

# ST45L/ ST56L/ ST80L series

LED Steady/Flashing Tower Lights

**Universal LED tower light with a wide selection of audio and visual signaling options according to the application environment and intended use**

### 1 Different sizes of LED steady/flashing lenses

You can select from a variety of indicators depending on the working environment and application needs

Model number	Lens diameter	Lens length
ST45(M)L	45mm	40mm
ST45(M)LF	45mm	40mm
ST56(M)EL	56mm	40mm
ST56(M)ELF	56mm	40mm
ST56(M)L	56mm	70mm
ST56(M)LF	56mm	70mm
ST80(M)EL	80mm	40mm
ST80(M)ELF	80mm	40mm
ST80(M)L	80mm	70mm
ST80(M)LF	80mm	70mm

### 2 Buzzer and sound patterns with 15 different tones

Concrete messages can be clearly conveyed with the option of 15 types of audible signals

Main	Built-in sound	Channel	Sound patterns
BZ	1 buzzer sound 2 buzzer sounds		Customized 2 tone Buzzer available
WS	5 Warning sounds	Ch1 Ch2 Ch3 Ch4 Ch5	Fire.A-ANG Emergency Ambulance Machinery Fault High Expansion
WM	5 Melodies	Ch1 Ch2 Ch3 Ch4 Ch5	Sweet Home For Elise Cuckoo's Waltz Piano Sonata Turkish March
WA	5 Alarms	Ch1 Ch2 Ch3 Ch4 Ch5	Beep Intermittent Door Chime Phone Ring PI.PI.PI Short Tripping Beat



### 3 A variety of mounting bracket selection

- Wall mount type model allows for contained and tidy wiring with no exposed wires
- A number of pole mounting stands are available for a variety of environments depending on location and mounting needs
- Specifically, the QL-type and SL-type tower lights can be applied in a variety of environments as it can be folded up to 90 degrees in the horizontal direction. These products can avoid damage due to external forces when movement of the equipment is required
- QLA type offers an easy to use angle adjustment button on the side for angle intervals of 45 to 90 degrees. No additional tools necessary



#### Mounting Bracket Options

##### • Wall Mount Brackets

TWS45 TWS80	TWA45 TWA80
Steel	PC

##### • Pole Mount Brackets

Standard	LB18 LB24	LW18 LW24	QZ18 QZ24	SZ18 SZ24	QL18 QL24	SL18 SL24	QLA18 QLA24
Steel	Steel	PC	PC	Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

# ST45L/ ST56L/ ST80L series

LED Steady/Flashing Tower Lights

## Interchangeable Lens Concept

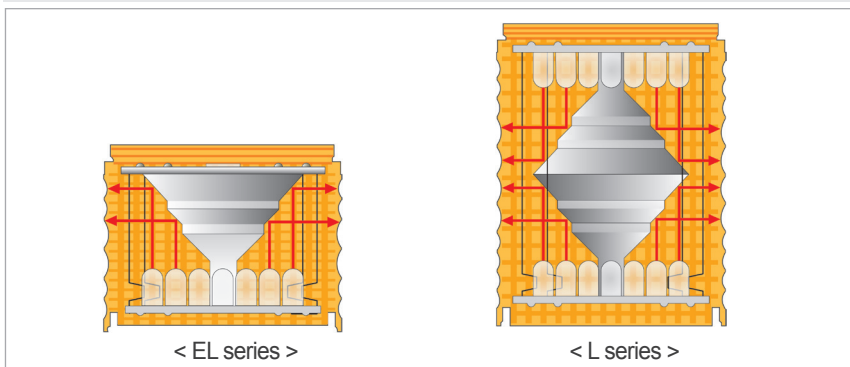
ST45L/ ST56L/ ST80L series product allows for the lens arrangement to be adjusted after removing the bolt that secures the cover. If additional lenses are required for this product please reach out to us. ST45L/ ST56L/ ST80L series can be stacked up to 5 layers.



## Common Specifications(ST45(M)L/ ST56(M)EL/ ST56(M)L/ ST80(M)EL/ ST80(M)L)







- LED steady/flashing tower lights
- Long product lifetime of over 20,000hours with the application of a high intensity LED light source
- Can select from size selections of Ø45mm, Ø56mm, and Ø80mm to fit your sophisticated application needs
- A variety of mounting bracket selections for the pole mount type to fit your location and mounting needs
- Built-in buzzer available (Volume : Max 90dB at 1m)
- Built-in alarm available (Volume : Max 85dB at 1m/ Speaker output type)  
(Can select from 5 warning sounds, 5 alarms, 5 melodies to fit your application needs)
- Flashing rate : 60-80 flashes/min
- Customized color arrangement available (LED light distribution system and lens is integrated into a combined structure)
- Materials : Lens-AS, Housing-ABS, Pole-Al
- Ambient operating temperature: -30°C to +60°C
- Protection rating : Standard type-IP44, Built-in buzzer type-IP23
- Certificates : CE Compliant, UL Listed
- Compliant with RoHS directive

## Reflection System



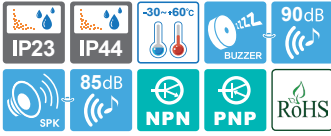
- Qlight's special light distribution system with multi-tiered reflector provides linear and balanced light transmission to the lens for strong LED illumination throughout the product
- The special light diffusion structure inside the product creates the brightest signal light at the center of the lens

## References

Mount type	Sound	Buzzer and sound patterns	Lens dimension				
			Ø45mm H40mm	Ø56mm H40mm	Ø56mm H70mm	Ø80mm H40mm	Ø80mm H70mm
 Direct mount	No sound	Standard	ST45ML(F)	ST56MEL(F)	ST56ML(F)	ST80MEL(F)	ST80ML(F)
		Built-in buzzer	ST45ML(F)-BZ	ST56MEL(F)-BZ	ST56ML(F)-BZ	ST80MEL(F)-BZ	ST80ML(F)-BZ
		5 Warning sounds	ST45ML(F)-WS	ST56MEL(F)-WS	ST56ML(F)-WS	ST80MEL(F)-WS	ST80ML(F)-WS
		5 Melodies	ST45ML(F)-WM	ST56MEL(F)-WM	ST56ML(F)-WM	ST80MEL(F)-WM	ST80ML(F)-WM
 Pole mount	5 Alarms	ST45ML(F)-WA	ST56MEL(F)-WA	ST56ML(F)-WA	ST80MEL(F)-WA	ST80ML(F)-WA	
	No sound	Standard	ST45L(F)	ST56EL(F)	ST56L(F)	ST80EL(F)	ST80L(F)
		Built-in buzzer	ST45L(F)-BZ	ST56EL(F)-BZ	ST56L(F)-BZ	ST80EL(F)-BZ	ST80L(F)-BZ
		5 Warning sounds	ST45L(F)-WS	ST56EL(F)-WS	ST56L(F)-WS	ST80EL(F)-WS	ST80L(F)-WS
		5 Melodies	ST45L(F)-WM	ST56EL(F)-WM	ST56L(F)-WM	ST80EL(F)-WM	ST80L(F)-WM
5 Alarms	ST45L(F)-WA	ST56EL(F)-WA	ST56L(F)-WA	ST80EL(F)-WA	ST80L(F)-WA		

# ST45ML

## Ø45mm LED Steady/Flashing Tower Lights



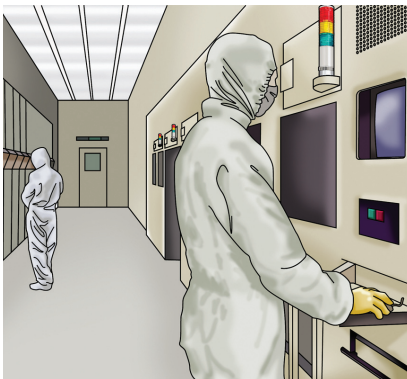
ST45ML series

Built-in buzzer output holes formed on the housing of the product.



### Substitute model numbers for discontinued model

Built-in signal sound type, ST45ML-WS, ST45ML-WM, ST45ML-WA are substituted for old model number ST45WML. All specifications such as diameter and functions are all the same.



## ST45ML Ø45mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST45ML ST45ML-BZ ST45ML-WS ST45ML-WM ST45ML-WA ST45MLF ST45MLF-BZ ST45MLF-WS ST45MLF-WM ST45MLF-WA	1	AC/DC12V	0.040A	 DC24V only  DC24V only	0.19kg	● R-Red
		AC/DC24V	0.040A		0.19kg	
		AC110V	0.024A		0.25kg	
		AC220V	0.012A		0.25kg	
	2	AC/DC12V	0.080A		0.21kg	● R-Red ● G-Green
		AC/DC24V	0.080A		0.21kg	
		AC110V	0.026A		0.29kg	
	3	AC/DC12V	0.120A		0.25kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.120A		0.25kg	
		AC110V	0.028A		0.34kg	
	4	AC/DC12V	0.160A		0.30kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.160A		0.30kg	
		AC110V	0.031A		0.38kg	
	5	AC/DC12V	0.200A		0.34kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.200A		0.34kg	
AC110V		0.033A	0.42kg			
		AC220V	0.016A	0.42kg		

- ST45ML Steady
- ST45ML-BZ Built-in buzzer, Steady
- ST45ML-WS Built-in 5 Warning sounds, Steady
- ST45ML-WM Built-in 5 Melodies, Steady
- ST45ML-WA Built-in 5 Alarms, Steady
- ST45MLF Steady/ flashing
- ST45MLF-BZ Built-in buzzer, Steady/ flashing
- ST45MLF-WS Built-in 5 Warning sounds, Steady/ flashing
- ST45MLF-WM Built-in 5 Melodies, Steady/ flashing
- ST45MLF-WA Built-in 5 Alarms, Steady/ flashing

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

### Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.040A	0.040A	0.024A	0.012A
Audible line current	0.016A	0.031A	0.027A	0.030A

### Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall



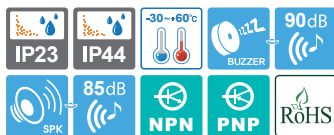
### Ordering Specification

ST45ML	-	3	-	24	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
<ul style="list-style-type: none"> <li>ST45ML</li> <li>ST45ML-BZ</li> <li>ST45ML-WS</li> <li>ST45ML-WM</li> <li>ST45ML-WA</li> <li>ST45MLF</li> <li>ST45MLF-BZ</li> <li>ST45MLF-WS</li> <li>ST45MLF-WM</li> <li>ST45MLF-WA</li> </ul>		<ul style="list-style-type: none"> <li>1-1Layer</li> <li>2-2Layers</li> <li>3-3Layers</li> <li>4-4Layers</li> <li>5-5Layers</li> </ul>		<ul style="list-style-type: none"> <li>12-DC12V</li> <li>24-DC24V</li> <li>110-AC110V</li> <li>220-AC220V</li> </ul>		<ul style="list-style-type: none"> <li>● R-Red</li> <li>● A-Amber</li> <li>● G-Green</li> <li>● B-Blue</li> <li>● W-White</li> </ul>



# ST45L

## Ø45mm LED Steady/Flashing Tower Lights



ST45L series

Built-in buzzer output holes formed on the housing of the product.



### Substitute model numbers for discontinued model

Built-in signal sound type, ST45L-WS, ST45L-WM, ST45L-WA are substituted for old model number ST45WL.

All specifications such as diameter and functions are all the same.

### Mounting Bracket

Standard	LB18	LW18	QZ18
Steel	Steel	PC	PC
SZ18	QL18	SL18	QLA18
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.

## ST45L Ø45mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST45L ST45L-BZ ST45L-WS ST45L-WM ST45L-WA ST45LF ST45LF-BZ ST45LF-WS ST45LF-WM ST45LF-WA	1	AC/DC12V	0.040A	CE DC24V only UL DC24V only	0.35kg	● R-Red
		AC/DC24V	0.040A		0.35kg	
		AC110V	0.024A		0.45kg	
		AC220V	0.012A		0.45kg	
	2	AC/DC12V	0.080A		0.39kg	● R-Red ● G-Green
		AC/DC24V	0.080A		0.39kg	
		AC110V	0.026A		0.49kg	
	3	AC/DC12V	0.120A		0.44kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.120A		0.44kg	
		AC110V	0.028A		0.54kg	
	4	AC/DC12V	0.160A		0.48kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.160A		0.48kg	
		AC110V	0.031A		0.58kg	
	5	AC/DC12V	0.200A		0.52kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.200A		0.52kg	
AC110V		0.033A	0.62kg			
		AC220V	0.016A	0.62kg		

<b>ST45L</b>	Steady
<b>ST45L-BZ</b>	Built-in buzzer, Steady
<b>ST45L-WS</b>	Built-in 5 Warning sounds, Steady
<b>ST45L-WM</b>	Built-in 5 Melodies, Steady
<b>ST45L-WA</b>	Built-in 5 Alarms, Steady
<b>ST45LF</b>	Steady/ flashing
<b>ST45LF-BZ</b>	Built-in buzzer, Steady/ flashing
<b>ST45LF-WS</b>	Built-in 5 Warning sounds, Steady/ flashing
<b>ST45LF-WM</b>	Built-in 5 Melodies, Steady/ flashing
<b>ST45LF-WA</b>	Built-in 5 Alarms, Steady/ flashing

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

### Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.040A	0.040A	0.024A	0.012A
Audible line current	0.016A	0.031A	0.027A	0.030A

### Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

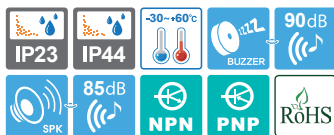
### Ordering Specification

<b>ST45L</b>	-	<b>3</b>	-	<b>24</b>	-	<b>RAG</b>	-	<b>LW18</b>
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
<ul style="list-style-type: none"> <li>• ST45L</li> <li>• ST45L-BZ</li> <li>• ST45L-WS</li> <li>• ST45L-WM</li> <li>• ST45L-WA</li> <li>• ST45LF</li> <li>• ST45LF-BZ</li> <li>• ST45LF-WS</li> <li>• ST45LF-WM</li> <li>• ST45LF-WA</li> </ul>		<ul style="list-style-type: none"> <li>• 1-1Layer</li> <li>• 2-2Layers</li> <li>• 3-3Layers</li> <li>• 4-4Layers</li> <li>• 5-5Layers</li> </ul>		<ul style="list-style-type: none"> <li>• 12-DC12V</li> <li>• 24-DC24V</li> <li>• 110-AC110V</li> <li>• 220-AC220V</li> </ul>		<ul style="list-style-type: none"> <li>● R-Red</li> <li>● A-Amber</li> <li>● G-Green</li> <li>● B-Blue</li> <li>● W-White</li> </ul>		<ul style="list-style-type: none"> <li>• None</li> <li>-Standard</li> <li>• Bracket</li> <li>-LB18</li> <li>-LW18</li> <li>-QZ18</li> <li>-SZ18</li> <li>-QL18</li> <li>-SL18</li> <li>-QLA18</li> </ul>



# ST56ML

## Ø56mm LED Steady/Flashing Tower Lights



ST56ML series

Built-in buzzer output holes formed on the housing of the product.



### Substitute model numbers for discontinued model

Built-in signal sound type, ST56ML-WS, ST56ML-WM, ST56ML-WA are substituted for old model number ST56WML. All specifications such as diameter and functions are all the same.

## ST56ML Ø56mm Direct Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56ML ST56ML-BZ ST56ML-WS ST56ML-WM ST56ML-WA ST56MLF ST56MLF-BZ ST56MLF-WS ST56MLF-WM ST56MLF-WA	1	AC/DC12V	0.120A	 DC24V only  DC24V only	0.22kg	● R-Red
		AC/DC24V	0.080A		0.22kg	
		AC110V	0.048A		0.45kg	
		AC220V	0.024A		0.45kg	
	2	AC/DC12V	0.240A		0.30kg	● R-Red ● G-Green
		AC/DC24V	0.160A		0.30kg	
		AC110V	0.057A		0.53kg	
	3	AC/DC12V	0.360A		0.38kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.240A		0.38kg	
		AC110V	0.066A		0.61kg	
	4	AC/DC12V	0.480A		0.46kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.320A		0.46kg	
		AC110V	0.075A		0.70kg	
		AC220V	0.037A		0.70kg	
	5	AC/DC12V	0.600A		0.54kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
AC/DC24V		0.400A	0.54kg			
AC110V		0.082A	0.78kg			
AC220V		0.041A	0.78kg			

- ST56ML Steady
- ST56ML-BZ Built-in buzzer, Steady
- ST56ML-WS Built-in 5 Warning sounds, Steady
- ST56ML-WM Built-in 5 Melodies, Steady
- ST56ML-WA Built-in 5 Alarms, Steady
- ST56MLF Steady/ flashing
- ST56MLF-BZ Built-in buzzer, Steady/ flashing
- ST56MLF-WS Built-in 5 Warning sounds, Steady/ flashing
- ST56MLF-WM Built-in 5 Melodies, Steady/ flashing
- ST56MLF-WA Built-in 5 Alarms, Steady/ flashing

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

### Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.120A	0.080A	0.048A	0.024A
Audible line current	0.016A	0.031A	0.027A	0.030A

### Customization

- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- Wall mount bracket options : Bracket structure allows for threading through the bracket hole or into the wall

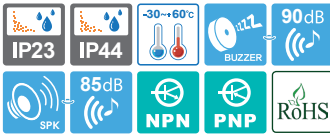


### Order specification

ST56ML	-	3	-	110	-	RAG
[Model number]		[Layer]		[Voltage]		[Color]
<ul style="list-style-type: none"> <li>• ST56ML</li> <li>• ST56ML-BZ</li> <li>• ST56ML-WS</li> <li>• ST56ML-WM</li> <li>• ST56ML-WA</li> <li>• ST56MLF</li> <li>• ST56MLF-BZ</li> <li>• ST56MLF-WS</li> <li>• ST56MLF-WM</li> <li>• ST56MLF-WA</li> </ul>		<ul style="list-style-type: none"> <li>• 1-1Layer</li> <li>• 2-2Layers</li> <li>• 3-3Layers</li> <li>• 4-4Layers</li> <li>• 5-5Layers</li> </ul>		<ul style="list-style-type: none"> <li>• 12-DC12V</li> <li>• 24-DC24V</li> <li>• 110-AC110V</li> <li>• 220-AC220V</li> </ul>		<ul style="list-style-type: none"> <li>● R-Red</li> <li>● A-Amber</li> <li>● G-Green</li> <li>● B-Blue</li> <li>● W-White</li> </ul>

# ST56L

## Ø56mm LED Steady/Flashing Tower Lights



ST56L series

Built-in buzzer output holes formed on the housing of the product.



### Substitute model numbers for discontinued model

Built-in signal sound type, ST56L-WS, ST56L-WM, ST56L-WA are substituted for old model number ST56WL.

All specifications such as diameter and functions are all the same.



### Mounting Bracket

Standard	LB18	LW18	QZ18
Steel	Steel	PC	PC
SZ18	QL18	SL18	QLA18
Al	PC	Al	PC

※ Please refer to page 34-39 for detailed dimensions.



## ST56L Ø56mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56L ST56L-BZ ST56L-WS ST56L-WM ST56L-WA ST56LF ST56LF-BZ ST56LF-WS ST56LF-WM ST56LF-WA	1	AC/DC12V	0.120A	 DC24V only  DC24V only	0.44kg	● R-Red
		AC/DC24V	0.080A		0.44kg	
		AC110V	0.048A		0.60kg	
		AC220V	0.024A		0.60kg	
	2	AC/DC12V	0.240A		0.52kg	● R-Red ● G-Green
		AC/DC24V	0.160A		0.52kg	
		AC110V	0.057A		0.68kg	
	3	AC/DC12V	0.360A		0.60kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.240A		0.60kg	
		AC110V	0.066A		0.76kg	
	4	AC/DC12V	0.480A		0.68kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.320A		0.68kg	
		AC110V	0.075A		0.84kg	
	5	AC/DC12V	0.600A		0.77kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.400A		0.77kg	
AC110V		0.082A	0.93kg			
		AC220V	0.041A	0.93kg		

- ST56L Steady
- ST56L-BZ Built-in buzzer, Steady
- ST56L-WS Built-in 5 Warning sounds, Steady
- ST56L-WM Built-in 5 Melodies, Steady
- ST56L-WA Built-in 5 Alarms, Steady
- ST56LF Steady/ flashing
- ST56LF-BZ Built-in buzzer, Steady/ flashing
- ST56LF-WS Built-in 5 Warning sounds, Steady/ flashing
- ST56LF-WM Built-in 5 Melodies, Steady/ flashing
- ST56LF-WA Built-in 5 Alarms, Steady/ flashing

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

### Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.120A	0.080A	0.048A	0.024A
Audible line current	0.016A	0.031A	0.027A	0.030A



### Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

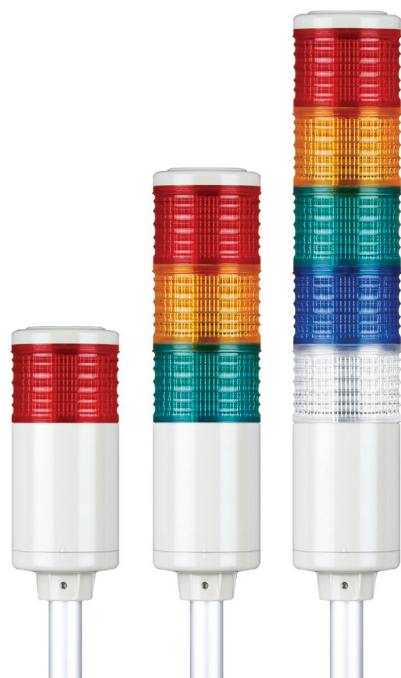
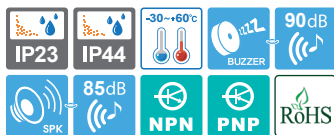


### Ordering Specification

<b>ST56L</b>	-	<b>3</b>	-	<b>220</b>	-	<b>RAG</b>	-	<b>LW18</b>
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
<ul style="list-style-type: none"> <li>• ST56L</li> <li>• ST56L-BZ</li> <li>• ST56L-WS</li> <li>• ST56L-WM</li> <li>• ST56L-WA</li> <li>• ST56LF</li> <li>• ST56LF-BZ</li> <li>• ST56LF-WS</li> <li>• ST56LF-WM</li> <li>• ST56LF-WA</li> </ul>		<ul style="list-style-type: none"> <li>• 1-1Layer</li> <li>• 2-2Layers</li> <li>• 3-3Layers</li> <li>• 4-4Layers</li> <li>• 5-5Layers</li> </ul>		<ul style="list-style-type: none"> <li>• 12-DC12V</li> <li>• 24-DC24V</li> <li>• 110-AC110V</li> <li>• 220-AC220V</li> </ul>		<ul style="list-style-type: none"> <li>● R-Red</li> <li>● A-Amber</li> <li>● G-Green</li> <li>● B-Blue</li> <li>● W-White</li> </ul>		<ul style="list-style-type: none"> <li>• None</li> <li>• -Standard</li> <li>• -Bracket</li> <li>• -LB18</li> <li>• -LW18</li> <li>• -QZ18</li> <li>• -SZ18</li> <li>• -QL18</li> <li>• -SL18</li> <li>• -QLA18</li> </ul>

# ST56EL

## Ø56mm LED Steady/Flashing Tower Lights



**ST56EL series**

Built-in buzzer output holes formed on the housing of the product.



### Substitute model numbers for discontinued model

Built-in signal sound type, ST56EL-WS, ST56EL-WM, ST56EL-WA are substituted for old model number ST56WEL.

All specifications such as diameter and functions are all the same.

### Mounting Bracket

Standard	LB18	LW18	QZ18
Steel	Steel	PC	PC
SZ18	QL18	SL18	QLA18
Al	PC	Al	PC

※ Please refer to page 188-193 for detailed dimensions.

## ST56EL Ø56mm Pole Mount, LED Steady/Flashing

Model number	Layer	Voltage	Current	Certificates	Weight	Color
ST56EL ST56EL-BZ ST56EL-WS ST56EL-WM ST56EL-WA ST56ELF ST56ELF-BZ ST56ELF-WS ST56ELF-WM ST56ELF-WA	1	AC/DC12V	0.060A	CE DC only  DC24V only (buzzer type)	0.41kg	● R-Red
		AC/DC24V	0.040A		0.41kg	
		AC110V	0.044A		0.57kg	
		AC220V	0.022A		0.57kg	
	2	AC/DC12V	0.120A		0.47kg	● R-Red ● G-Green
		AC/DC24V	0.080A		0.47kg	
		AC110V	0.048A		0.62kg	
	3	AC/DC12V	0.180A		0.52kg	● R-Red ● A-Amber ● G-Green
		AC/DC24V	0.120A		0.52kg	
		AC110V	0.053A		0.68kg	
	4	AC/DC12V	0.240A		0.58kg	● R-Red ● A-Amber ● G-Green ● B-Blue
		AC/DC24V	0.160A		0.58kg	
		AC110V	0.057A		0.74kg	
	5	AC/DC12V	0.300A		0.63kg	● R-Red ● A-Amber ● G-Green ● B-Blue ● W-White
		AC/DC24V	0.200A		0.63kg	
AC110V		0.062A	0.75kg			
		AC220V	0.031A	0.75kg		

- ST56EL Steady
- ST56EL-BZ Built-in buzzer, Steady
- ST56EL-WS Built-in 5 Warning sounds, Steady
- ST56EL-WM Built-in 5 Melodies, Steady
- ST56EL-WA Built-in 5 Alarms, Steady
- ST56ELF Steady/ flashing
- ST56ELF-BZ Built-in buzzer, Steady/ flashing
- ST56ELF-WS Built-in 5 Warning sounds, Steady/ flashing
- ST56ELF-WM Built-in 5 Melodies, Steady/ flashing
- ST56ELF-WA Built-in 5 Alarms, Steady/ flashing

※ Please refer to page 186 for detailed information about selectable sound patterns.

### Signal/ Audible Line Current(per each layer)

Voltage	AC/DC12V	AC/DC24V	AC110V	AC220V
Signal line current	0.060A	0.040A	0.044A	0.022A
Audible line current	0.016A	0.031A	0.027A	0.030A

### Customization

- 2 buzzer sound types : Both prolonged (beep, beep) and staccato (beep, beep, beep) buzzer output available
- AC type each layer power provided(same wiring DC steady)
- DC24V voltage UL listed product
- Customized pole length available

### Ordering Specification

<b>ST56EL</b>	-	<b>3</b>	-	<b>220</b>	-	<b>RAG</b>	-	<b>LW18</b>
[Model number]		[Layer]		[Voltage]		[Color]		[Mounting bracket]
<ul style="list-style-type: none"> <li>• ST56EL</li> <li>• ST56EL-BZ</li> <li>• ST56EL-WS</li> <li>• ST56EL-WM</li> <li>• ST56EL-WA</li> <li>• ST56ELF</li> <li>• ST56ELF-BZ</li> <li>• ST56ELF-WS</li> <li>• ST56ELF-WM</li> <li>• ST56ELF-WA</li> </ul>		<ul style="list-style-type: none"> <li>• 1-1Layer</li> <li>• 2-2Layers</li> <li>• 3-3Layers</li> <li>• 4-4Layers</li> <li>• 5-5Layers</li> </ul>		<ul style="list-style-type: none"> <li>• 12-DC12V</li> <li>• 24-DC24V</li> <li>• 110-AC110V</li> <li>• 220-AC220V</li> </ul>		<ul style="list-style-type: none"> <li>● R-Red</li> <li>● A-Amber</li> <li>● G-Green</li> <li>● B-Blue</li> <li>● W-White</li> </ul>		<ul style="list-style-type: none"> <li>• None</li> <li>-Standard</li> <li>• Bracket</li> <li>-LB18</li> <li>-LW18</li> <li>-QZ18</li> <li>-SZ18</li> <li>-QL18</li> <li>-SL18</li> <li>-QLA18</li> </ul>



# ST45ML/ ST45L

Ø45mm LED Steady/Flashing Tower Lights

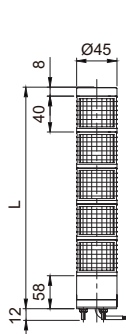


## Technical Diagram

(Units : mm)

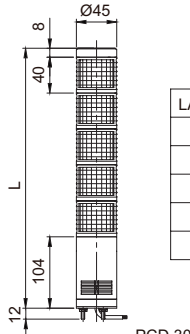


ST45ML : AC/DC  
ST45ML-BZ : DC  
ST45MLF : DC



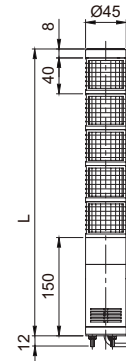
LAYER	L
1	106
2	146
3	186
4	226
5	266

ST45ML-BZ : AC  
ST45MLF : AC  
ST45MLF-BZ : DC



LAYER	L
1	152
2	192
3	232
4	272
5	312

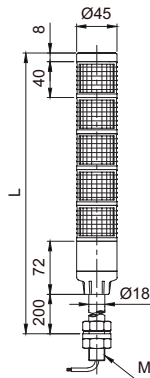
ST45MLF-BZ : AC



LAYER	L
1	198
2	238
3	278
4	318
5	358

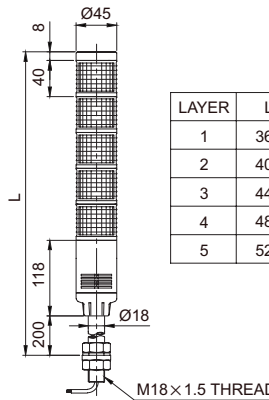


ST45L : AC/DC  
ST45L-BZ : DC  
ST45LF : DC



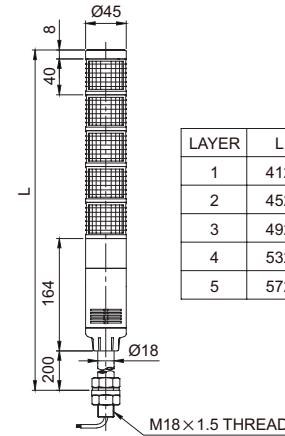
LAYER	L
1	320
2	360
3	400
4	440
5	480

ST45L-BZ : AC  
ST45LF : AC  
ST45LF-BZ : DC



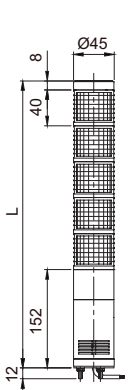
LAYER	L
1	366
2	406
3	446
4	486
5	526

ST45LF-BZ : AC



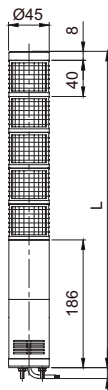
LAYER	L
1	412
2	452
3	492
4	532
5	572

ST45ML-W□ : DC  
ST45MLF-W□ : DC

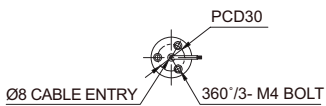


LAYER	L
1	200
2	240
3	280
4	320
5	360

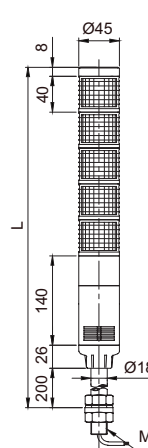
ST45ML-W□ : AC  
ST45MLF-W□ : AC



LAYER	L
1	234
2	274
3	314
4	354
5	394

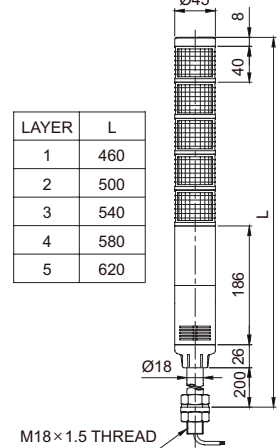


ST45L-W□ : DC  
ST45LF-W□ : DC



LAYER	L
1	414
2	454
3	494
4	534
5	574

ST45L-W□ : AC  
ST45LF-W□ : AC



LAYER	L
1	460
2	500
3	540
4	580
5	620



## Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
- Signal line standard : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page299-300 for detailed wiring instructions.

# ST56ML/ST56L

Ø56mm LED Steady/Flashing Tower Lights



## Technical Diagram

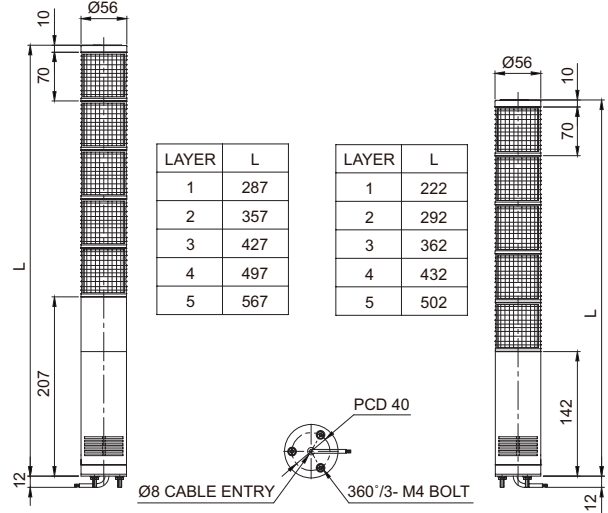
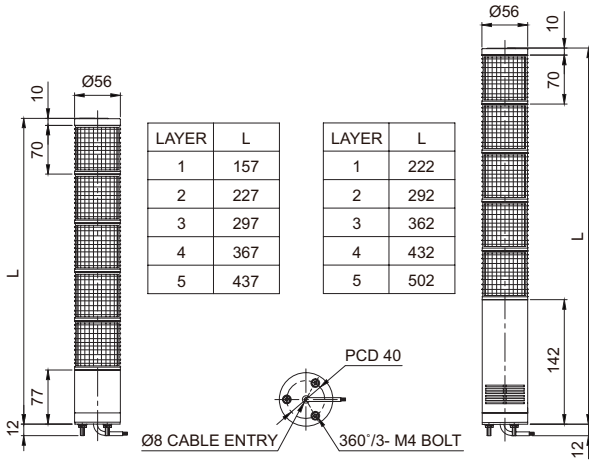
(Units : mm)

ST56ML : AC/DC  
ST56ML-BZ : DC

ST56ML-BZ : AC  
ST56MLF-BZ : AC/DC

ST56ML-W□ : AC  
ST56MLF-W□ : AC

ST56ML-W□ : DC  
ST56MLF-W□ : DC

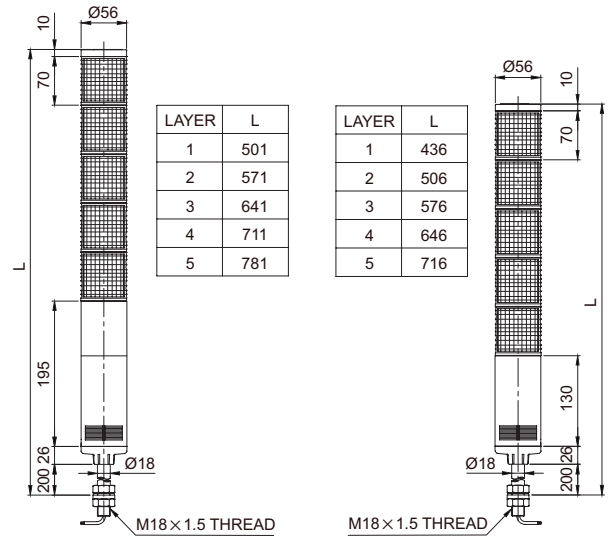
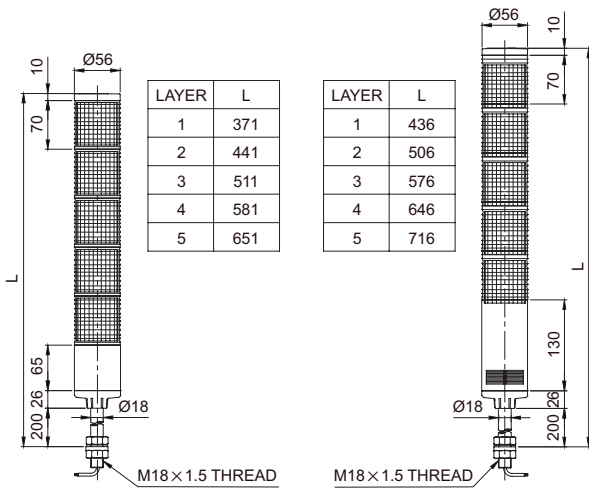


ST56L : AC/DC  
ST56L-BZ : DC  
ST56LF : DC

ST56L-BZ : AC  
ST56LF-BZ : AC/DC  
ST56LF : AC

ST56L-W□ : AC  
ST56LF-W□ : AC

ST56L-W□ : DC  
ST56LF-W□ : DC



## Wiring Instructions

- External power line standard : UL1015 AWG18(0.75sq)×2C 400mm
  - Signal line standard : UL1007 AWG22(0.3sq) 400mm
  - LED tower light can be wired by using transistor and external contact
- ※ Please refer to page 299-300 for detailed wiring instructions.

# ST56MEL/ST56EL

Ø56mm LED Steady/Flashing Tower Lights



## Technical Diagram

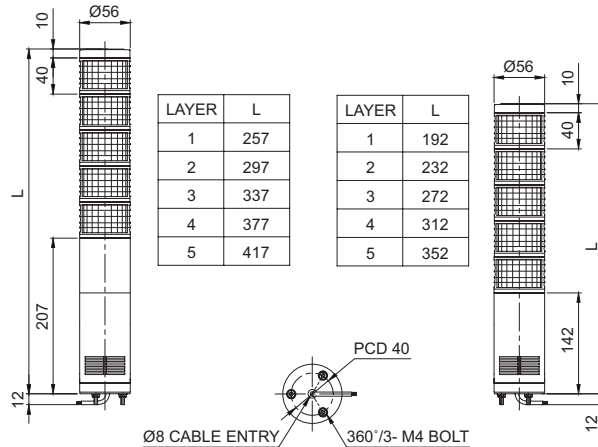
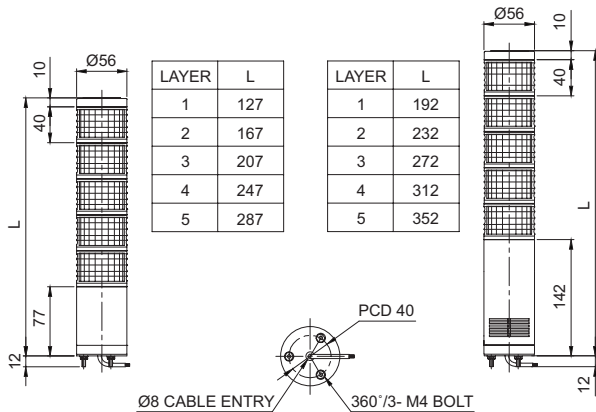
(Units : mm)

ST56MEL : AC/DC  
ST56MEL-BZ : DC  
ST56MELF : DC

ST56MEL-BZ : AC  
ST56MELF-BZ : AC/DC  
ST56MELF : AC

ST56MEL-W□ : AC  
ST56MELF-W□ : AC

ST56MEL-W□ : DC  
ST56MELF-W□ : DC

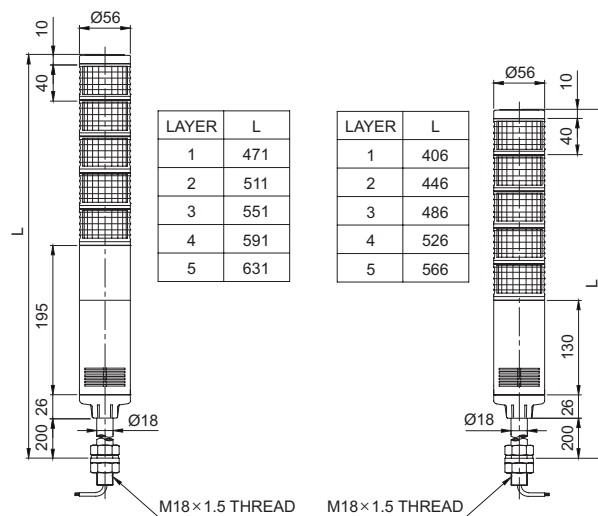
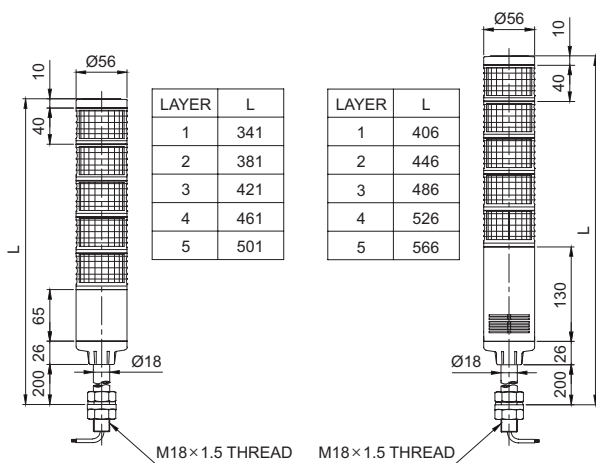


ST56EL : AC/DC  
ST56EL-BZ : DC  
ST56ELF : DC

ST56EL-BZ : AC  
ST56ELF-BZ : AC/DC  
ST56ELF : AC

ST56EL-W□ : AC  
ST56ELF-W□ : AC

ST56EL-W□ : DC  
ST56ELF-W□ : DC



## Wiring Instructions

- External power line : UL1015 AWG18(0.75sq)×2C 400mm
- External signal line : UL1007 AWG22(0.3sq) 400mm
- LED tower light can be wired by using transistor and external contact

※ Please refer to page 56-57 for detailed wiring instructions.



# ST45L/ST56L/ST80L series

LED Steady/Flashing Tower Lights



## Wiring Instructions(using external contact)

- Please wire based on below instructions in case of using external contact.
- Customized AC each layer power supply type wiring is same as DC steady type.

Applied products	Wiring Instructions	Applied products	Wiring Instructions
DC Steady  ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L	<p style="text-align: center;">EXTERNAL CONTACT</p>	AC Steady  ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L	<p style="text-align: center;">EXTERNAL CONTACT</p>
DC Steady/Flashing  ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	<p style="text-align: center;">EXTERNAL CONTACT</p>	AC Steady/Flashing  ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	<p style="text-align: center;">EXTERNAL CONTACT</p>
DC/AC Steady Built-in Signal Sound  ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L	<p style="text-align: center;">EXTERNAL CONTACT</p> <ul style="list-style-type: none"> <li>• STXXM(E)L - WS/ WM/ WA same wiring instruction</li> <li>• STXX(E)L - WS/ WM/ WA same wiring instruction</li> <li>• STXXL             <ul style="list-style-type: none"> <li>└ Lens diameter 45(45mm) : ST45L</li> <li>56(56mm) : ST56L</li> <li>80(80mm) : ST80L</li> </ul> </li> </ul>	DC/AC Steady/Flashing Built-in Signal Sound  ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	<p style="text-align: center;">EXTERNAL CONTACT</p> <ul style="list-style-type: none"> <li>• STXXM(E)LF - WS/ WM/ WA same wiring instruction</li> <li>• STXX(E)LF - WS/ WM/ WA same wiring instruction</li> <li>• STXXLF             <ul style="list-style-type: none"> <li>└ Lens diameter 45(45mm) : ST45LF</li> <li>56(56mm) : ST56LF</li> <li>80(80mm) : ST80LF</li> </ul> </li> </ul>

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

# ST45L/ST56L/ST80L series

LED Steady/Flashing Tower Lights



## Wiring Instructions(using external contact)

• In case of wiring by transistor, please make sure if it is NPN type or PNP type. Please carefully follow wiring instruction below.

Applied products	Wiring Instructions		
DC Steady	<p>EXTERNAL TRANSISTOR-NPN</p>	<p>EXTERNAL TRANSISTOR-PNP</p>	
ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L			
Applied products	Wiring Instructions	Applied products	Wiring Instructions
DC Steady/Flashing	<p>EXTERNAL TRANSISTOR-PNP</p>	AC Steady/Flashing	<p>EXTERNAL TRANSISTOR-PNP</p>
ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF		ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	
DC/AC Steady Built-in Signal Sound	<p>EXTERNAL TRANSISTOR-NPN</p>	DC/AC Steady/Flashing Built-in Signal Sound	<p>EXTERNAL TRANSISTOR-PNP</p>
ST45ML ST45L ST56MEL ST56ML ST56EL ST56L ST80MEL ST80ML ST80EL ST80L	<ul style="list-style-type: none"> <li>• STXXM(E)L - WS/ WM/ WA same wiring instruction</li> <li>• STXX(E)L - WS/ WM/ WA same wiring instruction</li> <li>• STXXL               <ul style="list-style-type: none"> <li>└ Lens diameter 45(45mm) : ST45L</li> <li>56(56mm) : ST56L</li> <li>80(80mm) : ST80L</li> </ul> </li> </ul>	ST45MLF ST45LF ST56MELF ST56MLF ST56ELF ST56LF ST80MELF ST80MLF ST80ELF ST80LF	<ul style="list-style-type: none"> <li>• STXXM(E)LF - WS/ WM/ WA same wiring instruction</li> <li>• STXX(E)LF - WS/ WM/ WA same wiring instruction</li> <li>• STXXLF               <ul style="list-style-type: none"> <li>└ Lens diameter 45(45mm) : ST45LF</li> <li>56(56mm) : ST56LF</li> <li>80(80mm) : ST80LF</li> </ul> </li> </ul>

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