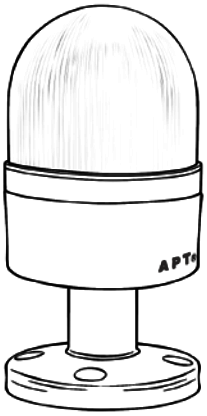
APT
A SIEMENS COMPANY



TL Tower Light

TL-50/70/90 Series

Your brand of choice
www.si-apt.com

TL Tower Light

苏州西门子电器有限公司上海分公司

上海市广中西路 777 弄 55 号启迪大厦 301

邮编 : 200072

总机 : (021) 56553757

网址 : http://www.si-apt.com

传真 : (021) 56551750

电子邮箱 : sales@si-apt.com

Siemens Electrical Apparatus Ltd., Suzhou, Shanghai Branch

Rm 301, Tsidi Building No.55, Lane 777, West Guangzhong Road Shanghai

Zip Code: 200072

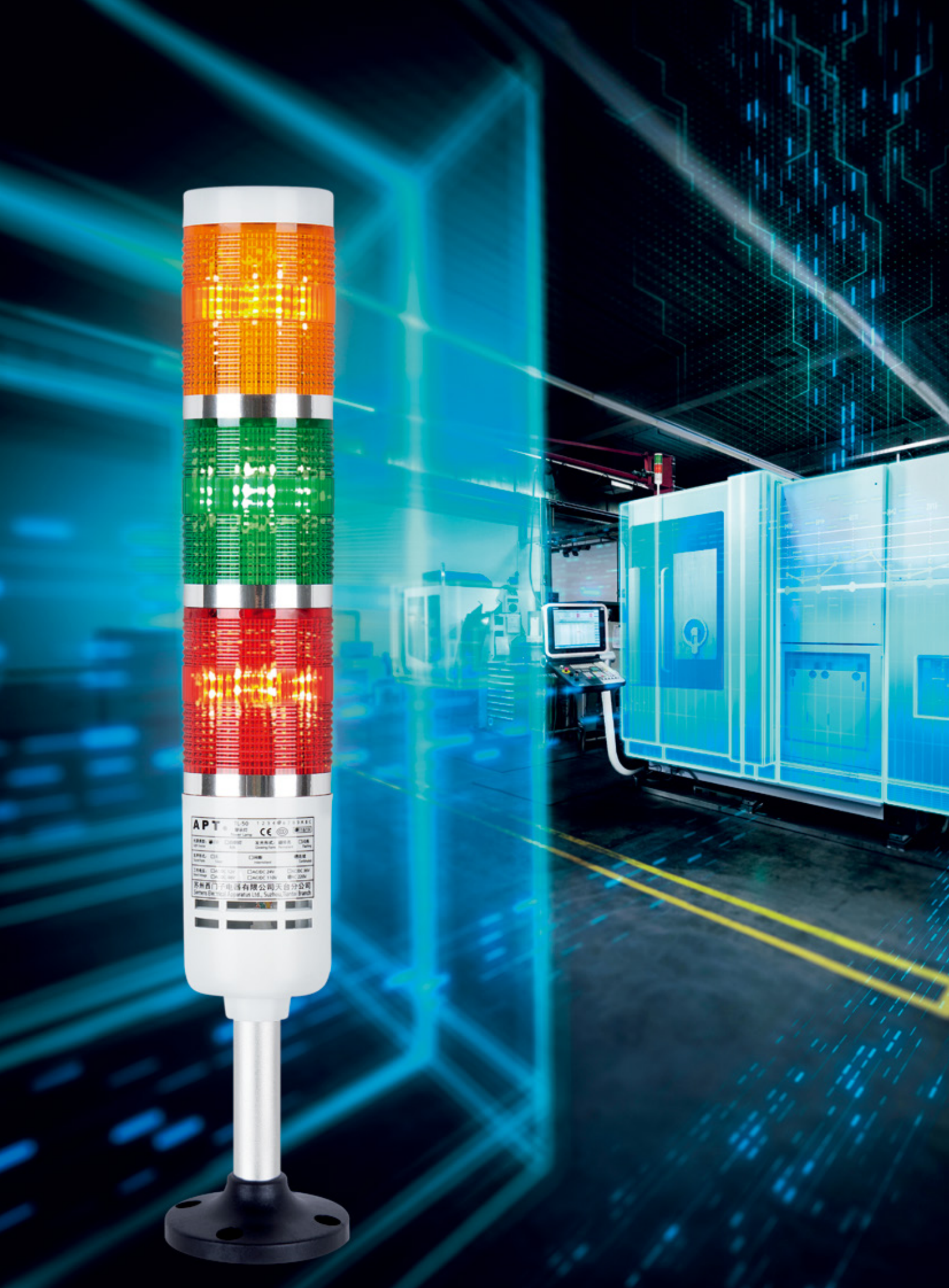
TEL: (021) 56553757

URL: http://www.si-apt.com

FAX: (021) 56551750

E-mail: sales@si-apt.com

2025/01


APT

APT

TL Tower Light

TL-50/70/90 Series

RoHS

Company Profile

APT has been established in 1993. Today it is now a Chinese leading manufacturer of low-voltage components and has been specialized in the manufacturing of low voltage products such as pushbuttons, indicators, cam switches and general-purpose relays. In August 2008, Siemens Electrical Apparatus Ltd. Suzhou (hereinafter referred to as “Siemens”) made the wholly-owned acquisition of APT, putting the APT brand and related products under the operation of Siemens. With unified quality control and R&D resources of Siemens, APT focuses on manufacturing pushbuttons, indicators and other important low-voltage products such as tower lights, control cabinets, combined lights, current transformers and limit switches etc.

Through over 20 years of promotion and application, the APT products have been widely serving dozens of industrial fields in China including power, energy, rail transit, elevator, logistics, machine tool, etc. They have been successively selected and applied in Qinshan Nuclear Power Plant, the Three Gorges Project, Shenzhou V Spacecraft, Qinghai-Tibet Railway locomotives, “Harmony” Electric Multiple Unit, “Fuxing” Electric Multiple Unit, international airports and urban metros and have become the preferred brand for national key projects. At the same time, Siemens gives full play to its international operation experience to continuously enhance the management and business development of APT and better serve the Chinese market through advanced technology and improved product line.

APT
A SIEMENS COMPANY

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◎ Selection principles for tower light

Based on the intended use and working environment, etc., the tower lights shall be selected according to the following factors:

- ☒ Surrounding brightness
- ☒ Distance from the observation point
- ☒ Endurance and use cost of the light source
- ☒ Noise level and pollution level of the service environment; if there are intense vibrations or shocks
- ☒ Influence on the safety caused by the unexpected problems, such as light source damage
- ☒ Convenience in usage and maintenance

Therefore, different products are selected based on the operating requirements and the environmental characteristics, while the maintenance convenience and economy shall be considered in any case.

◎ Light source

I. Lamp bulb

The lamp bulb glows by heating the resistance wire during current flows.

The helical tungsten filament is normally used and the inert gas is injected into the bulb.

In general, the lamp bulb is featured by:

- ☒ If the voltage is 10% lower than the rated voltage of the lamp bulb, the endurance can be increased by four times, the power consumption reduces to 85% and the brightness drops to around 30%.
- ☒ If the voltage is 10% higher than the rated voltage, the endurance can be shortened by 30%, the power consumption increases by around 16% and the brightness rises by around 40%.

II. LED

Light-emitting diode (LED) is a solid light-emitting device by use of the semi-conductor electroluminescent effect, mainly made of semi-conductor materials such as GaAs and GaP.

Like the normal semi-conductors, the endurance of LED is affected by various factors such as overvoltage and surrounding temperature, etc. However, unlike the lamp bulb whose filament will be thinner due to volatilization and which will not be subject to mechanical wear, it is of shock and vibration resistance and longer endurance without special aseismic structure. Furthermore, LED has higher photoelectric conversion efficiency, which shall be deemed as an energy-saving clean light source with longer endurance.

Normally, the standard endurance of LED is 100,000 hours.

III. Xenon lamp

The xenon lamp glows by the gas excited by instantaneous high-energy, with higher brightness.

Compared with the common lamp bulb, xenon lamp requires bringing in extremely high electric energy instantly and letting out enormous light intensity. As the low voltage for exciting xenon and the available supporting materials, Xe gas is mostly used by this light source, hence the name.

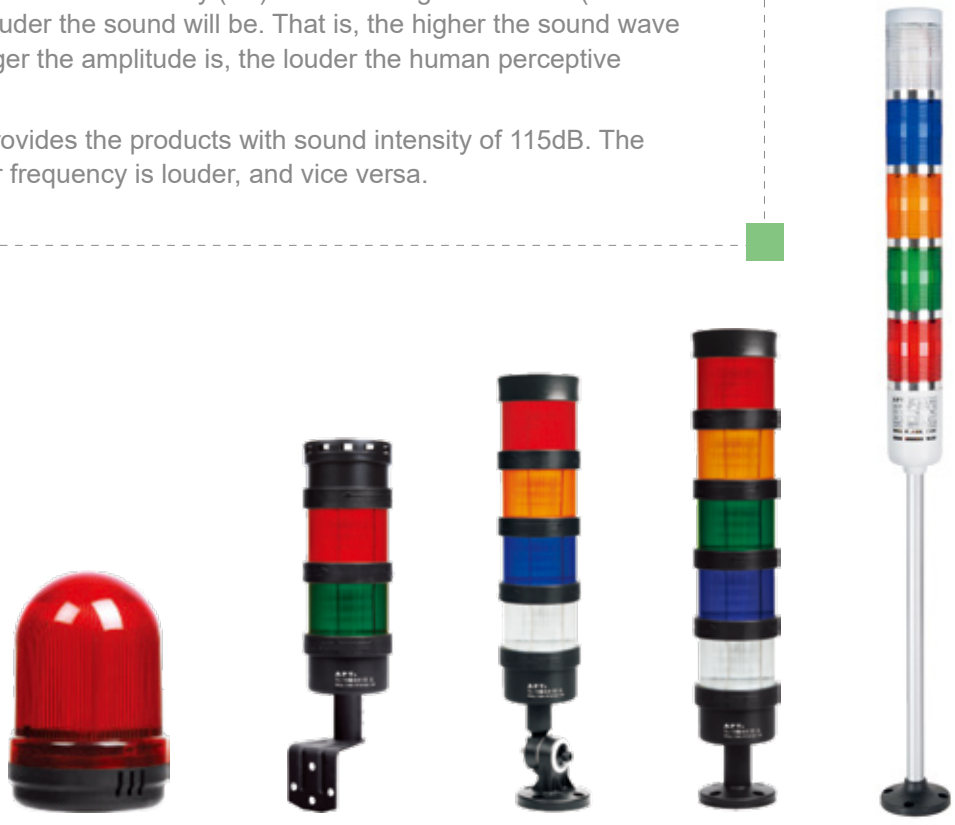
The bulb of xenon lamp can be fixed by seismic restraint method, with good seismic resistance. The spectrum of xenon lamp is similar to that of natural light. Its working mode is explosion flashing, which is same as the camera’ s flash lamp. Therefore, it has extremely strong visibility.

◎ Human perceptive volume

Human perceptive volume is different from the physical intensity of sound pressure (dB).

Under the same sound intensity (dB), if the tone (audio frequency, amplitude) is different, the perceptive volume is different. Generally, the higher the audio frequency is, the more fidget people will get, the bigger the volume will be. Therefore, the stronger the sound intensity (dB) is and the higher the tone (vibration and frequency) is, the louder the sound will be. That is, the higher the sound wave frequency is and the larger the amplitude is, the louder the human perceptive volume will be.

The company also provides the products with sound intensity of 115dB. The warning tone with higher frequency is louder, and vice versa.



APT

TL 50

Series Tower Light

Product feature

- Protection class IP20.
- Pass the signal effectively even in a larger work space.
- The illumination form includes normally on, flashing.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.
- Buzzer volume > 90dB (at 10cm in horizontal direction from the sound source).

Product description

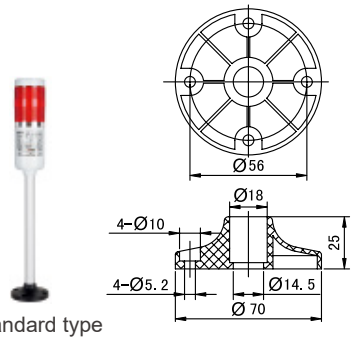
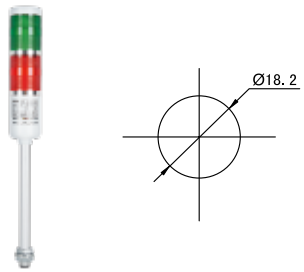
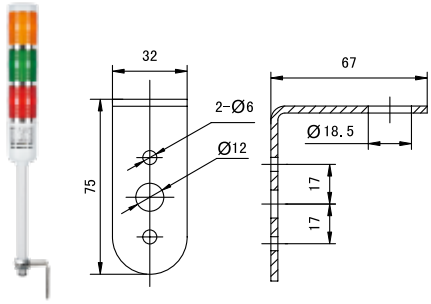
Order code	Specification	Rated voltage/current of LED	Rated voltage/ current of buzzer	Color
TL-50LL	LED normally on	12V/≤64mA 24V/≤36mA 36V/≤36mA 75V/≤15mA 110V/≤15mA 220V/≤15mA		
TL-50LF	LED flashing	12V/≤64mA 24V/≤36mA 36V/≤36mA 75V/≤18mA 110V/≤18mA 220V/≤18mA		
TL-50BL	Incandescent light normally on	12V/≤260mA 24V/≤130mA 110V/≤30mA 220V/≤16mA		
TL-50BF	Incandescent light flashing			
TL-50LLI(C)	LED normally on with intermittent or continuous sound	12V/≤64mA 24V/≤36mA 36V/≤36mA 75V/≤15mA 110V/≤15mA 220V/≤20mA		
TL-50LFI(C)	LED flashing with intermittent or continuous sound	12V/≤64mA 24V/≤36mA 36V/≤36mA 75V/≤15mA 110V/≤15mA 220V/≤15mA		
TL-50BLI(C)	Incandescent light normally on with intermittent or continuous sound	12V/≤260mA 24V/≤130mA 110V/≤30mA 220V/≤16mA	15~35mA	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
TL-50BFI(C)	Incandescent light flashing with intermittent or continuous sound			

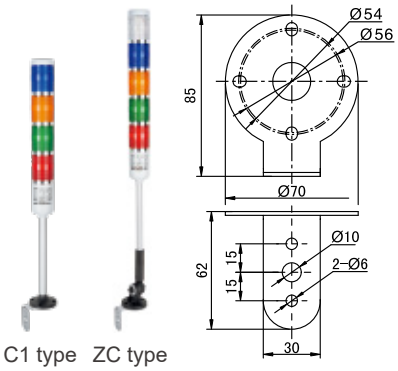
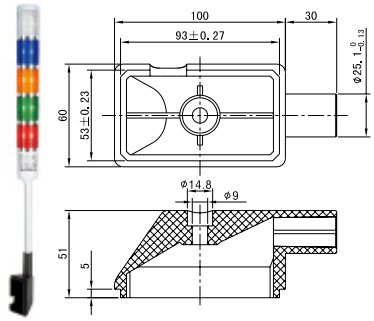
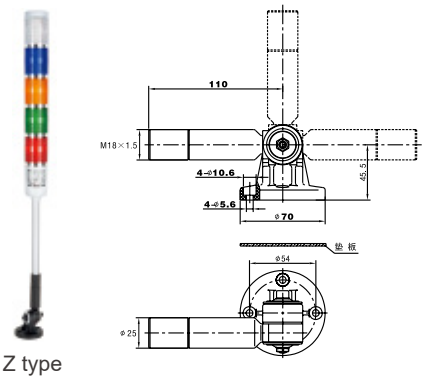
Note: 12V, 24V, 36V, 48V, 75V and 110V are available for DC and AC, while 220V is only available for AC. The unit for rated current is layer.
The current is only for reference during selection and the actual value shall be subject to the material object.

Order code designations

No.	TL-50 □ □ □ / □ □ □ Z □ 1 2 3 4 5 6 7	
1	Light source	L: LED B: Incandescent light
2	Illumination form	L: normally on F: flashing
3	Sounding form	No marking: silent I: intermittent C: continuous
4	Color	● Red-r ● Green-g ● Yellow-y ● Blue-b ○ White-w (color order: from down to up)
5	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 18: AC/DC 75V 26: AC/DC 110V 31: AC 220V（36V、48V、75V are only for LED)
6	Installation method	No marking: standard type L: direct nut mounting C: nut side mounting C1: base side mounting C2: base side mounting Z: folding mounting ZC: folding side mounting
7	Pole length	No marking: standard type (about 200mm) Fill in the visible pole length as necessary (Unit: mm, requirement: integer multiple of 10, range: Z0~Z1000)

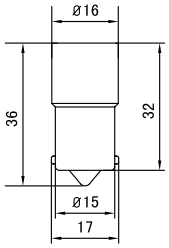
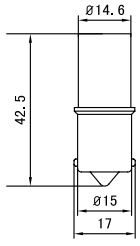
◎ Hole dimensions

Standard type	L type	C type
 Standard type	 L type	 C type

C1 type, ZC type	C2 type	Z type
 C1 type ZC type	 C2 type	 Z type

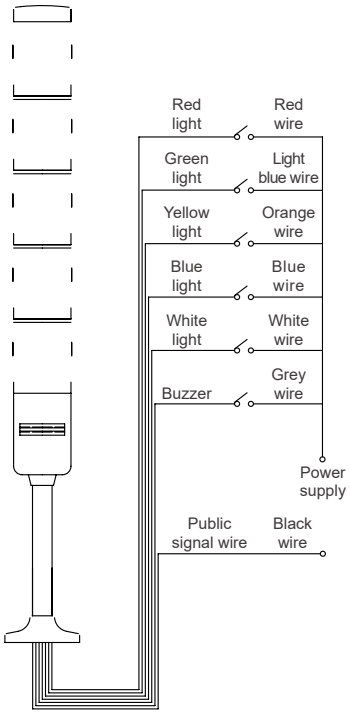
Note: If another installation method is selected, please specify in the order code when ordering.

◎ Accessories

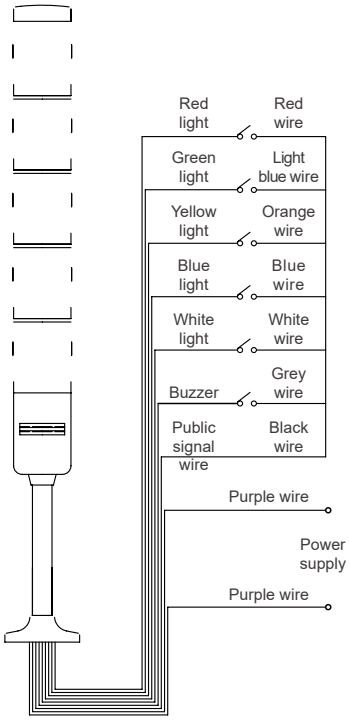
Name	Type	Order code	Voltage grade	Color	Function	Dimension
Incandescent light bead		TL-50B1/ ★	22:AC/DC12V		As TL-50 AC/DC12V series light source	
			23:AC/DC24V		As TL-50 AC/DC24V series light source	
			26:AC/DC110V		As TL-50 AC/DC110V series light source	
			31:AC220V		As TL-50 AC220V series light source	
LED light bead		TL-50L1/ ▲★	22:AC/DC12V	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b	As TL-50 AC/DC12V series light source	
			23:AC/DC24V		As TL-50 AC/DC24V, 36V and AC220V flashing series light source	
			25:AC/DC48V		As TL-50 AC/DC48V, 75V, 110V and AC220V series light source	

Note: Indicate color at ▲ and voltage grade at ★ in the order code column.

Wiring diagram

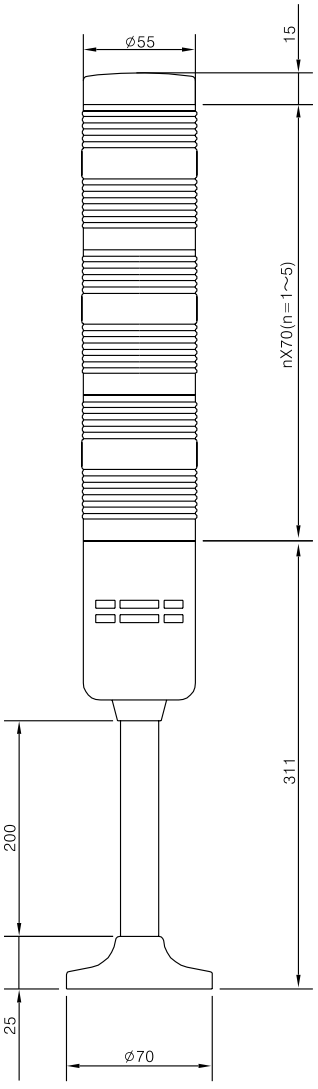


Normally on type



Flashing type

Dimension



APT

TL 501

Series Tower Light

Product feature

- Protection class IP20.
- Pass the signal effectively even in a larger work space.
- The illumination form includes normally on, flashing.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.
- Buzzer volume > 90dB (at 10cm in horizontal direction from the sound source).

ø 55 BUZ IP20

Product description

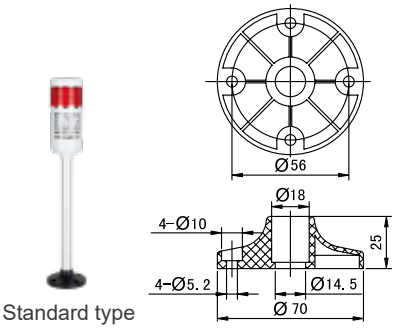
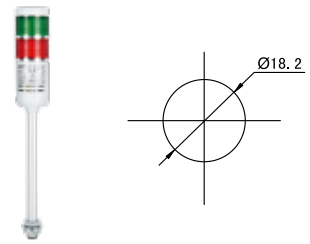
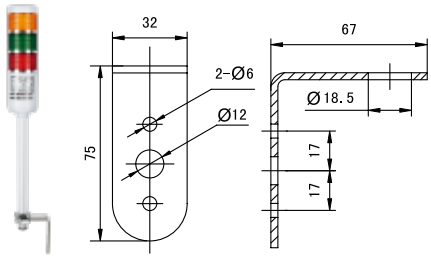
Order code	Specification	Rated voltage/current of LED	Rated voltage/ current of buzzer	Color
TL-501LL	LED normally on	12V/≤70mA 24V/≤35mA 36V/≤35mA 48V/≤35mA 75V/≤35mA 110V/≤35mA 220V/≤19mA		● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
TL-501LF	LED flashing			
TL-501LLI(C)	LED normally on with intermittent or continuous sound		15~35mA	
TL-501LFI(C)	LED flashing with intermittent or continuous sound			

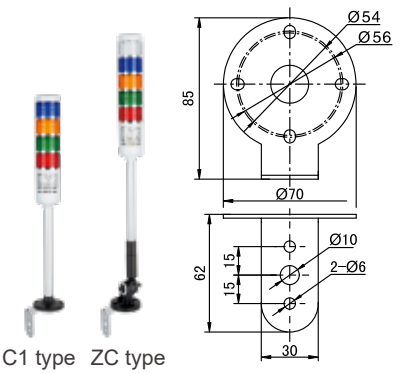
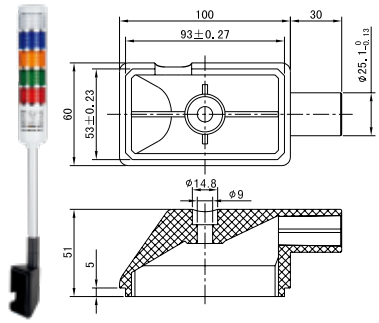
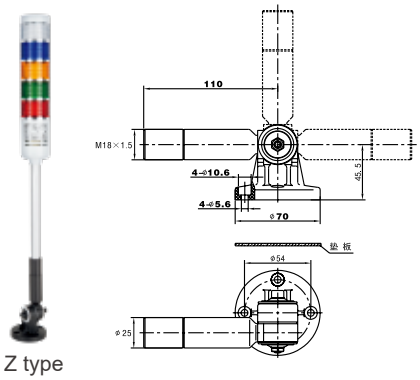
Note: 12V, 24V, 36V, 48V, 75V and 110V are available for DC and AC, while 220V is only available for AC. The unit for rated current is layer.
The current is only for reference during selection and the actual value shall be subject to the material object.

Order code designations

No.	TL-501 L □ □ / □ □ □ Z □ (1 2 3 4 5 6 7)	
1	Light source	L: LED
2	Illumination form	L: normally on F: flashing
3	Sounding form	No marking: silent I: intermittent C: continuous
4	Color	● Red-r ● Green-g ● Yellow-y ● Blue-b ○ White-w (color order: from down to up)
5	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 18: AC/DC 75V 26: AC/DC 110V 31: AC 220V
6	Installation method	No marking: standard type L: direct nut mounting C: nut side mounting C1: base side mounting C2: base side mounting Z: folding mounting ZC: folding side mounting
7	Pole length	No marking: standard type (about 200mm) Fill in the visible pole length as necessary (Unit: mm, requirement: integer multiple of 10, range: Z0~Z1000)

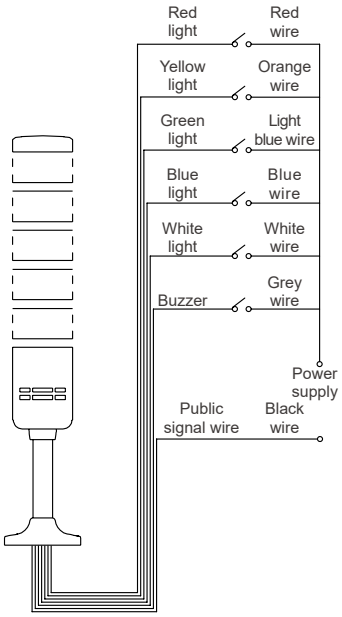
◎ Hole dimensions

Standard type	L type	C type
		
Standard type	L type	C type

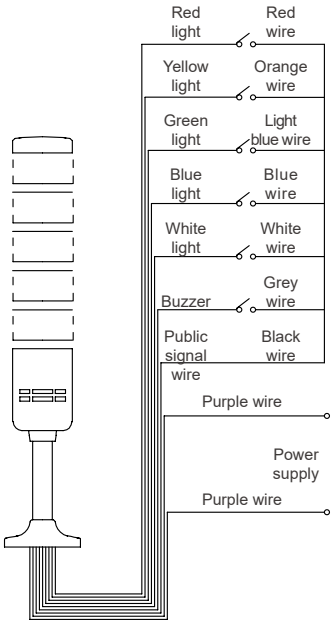
C1 type, ZC type	C2 type	Z type
		
C1 type ZC type	C2 type	Z type

Note: If another installation method is selected, please specify in the order code when ordering.

Wiring diagram

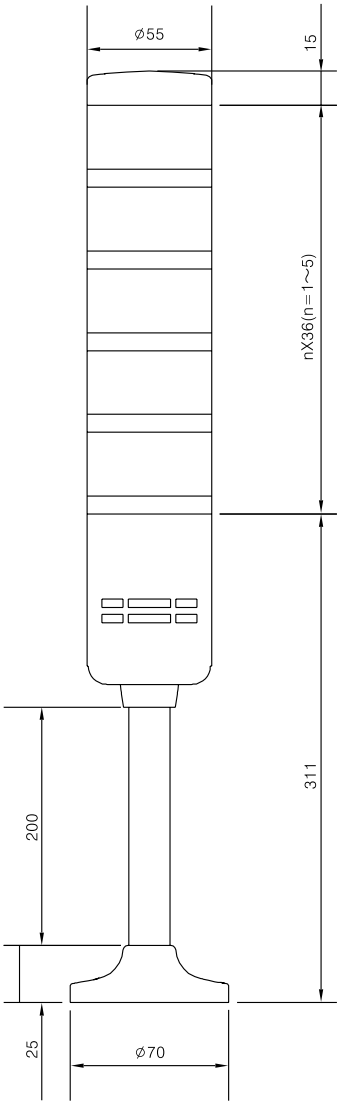


Normally on type



Flashing type

Dimension



TL-501

APT

TL 503

Series Tower Light

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Product feature

- Protection class IP20.
- Pass the signal effectively even in a larger work space.
- The illumination form includes normally on, flashing.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.
- Buzzer volume Max.90dB (at 10cm in horizontal direction from the sound source).

Product description

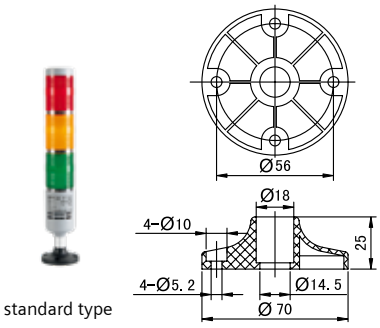
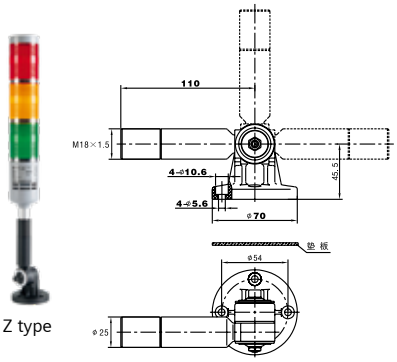
Important parameters			
Rated voltage (Ue)	AC/DC 24V	Rated current (Ie)	LED: < 36mA Buzzer: 15mA~35mA
Rated insulation voltage (Ui)	400V	Power frequency withstand voltage	AC1890 · 50Hz · 5S
Allowable Maximum voltage fluctuation	±10%Ue	Rated frequency	40~60Hz
Buzzer volume	Max.90dB	Protection class	IP20

Note: The current is only for reference during selection and the actual value shall be subject to the material object.

Order code designations

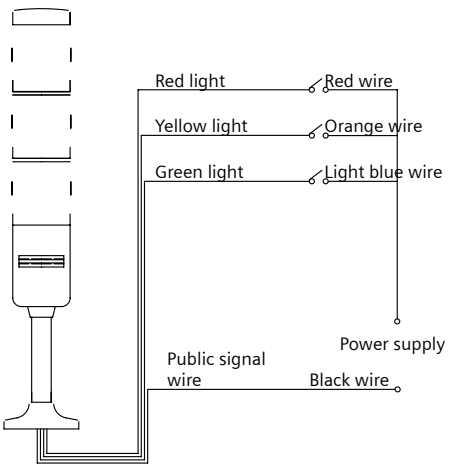
Order code description and list	Product series	Light source type	Illuminating form	Sounding form	/	Color	Voltage	Installation method
	TL-503	L:LED	L:normally on F:flashing	No:silent C:continuous	/	gyr: green yellow red * from down to up in fixed order	23: AC/DC 24V	No: standard type Z: folding mounting
TL-503LL/gyr23	TL-503	LED	normally on	silent	/	● 绿 - g ● 黄 - y ● 红 - r	AC/DC 24V	standard type
TL-503LL/gyr23Z			normally on	silent				folding mounting
TL-503LLC/gyr23			normally on	continuous				standard type
TL-503LLC/gyr23Z			normally on	continuous				folding mounting
TL-503LF/gyr23			flashing	silent				standard type
TL-503LF/gyr23Z			flashing	silent				folding mounting
TL-503LFC/gyr23			flashing	continuous				standard type
TL-503LFC/gyr23Z			flashing	continuous				folding mounting

◎ Hole dimensions

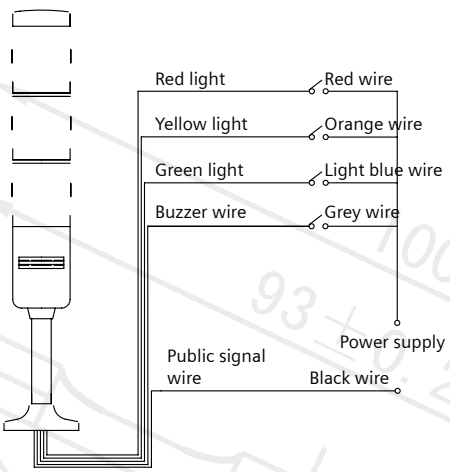
standard type	Z type
	

TL-503

Wiring diagram

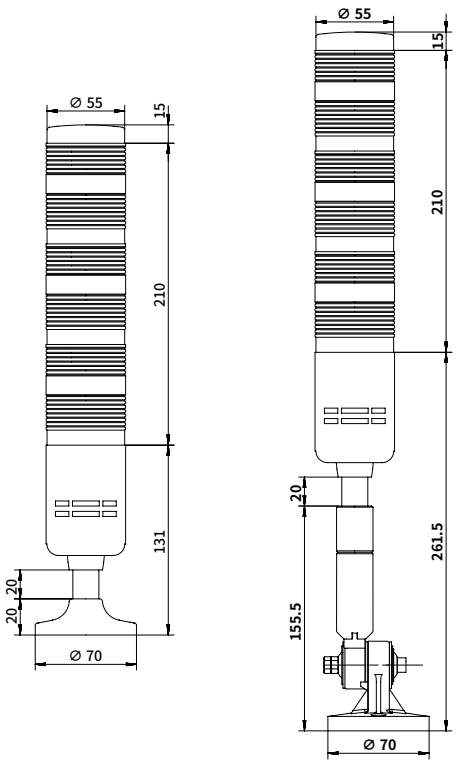


w/o buzzer



with buzzer

Dimension



Note: The wiring method is the same for both flashing and normally on types, with a power cable length of appro. 0.8m.

APT

TL 70

Combined Tower Light

Product feature

- Protection class IP65.
- Different illumination forms and light sources may be combined at will as necessary (max. five optical elements or four optical elements plus one acoustic element).
- The illumination form includes normally on, flashing or explosion-flashing, fade up.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.
- Buzzer volume > 100dB (at 10cm in horizontal direction from the sound source).

Description of optical elements

Type	Order code	Specification	Rated voltage/current	Color
	TL-70LL	LED normally on	12V/≤60mA 24V/≤45mA 36V/≤45mA 48V/≤19mA 75V/≤19mA 110V/≤19mA 220V/≤18mA	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
	TL-70LF	LED flashing	12V/≤60mA 24V/≤45mA 36V/≤45mA 48V/≤24mA 75V/≤24mA 110V/≤24mA 220V/≤32mA	
	TL-70LS	LED fade up	12V/≤52mA 24V/≤32mA 36V/≤32mA 48V/≤32mA 75V/≤32mA 110V/≤32mA 220V/≤32mA	
	TL-70SF	Xenon lamp explosion-flashing	24V/≤200mA 110V/≤42mA 220V/≤40mA	

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

Order code designations

No.	TL-70 □ □ / □ □ (1 2 / 3 4)	
1	Light source	L: LED S: Xenon lamp
2	Illumination form	L: normally on F: flashing or explosion-flashing S: fade up
3	Color	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
4	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 18: AC/DC 75V 26: AC/DC 110V 31: AC 220V

Description of acoustic elements

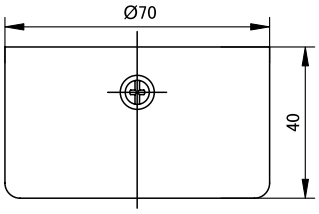
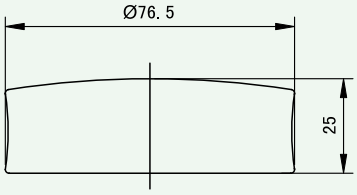
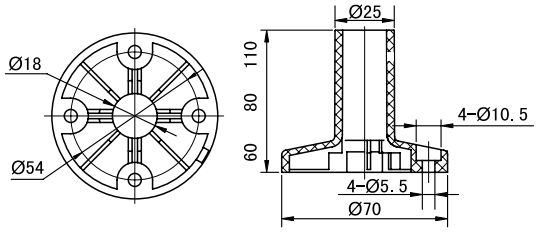
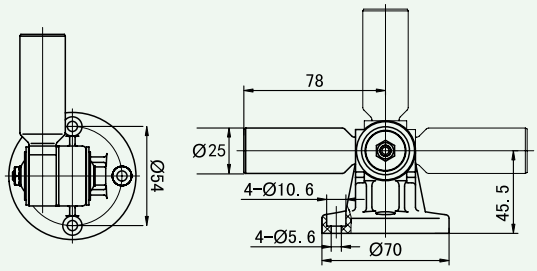
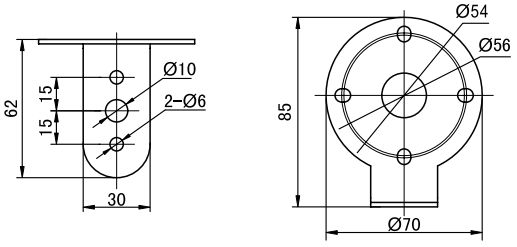
Type	Order code	Specification	Rated voltage/current	Color
	TL-70BI	Buzzing (intermittent)	12V/≤32mA 24V/≤32mA 36V/≤32mA 48V/≤32mA 75V/≤30mA 110V/≤30mA 220V/≤32mA	● Black-k
	TL-70BC	Buzzing (continuous)	12V/≤32mA 24V/≤30mA 36V/≤30mA 48V/≤30mA 75V/≤30mA 110V/≤30mA 220V/≤32mA	

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

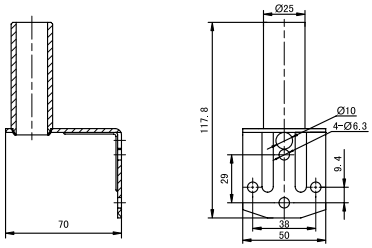
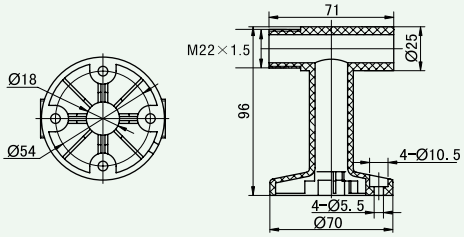
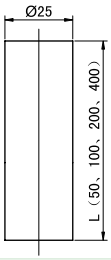
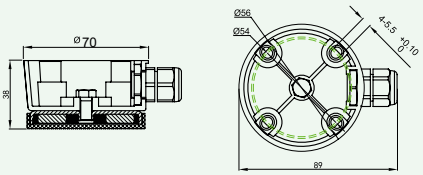
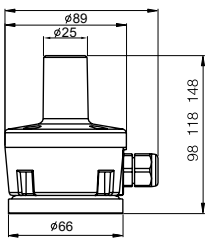
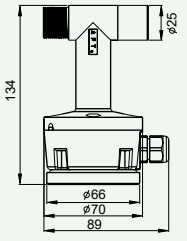
Order code designations

No.	TL-70 B □ / □ (B 1 / 2 / 3)	
1	Sound source	B: buzzing
2	Sounding form	I: intermittent C: continuous
3	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 18: AC/DC 75V 26: AC/DC 110V 31: AC 220V

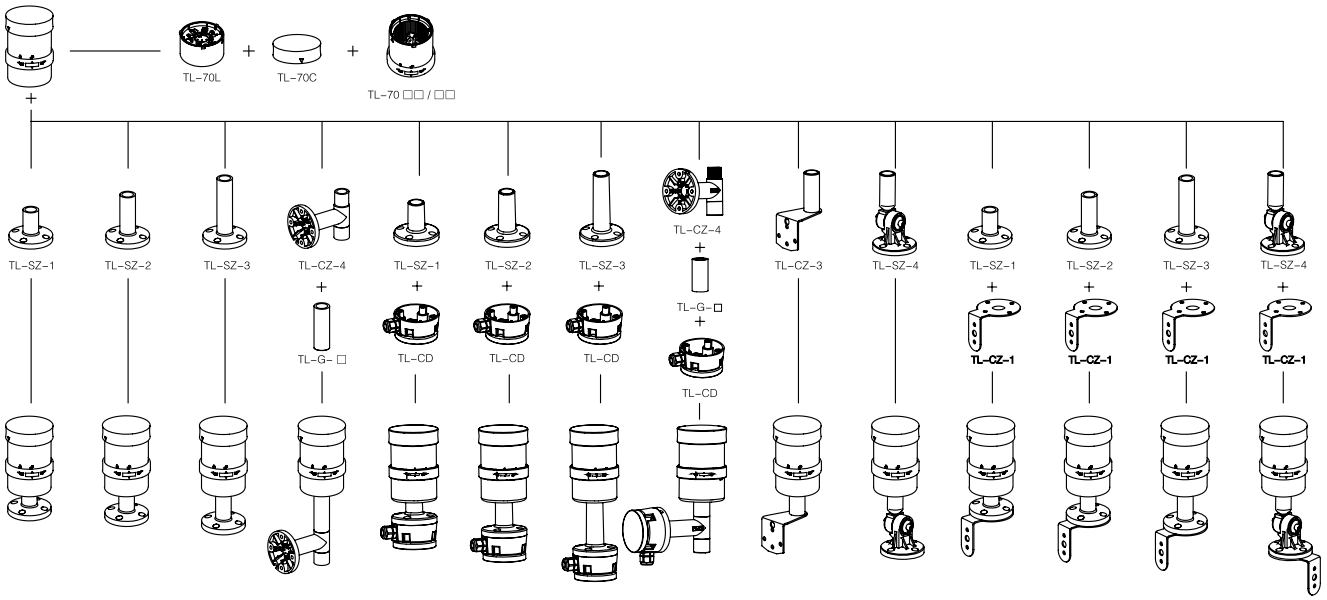
◎ Accessories

Name	Type	Order code	Dimension	Remark
Terminal block		TL-70L		
Decoration cover		TL-70C		Used with optical elements for protection
Vertical-mounted base		TL-SZ-1 TL-SZ-2 TL-SZ-3		Height 60 Height 80 Height 110
Folding-mounted base		TL-SZ-4		
Side-mounted base		TL-CZ-1		Used with TL-SZ-1, TL-SZ-2, TL-SZ-3 or TL-SZ-4 for side installation

◎ Accessories

Name	Type	Order code	Dimension	Remark
Side-mounted base		TL-CZ-3		
Side-mounted base		TL-CZ-4		Used with TL-G-□ for side installation
Side-mounted base		TL-G-□		Used with TL-CZ-4 for side installation Note: Provide the height of the required product in "□" in the order code
Magnetic-mounted base		TL-CD-1		
Magnetic-mounted base		TL-CD-11 TL-CD-12 TL-CD-13		Combination: TL-CD-1+TL-SZ-1 TL-CD-1+TL-SZ-2 TL-CD-1+TL-SZ-3
Magnetic-mounted base		TL-CD-24		TL-CD-1+TL-CZ-4 Note: used with TL-G-□

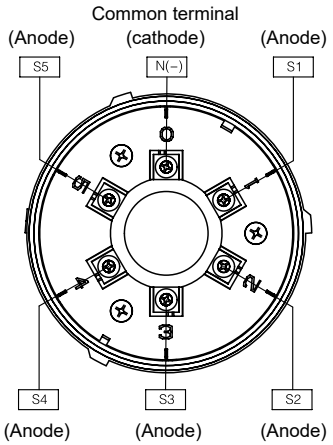
◎ Schematic diagram for accessory combination



◎ Installation instructions

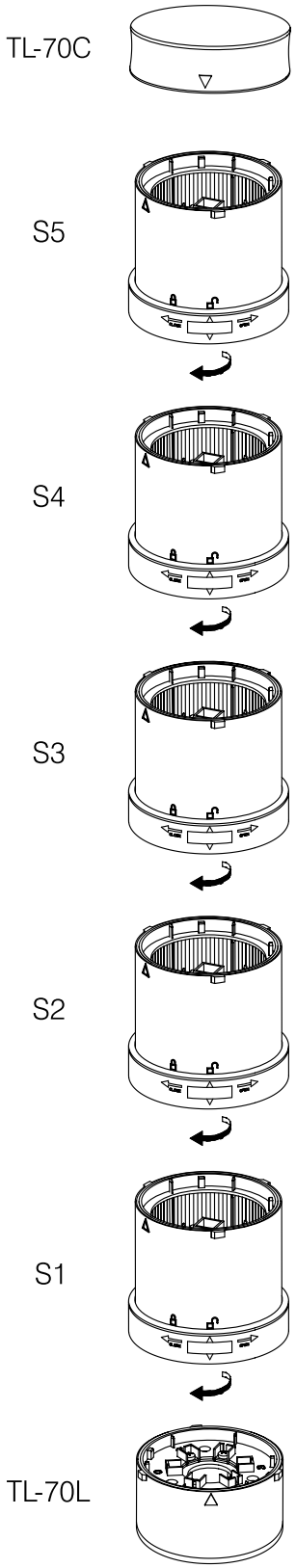
- ☒ The optical element combination with the same voltage grade and different colors, light sources and illumination forms can be selected.
- ☒ One tower light can combine five units in maximum, that is, five optical elements or four optical elements and one acoustic element.
- ☒ Different accessories are available for different installation methods.

◎ Wiring diagram

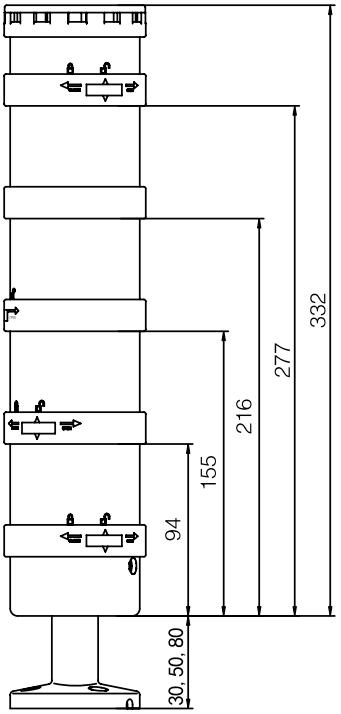


The common terminal is cathode, other anode terminal wiring must be through S1-S5

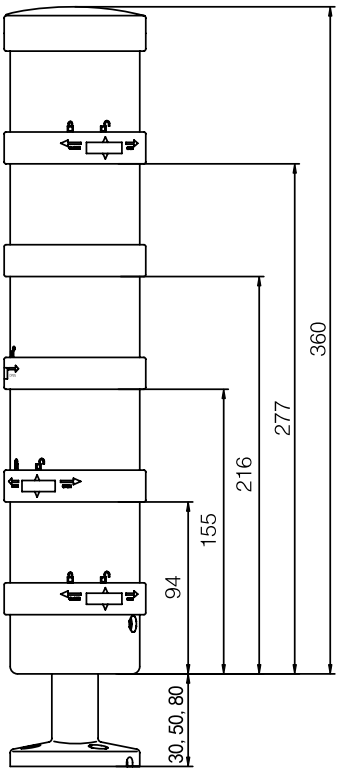
Installation diagram



Dimension



Dimension (4 optical elements + 1 acoustic element)



Dimension (5 optical elements)

APT

TL 701

Single Tower Light

Product feature

- Protection class IP65.
- The illumination form includes normally on, flashing or explosion-flashing, fade up.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.

Product description

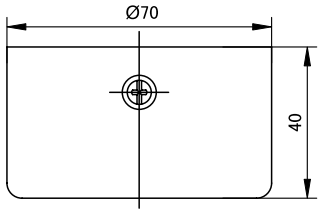
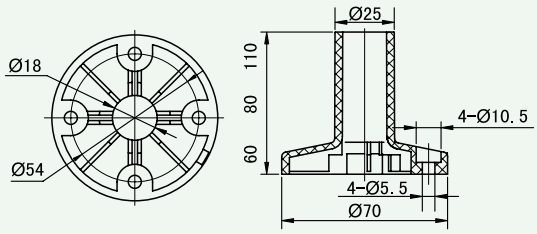
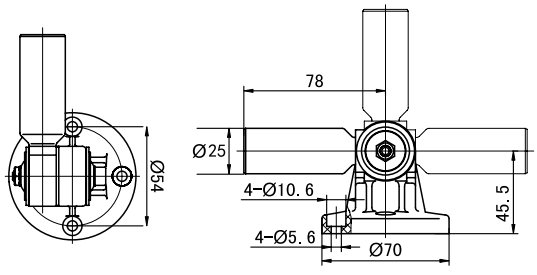
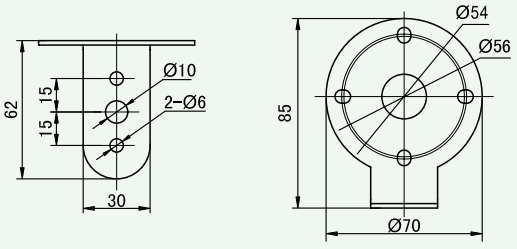
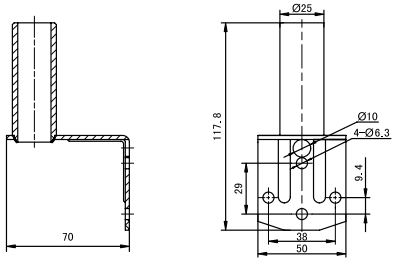
Type	Order code	Specification	Rated voltage/current	Color
	TL-701LL	LED normally on	12V/≤60mA 24V/≤45mA 36V/≤45mA 48V/≤19mA 75V/≤19mA 110V/≤19mA 220V/≤18mA	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
	TL-701LF	LED flashing	12V/≤60mA 24V/≤45mA 36V/≤45mA 48V/≤24mA 75V/≤24mA 110V/≤24mA 220V/≤32mA	
	TL-701LS	LED fade up	12V/≤52mA 24V/≤32mA 36V/≤32mA 48V/≤32mA 75V/≤32mA 110V/≤32mA 220V/≤32mA	
	TL-701SF	Xenon lamp explosion-flashing	24V/≤200mA 110V/≤42mA 220V/≤40mA	

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

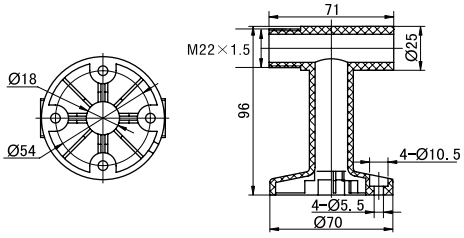
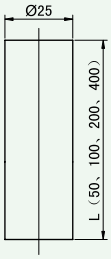
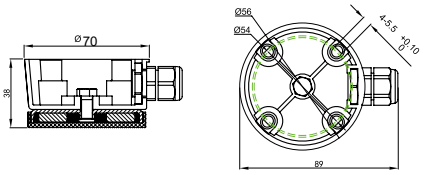
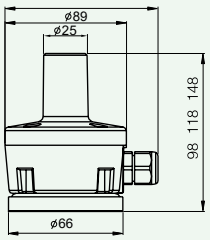
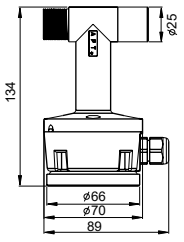
Order code designations

No.	TL-701 □ □ / □ □ (1 2 / 3 4)	
1	Light source	L: LED S: Xenon lamp
2	Illumination form	L: normally on F: flashing or explosion-flashing S: fade up
3	Color	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
4	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 18: AC/DC 75V 26: AC/DC 110V 31: AC 220V

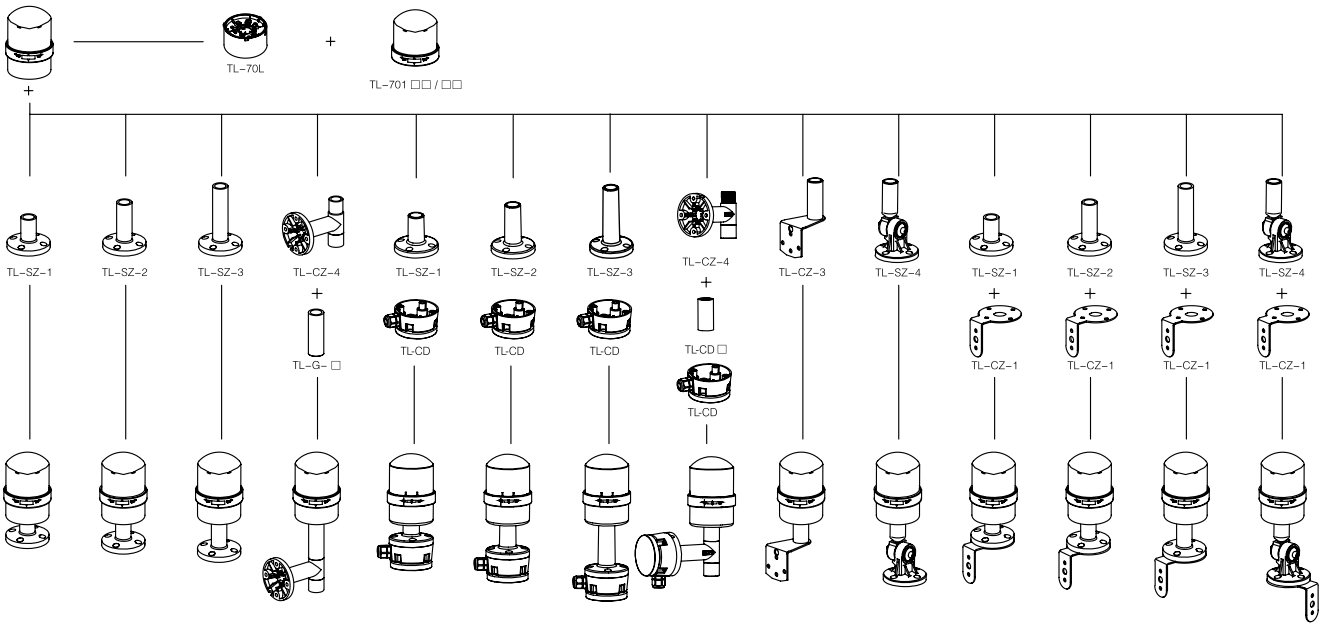
◎ Accessories

Name	Type	Order code	Dimension	Remark
Terminal block		TL-70L		
Vertical-mounted base		TL-SZ-1 TL-SZ-2 TL-SZ-3		Height 60 Height 80 Height 110
Folding-mounted base		TL-SZ-4		
Side-mounted base		TL-CZ-1		Used with TL-SZ-1, TL-SZ-2, TL-SZ-3 or TL-SZ-4 for side installation
Side-mounted base		TL-CZ-3		

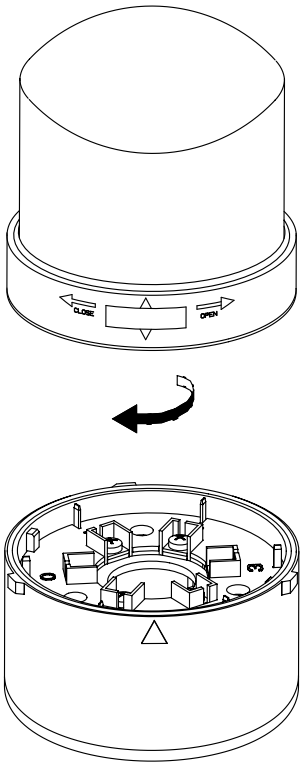
◎ Accessories

Name	Type	Order code	Dimension	Remark
Side-mounted base		TL-CZ-4		Used with TL-G-□ for side installation
Side-mounted base		TL-G-□		Used with TL-CZ-4 for side installation Note: Provide the height of the required product in "□" in the order code
Magnetic-mounted base		TL-CD-1		
Magnetic-mounted base		TL-CD-11 TL-CD-12 TL-CD-13		Combination: TL-CD-1+TL-SZ-1 TL-CD-1+TL-SZ-2 TL-CD-1+TL-SZ-3
Magnetic-mounted base		TL-CD-24		TL-CD-1+TL-CZ-4 Note: used with TL-G-□

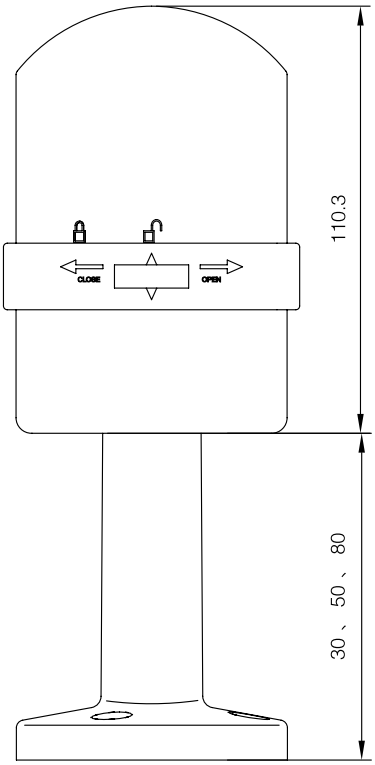
◎ Schematic diagram for accessory combination



Installation diagram



Dimension



APT

TL 702

Acousto-optical single tower light

Product feature

- Protection class IP20.
- Acousto-optical combination.
- The illumination form includes normally on, flashing, fade up.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.

ø 70 BUZ IP20

Product description

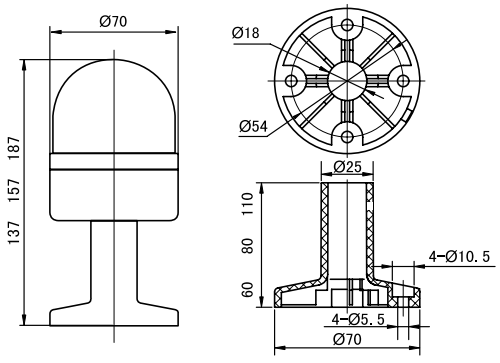
Type	Order code	Specification	Rated voltage/current	Color
	TL-702L	normally on	12V/≤75mA 24V/≤75mA 36V/≤75mA 48V/≤75mA 75V/≤32mA 110V/≤32mA 220V/≤32mA	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
	TL-702F	flashing		
	TL-702S	fade up		
	TL-702LI(C)	Normally on, intermittent (continuous) sound		
	TL-702FI(C)	Flashing, intermittent (continuous) sound		
	TL-702SI(C)	Fade up, intermittent (continuous) sound		

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.
This type is acousto-optical combination, the light and sound cannot be controlled separately.

Order code designations

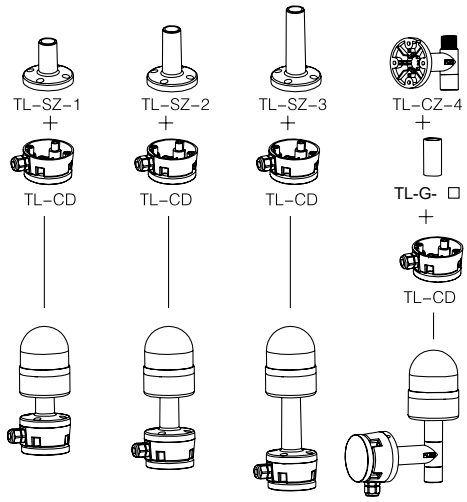
No.	TL-702 □ □ / □ □ □ (1 2 / 3 4 5)	
1	Illumination form	L: normally on F: flashing S: fade up
2	Sounding form	No marking: silent I: intermittent C: continuous
3	Color	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
4	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 18: AC/DC 75V 26: AC/DC 110V 31: AC 220V
5	Product height	No marking: 137mm H1: 157mm H2: 187mm

Dimensional instructions



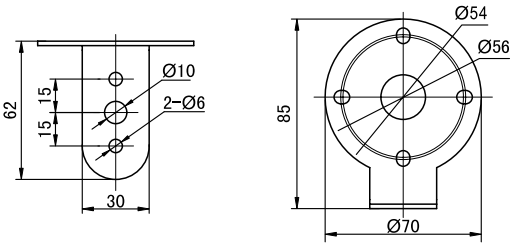
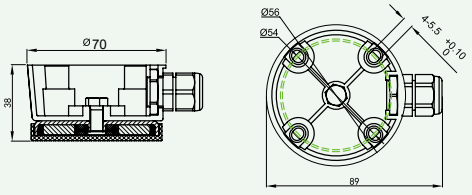
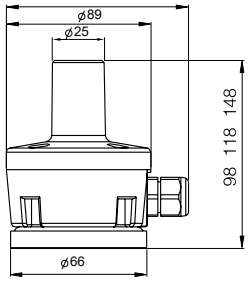
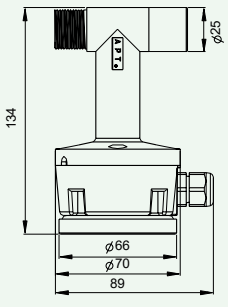
There are three heights, which can be selected when ordering as necessary

Schematic diagram for accessory combination



TL-702

◎ Accessories

Name	Type	Order code	Dimension	Remark
Side-mounted base		TL-CZ-1		For side installation
Magnetic-mounted base		TL-CD-1		
Magnetic-mounted base		TL-CD-11 TL-CD-12 TL-CD-13		Combination: TL-CD-1+TL-SZ-1 TL-CD-1+TL-SZ-2 TL-CD-1+TL-SZ-3
Magnetic-mounted base		TL-CD-24		TL-CD-1+TL-CZ-4 Note: used with TL-G- □

APT

TL 703

Combined Tower Light

Product feature

- Protection class IP65.
- Different illumination forms and light sources may be combined at will as necessary (max. five optical elements).
- The illumination form includes normally on, flashing, fade up.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.
- Buzzer volume > 90dB (at 10cm in horizontal direction from the sound source).

Description of optical elements

Type	Order code	Specification	Rated voltage/current	Color
	TL-703A(B)LL	LED normally on	12V/≤67mA 24V/≤67mA 36V/≤67mA 48V/≤67mA 75V/≤18mA 110V/≤18mA 220V/≤18mA	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
	TL-703A(B)LF	LED flashing	12V/≤70mA 24V/≤70mA 36V/≤70mA 48V/≤70mA 75V/≤24mA 110V/≤24mA 220V/≤32mA	
	TL-703A(B)LS	LED fade up	12V/≤32mA 24V/≤32mA 36V/≤32mA 48V/≤32mA 75V/≤32mA 110V/≤32mA 220V/≤32mA	

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

Order code designations

No.	TL-703 □(1) L(2) □(3) / □(4) □(5)	
1	Enclosure form	A: vertical grating B: cross grating
2	Light source	L: LED
3	Illumination form	L: normally on F: flashing S: fade up
4	Color	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
5	Voltage code	22: AC/DC 12V 23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 26: AC/DC 110V 31: AC 220V

Description of acoustic elements

Type	Order code	Specification	Rated voltage/current	Color
	TL-703A(B)BI	Intermittent sound	12V/≤40mA 24V/≤40mA 36V/≤40mA 48V/≤40mA 75V/≤30mA 110V/≤30mA 220V/≤32mA	● Black-k
	TL-703A(B)BC	Continuous sound		

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

Order code designations

No.	TL-703 □ (1) B (2) □ (3) / □ (4)				
1	Enclosure form	A: vertical grating	B: cross grating		
2	Sound source	B: buzzing			
3	Sounding form	I: intermittent	C: continuous		
4	Voltage code	22: AC/DC 12V 18: AC/DC 75V	23: AC/DC 24V 26: AC/DC 110V	24: AC/DC 36V 31: AC 220V	25: AC/DC 48V

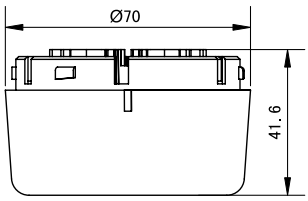
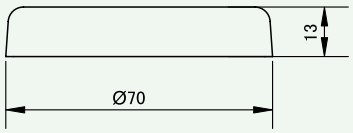
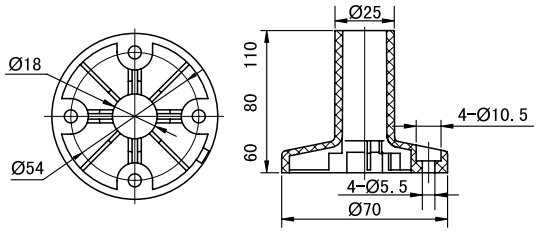
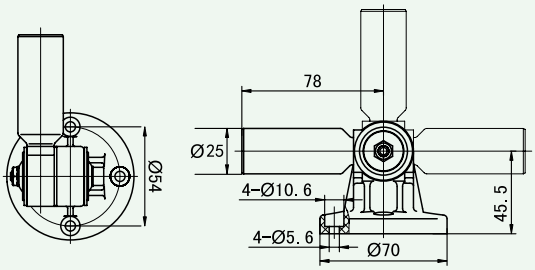
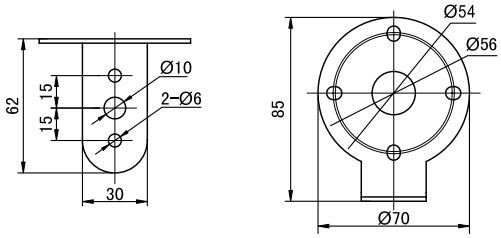
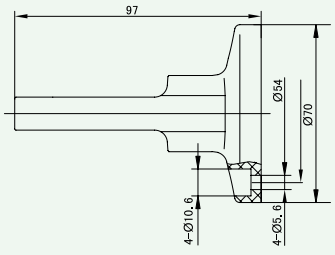
Type	Music type	Rated voltage/current	Color
IP20	Waltz For Elise Sweet Home	12V/≤200mA 24V/≤260mA 36V/≤70mA 48V/≤70mA 75V/≤40mA 110V/≤30mA 220V/≤20mA	● Black-k

Note: 12V-110V are available for DC and AC, while 220V is only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

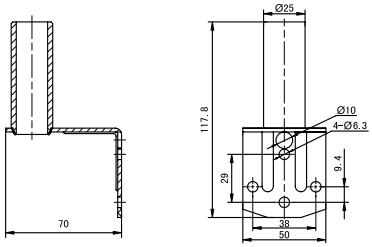
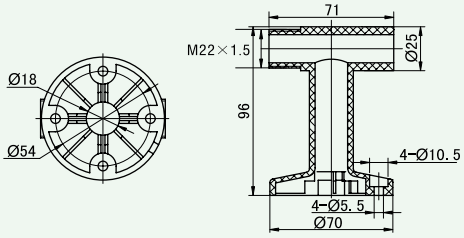
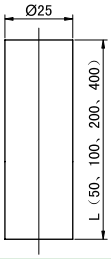
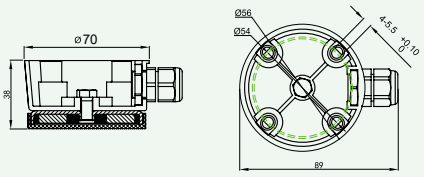
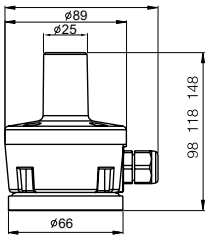
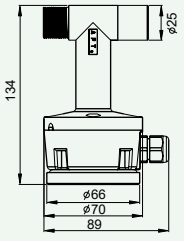
Order code designations

No.	TL-703 □ (1) M (2) □ (3) / □ (4)				
1	Enclosure form	A: vertical grating	B: cross grating		
2	Sound source	M: music type			
3	Sounding form	h: waltz	z: for Elise	t: Sweet Home	
4	Voltage code	22: AC/DC 12V 18: AC/DC 75V	23: AC/DC 24V 26: AC/DC 110V	24: AC/DC 36V 31: AC 220V	25: AC/DC 48V

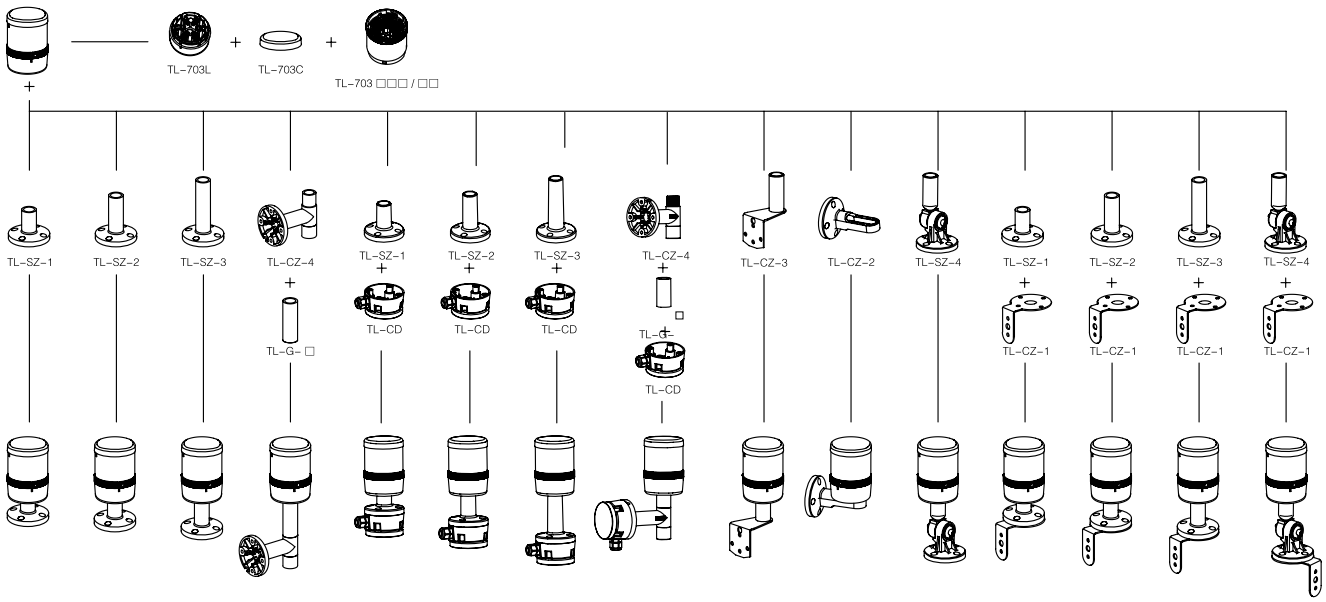
◎ Accessories

Name	Type	Order code	Dimension	Remark
Terminal block		TL-703L		
Decoration cover		TL-703C		Used with optical elements for protection
Vertical-mounted base		TL-SZ-1 TL-SZ-2 TL-SZ-3		Height 60 Height 80 Height 110
Folding-mounted base		TL-SZ-4		
Side-mounted base		TL-CZ-1		Used with TL-SZ-1, TL-SZ-2, TL-SZ-3 or TL-SZ-4 for side installation
Side-mounted base		TL-CZ-2		

◎ Accessories

Name	Type	Order code	Dimension	Remark
Side-mounted base		TL-CZ-3		
Side-mounted base		TL-CZ-4		Used with TL-G- □ for side installation
Side-mounted base		TL-G- □		Used with TL-CZ-4 for side installation Note: Provide the height of the required product in "□" in the order code
Magnetic-mounted base		TL-CD-1		
Magnetic-mounted base		TL-CD-11 TL-CD-12 TL-CD-13		Combination: TL-CD-1+TL-SZ-1 TL-CD-1+TL-SZ-2 TL-CD-1+TL-SZ-3
Magnetic-mounted base		TL-CD-24		TL-CD-1+TL-CZ-4 Note: used with TL-G- □

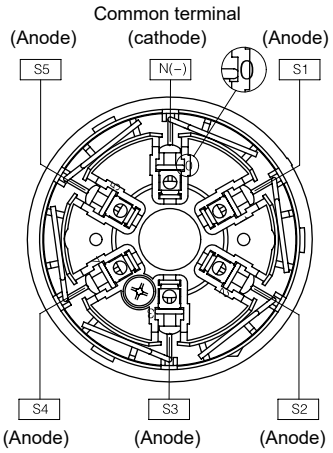
◎ Schematic diagram for accessory combination



◎ Installation instructions

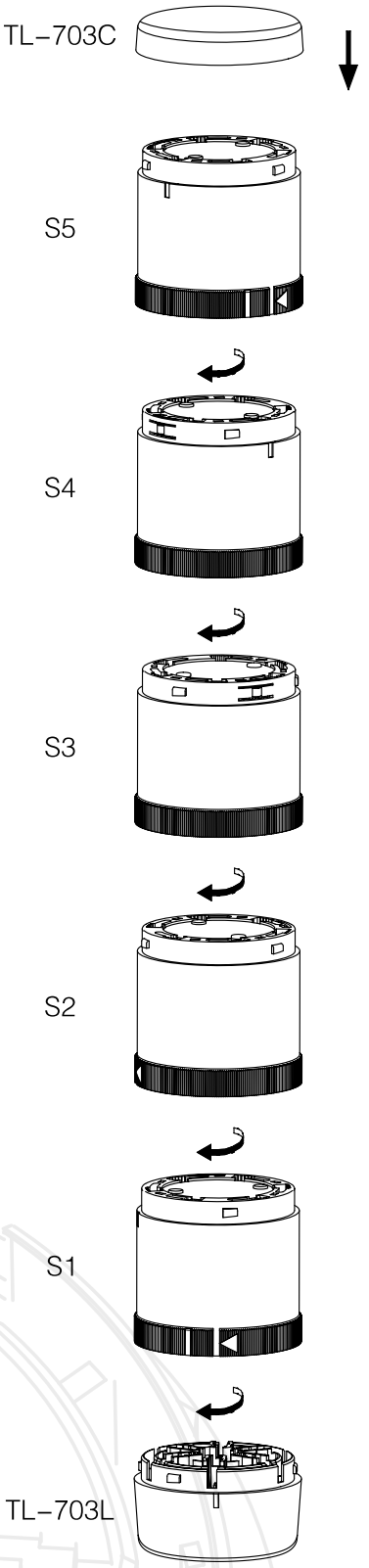
- ☒ The optical element combination with the same voltage grade and different colors, light sources and illumination forms can be selected.
- ☒ One tower light can combine five units in maximum, that is, five optical elements or four optical elements and one acoustic element.
- ☒ Different accessories are available for different installation methods.

◎ Wiring diagram

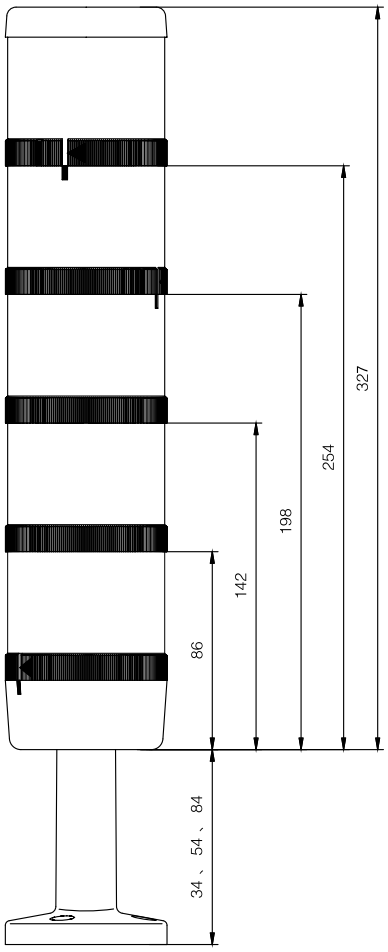


The common terminal is cathode, other anode terminal wiring must be through S1-S5

Installation diagram



Dimension



APT

TL 90

Acousto-optical single tower light

Product feature

- Protection class IP65 (single light or whistle acousto-optical combination), IP40 (continuous / intermittent acousto-optical combination).
- The illumination form includes normally on, flashing, fade up.
- The lampshade is made of polycarbonate resin which is heat and vibration resistant.
- Volume: Whistle > 110dB; continuous/intermittent sound > 90dB (at 10cm in horizontal direction from the sound source).

Product description

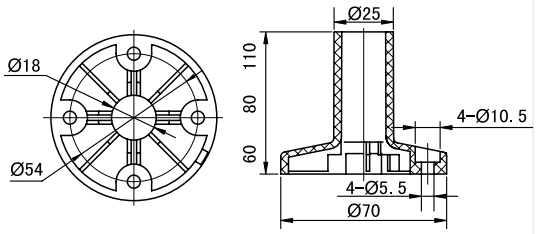
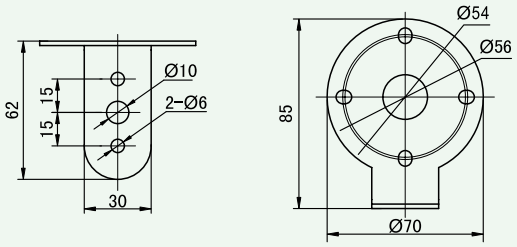
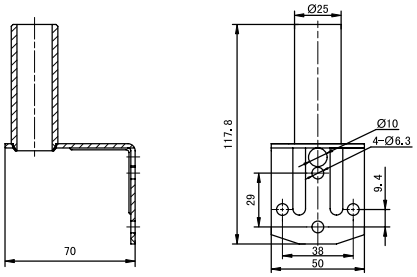
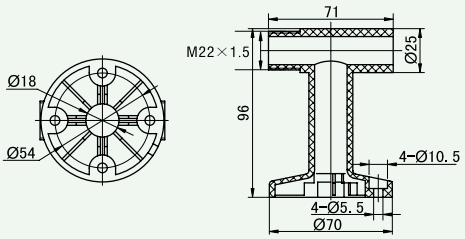
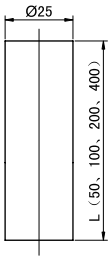
Order code	Specification	Rated voltage/current	Color
TL-90LL	LED normally on	24V/≤110mA 36V/≤110mA 48V/≤60mA 110V/≤25mA 220V/≤33mA	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
TL-90LF	LED flashing		
TL-90LS	LED fade up	24V/≤54mA 36V/≤52mA 48V/≤52mA 110V/≤25mA 220V/≤32mA	
TL-90LL/B(I、C、W)	LED normally on (intermittent, continuous, whistle)	24V/≤210mA 36V/≤190mA 48V/≤130mA 110V/≤44mA 220V/≤45mA	
TL-90LF/B(I、C、W)	LED flashing (intermittent, continuous, whistle)	24V/≤210mA 36V/≤190mA 48V/≤130mA 110V/≤44mA 220V/≤58mA	
TL-90LS/B(I、C、W)	LED fade up (intermittent, continuous, whistle)	24V/≤152mA 36V/≤132mA 48V/≤122mA 110V/≤44mA 220V/≤44mA	

Note: 24V-48V are available for DC and AC, while 110V and 220V are only available for AC.
The current is only for reference during selection and the actual value shall be subject to the material object.

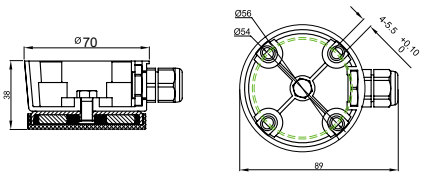
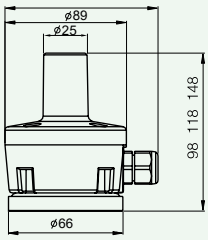
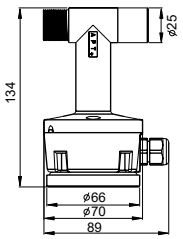
Order code designations

No.	TL-90 L □ / B □ / □ □ / □ □ (1 2 / 3 4 / 5 6 / 7 8)	
1	Light source	L: LED
2	Illumination form	L: normally on F: flashing S: fade up
3	Sound source	B: buzzing
4	Sounding form	I: intermittent C: continuous W: whistle
5	Color	● Red-r ● Green-g ● Yellow-y ○ White-w ● Blue-b
6	Voltage code	23: AC/DC 24V 24: AC/DC 36V 25: AC/DC 48V 26: AC 110V 31: AC 220V
7	Wiring method	S: side outlet D: bottom outlet
8	Installation method	No marking: Install the tower light with three holes directly X: Install the base by tightening one screw on the side

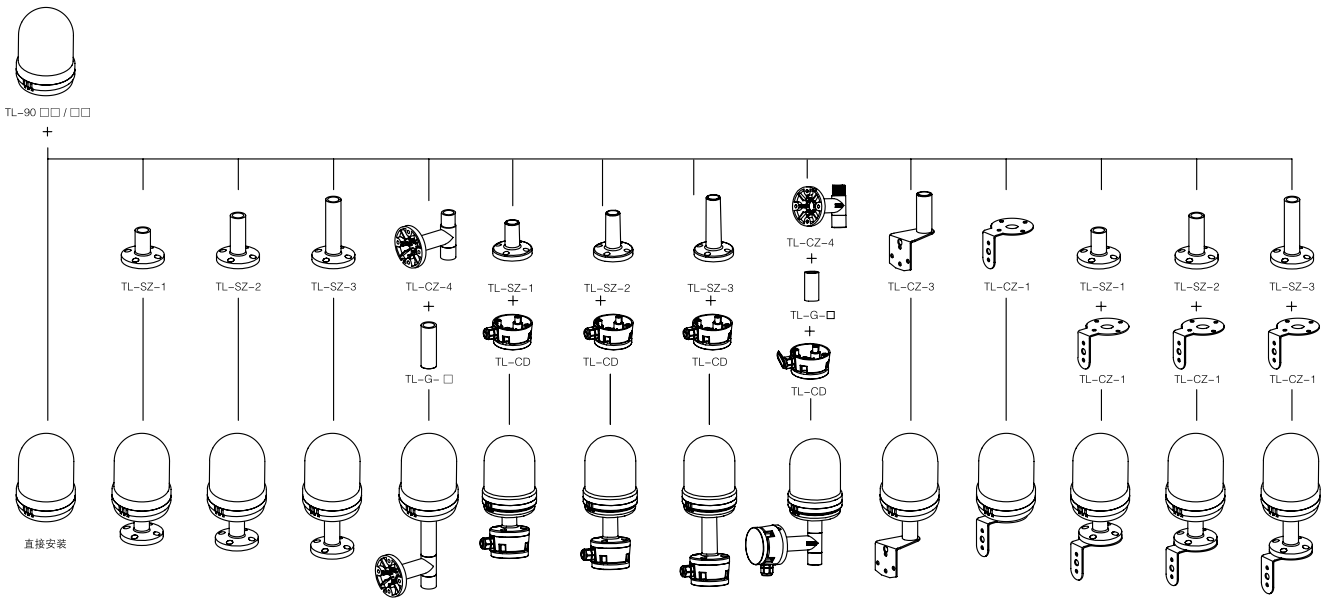
◎ Accessories

Name	Type	Order code	Dimension	Remark
Vertical-mounted base		TL-SZ-1 TL-SZ-2 TL-SZ-3		Height 60 Height 80 Height 110 (Mark –X at the end of tower light order code)
Side-mounted base		TL-CZ-1		For side installation, it can be used alone or with TL-SZ-1, TL-SZ-2, TL-SZ-3, TL-SZ-4. When used alone, no marking is required at the end of the tower light order code; when used with TL-SZ-1, TL-SZ-2, TL-SZ-3, TL-SZ-4, mark –X at the end of the order code.
Side-mounted base		TL-CZ-3		(Mark –X at the end of tower light order code)
Side-mounted base		TL-CZ-4		Used with TL-G- □ for side installation. (Mark –X at the end of tower light order code)
Side-mounted base		TL-G- □		Used with TL-CZ-4 for side installation Note: Provide the height of the required product in “□” in the order code

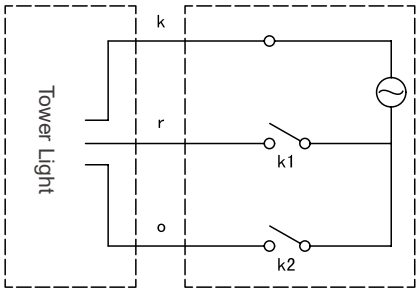
◎ Accessories

Name	Type	Order code	Dimension	Remark
Magnetic-mounted base		TL-CD-1		(Mark –X at the end of tower light order code)
Magnetic-mounted base		TL-CD-11 TL-CD-12 TL-CD-13		Used with TL-G- □ for side installation. (Mark –X at the end of tower light order code)
Magnetic-mounted base		TL-CD-24		Used with TL-CZ-4 for side installation Note: Provide the height of the required product in "□" in the order code

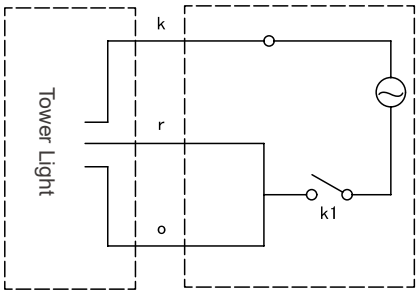
◎ Schematic diagram for accessory combination



Wiring diagram



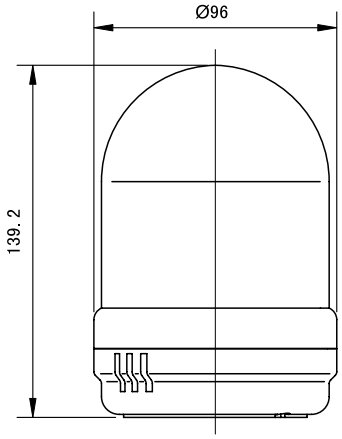
Wiring diagram for acousto-optical combination

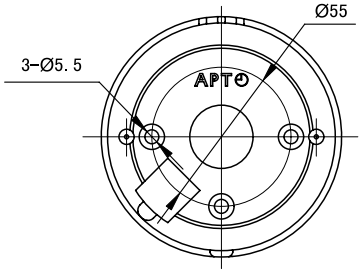
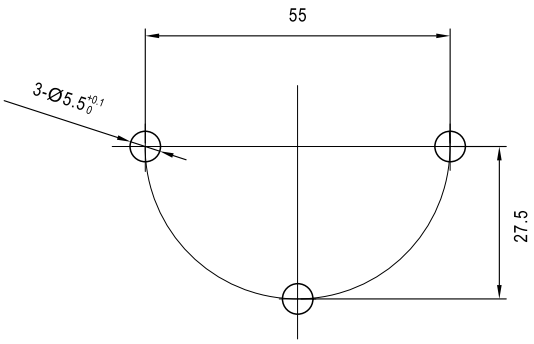
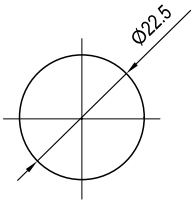


Wiring diagram for single light

Note: r – red wire (power line for LED), o – grey wire (power line for buzzer);
k – black wire (public power line), 1m long.

Dimension





Hole dimensions