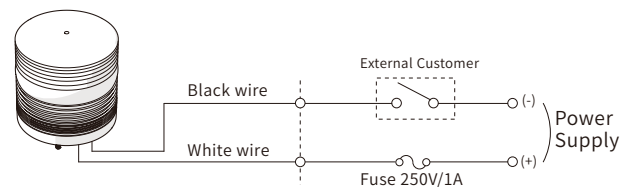
Function selection switch to flashing

- Flashing feature selection



F1: 80±10times per minute
F3: 240±10times per minute
(emergency signal display light)

Connection Diagram



MS135T Series D135mm LED Large Warning Signal Light



MS135T series is a large 135mm LED Warning Light of multi-functional that is designed to inject LED light effectively both indoor and outdoor and both day and night securing an excellent visibility. It secures an excellent visibility for both distant place and just under the bottom of the even when mounted high.



Ordering information

MS135 T - B 00 - R

① ② ③ ④

① Product Model Type

T	Standard type
TP	Aluminium Pole mounting type

③ Power supply

00	12~24VDC
FF	100~240VAC

④ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

② Light Style (NOTE)

R	Flashing + Rotating
B	Flashing + Rotating + Buzzer
M	Flashing + Rotating + Melody
S	Flashing + Rotating + Siren

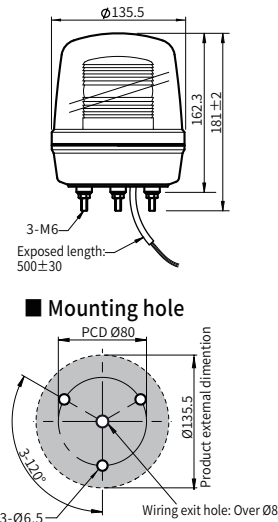
(NOTE)

MS135T function option : R, B, M, S

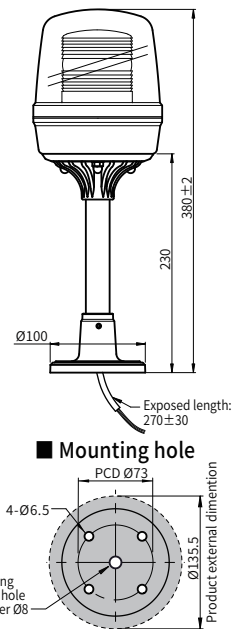
MS135TP function option : R, B only

Dimensions (unit: mm)

MS135T series

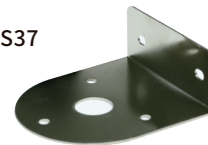


MS135TP series



Optional Parts Wall Mount Bracket

MAM-DS37
Steel



MS135P type only
MAM-DS38
Steel



See Page 80 ~ 81 >> for Mounting Options and Accessories.

Specifications

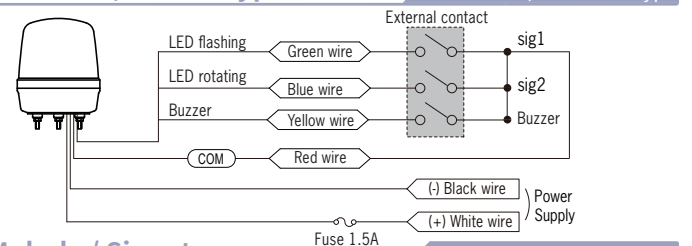
Function	Flashing(emergency signal flash pattern), rotating, Buzzer		
Power supply	12~24VDC ±5%, 100~240VAC (AC. 50/60Hz)		
Light source	LED		
Dimension	135.5mm		
Flash rate	240±5 time/min	Rotating rate	60~300 rpm/min
Buzzer volume (Built-in volume control)	intermittent sound (Beep-Beep-Beep) : 75~100±5dB (1M)	Sound volume (built-in volume)	55~80±5dB (1M)
		Melody	for Elise, Home sweet home Cuckoo waltz
Lens color	Red, Yellow, Green, Blue, Clear	Siren	Fire, Police, Ambulance
Mounting method	MS135T: Direct mounting on the body / MS135TP: aluminum base mounting		
Connection method	Exposed wiring connections		
Ambient temperature	-15 ~ 50°C	Storage ambient temperature	-20 ~ 70°C
Ambient humidity	45~85% RH		
Dielectric strength	1 Min. at 1000VAC 50/60Hz		
Insulation Resistance	100MΩ or more (500VDC Megger basis)		
Vibration	10 ~ 55Hz (1 min.cycle) Double amplitude 0.75mm X, Y, Z		
Protection structure	IP65		
Connection	UL2464/22AWG		
Approval	RoHS		
Weight	MS135T series - app.555g MS135TP series - app.935g		

Current Consumption

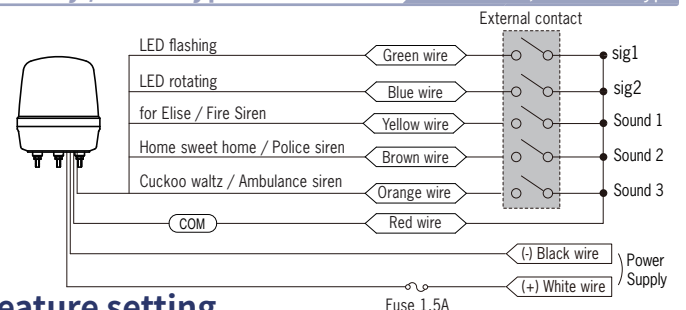
Product color	Standard type		Buzzer type		Melody / Siren	
	12~24V	110~220V	12~24V	110~220V	12~24V	110~220V
Red	0.75A	0.10A	0.78A	0.13A	0.90A	0.14A
Yellow	0.75A	0.10A	0.78A	0.13A	0.90A	0.14A
Green	0.72A	0.08A	0.75A	0.10A	0.90A	0.14A
Blue	0.72A	0.08A	0.75A	0.10A	0.90A	0.14A
Clear	0.75A	0.10A	0.78A	0.12A	0.90A	0.14A

Note: Life of the LED vary depending on the operating condition or environment.

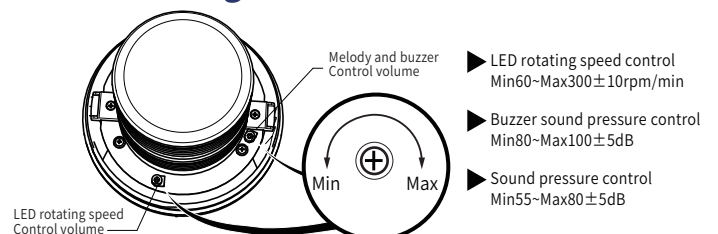
Connection Diagram Standard / Buzzer type



Melody / Siren type



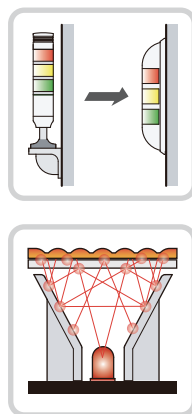
Feature setting



PWE Series D90mm Wall Mounting Type Signal Light

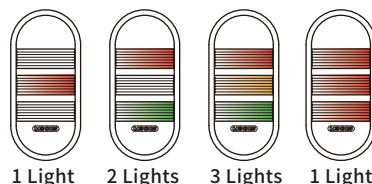


Ultra-Slim Signal Lights that offer seamless integration with equipment.



Product Feature

- Slim Profile Wall Mount
- Easy Mounted vertically and horizontally
- Equivalent brightness in every angle
- Steady and flashing lights
- Vibration and moisture resistant



For information of Special specifications Please contact us.

Current Consumption (RMS value $\pm 10\%$)

PowerSupply	12VAC/DC		24VAC/DC		90~240VAC	
LED Color	General	Buzzer	General	Buzzer	General	Buzzer
1stack-Red	0.06A	0.25A	0.07A	0.16A	0.02A	0.05A
2stacks-Red+Green	0.12A	0.30A	0.12A	0.20A	0.03A	0.13A
3stacks-R+Y+G	0.17A	0.37A	0.15A	0.27A	0.04A	0.18A

Note: Life of the LED varies according to operating conditions and environment.

Ordering information

PWE **C** **F** - **3** **02** - **RYG**

① Body Color

No mark	Ivory
C	Silver Coating

② Light Style

No mark	Steady
F	Steady + Flashing
B	Steady + Buzzer
Z	Steady + Flashing + Buzzer

③ Number of Stack

1	1 Stack
2	2 Stacks
3	3 Stacks

④ Power Supply

01	12VAC/DC
02	24VAC/DC
FF	90 ~ 240VAC

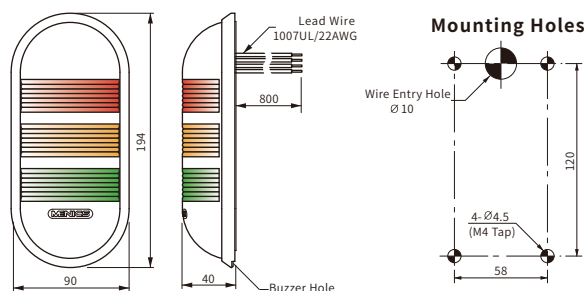
⑤ LED Color (Top to Bottom)

R	Red	RYG	Red + Yellow + Green
RG	Red + Green	RBG	Red + Blue + Green

Specifications

Function	Steady, Flashing, Buzzer	
Power supply	12VAC/DC, 24VAC/DC, 90~240VAC (AC 50/60Hz)	
Light source	LED	
Lens color	Red, Yellow, Green, Blue	
Dimension	Width: 90mm, Thickness: 40mm, Length: 194mm	
Flashing rate	80 $\pm$ 5times per minute	
Buzzer volume	80 $\pm$ 5dB (at 1M, Sound Level is maximum)	
Mounting method	Wall mounting only (Upright, Reverse, Sideways)	
Connection method	Lead wire connection	
Ambient temperature	-20 ~ 40°C	
Storage ambient temperature	-20 ~ 70°C	
Ambient humidity	45~85% RH	
Dielectric strength	1000VAC 50/60Hz for 1min	
Insulation resistance	100M Ω min. at 500VDC	
Vibration	0.75mm at 10~55Hz	
Connection	UL1007/22AWG	Approval : UL, CE, RoHS
Protection structure	IP65 (IP52-Buzzer type)	
Weight (Buzzer type)	Approx. 340g	

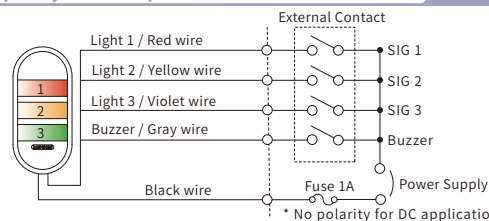
Dimensions <Unit: mm>



Connection Diagram

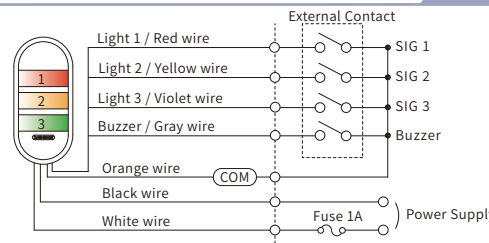
12VAC/DC, 24VAC/DC

Steady / Buzzer



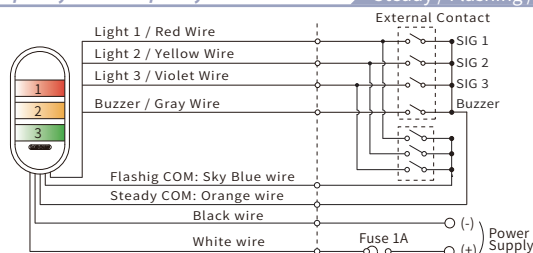
90~240VAC

Steady / Buzzer



12VAC/DC, 24VAC/DC, 90~240VAC

Steady / Flashing / Buzzer



MWE Series D90mm Wall Mounting Type Multicolor Signal Light (Single lens)



MWE Series are manufactured from Lens using LED-only synthetic resin, so it displays natural and detail color of the LED Lighting. The diffusion and transmission ratio of the LED Lighting are very good regardless of angle. This slim product offers seamless integration with equipment.



Body : Ivory
Lens : Clear Lens

Body : Ivory
Lens : Milky Lens

Body : Silver Coating
Lens : Milky Lens

Ordering information

MWE **C** **F** - **4** **00** - **RYGB** (**M**)

① ② ③ ④ ⑤ ⑥

① Body Color

No mark	Ivory
C	Silver Coating

② Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

③ Number of Stack

3	3 Color signals
4	4 Color signals

④ Power Supply

00	12 ~ 24VDC
FF	110~220VAC

⑤ LED Color

RGB	Red + Green + Blue
RYG	Red + Yellow + Green
RYGB	Red + Yellow + Green + Blue

⑥ Color of Front lens ※ option

No mark	Clear lens
(M)	Milky lens

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12~24VDC, 110~220VAC (AC: 50/60Hz)
Light source	LED
LED color	3 colors: RGB/RYG, 4 colors: RYGB
Dimension	Width: 90mm, Thickness: 40mm, Length: 194mm
Flashing rate	12VDC: 80±5times per minute 24VDC: 85±5times per minute 110~220VAC: 85±5times per minute
Lens color	Standard type: Clear, Option: Milky white
Buzzer volume	75±5dB (at 1M, Sound Level is maximum)
Mounting method	Wall mounting only (Upright, Reverse, Sideways)
Connection method	Lead wire connection
Ambient temperature	-20 ~ 40°C
Storage ambient temperature	-20 ~ 70°C
Ambient humidity	45~85% RH
Dielectric strength	1000VAC 50/60Hz for 1min
Insulation resistance	100MΩ min. at 500VDC
Vibration	0.75mm at 10~55Hz
Connection	UL1007/22AWG Certification UL, CE, RoHS
Protection structure	IP65 (IP52-Buzzer type)
Weight (Buzzer type)	AC type - App. 300g, DC type - App. 293g

“New concept LED display that can change color from 1 color to 4 colors on one display window”

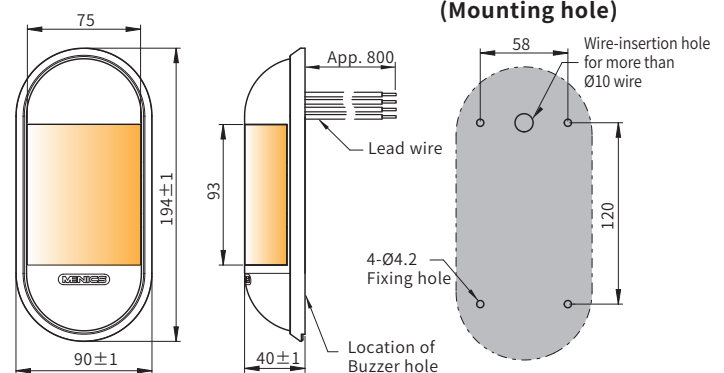
Product Feature

- 4 Colors (Red, Yellow, Green, Blue) / 3 Colors (Red, Green, Blue) Signal Light
- Large LED Light-emitting Lens: Length: 93mm
- 40mm thick, slim product offers seamless integration with equipment
- Optional built-in Buzzer: IP65 (Buzzer type: IP52)
- Letters, Symbols and Company Logos can be carved and attached to the Front lens using sheet.

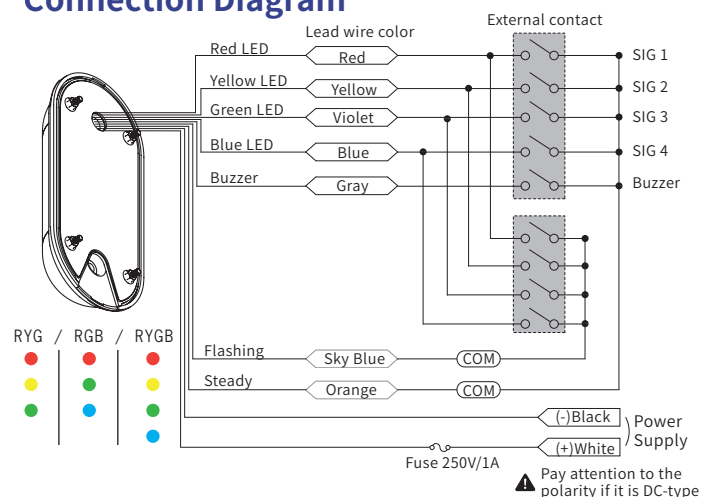
Current Consumption (RMS value ±10%)

PowerSupply	12~24VDC		110~220VAC	
Current consumption	General	Buzzer	General	Buzzer
	0.50A	0.60A	0.07A	0.07A

Dimensions <Unit: mm>



Connection Diagram



RGB LED Color Chart (12~24VDC only)

Condition	Wiring	LED Color
1	Red wire	Red
2	Violet wire	Green
3	Blue wire	Blue
4	Red + Violet wire	Yellow
5	Red + Blue wire	Pink
6	Violet + Blue wire	Cyan
7	Red + Violet + Blue wire	White

MWET Series D90mm Wall Mounting Multi-channel LED 3-color Signal Light (Single Lens)



This 3 colors in 1 signal light offers wide visibility and multi-channel analog input. When one signal line is activated the LEDs illuminate the entire screen, and when the second line is activated the screen splits in two showing two different colors.



Clear lens

high intensity LEDs and prism-cut lens provides great visibility at long distance (Long distance applications)



Milky white lens

offers a softer light brightness helping prevent eye exhaustion from the light (short distance applications)

Ordering information

MWET **C** **F** - **3** **00** - **RYGB** (M) ※ option

① ② ③ ④ ⑤ ⑥

① Body Color

No mark	Ivory
C	Silver Coating

② Light Style

F	Steady + Flashing
B	Steady + Flashing + Buzzer

③ LED Color Type

3	3 Color signal
---	----------------

④ Power Supply

00	12 ~ 24VDC
FF	110~220VAC

⑤ LED Color

RGB	Red + Green + Blue
RYG	Red + Yellow + Green

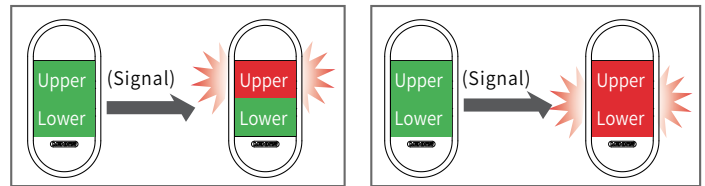
⑥ Color of Front lens ※ option

No mark	Clear lens
(M)	Milky lens

Specifications

Function	Steady, Flashing, Buzzer
Power supply	12~24VDC, 110~220VAC (AC: 50/60Hz)
Current consumption	12~24VDC: 0.22A, 110~220VAC: 0.08A (RMS ±10%)
LED color	3 colors: RGB/RYG
Dimension	Width: 90mm, Thickness: 40mm, Length: 194mm
Flashing rate	12VDC: 80±5times per minute 24VDC: 85±5times per minute 110~220VAC: 85±5times per minute
Front lens color	Standard type: Clear-white, Option: Milky white
Buzzer volume	75±5dB (at 1M, Sound Level is maximum)
Mounting method	Wall mounting only (Upright, Reverse, Sideways)
Connection method	Lead wire connection
Ambient temperature	-20 ~ 40°C
Storage ambient temperature	-20 ~ 70°C
Ambient humidity	45~85% RH
Dielectric strength	1000VAC 50/60Hz for 1min
Insulation resistance	100MΩ min. at 500VDC
Vibration	0.75mm at 10~55Hz
Connection	UL1007/22AWG Approval UL, RoHS
Protection structure	IP65 (IP52-Buzzer type)
Weight (Buzzer type)	AC type - App. 300g, DC type - App. 293g

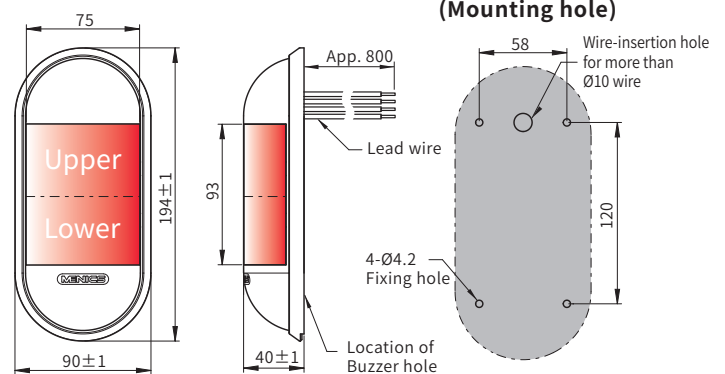
“New concept LED indicator that can transmit 1 or 2 color signals on one display window”



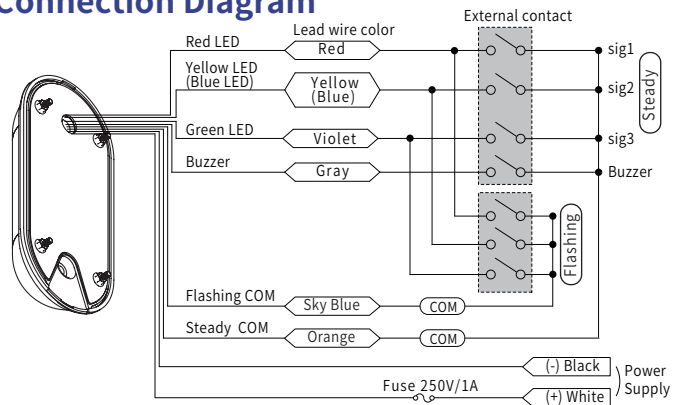
Product Feature

- Its half capsule shape allows it to homogenize with all equipment and machines
- Easy wall mounting and its 40mm slim housing makes it suitable for application with tight spaces.
- Its 93mm lens provides great visibility at long distance.
- IP65 (IP52 with buzzer)

Dimensions <Unit: mm>



Connection Diagram



※Pay attention to the polarity if it is DC-type.

Product Operating Conditions

RYG Light-Output truth table

Conditions	Input condition			LED Output color	
	Red LED (Red wire)	Yellow LED (Yellow wire)	Green LED (Violet wire)	Uppe Display	Lower Display
Condition-1	0	1	1	Red	
Condition-2	1	0	1	Yellow	
Condition-3	1	1	0	Green	
Condition-4	0	1	0	Red	Green
Condition-5	0	0	1	Red	Yellow
Condition-6	1	0	0	Yellow	Green
Condition-7	0	0	0	Red	OFF
Condition-8	1	1	1	OFF	
Remark	0: Orange wire (-) COM ---> Connection status 1: Open condition				

MQVL Series 95mm Cube LED Signal Light



Various combinations of LED warning lights for traffic signs

Multiple connection (MQVS or MQVH series)



Ordering information

MQVL - FF - R (V)

① ② ③

① Power Supply

00	12~24VDC
FF	110~220VAC

③ Option

(V)	240 ± 10 times/minute (Emergency signal)
-----	--

② Lens Color

R	Red	G	Green
Y	Yellow	B	Blue
C	Clear		

Specifications

Power supply	12 ~ 24VDC, 110 ~ 220VAC (50/60Hz)
Allowable voltage range	10.8V ~ 26.4VDC, 100 ~ 240VAC
Function	Steady, Flashing
Light source	LED
Dimension	95 x 95 x 94 (mm)
Flashing rate	Standard - 80 ± 5 per minute Option (V) type - 240 ± 10 times per minute
Mounting method	Body bottom mount base - Screw type (M6, 2EA) Internal bottom of main body - Maximum cable diameter : Ø7mm
Power cable insertion	External locations - Cable gland
Connection	UL1007/AWG22
Color	Body - Black Lens - Red, Yellow, Green, Blue, Clear
Material	Body - PA6 Lens - PC
Insulation resistance	Over 100MΩ (500VDC mega between terminals and case)
Withstand voltage	500VAC 50/60Hz 1 min (between terminals and case before)
Vibration	0.75mm at 10~55Hz (cycle: 1minute)
Temperature	Ambient temperature : -20 ~ 50°C Storage ambient temperature: -20 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	RoHS
Weight	App. 300g (AC type standard)

Current consumption (RMS ± 10%)

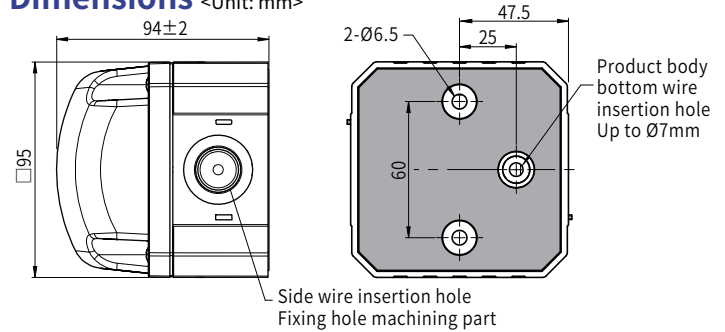
Product LED color	MQVL Series	
	12~24VDC	110~220VAC
Red	0.21A	0.06A
Yellow	0.21A	0.06A
Green	0.21A	0.06A
Blue	0.28A	0.19A
White	0.21A	0.06A

<Note> The lifetime of LED depends on operating conditions and environment.

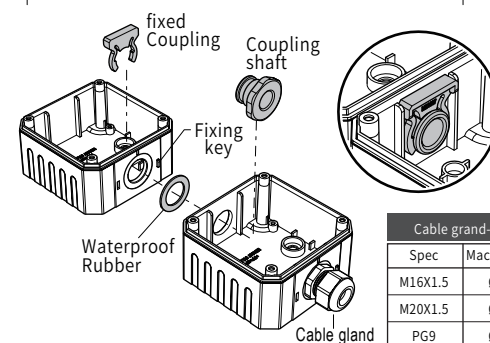
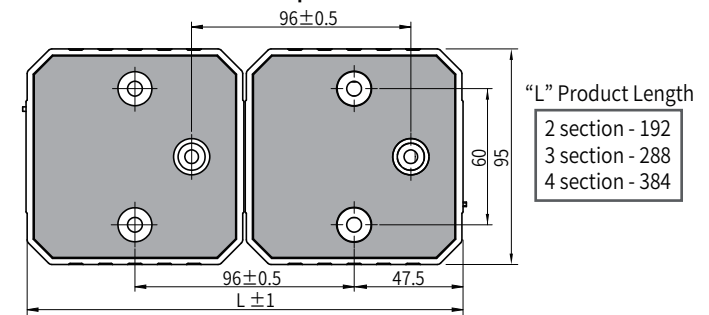
Product Feature

- LED Function : Steady, Flashing
- Various colors can be produced according to installation conditions in row or column direction for each color
- High degree of protection IP66 construction provides excellent airtightness in outdoor and dusty areas

Dimensions <Unit: mm>

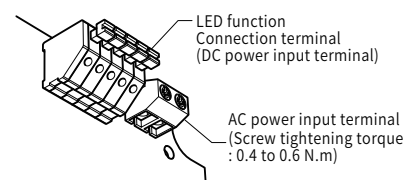
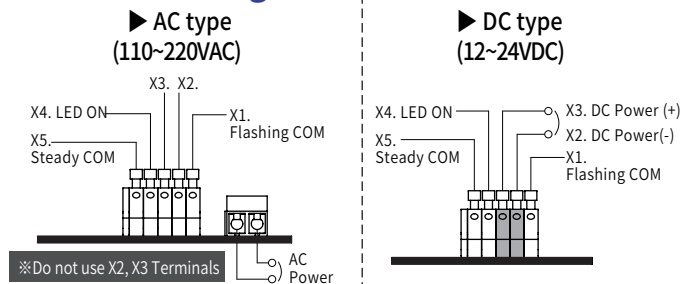


Fixed dimensions for multiple connection



Cable gland-Dimension of machining hole		
Spec	Machining hole	Suitable Cable Dia
M16X1.5	Ø16mm	Ø4.5~10mm
M20X1.5	Ø20mm	Ø7~12.5mm
PG9	Ø16mm	Ø3~8mm
PG13.5	Ø20mm	Ø5~12mm

Connection Diagram



<Steady Light>
X4+X5 short

<Flashing Light>
X1+X4 short

MQVM Series 95mm Cube multi-color LED Signal Light



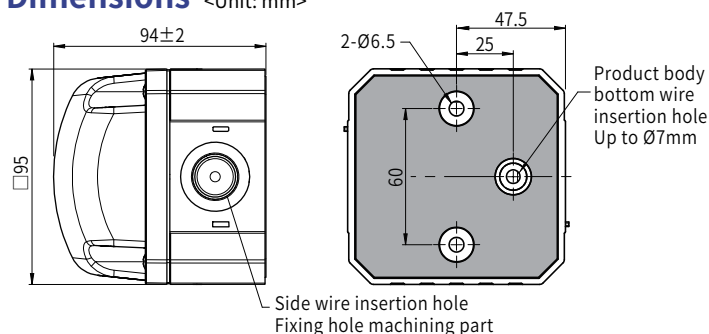
Various combinations of LED warning lights for traffic signs

“7 Colors in one signal light:
Red, Yellow, Green, Blue, Pink, Cyan, White”

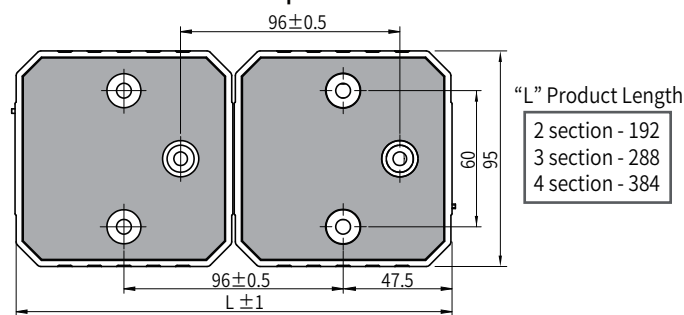
Product Feature

- LED Function : Steady, Flashing
- LED Permanent light (multi-color) in attractive quadratic form
- 7 different status warnings can be signalled by just one signal light (7 colors)
- The three basic colors (RGB/RYG) can be triggered using only two PLC outputs.
- Easy assembly due to quick-release screws
- Connected with speaker products (MQVH, MQVS series)

Dimensions <Unit: mm>



Fixed dimensions for multiple connection



Ordering information

MQVM - **00** - **RGB** (**V**)

① ② ③

① Power Supply

00	12~24VDC
FF	110~220VAC

② LED Color

RGB	Red + Green + Blue
RYG	Red + Yellow + Green

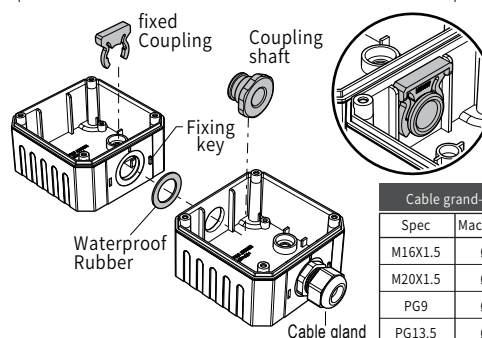
③ Option

(V)	240 ± 10 times/minute (Emergency signal)
-----	---

Specifications

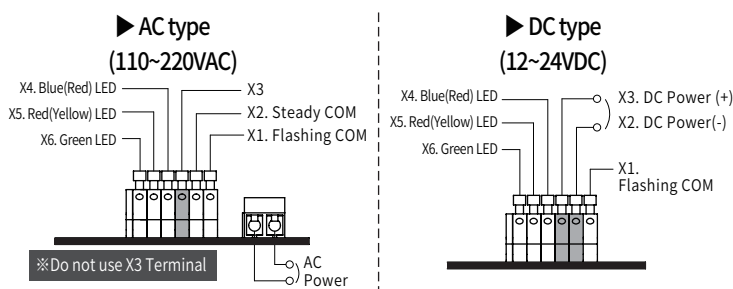
Power supply	12 ~ 24VDC, 110 ~ 220VAC (50/60Hz)
Allowable voltage range	10.8V ~ 26.4VDC, 100 ~ 240VAC
Current consumption (±10%)	12~24VDC : 0.28A 110~220VAC : 0.07A
Function	Steady, Flashing
Light source	LED
Dimension	95 x 95 x 94 (mm)
Flashing rate	Standard - 80 ± 5 per minute Option (V) type - 240 ± 10 times per minute
Mounting method	Body bottom mount base - Screw type (M6, 2EA)
Power cable insertion	Internal bottom of main body - Maximum cable diameter : Ø7mm External locations - Cable gland
Connection	UL1007/AWG22
Color	Body - Black Lens - Milky white
Material	Body - PA6 Lens - PC
Insulation resistance	Over 100MΩ (500VDC mega between terminals and case)
Withstand voltage	500VAC 50/60Hz 1 min (between terminals and case before)
Vibration	0.75mm at 10~55Hz (cycle: 1minute)
Temperature	Ambient temperature : -20 ~ 50°C Storage ambient temperature : -20 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	RoHS
Weight	App. 300g (AC type standard)

Note: Life of the LED varies according to operating conditions and environment



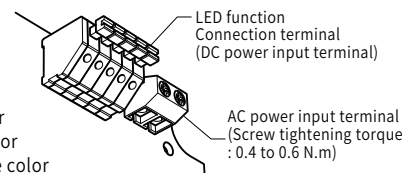
Spec	Machining hole	Suitable Cable Dia
M16X1.5	Ø16mm	Ø4.5~10mm
M20X1.5	Ø20mm	Ø7~12.5mm
PG9	Ø16mm	Ø3~8mm
PG13.5	Ø20mm	Ø5~12mm

Connection Diagram



RGB Product Color Combination

- X2 + X4: Blue color
- X2 + X5: Red color
- X2 + X6: Green color
- X2 + X4 + X5: Pink color
- X2 + X4 + X6: Cyan color
- X2 + X5 + X6: Yellow color
- X2 + X4 + X5 + X6: White color



MQVX Series Xenon lamp type High power D95mm Cube Strobe Light



Combinable cube permanent Xenon lamp strobe light



Ordering information

MQVX - 10 - R

① Power Supply ② Lens Color

00	12~48VDC	R	Red	G	Green
10	110VAC	Y	Yellow	B	Blue
20	220VAC	C	Clear		

Specifications

Power supply	12 ~ 48VDC, 110VAC, 220VAC (AC 50/60Hz)
Allowable voltage range	10.8V ~ 50VDC, 100~120VAC, 210~230VAC
Current consumption	12~48VDC: 0.2A , 110VAC: 0.07A , 220VAC: 0.04A
Function	Flashing
Light source	Xenon Lamp
Dimension	95 x 95 x 94 (mm)
Flashing rate	12~18VDC : 80±5 times per minute 110VAC : 77±5 times per minute 220VAC : 60±5 times per minute
Mounting method	Body bottom face fixing - Screw type (M6, 2EA)
Power cable insertion	Internal bottom of main body - Maximum cable diameter : Ø7mm External locations - Cable gland
Connection	UL1007/18AWG
Color	Body - Black Lens - Red, Yellow, Green, Blue, Clear
Material	Body - PA6 Lens - PC
Insulation resistance	Over 100MΩ (500VDC mega between terminals and case)
Withstand voltage	500VAC 50/60Hz 1 min (between terminals and case before)
Vibration	0.75mm at 10~55Hz (cycle: 1minute)
Temperature	Ambient temperature : -20 ~ 50°C Storage temperature: -20 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	RoHS
Weight	App. 283g (DC type)



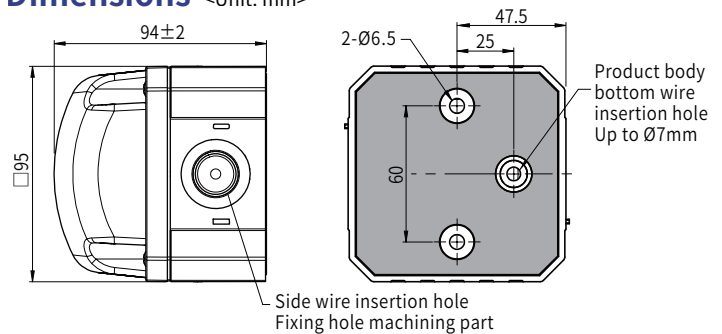
Product Feature

- Diffusing very clear light for night-time visibility as well as daytime.
- Various colors can be produced according to conditions of installation in row or column direction for each color.
- Structure of high degree protection IP65 provides excellent airtightness in outdoor and dusty areas
- Connection with speaker products (MQVH, MQVS series) enables various displays.

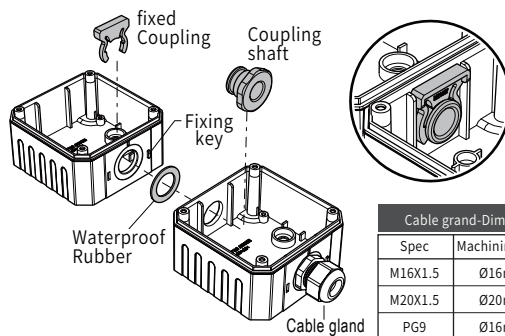
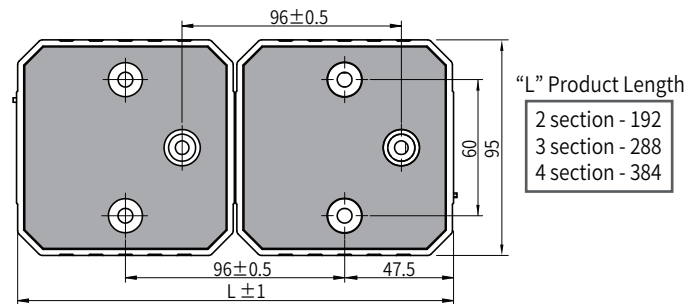
Multiple connection (MQVH or MQVS series) ▶



Dimensions <Unit: mm>



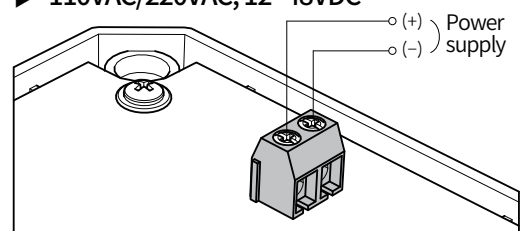
Fixed dimensions for multiple connection



Spec	Machining hole	Suitable Cable Dia
M16X1.5	Ø16mm	Ø4.5~10mm
M20X1.5	Ø20mm	Ø7~12.5mm
PG9	Ø16mm	Ø3~8mm
PG13.5	Ø20mm	Ø5~12mm

Connection Diagram

▶ 110VAC/220VAC, 12~48VDC





Compact and lightweight high pressure Panel stationary type Horn speaker

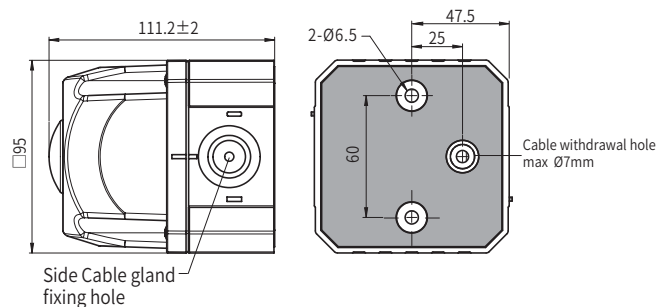
Multiple connection
(MQVL or MQVX series) ▶



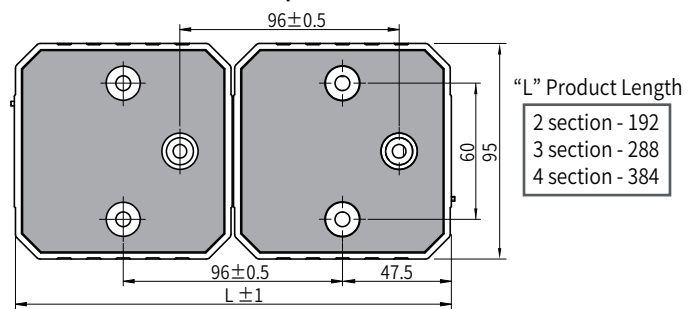
Product Feature

- Built-in 15W high power speaker
- Volume adjustable up to 105dB
- 9 tones for a diverse range of applications
- Duration of signal phase selectable
- High protection rating IP 65

Dimensions <Unit: mm>



Fixed dimensions for multiple connection



Ordering information

MQVH - **9** **FF** - **R**

① ② ③

① Built-in Sound

9	9 tones
---	---------

② Power Supply

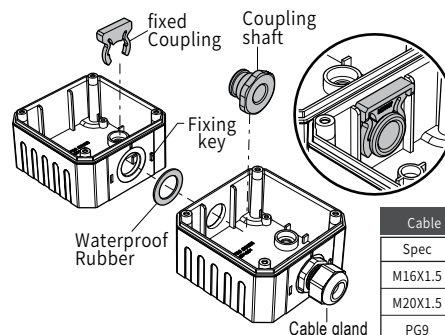
00	12 ~ 24VDC
FF	110 ~ 220VAC

③ Cover Color

R	Red
B	Black

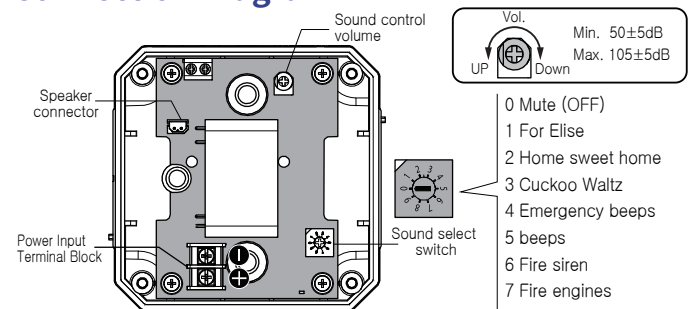
Specifications

Power supply	12~24VDC, 110~220VAC (AC 50/60Hz)
Allowable voltage range	10.8~26.4VDC, 100~240VAC
Current consumption (±10%)	12V~24VDC: 0.45A 110~220VAC: 0.20A
Sound volume (max)	105±5dB (1M)
Volume control	Built-in volume control
Sound type	Melody : 3ch / Signal : 3ch / Siren : 3ch
Mounting Method	Body bottom face fixing - Screw type (M6, 2EA)
Power cable insertion	Bottom of main body - Maximum cable diameter: Ø7mm Two external locations - Cable gland
Connection	AC type: 18AWG DC type: 22AWG
Color	Body - Black Speaker cover- Black, Red
Material	Body - PA6 Speaker Cover - ABS
Insulation resistance	Over 100MΩ (500VDC mega between terminals and case)
Withstand voltage	500VAC 50/60Hz 1min (between terminals and case before)
Vibration	0.75mm at 10~55Hz (cycle: 1minute)
Temperature	Working temperature : -20 ~ 50°C Storage temperature : -20 ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP65
Approval	RoHS
Weight	App. 535g (AC type standard)



Spec	Machining hole	Suitable Cable Dia
M16X1.5	Ø16mm	Ø4.5~10mm
M20X1.5	Ø20mm	Ø7~12.5mm
PG9	Ø16mm	Ø3~8mm
PG13.5	Ø20mm	Ø5~12mm

Connection Diagram



※Be careful of polarity when inputting DC.

⚠ Warning : It must be powered off before connecting terminals

MQVS Series D95mm Cube Electronic Multi-Tone Sounder



Compact and light weight high pressure
Panel stationary type Horn speaker

Multiple connection
(MQVL or MQVX series) ➔



Ordering information

MQVS - 15 00 - B

① Sound Type

15 15ch Sound

② Power Supply

00 12 ~ 24VDC
FF 110~220VAC

③ Cover Color

R Red
B Black

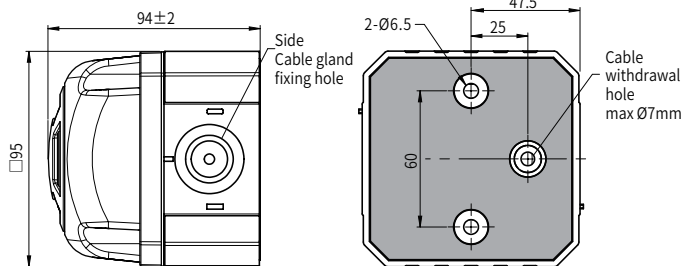
Specifications

Power Supply	12~24VDC, 110~220VAC (50/60Hz)
Allowable voltage range	10.8V ~ 26.4VDC, 100~240VAC
Current consumption (±10%)	12~24VDC : 0.1A 110~220VAC : 0.03A
Sound volume control	Internal volume control: 0~85±5dB (1M)
Sound type	Siren: 3ch Vehicle beep: 2ch Phone bell: 4ch Melody: 6ch
Mounting method	Body bottom face fixing - Screw type (M6, 2EA)
Power cable insertion	Bottom of main body - Maximum cable diameter: Ø7mm Two external locations - Cable gland
Connection	AC : 18 AWG DC : 22 AWG
Color	Body - Black Speaker cover - Black or Red
Material	Body - PA6 Speaker Cover - ABS
Insulation resistance	Over 100MΩ (500VDC mega between terminals and case)
Withstand voltage	500VAC 50/60Hz 1 min (between terminals and case before)
Vibration	0.75mm at 10~55Hz (cycle: 1minute)
Temperature	Working temperature : -20 ~ 50°C Storage temperature: -20 ~ 70°C
Operating humidity	45 ~ 85% RH
Protection structure	IP55
Approval	RoHS
Weight (Buzzer type)	App. 380g (AC type standard)

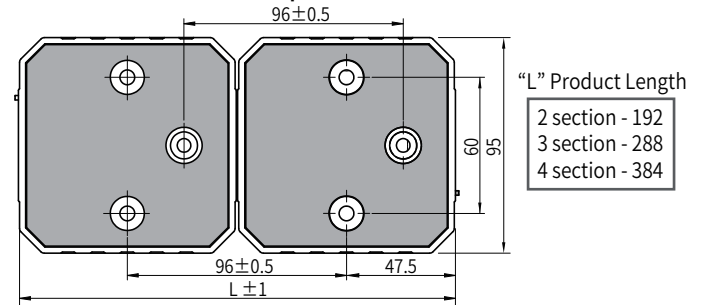
Product Feature

- Built-in 5W speaker
- Volume adjustable up to 85dB
- 15 tones for a diverse range of applications
- Duration of signal phase selectable
- High protection rating IP55

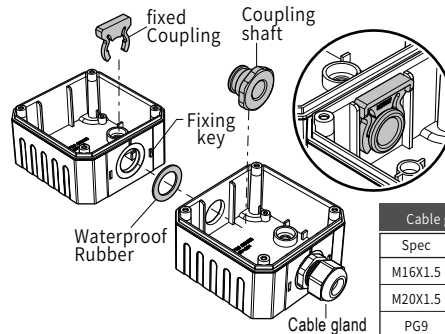
Dimensions <Unit: mm>



Fixed dimensions for multiple connection

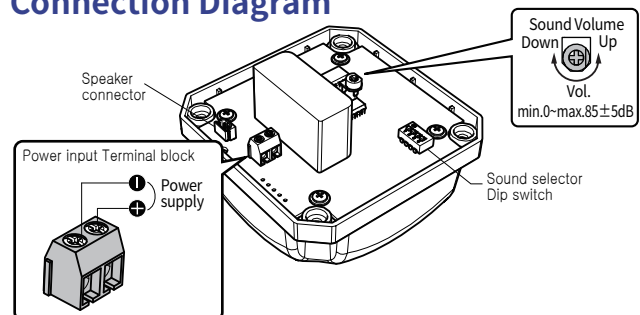


"L" Product Length
2 section - 192
3 section - 288
4 section - 384



Spec	Machining hole	Suitable Cable Dia
M16X1.5	Ø16mm	Ø4.5~10mm
M20X1.5	Ø20mm	Ø7~12.5mm
PG9	Ø16mm	Ø3~8mm
PG13.5	Ø20mm	Ø5~12mm

Connection Diagram



Sound selection guide

No.	Dip Switch	Tone	1	2	3	4	4	5	6	7	8	9	10	11	12	13	14	15	1	2	3	4
0	ON OFF	Mute(off)	0	0	0	0	4	5	6	7	8	9	10	11	12	13	14	15	0	1	0	1
1	ON OFF	Emergency vehicle	1	0	0	0	4	5	6	7	8	9	10	11	12	13	14	15	1	1	0	1
2	ON OFF	Ambulance	0	1	0	0	4	5	6	7	8	9	10	11	12	13	14	15	0	0	1	1
3	ON OFF	Fire vehicle	1	1	0	0	4	5	6	7	8	9	10	11	12	13	14	15	1	0	1	1
4	ON OFF	Car clock	0	0	1	0	4	5	6	7	8	9	10	11	12	13	14	15	0	1	0	1
5	ON OFF	Vehicle back-beep	1	0	1	0	4	5	6	7	8	9	10	11	12	13	14	15	1	1	0	1
6	ON OFF	Doorbell	0	1	1	0	4	5	6	7	8	9	10	11	12	13	14	15	0	0	1	1
7	ON OFF	Pipipi	1	1	1	0	4	5	6	7	8	9	10	11	12	13	14	15	1	0	1	1
8	ON OFF	Telephone ringing	0	0	0	1	4	5	6	7	8	9	10	11	12	13	14	15	0	1	1	1
9	ON OFF	Telephone	1	0	0	1	4	5	6	7	8	9	10	11	12	13	14	15	1	1	1	1
10	ON OFF	General Alarm	0	1	0	1	4	5	6	7	8	9	10	11	12	13	14	15	0	1	0	1
11	ON OFF	Spinning song	1	1	0	1	4	5	6	7	8	9	10	11	12	13	14	15	1	1	0	1
12	ON OFF	Serenade-Haydn	0	0	1	1	4	5	6	7	8	9	10	11	12	13	14	15	0	0	1	1
13	ON OFF	Orpheus in the Underworld	1	0	1	1	4	5	6	7	8	9	10	11	12	13	14	15	1	0	1	1
14	ON OFF	Melody	0	1	1	1	4	5	6	7	8	9	10	11	12	13	14	15	0	1	1	1
15	ON OFF	Home sweet home	1	1	1	1	4	5	6	7	8	9	10	11	12	13	14	15	1	1	1	1

■ Combination with signal lights

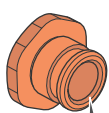
Speaker products and signal lights can be used in the form of traffic lights by connecting two or more products.



■ Body connection coupling parts

- Built-in as default for the MQVL, MQVM, MQVH series.
Please inquire at head office for additional purchase.

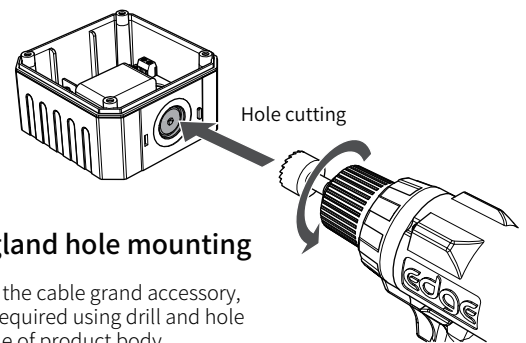
1. Coupling shaft
Material: POM resin
2. Fixing coupling
Material: POM resin
3. Waterproof rubber
Material: EVA sheet



There is a hole (Ø12mm) inside the shaft, so you can easily connect the wire between the bodies.

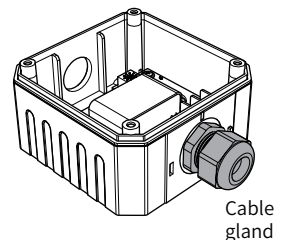
▲ Cable gland hole mounting

Before inserting the cable gland accessory, cutting work is required using drill and hole cutter on the side of product body.

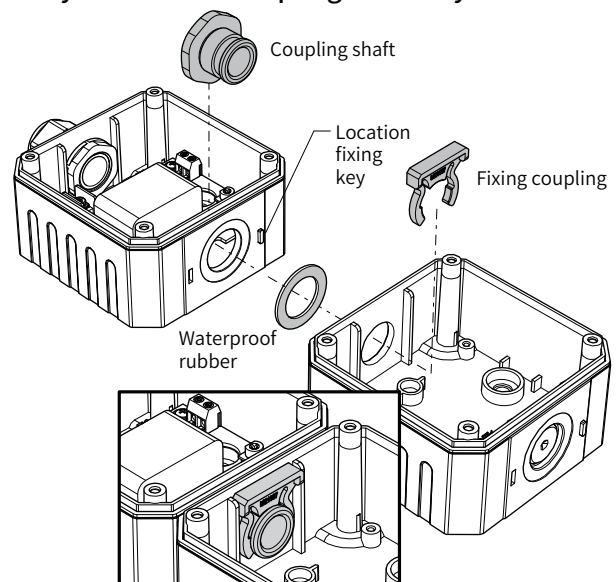


Mounting hole dimension by cable gland standard

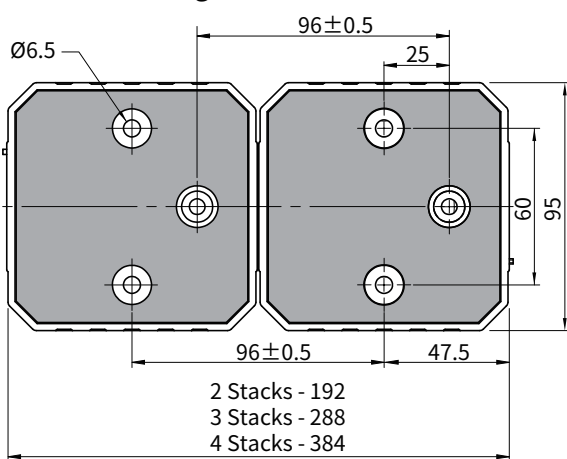
Cable gland	Mounting hole	Cable Outer dia
M16X1.5	Ø16	Ø4.5~10
M20X1.5	Ø20	Ø7~12.5
PG9	Ø16	Ø3~8
PG13.5	Ø20	Ø5~12



■ Body connection coupling assembly



■ Panel mounting dimension (Unit:mm)



■ Combination with signal lights



ML Series D66mm Miniature Warning Bulb Signal Light



Compact Revolving Warning Light perfectly designed for small devices.

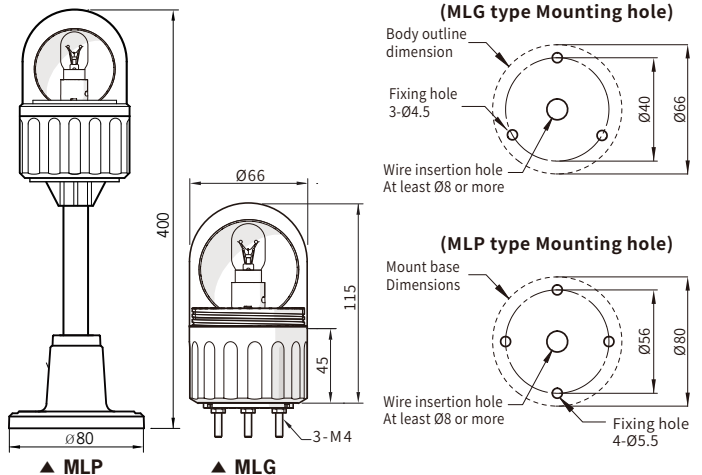
Product Feature

- Incandescent or Xenon lamp type
- Red, Yellow, Green and Blue lens available
- Stud mounted or Pole mounted
- Optional Wall Mounting Brackets available

Bulb Replacement Parts

Energy Used: 8 watts Base Type: Single Contact (BA15S) Color / Finish: Clear Length: 45mm Width: 16mm	Input Voltage	Bulb	Part no.
	12V type	12V 8W	MAM-T15-S-012-08
	24V type	24V 8W	MAB-T15-S-024-08
	110V type	130V 8W	MAB-T15-S-130-08
	220V type	240V 8W	MAB-T15-S-240-08

Dimensions <Unit: mm>



Ordering information

ML G F - 20 - R

① ② ③ ④

① Mount Style

G	Body direct fixed
P	Aluminum Pole + Aluminum mount base

② Light Style

No mark	Rotating (Smooth Lens)
F	Flashing (Prism Lens)
S	Xenon Strobe Lamp (Prism Lens) - 110V, 220V only available

③ Power Supply

01	12VAC/DC	10	110VAC
02	24VAC/DC	20	220VAC

④ Lens Color

R	Red	B	Blue
Y	Yellow	G	Green

Specifications - Bulb type

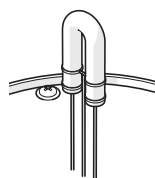
Power supply	12VAC/DC, 24VAC/DC, 110VAC, 220VAC (50/60Hz)
Dimension	66mm
Lens color	Red, Yellow, Green, Blue (Smooth Lens)
Rotation rate	130±10 rpm
Flashing rate	80±10 times/minute
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-25°C ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP42
Connection	AC 110/220V: VSF/0.75mm ² (Power supply wire only) AC/DC 12/24V: 1007UL/220AWG
Approval	CE, RoHS

Current Consumption

Power Supply	12V	24V	110V	220V
Current Consumption	0.6A, 8W	0.3A, 8W	0.07A, 8W	0.03A, 8W

Specifications - Xenon Lamp Type (ML-S)

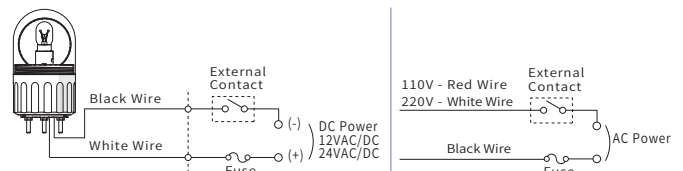
Power supply	110VAC, 220VAC (50/60Hz)
Current consumption	110VAC : 0.22A 220VAC : 0.11A
Lens color	Red, Yellow, Green, Blue (Lens type : Prism)
Strobe Pulse	80±10 times/minute
Protection structure	IP42
Approval	CE, RoHS
Connection	VSF / 0.75mm ²
Lamp Wattage	6W Lamp



Connection Diagram

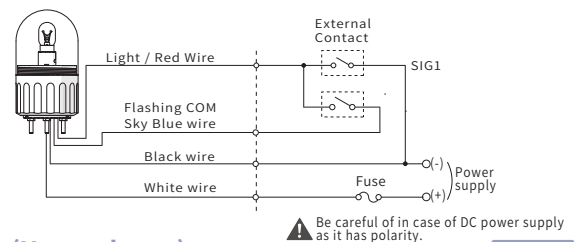
ML

Rotating



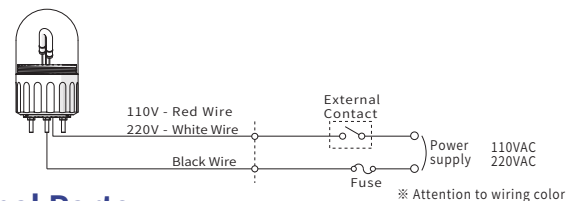
ML-F

Flashing



ML-S (Xenon lamp)

Flashing

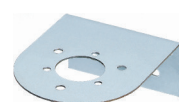


Optional Parts

Wall Mount Brackets



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for detail dimensions.

ASG / APG Series D86mm Bulb Revolving Small Size Warning Signal Light



Compact Revolving Warning Light perfectly designed for small devices.



Ordering information

ASG B - 20 - R

① ② ③ ④

① Product style

ASG	Dome top lens
APG	Flat top lens

② Light Style

No mark	Rotating (Smooth Lens)
F	Flashing (Prism Lens)
B	Rotating + Buzzer (Smooth Lens)
S	Xenon Strobe Lamp (Smooth Lens) - 110V, 220V only available

③ Power Supply

01	12VAC/DC	10	110VAC
02	24VAC/DC	20	220VAC
FF	110/220VAC (Free voltage type)		

④ Lens Color

R	Red	B	Blue
Y	Yellow	G	Green

Specifications - Bulb type

Function	Rotating, Flashing, Buzzer
Power supply	12/24VAC/DC, 110/220VAC (AC: 50/60Hz)
Dimension	86mm
Lens color	Red, Yellow, Green, Blue (Lens type: Smooth)
Rotation rate	130±10 rpm
Flashing rate	80±10 times/minute
Ambient temperature	-15°C ~ 40°C
Storage ambient temperature	-25°C ~ 70°C
Ambient humidity	45 ~ 85% RH
Protection structure	IP42
Connection	AC 110/220V: VSF/0.75mm ² (Power supply wire only) AC/DC 12/24V: 1007UL/220AWG
Approval	CE, RoHS

Current Consumption

Power Supply	12V	24V	110V	220V	110/220V
Current Supply	0.67A, 8W	0.33A, 8W	0.07A, 8W	0.03A, 8W	0.4A, 8W

Specifications - Xenon Lamp Type (A■GS)

Power supply	110VAC, 220VAC (50/60Hz)
Current consumption	110VAC : 0.22A 220VAC : 0.11A
Lens color	Red, Yellow, Green, Blue (Lens type : Prism)
Strobe pulse	80±10 times/minute
Protection structure	IP42
Approval	CE, RoHS
Connection	VSF / 0.75mm ²
Lamp Wattage	6W Lamp



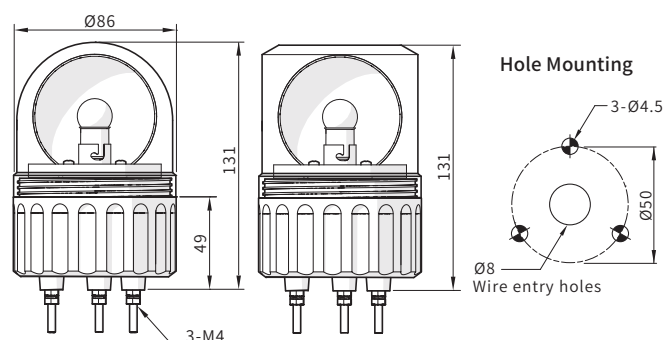
Product Feature

- Incandescent or Xenon lamp type
- Red, Yellow, Green and Blue lens available
- Dome top lens or Flat top lens
- Optional Wall Mounting Brackets available
- Built-in Buzzer available: 85dB

Bulb Replacement Parts

 Energy Used: 8 watts Base Type: Single Contact (BA15S) Color / Finish: Clear Length: 45mm Width: 16mm	 Energy Used: 5 watts Base Type: Single Contact (BA15S) Color / Finish: Clear Length: 35mm Width: 19mm	Only Flashing Light type 12V type MAM-T15-S-012-08 24V type MAB-T15-S-024-08 110V type MAB-T15-S-130-08 220V type MAB-T15-S-240-08
		Only Rotating Light type 12V type MAM-T15-S-012-08 24V type MAB-T15-S-024-08 110V type MAB-T15-S-012-05 220V type MAB-T15-S-012-05
		110/220V Free Voltage type (Rotating type) 110/220V type MAB-T15-S-012-05

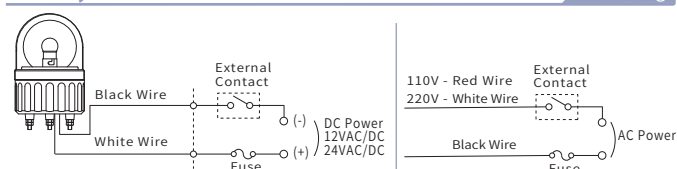
Dimensions <Unit: mm>



Connection Diagram

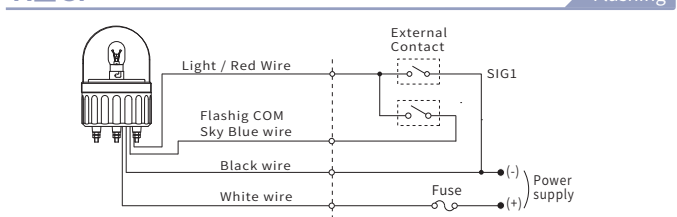
A■G, ASGB

Rotating



A■GF

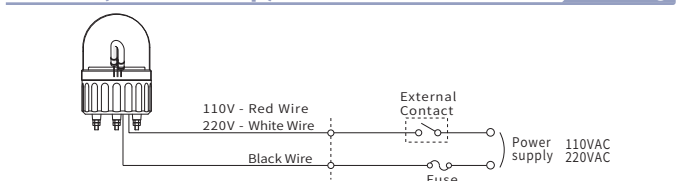
Flashing



⚠ Be careful of in case of DC power supply as it has polarity.

A■GS (Xenon lamp)

Flashing

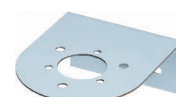


Optional Parts

Wall Mount Brackets



MAP-DS30
ABS resin



MAM-DS26
Steel

See Page 80 ~ 81 >> for detail dimensions.

AVG Series D135mm Large Size Revolving Warning Signal Light



Large size plastic Revolving Warning Light for a wide range of applications. Ideal for large machines, construction sites, parking systems and more.



Ordering information

AVG B-20-R

① ② ③

① Light Style

No mark	Rotating	R	Red	B	Blue
B	Rotating + Buzzer	Y	Yellow	G	Green

③ Lens Color

② Power Supply

01	12VDC	10	110VAC
02	24VDC	20	220VAC

Specifications

Function	Rotating, Buzzer
Power supply	12VDC, 24VDC 110/220VAC (AC. 50/60Hz)
Dimension	135mm
Lens color	Red, Yellow, Green, Blue
Rotation rate	150±10rpm
Buzzer volume	80±5dB (at 1M)
Ambient temperature	-15~40°C
Storage ambient temperature	-20~70°C
Ambient humidity	45~85% RH
Protection structure	IP42
Connection	110/220V : 1007 UL / 18 AWG 12/24V : 1007 UL / 22 AWG
Approval	UL, CE, RoHS

Current consumption

Power supply	12V	24V	110V	220V
Current consumption	2.08A, 25W	1.04A, 25W	0.22A, 25W	0.11A, 25W

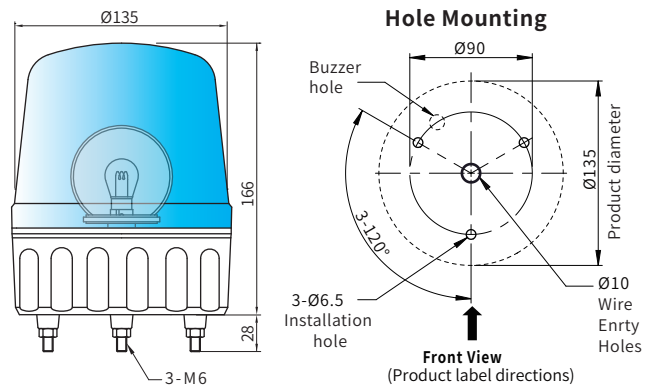
Replacement Bulbs

	Energy Used: 25 watt	Input Voltage	Bulb	Part no.
	Base Type: Double Contact (BA15D)	12V type	12V 25W	MAM-T15-D-012-25
	Color / Finish: Clear	24V type	24V 25W	MAB-T15-D-024-25
	Length: 54mm	110V type	130V 25W	MAB-T15-D-130-25
	Width: 22mm	220V type	240V 25W	MAB-T15-D-240-25

Product Feature

- Incandescent type
- Red, Yellow, Green and Blue lens available
- Buzzer(80dB) Model available

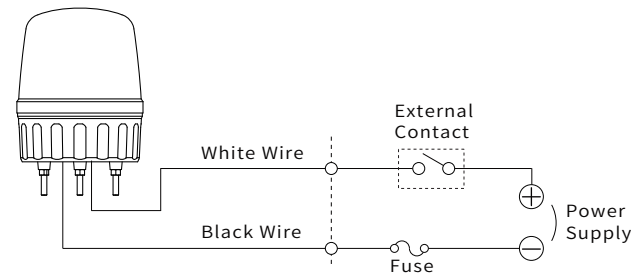
Dimensions <Unit: mm>



Connection Diagram

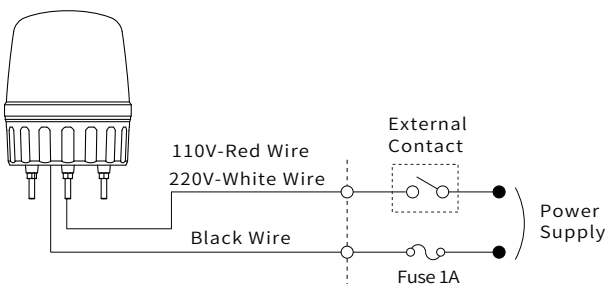
12/24VDC

Steady



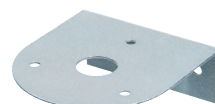
110VAC, 220VAC

Steady



Optional Parts

Wall Mount Brackets



MAM-DS27
Steel

See Page 80 ~ 81 >> for Mounting Options and Accessories.

MS135B Series D135mm Large Revolving Warning Signal Light



MS135B series is a large 135mm Revolving Warning Light that can serve for multi-funtional usage. It is designed to emit a strong flash using a reflector that can effectively inject light far away. In the case of the model with a built-in buzzer, the flash rotate with the electronic buzzer and intermittent sound of up to 90dB (at 1M)



Ordering information

MS135B - B 01 - R

① Product model type

MS135B	Standard type
MS135BP	Pole mount base type

② Function

No mark	Reflector rotation
B	Reflector rotation + Buzzer

③ Power supply

01	12VDC
02	24VDC
10	110VAC
20	220VAC

④ Lens Color

R	Red	B	Blue
Y	Yellow	C	Clear
G	Green		

Specifications

Power supply	12VDC $\pm$ 5%, 110VAC $\pm$ 10% (50/60Hz) 24VDC $\pm$ 5%, 220VAC $\pm$ 10% (50/60Hz)
Light source	Incandescent
Dimension	135.5mm
Rotation rate	150 $\pm$ 10% rpm/min
Buzzer volume	90 $\pm$ 5dB (1M) beep-beep-beep : The volume can not be adjusted
Lens color	Red, Yellow, Green, Blue, Clear
Mounting method	MS135B: Direct mounting on the body MS135BP: aluminum base mounting
Connection method	Exposed wiring connections
Ambient temperature	-15 ~ 50°C
Storage ambient temerature	-20 ~ 70°C
Ambient humidity	45 ~ 85% RH
Dielectric strength	1 Min. at 1000VAC 50/60Hz
Insulation Resistance	100M Ω or more (500VDC Megger basis)
Vibration resistance	10~55Hz (1 min cycle) Double amplitude 0.75mm X, Y, Z
Protection structure	IP65
Connection	UL2464/22AWG
Bulb life	1,000 hrs
Approval	RoHS
Weight	MS135B series - app.555g MS135BP series - app.935g

Current Consumption

Power Supply	12VDC	24VDC	110VAC	220VAC
Current Consumption	2.08A, 25W	1.04A, 25W	0.22A, 25W	0.11A, 25W

※ Note : Life of the bulb may vary depending on operating conditions and environment

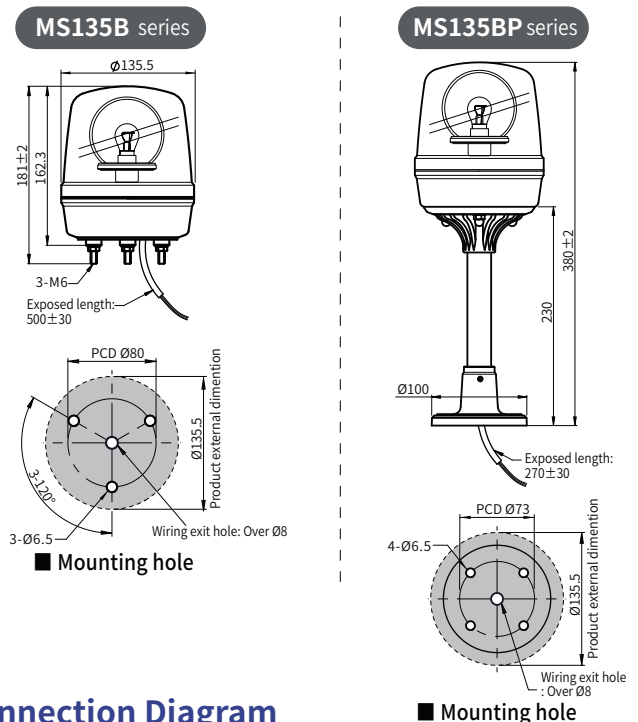
Product Feature

- Apply a light bulb 25W
- Designed strong against vibration
- IP65 waterproof rating
- Black body with strong weather resistance that is not affected by the ultraviolet

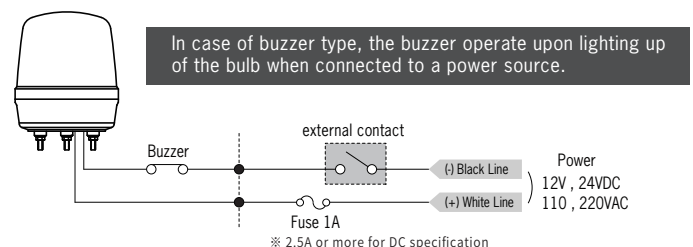
Replacement Bulbs

Energy Used: 25 watt Base Type: Double Contact (BA15D) Color / Finish: Clear Length: 54mm Width: 22mm	Input Voltage	Bulb	Part no.
	12V type	12V 25W	MAM-T15-D-012-25
	24V type	24V 25W	MAB-T15-D-024-25
	110V type	130V 25W	MAB-T15-D-130-25
	220V type	240V 25W	MAB-T15-D-240-25

Dimensions (unit: mm)



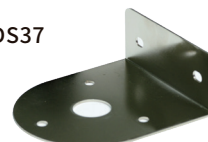
Connection Diagram



Optional Parts

Wall Mount Bracket

MAM-DS37
Steel



MS135■P type only

MAM-DS38
Steel



See Page 80 ~ 81 >> for Mounting Options and Accessories.

MW86N Series Wall Mounting Electronics Siren (Multi sound)



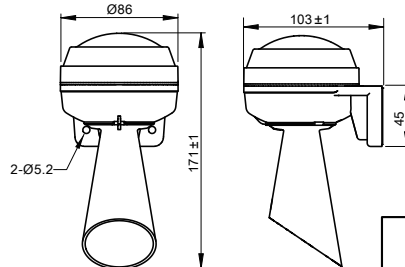
MW86N Series is electronic Horn which has beautiful appearance and outputs high quality sound. It can be easily fixed on the wall without extra equipments even in the narrow space

Product Feature

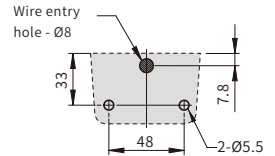
- Built-in Button for sound volume adjusting
- Built-in Speaker for 3 Sounds
- Removable Horn is offered

Dimensions <Unit: mm>

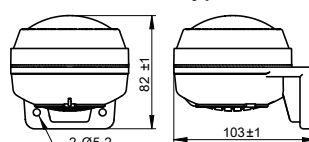
▼ Horn type



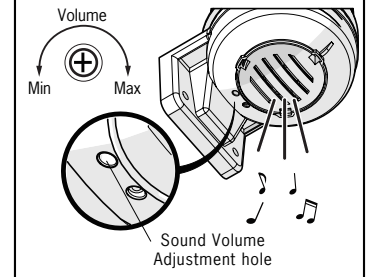
Mounting hole



▼ General type



Sound volume



Ordering information

MW86N - **FF** - **M3** (**B**)

① Power Supply

00	12 ~ 24VAC/DC
FF	90 ~ 240VAC

② Sound Type

M3	Melody 3 channels
M4	Melody 4 channels
S3	Siren 3 channels

③ Body Color

No mark	Ivory
(B)	Black
(R)	Red

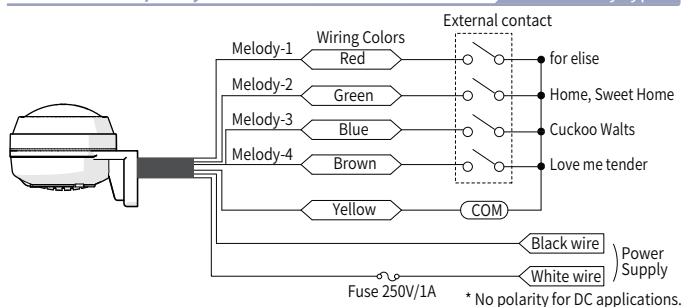
For Elise — M3 type
Home, Sweet Home — M4 type
Cuckoo Walts — M4 type
Love me tender — M4 type

Fire siren
Police siren
Ambulance siren

Connection Diagram

12~24VAC/DC, 90~240VAC

Melody type



Specifications

	General Type	Horn Type
Power supply	12~24VAC/DC, 90~240VAC (AC: 50/60Hz)	
Sound volume (1m)	55 ~ 85±5dB	55 ~ 90±5dB
Connection method	Lead wire	
Material	Body, Cap - ABS resin	
Mounting method	Wall mounting (upright only)	
Ambient temperature	-20 ~ 40°C	
Storage ambient temperature	-20 ~ 70°C	
Ambient humidity	45~85% RH	
Protection structure	IP43	IP54
Vibration	0.75mm at 10~55Hz	
Connection	2464UL / 22AWG	
Approval	UL, RoHS	
Weight (AC type basis)	App. 198g	App. 224g

Current Consumption

12 ~ 24VAC/DC	90 ~ 240VAC
Max. 0.2A ±10%	Max. 0.06A ±10%

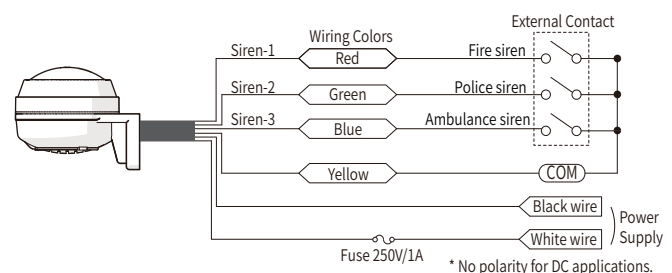
Setting of 3 melody sound and operation

※ it means the condition of '0' when connected with com wire.

Wiring Colors	Red	Green	Blue	Melody reaction	Notes
Normal entry conditions	1	1	1	No	1. If you don't select the signal (Under this condition, 111 is displayed) or select three signals at the same time (Under this condition, 000 is displayed), then the melody doesn't play.
	0	1	1	for elise	
	1	0	1	Home, Sweet Home	
	1	1	0	Cuckoo Walts	
Priority entry conditions	1	0	0	for elise (priority-1)	2. Priority order of melody-playback (1) Red Wire - for elise (2) Green Wire - Home, Sweet Home (3) Blue Wire - Cuckoo Walts
	0	1	0	Home, Sweet Home (priority-2)	
	0	0	1	Cuckoo Walts (priority-3)	

12~24VAC/DC, 90~240VAC

Siren type



Setting of Siren type and operation

※ it means the condition of '0' when connected with com wire.

Wiring Colors	Red wire	Green wire	Blue wire	Siren reaction	Notes
Normal entry conditions	1	1	1	Notes	It's impossible to input two or three signals at the same time. ※ When connecting wiring at the same time, a sound is played sequentially. Fire siren > Police siren > Ambulance siren
	0	1	1	Fire siren	
	1	0	1	Police siren	
	1	1	0	Ambulance siren	

MSP-H Series Compact design High power horn speaker



Compact and lightweight high pressure Panel stationary type Horn speaker

▼ MSP-HB type

◀ MSP-HP type

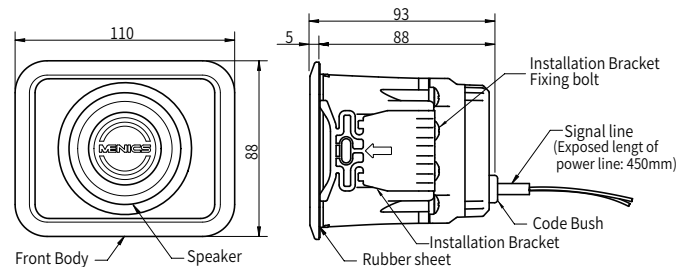


Product Feature

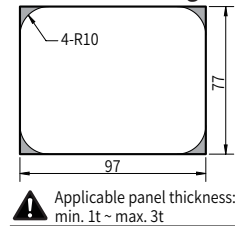
- Simple and slim design
- Strong vibrations when applied to the panel mounting bracket
- 15W output, 108dB wide variety of applications are possible with the horn speaker
- Speaker Front panel IP65 protection structure
- Body in four colors : Ivory / Black / Red / Ni plated type

Dimensions <Unit: mm>

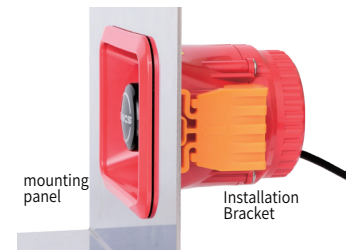
MSP-HP type



▼ Panel cutting



▼ How to install panel



Ordering information

MSP - H P 15 (B)

① Mounting Type

HP15	Panel Type
HB15	Bracket Type

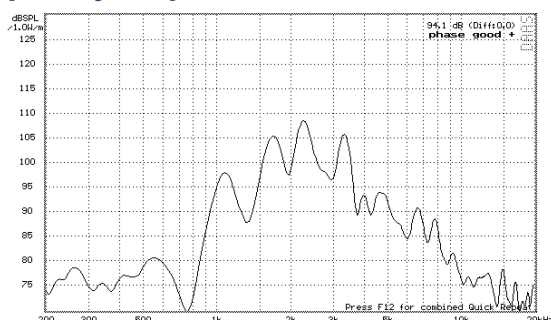
② Body Color

No mark	Ivory
(B)	Black
(R)	Red
(P)	Nickel Coating

Specifications

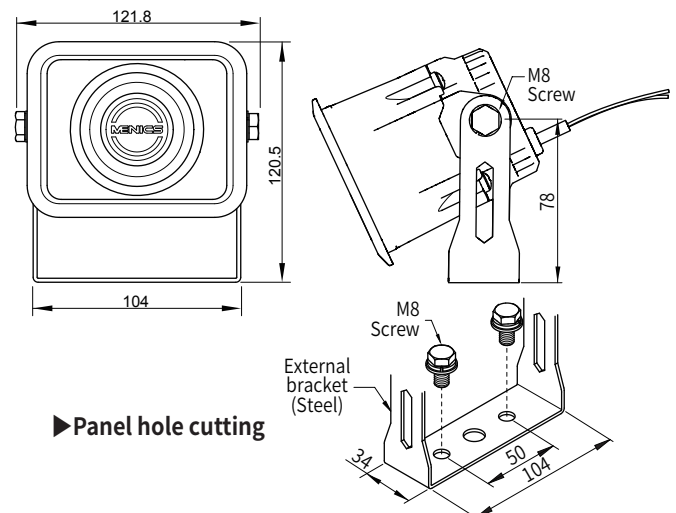
Maximum rated input	15W
Impedance	6 Ohm
Frequency band	1000 ~ 4000Hz
Sound volume (Maximum output)	108dB (1M)
Material	Body - ABS resin Rubbers - NBR
Color	Body - White Speaker horn - Black
Ambient temperature	-20 ~ 50°C
Storage ambient temperature	-20 ~ 65°C
Ambient humidity	45 ~ 85% RH
Vibration	0.75mm at 10~55Hz (cycle : 1minute)
Protection structure	MSP-HP type: IP65 (front panel) , MSP-HB type: IP60
Connection	2464UL/22AWG, 2P, 450mm
Approval	RoHS
Weight	Approx. 410 (MSP-HP type standard)

Frequency response



MSP-HB type

MSP-HB type is product to fix speakers on the equipment or on the wall of a building other than a panel. Speaker angle can be adjusted up and down after fixing.



▶ Panel hole cutting

MSP-T Series

Terminal contact series

Compact and lightweight horn speaker electronic sounder



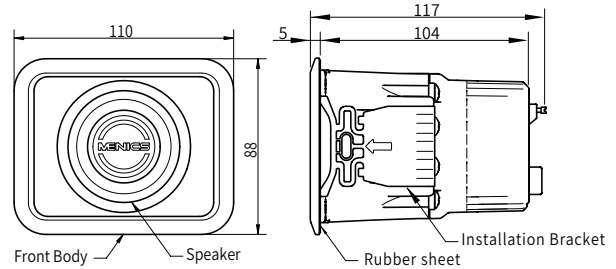
Compact and lightweight high pressure Panel stationary type Horn speaker

Product Feature

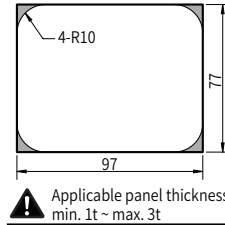
- Compact and slim Design
- Adjustable sound volume control
- Power Supply : 12VDC, 24VDC, 100~240VAC
- Body-ABS, Installation Bracket-STS304, Panel Bracket-POM
- Body Color : Black, Red, Ivory, Nickel coating
- Internal Sound : 3 channels (Melody type, Siren type)
- Front IP65 protective structure

Dimensions <Unit: mm>

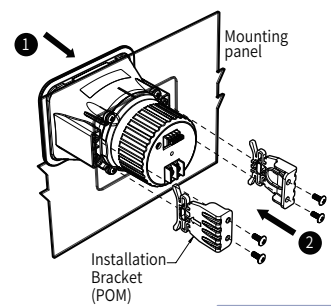
MSP-TP type



Panel cutting

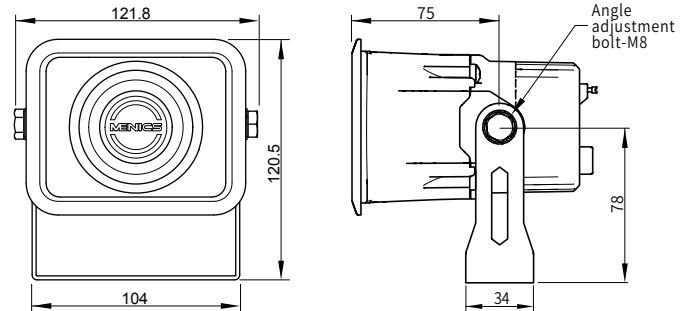


How to install panel

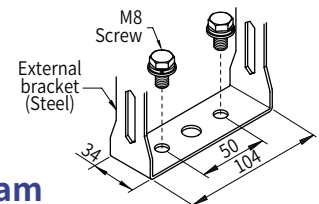


MSP-TB type

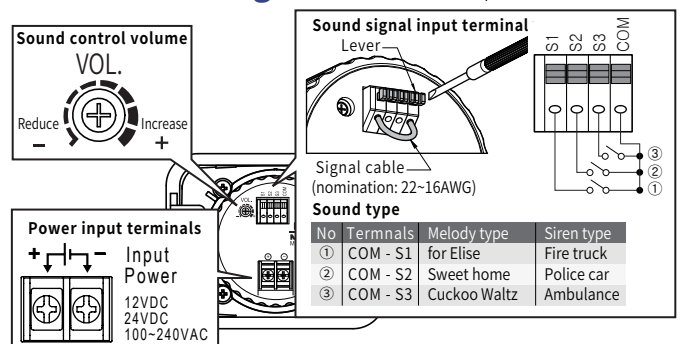
MSP-TB type is product to fix speakers on the equipment or on the wall of a building other than a panel. Speaker angle can be adjusted up and down after fixing.



Panel hole cutting



Connection Diagram



MSP-TP type



MSP-TB type

Ordering information

MSP - TP M - 02 (B)

① Mounting Style

TP	Panel Type
TB	Bracket Type

② Sound Type

M	Melody 3 channel
S	Siren 3 channel

③ Power supply

01	12VDC
02	24VDC
FF	100~240VAC

④ Body Color

No mark	Ivory	(R)	Red
(B)	Black	(P)	Nickel Coating

Specifications

Power supply	12VDC, 24VDC, 100~240VAC	
Allowable voltage range	12VDC $\pm$ 5%, 24VDC $\pm$ 10%, 100~240VAC $\pm$ 10%	
Current consumption ($\pm$ 10%)	Melody type	Siren type
	12VDC: 0.22A	0.8A
	24VDC: 0.12A	0.4A
	100~240AC: 0.13A	0.13A
Sound volume (Max, 1M)	Melody type: 100 $\pm$ 5dB, siren type: 110 $\pm$ 5dB	
Number of channels	Sound Types: 3 channels	
Sound type	Melody type: For Elise/Sweet Home/Cuckoo Waltz Siren type: Fire trucks/Police cars/Ambulance	
Volume control	Available (Built-in volume control)	
Volume range	12/24VDC type: 70~100 $\pm$ 5dB (1M) 100~240VAC type: 50~100 $\pm$ 5dB (1M)	
Color	Body - Ivory/Black/Red/Nickel plated Horn speaker - black	
Material	Body - ABS, Rubbers - NBR	
Insulation resistance	Over 100M Ω (500VDC mega between terminals and case)	
Withstand voltage	500VAC 50/60Hz 1 min (between terminals and case before)	
Vibration	0.75mm at 10~55Hz (cycle: 1 minute)	
Temperature	Ambient temperature: -20 ~ 50°C Storage ambient temperature: -20 ~ 65°C	
Ambient humidity	45~85% RH	
Protection structure	IP65 (Front panel)	
Approval	RoHS	
Weight	App. 436g (MSP-TP type)	



Compact and lightweight high pressure Panel stationary type Horn speaker



▲ MSP-LB type

MSP-LP type ►

Ordering information

MSP - LP M - 02 (B)

① Mounting Style

LP	Panel Type
LB	Bracket Type

② Sound Type

M	Melody 3 channels
S	Siren 3 channels

③ Power Supply

01	12VDC
02	24VDC
FF	100~240VAC

④ Body Color

No mark	Ivory	(R)	Red
(B)	Black	(P)	Nickel Coating

Specifications

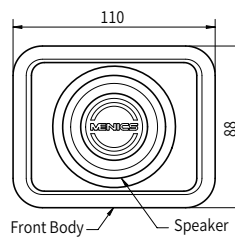
Power supply	12VDC, 24VDC, 100~240VAC	
Allowable voltage range	12VDC $\pm 5\%$, 24VDC $\pm 10\%$, 100~240VAC $\pm 10\%$	
Current consumption ($\pm 10\%$)	Melody type	Siren type
	12VDC: 0.22A	0.8A
	24VDC: 0.12A	0.4A
	100~240AC: 0.13A	0.13A
Sound volume (max, 1M)	Melody type: 100 ± 5 dB, siren type: 110 ± 5 dB	
Number of channels	Sound Types: 3 channels	
Sound type	Melody type: For Elise/Sweet Home/Cuckoo Waltz Siren type: Fire trucks/Police cars/Ambulance	
Volume control	Available (Built-in volume control)	
Connection	2464UL/22AWG, 6P, 450mm	
Color	Body - Ivory/Black/Red/Nickel plated Horn speaker - black	
Material	Body - ABS, Rubbers - NBR	
Insulation resistance	Over 100M Ω (500VDC mega between terminals and case)	
Withstand voltage	500VAC 50/60Hz 1 min (between terminals and case before)	
Vibration	0.75mm at 10~55Hz (cycle: 1 minute)	
Temperature	Ambient temperature: -20 ~ 50°C Storage ambient temperature: -20 ~ 65°C	
Ambient humidity	45~85% RH	
Protection structure	IP65	
Approval	RoHS	
Weight	App. 588g (MSP-LB type)	

Product Feature

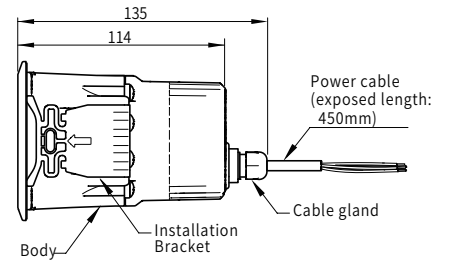
- Compact and slim Design
- Adjustable sound volume control
- Power Supply : 12VDC, 24VDC, 100~240VAC
- Body-ABS, Installation Bracket-ST5304, Panel Bracket-POM
- Body Color : Black, Red, Ivory, Nickel coating
- Internal Sound : 3 channels (Melody type, Siren type)
- Front IP65 protective structure

Dimensions <Unit: mm>

MSP-LP type

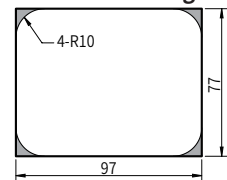


Front Body Speaker



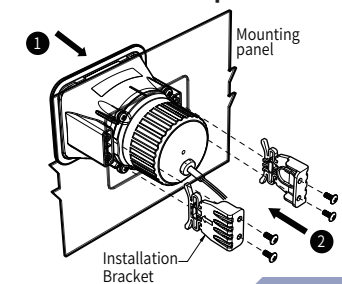
Body Installation Bracket Cable gland Power cable (exposed length: 450mm)

▼ Panel cutting



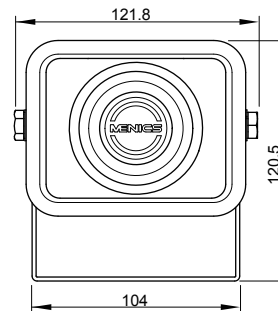
Applicable panel thickness: min. 1t ~ max. 3t

▼ How to install panel

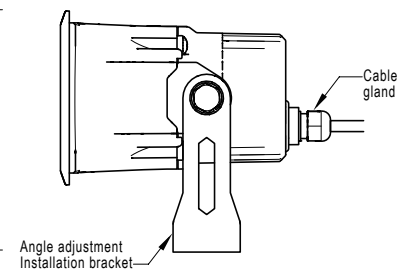


MSP-LB type

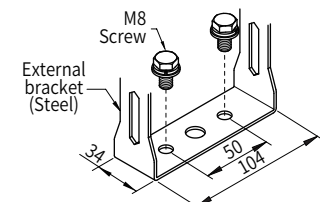
MSP-LB type is product to fix speakers on the equipment or on the wall of a building other than a panel. Speaker angle can be adjusted up and down after fixing.



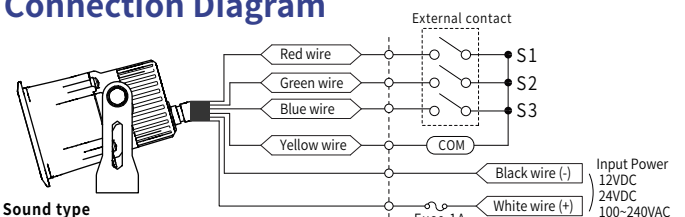
Angle adjustment Installation bracket



► Panel hole cutting



Connection Diagram



Sound type

No	Wire color	Melody type	Siren type
S1	Red	for Elise	Fire truck
S2	Green	Sweet home	Police car
S3	Blue	Cuckoo Waltz	Ambulance

※ Please mind the power polarity for connection

LED Indicators Panel mounting



Sealing type only

Except 6mm

F SERIES



6 mm



8, 10, 12, 16 mm

R SERIES



6 mm



8, 10, 12, 16 mm

P SERIES



6 mm



8, 10, 12, 16 mm

Product Feature

Operating Temperature Range: -25 ~ +60 °C

Chrome plated brass, Plastic housing

Dielectric strength: 500 VAC 50/60Hz for 1 minute (DC Type)

Dielectric strength: 1000 VAC 50/60Hz for 1 minute (AC Type)*

Insulation resistance: Max. 100MΩ (at 500VDC mega)

Accessories



LTC-500 / LTC-1000

Wire length: 500mm

* wire: UL1007, 22AWG

Wire length: 1M

* Terminal: 110 series connector, Brass 0.3t

Ordering Information

M 12 R - 03 R - W

① ② ③ ④ ⑤ ⑥

① Type	M	IP60	Standard LED
	H		High Bright LED
	E	IP67 (Sealing type)	Standard LED
	S		High Bright LED
② Diameter	06	6 mm	
	08	8 mm	
	10	10 mm	
	12	12 mm	
	16	16 mm	
③ Head Style	F	Flat (High bright only)	
	R	Round	
	P	Protrude	
④ Power Supply	03	3VDC	
	12	12VDC	
	24	24VDC	
	10	110VAC*	
	20	220VAC*	
⑤ Color	R	Red	
	Y	Yellow	
	G	Green	
	B	Blue (High bright LED only)	
	W	White (High bright LED only)	
⑥ Option	W	Milky white (Front lens)	

* Not applied for 6 mm series.

Specifications

Voltage	Operating Voltage	Operating Current
3V DC	2.7 to 3.3V DC	20 mA
12V DC	10.8 to 13.2V DC	20 mA
24V DC	21.6 to 26.4V DC	20 mA
110V AC*	100 to 120V AC	4 mA
220V AC*	200 to 240V AC	2 mA

* not valid on Ø6 mm

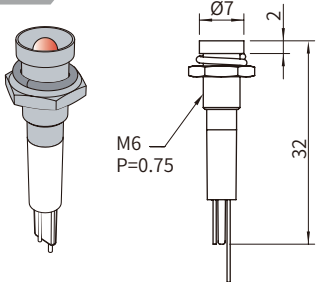
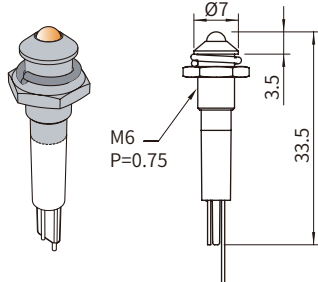
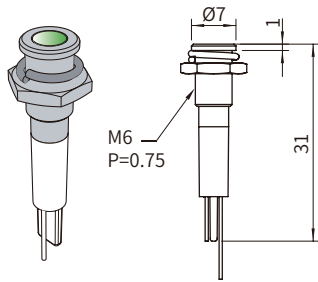
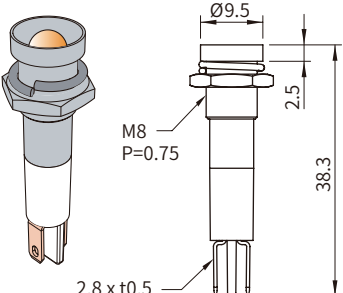
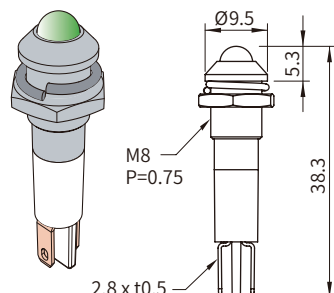
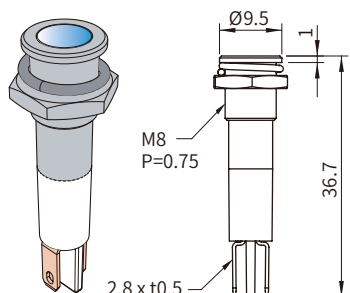
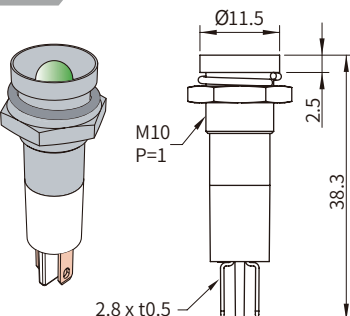
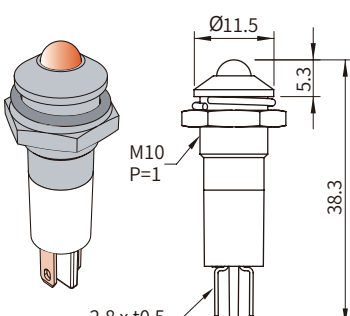
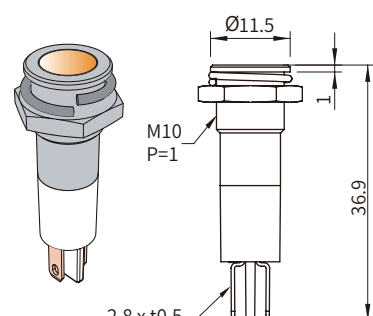
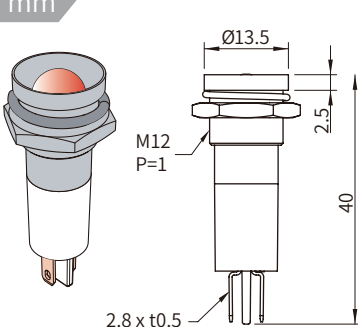
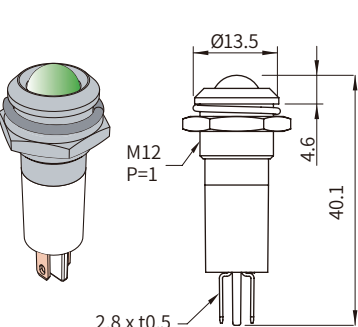
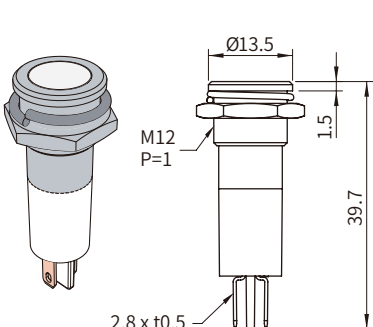
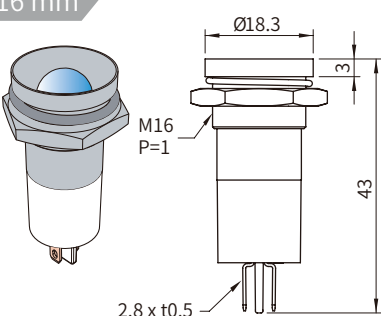
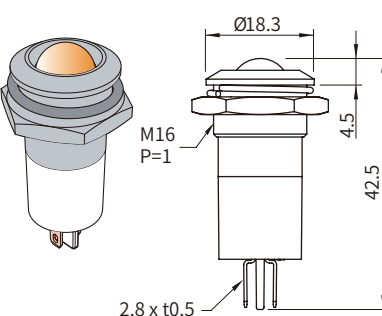
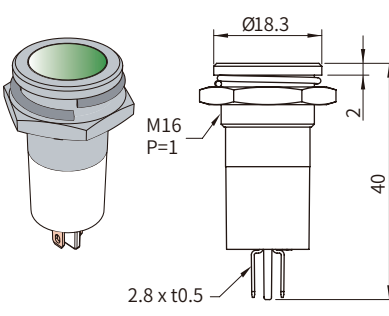
Standard LED Intensity

Type	Standard LED	Lumi. intensity P and R Type (mcd)	Lumi. intensity F Type (mcd)
6 mm	Red	50 to 80	10 to 20
	Yellow	50 to 70	10 to 18
	Green	50 to 80	10 to 23
8 mm	Red	60 to 90	15 to 23
	Yellow	50 to 80	10 to 22
	Green	70 to 100	15 to 25
10 mm	Red	60 to 90	13 to 20
	Yellow	50 to 80	8 to 20
	Green	70 to 100	14 to 23
12 mm	Red	50 to 80	10 to 20
	Yellow	40 to 70	8 to 18
	Green	60 to 80	10 to 22
16 mm	Red	50 to 80	8 to 18
	Yellow	40 to 60	8 to 15
	Green	50 to 70	10 to 20

High Bright LED Intensity (F Series only)

Type	High Bright LED	Lumi. Intensity P and R Type (mcd)	Lumi. Intensity F Type (mcd)
6 mm	Red	500 to 1000	100 to 200
	Yellow	600 to 1200	100 to 200
	Green	700 to 1500	150 to 250
	Blue	500 to 1300	100 to 220
	White	800 to 1300	120 to 200
8 mm	Red	600 to 1100	150 to 250
	Yellow	600 to 1200	130 to 260
	Green	1000 to 1800	200 to 300
	Blue	800 to 1500	140 to 240
	White	900 to 1600	150 to 240
10 mm	Red	600 to 1200	140 to 220
	Yellow	850 to 1200	120 to 240
	Green	1000 to 1800	180 to 270
	Blue	900 to 1500	130 to 230
	White	900 to 1600	140 to 230
12 mm	Red	500 to 1000	110 to 180
	Yellow	500 to 1100	100 to 190
	Green	800 to 1500	130 to 220
	Blue	550 to 1300	100 to 200
	White	600 to 1400	100 to 210
16 mm	Red	550 to 1000	80 to 150
	Yellow	600 to 1100	80 to 160
	Green	700 to 1400	100 to 210
	Blue	500 to 1200	80 to 190
	White	600 to 1200	90 to 180

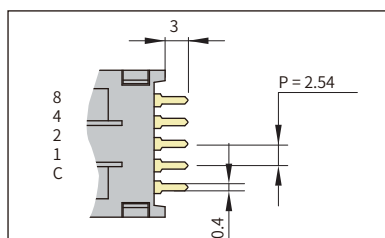
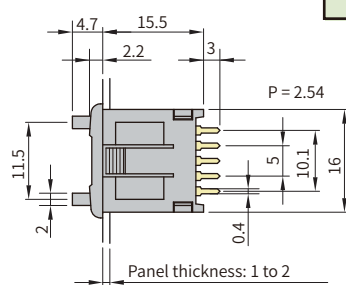
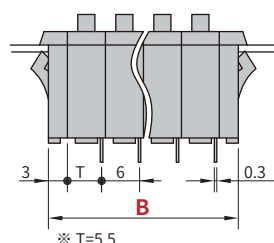
Dimensions <Unit: mm>

P series	R series	F series
6 mm  Ø7 2 32 M6 P=0.75	 Ø7 3.5 33.5 M6 P=0.75	 Ø7 1 31 M6 P=0.75
8 mm  Ø9.5 2.5 38.3 M8 P=0.75 2.8 x t0.5	 Ø9.5 5.3 38.3 M8 P=0.75 2.8 x t0.5	 Ø9.5 1 36.7 M8 P=0.75 2.8 x t0.5
10 mm  Ø11.5 2.5 38.3 M10 P=1 2.8 x t0.5	 Ø11.5 5.3 38.3 M10 P=1 2.8 x t0.5	 Ø11.5 1 36.9 M10 P=1 2.8 x t0.5
12 mm  Ø13.5 2.5 40 M12 P=1 2.8 x t0.5	 Ø13.5 4.6 40.1 M12 P=1 2.8 x t0.5	 Ø13.5 1.5 39.7 M12 P=1 2.8 x t0.5
16 mm  Ø18.3 3 43 M16 P=1 2.8 x t0.5	 Ø18.3 4.5 42.5 M16 P=1 2.8 x t0.5	 Ø18.3 2 40 M16 P=1 2.8 x t0.5



AD105-IN

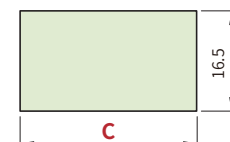
IN : Ivory
BN : Black



- High reliability achieved with gold contacts.
- snap-in Type (Front mounting)
- PCB Terminals, Pen-push Model
- Decimal Code - Uses the ten digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

Model	Switch Unit or Connector	Common terminal number	Terminals connected to common			
	Switch Unit	C	1	2	4	8
06	Connector	2	4	5	6	7
07	Connector	1	4	5	6	7
Dial		0				
		1	●			
		2		●		
		3	●	●		
		4			●	
		5	●		●	
		6		●	●	
		7	●	●	●	
		8				●
		9	●			●

▶ Panel Cutout

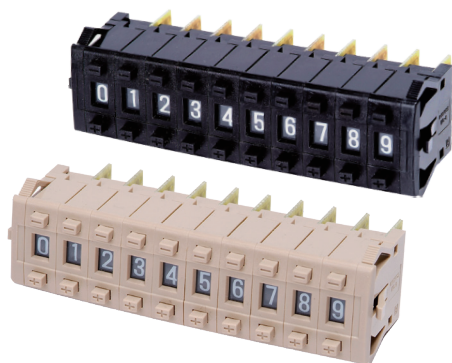


[Note] Common terminal C is at the bottom when the Switch Unit is viewed from the front.

Number of Switches (n)	A (n x 6+8)	B (n x 6+6)	C
1	14	12	12.5
2	20	18	18.5
3	26	24	24.5
4	32	30	30.5
5	38	36	36.5
6	44	42	42.5
7	56	48	48.5
8	56	56	56.5
9	62	60	60.5
10	68	66	66.5

※The dimensions above include both End Caps, and will increase 6 mm for each Spacer inserted.

Switching capacity (resistive load)		AC 5V / DC 28V 1 mA to 0.1 A
Continuous carry current		1A max.
Contact resistance		200mΩ max.
Insulation resistance	Between non-connected terminals	10 MΩ min. (at 250 VDC)
	Between terminal and non-current carrying part	100 MΩ min. (at 500 VDC)
Dielectric strength	Between non-connected terminals	200 VAC, 50/60 Hz for 1 min
	Between terminal and non-current carrying part	1,000 VAC, 50/60 Hz for 1 min
Shock resistance		490 m/s ² min.
Vibration resistance		10 to 55 Hz, 1.5-mm double amplitude
Durability	Mechanical	30,000 operations min.
	Electrical	20,000 operations min.
Ambient temperature		Operating: -10°C to 70°C (with no icing) Storage: -20°C to 80°C
Ambient humidity		35% ~ 85%
Max. operating force		4.41 N max.



Ordering Information

AD105-IN

PCB Length

AD604: 43mm

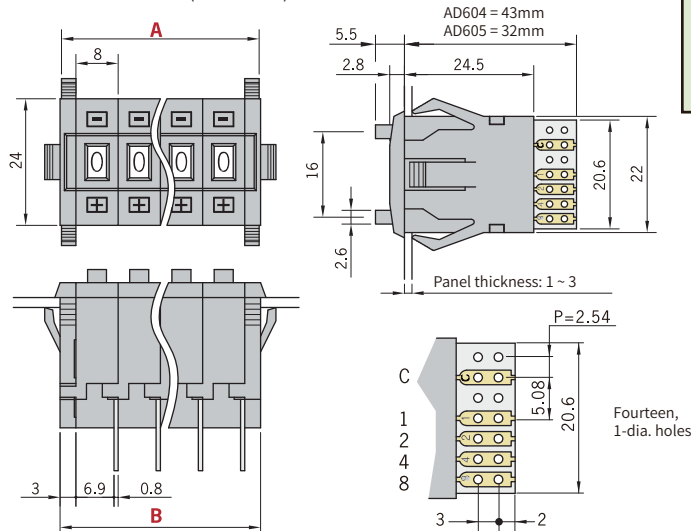
AD605: 32mm

Unit Color

IN : Ivory

BN : Black

Dimensions (unit: mm)



Wide Range of Locking-type Models Available

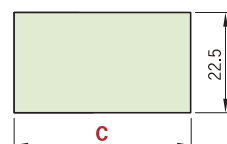
- Character height of 4.8 mm makes for easy - to view display
- Installation is easy with snap-in mounting.

Output Codes 06 and 07

Model	Switch Unit or Connector	Common terminal number	Terminals connected to common			
	Switch Unit	C	1	2	4	8
06	Connector	2	4	5	6	7
07	Connector	1	4	5	6	7
Dial	0					
	1		•			
	2			•		
	3		•	•		
	4				•	
	5		•		•	
	6			•	•	
	7		•	•	•	
	8					•
	9		•			•

※ The solid dot • indicates that the internal switch is ON (i.e., connected to the common terminal).

Panel Cutout



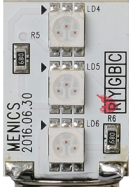
Specifications

Number of Switches (n)	A (n x 6+8)	B (n x 6+6)	C
1	16	14	14.5
2	24	22	22.5
3	32	30	30.5
4	40	38	38.5
5	48	46	46.5
6	56	54	54.5
7	64	62	62.5
8	72	70	70.5
9	80	78	78.5
10	88	86	86.5

※The dimensions above include both End Caps, and will increase 6 mm for each Spacer inserted.

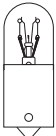
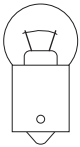
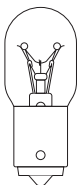
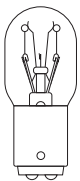
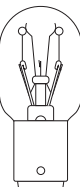
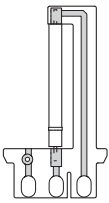
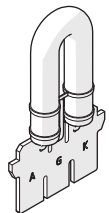
Switching capacity (resistive load)		AC 5V / DC 28V 1 mA to 0.1 A
Continuous carry current		1A max.
Contact resistance		300mΩ max.
Insulation resistance	Between non-connected terminals	10 MΩ min. (at 250 VDC)
	Between terminal and non-current carrying part	100 MΩ min. (at 500 VDC)
Dielectric strength	Between non-connected terminals	200 VAC, 50/60 Hz for 1 min
	Between terminal and non-current carrying part	1,000 VAC, 50/60 Hz for 1 min
Shock resistance		500 m/s ² min.
Vibration resistance		10 to 55 Hz, 1.5-mm double amplitude
Durability	Mechanical	100,000 operations min.
	Electrical	50,000 operations min.
Ambient temperature		Operating: -10°C to 70°C (with no icing) Storage: -20°C to 80°C
Ambient humidity		35% ~ 85%
Max. operating force		5.39 N max.

Replacement LED Bulbs

LED Bulb	Ordering Information	Applicable Products																																				
 Base 9mm Single contact	MAL - T09 - S - 12 - (R) Color <table><tr><td>R</td><td>Red</td></tr><tr><td>Y</td><td>Yellow</td></tr><tr><td>G</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr><tr><td>C</td><td>Clear</td></tr></table> Voltage <table><tr><td>12</td><td>12VAC/DC</td></tr><tr><td>24</td><td>24VAC/DC</td></tr></table> Current consumption Allowable voltage range <table><tr><td>12V: within 30~50mA</td><td>12V: 11~13V</td></tr><tr><td>24V: 20mA</td><td>24V: 22~26V</td></tr></table> ▲ Pay attention to the polarity if it is DC-type.	R	Red	Y	Yellow	G	Green	B	Blue	C	Clear	12	12VAC/DC	24	24VAC/DC	12V: within 30~50mA	12V: 11~13V	24V: 20mA	24V: 22~26V	MT4 series PS / PL series																		
R	Red																																					
Y	Yellow																																					
G	Green																																					
B	Blue																																					
C	Clear																																					
12	12VAC/DC																																					
24	24VAC/DC																																					
12V: within 30~50mA	12V: 11~13V																																					
24V: 20mA	24V: 22~26V																																					
 Base 15mm Single contact	MAL - T15 - S - 12 - (R) Color <table><tr><td>R</td><td>Red</td></tr><tr><td>Y</td><td>Yellow</td></tr><tr><td>G</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr><tr><td>C</td><td>Clear</td></tr></table> Voltage <table><tr><td>12</td><td>12VAC/DC</td></tr><tr><td>24</td><td>24VAC/DC</td></tr></table> Current consumption Allowable voltage range <table><tr><td>12V: within 30~50mA</td><td>12V: 11~13V</td></tr><tr><td>24V: within 20~30mA</td><td>24V: 22~26V</td></tr></table> ▲ Pay attention to the polarity if it is DC-type. MAL - T15 - S - 110 - (R) Color <table><tr><td>R</td><td>Red</td></tr><tr><td>Y</td><td>Yellow</td></tr><tr><td>G</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr><tr><td>C</td><td>Clear</td></tr></table> Voltage <table><tr><td>110</td><td>110VAC</td></tr><tr><td>220</td><td>220VAC</td></tr></table> Current consumption Allowable voltage range <table><tr><td>110V: 15mA</td><td>110V: 100~120V</td></tr><tr><td>220V: 20mA</td><td>220V: 210~240V</td></tr></table>	R	Red	Y	Yellow	G	Green	B	Blue	C	Clear	12	12VAC/DC	24	24VAC/DC	12V: within 30~50mA	12V: 11~13V	24V: within 20~30mA	24V: 22~26V	R	Red	Y	Yellow	G	Green	B	Blue	C	Clear	110	110VAC	220	220VAC	110V: 15mA	110V: 100~120V	220V: 20mA	220V: 210~240V	PR series ML series AS, SL series
R	Red																																					
Y	Yellow																																					
G	Green																																					
B	Blue																																					
C	Clear																																					
12	12VAC/DC																																					
24	24VAC/DC																																					
12V: within 30~50mA	12V: 11~13V																																					
24V: within 20~30mA	24V: 22~26V																																					
R	Red																																					
Y	Yellow																																					
G	Green																																					
B	Blue																																					
C	Clear																																					
110	110VAC																																					
220	220VAC																																					
110V: 15mA	110V: 100~120V																																					
220V: 20mA	220V: 210~240V																																					
 Base 15mm Double contact	MAL - T15 - D - 24 - (R) Color <table><tr><td>R</td><td>Red</td></tr><tr><td>Y</td><td>Yellow</td></tr><tr><td>G</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr><tr><td>C</td><td>Clear</td></tr></table> Voltage <table><tr><td>12</td><td>12VAC/DC</td></tr><tr><td>24</td><td>24VAC/DC</td></tr></table> Current consumption Allowable voltage range <table><tr><td>12V: within 30~50mA</td><td>12V: 11~13V</td></tr><tr><td>24V: within 20~30mA</td><td>24V: 22~26V</td></tr></table> ▲ Pay attention to the polarity if it is DC-type. MAL - T15 - D - 220 - (R) Color <table><tr><td>R</td><td>Red</td></tr><tr><td>Y</td><td>Yellow</td></tr><tr><td>G</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr><tr><td>C</td><td>Clear</td></tr></table> Voltage <table><tr><td>110</td><td>110VAC</td></tr><tr><td>220</td><td>220VAC</td></tr></table> Current consumption Allowable voltage range <table><tr><td>110V: 15mA</td><td>110V: 100~120V</td></tr><tr><td>220V: 20mA</td><td>220V: 210~240V</td></tr></table>	R	Red	Y	Yellow	G	Green	B	Blue	C	Clear	12	12VAC/DC	24	24VAC/DC	12V: within 30~50mA	12V: 11~13V	24V: within 20~30mA	24V: 22~26V	R	Red	Y	Yellow	G	Green	B	Blue	C	Clear	110	110VAC	220	220VAC	110V: 15mA	110V: 100~120V	220V: 20mA	220V: 210~240V	MT5 series MT8 series AVG series MSGs series
R	Red																																					
Y	Yellow																																					
G	Green																																					
B	Blue																																					
C	Clear																																					
12	12VAC/DC																																					
24	24VAC/DC																																					
12V: within 30~50mA	12V: 11~13V																																					
24V: within 20~30mA	24V: 22~26V																																					
R	Red																																					
Y	Yellow																																					
G	Green																																					
B	Blue																																					
C	Clear																																					
110	110VAC																																					
220	220VAC																																					
110V: 15mA	110V: 100~120V																																					
220V: 20mA	220V: 210~240V																																					

Please contact the head office for more informations about this product.

Replacement Bulbs

Bulb Type	No	Wattage	Ordering information	Applicable Products
 T10 / BA9S	1	12V 5W	MAB-T09-S-012-05	MT4 series PS / PL series
	2	24V 5W	MAB-T09-S-024-05	
	3	130V 5W	MAB-T09-S-130-05	
	4	240V 5W	MAB-T09-S-240-05	
 G19 / BA15S	5	12V 5W	MAB-T15-S-012-05	AS series SL series
 T16 / BA15S	6	12V 8W	MAB-T15-S-012-08	PR series ML series AS series SL series
	7	24V 8W	MAB-T15-S-024-08	
	8	130V 8W	MAB-T15-S-130-08	
	9	240V 8W	MAB-T15-S-240-08	
 T16 / BA15D	10	12V 10W	MAB-T15-D-012-10	MT5 series MT8 series
	11	24V 10W	MAB-T15-D-024-10	
	12	130V 10W	MAB-T15-D-130-10	
	13	240V 10W	MAB-T15-D-240-10	
 T22 / BA15D	14	12V 25W	MAB-T15-D-012-25	AVG series MSGs series
	15	24V 25W	MAB-T15-D-024-25	
	16	130V 25W	MAB-T15-D-130-25	AVG series
	17	240V 25W	MAB-T15-D-240-25	
	18	Xenon Lamp 3W	MS86S-LAMP-02 AC/DC 12 ~ 24V I-Type Lamp life: 2,000 hours	MS86S series MS115S series
	19	Xenon Lamp 6W	MS86S-LAMP-10 AC 110V, 220V U-Type Lamp life: 2,000 hours	MS86S series MS115S series

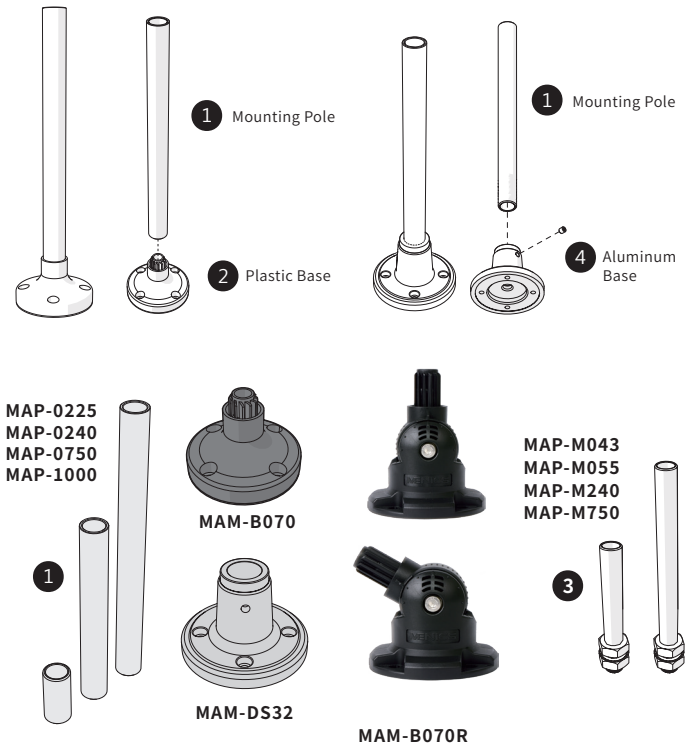
Tower Light Mounting Options

PTE , PTM , PTD , PME , MT5C/8C , MT4B/5B/8B

Pole Mounting with Base

No	Part #	Description
1	MAP-0225	Ø20mm, 8.86 in (Length 225mm) Pole
	MAP-0240	Ø20mm, 9.45 in (Length 240mm) Pole
	MAP-0750	Ø20mm, 29.53 in (Length 750mm) Pole
	MAP-1000	Ø20mm, 39.37 in (Length 1000mm) Pole
2	MAM-B070	Ø70mm Plastic Base With Water-Proof Rubber Gasket
	MAM-B070R	Ø70mm Plastic Base With 180° Rotating Pole Base
3	MAP-M043	Ø20mm, 1.69 in (Length 43mm) Pole Threaded pole With 2 Nut (M20 x 1.5Pitch)
	MAP-M055	Ø20mm, 2.17 in (Length 55mm) Pole Threaded pole With 2 Nut (M20 x 1.5Pitch)
	MAP-M240	Ø20mm, 9.45 in (Length 240mm) Pole Threaded pole With 2 Nut (M20 x 1.5Pitch)
	MAP-M750	Ø20mm, 29.53 in (Length 750mm) Pole Threaded pole With 2 Nut (M20 x 1.5Pitch)
4	MAM-DS32	Ø20mm Aluminum pole mount base - Die Casting

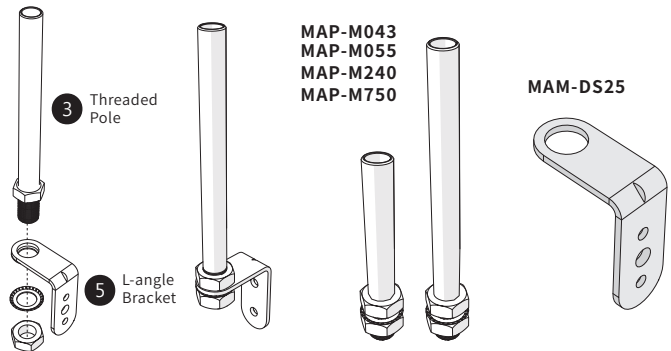
* Aluminum Pole Length Options



L-angle Mounting with Bracket

No	Part #	Description
3	MAP-M043	Ø20mm, 1.69 in (Length 43mm) Pole Threaded pole With 2 Nut
	MAP-M240	Ø20mm, 9.45 in (Length 240mm) Pole Threaded pole With 2 Nut
	MAP-M750	Ø20mm, 29.53 in (Length 750mm) Pole Threaded pole With 2 Nut
5	MAM-DS25	L-angle Bracket

* Aluminum Pole Length Options



L-angle Mounting with Bracket



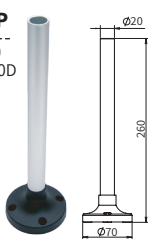
Accessories Parts

Ordering information and Dimensions (UNIT : mm)

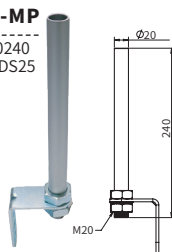
Semi-assembled pole mounting base

PTE, PTM, PTD, PME, MT4, MT5 series

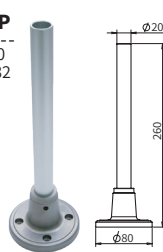
SAM-DP
MAP-0240
MAM-B070D



SAM-MP
MAP-0240
MAM-DS25

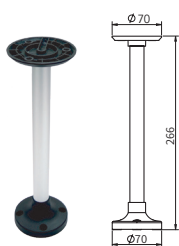


SAM-TP
MAP-0240
MAM-DS32

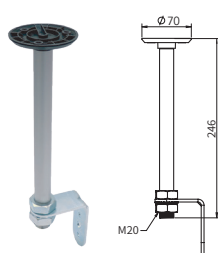


MS86 series dedicated part

SAM-D31



SAM-M31



SAM-T31



MS115 series

SAM-T115



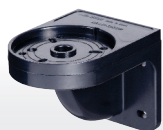
MS135 series

SAM-T135



Wall Mounting Bracket

MAP-DS30
Plastic



MAM-DS25
Steel



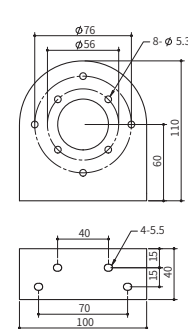
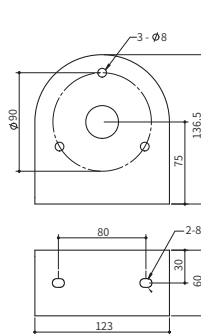
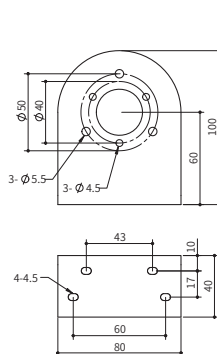
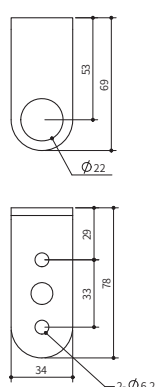
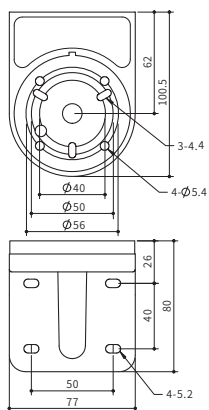
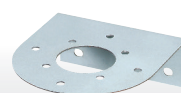
MAM-DS26
Steel



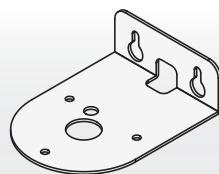
MAM-DS27
Steel



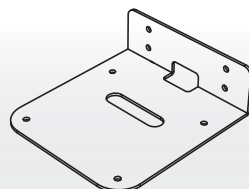
MAM-DS28
Steel



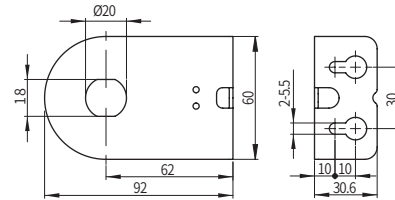
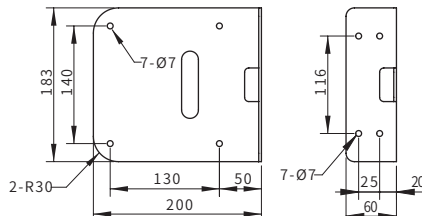
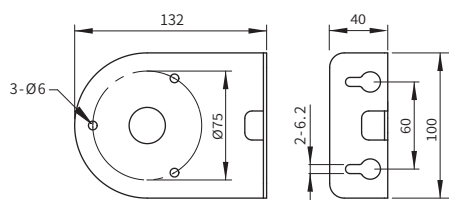
MAM-DS29
Steel



MAM-DS33
Steel



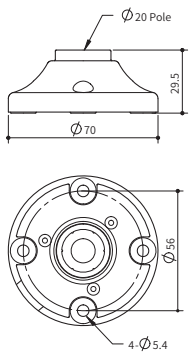
MAM-DS11
Steel



Mount Base

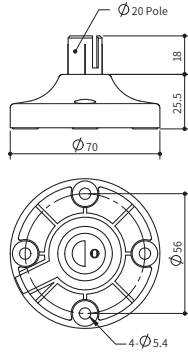
MAM-B070B

Plastic



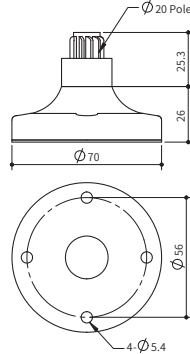
MAM-B070C

Plastic



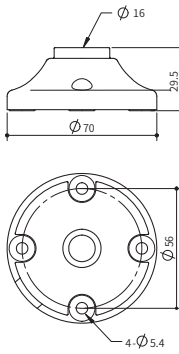
MAM-B070D

Plastic



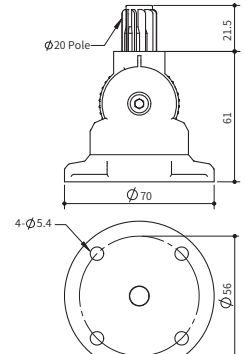
MAM-B070F

Plastic



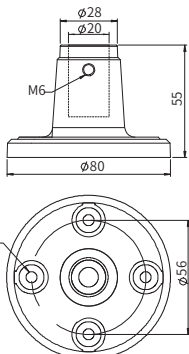
MAM-B070R

Plastic



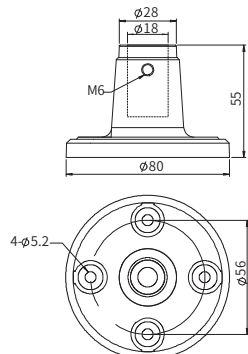
MAM-DS32A

Aluminum



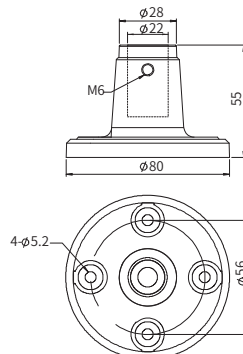
MAM-DS32B

Aluminum



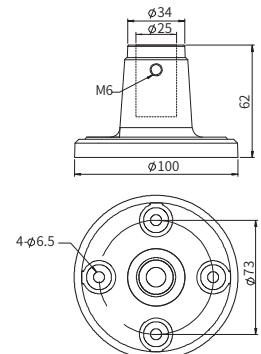
MAM-DS32C

Aluminum



MAM-DS35

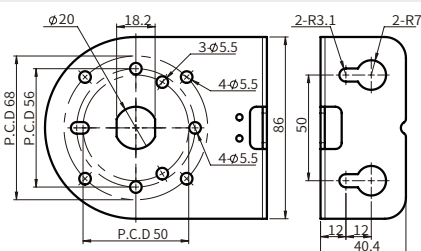
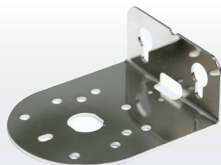
Aluminum



Wall Mounting Bracket

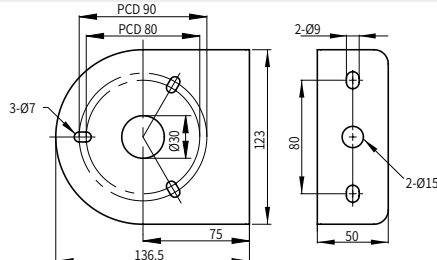
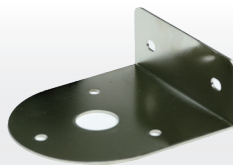
MAM-DS10

Steel



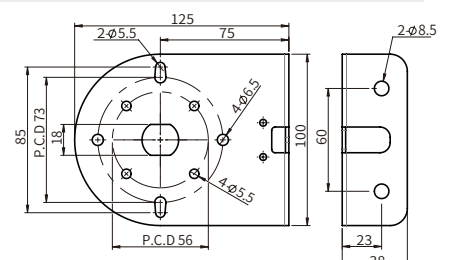
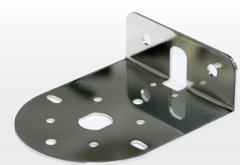
MAM-DS37

Steel



MAM-DS38

Steel



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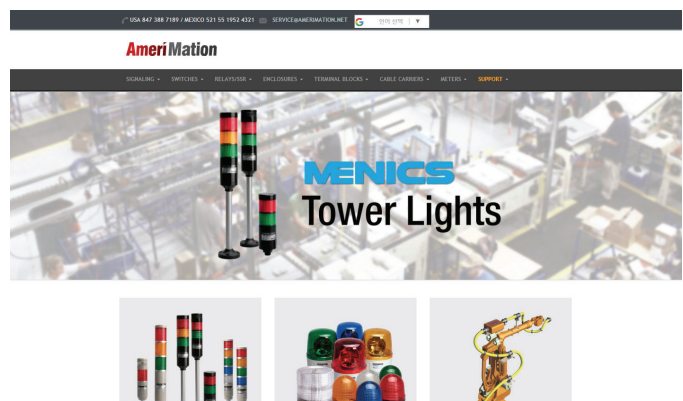


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