

# 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<br>2 buzzer sounds |                                 | Customized 2 tone<br>Buzzer available  |
| WS   | 5 Warning sounds                  | Ch1<br>Ch2<br>Ch3<br>Ch4<br>Ch5 | Fire.A-ANG<br>Emergency<br>Ambulance<br>Machinery Fault<br>High Expansion        |
| WM   | 5 Melodies                        | Ch1<br>Ch2<br>Ch3<br>Ch4<br>Ch5 | Sweet Home<br>For Elise<br>Cuckoo's Waltz<br>Piano Sonata<br>Turkish March       |
| WA   | 5 Alarms                          | Ch1<br>Ch2<br>Ch3<br>Ch4<br>Ch5 | Beep Intermittent<br>Door Chime<br>Phone Ring<br>PI.PI.PI Short<br>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<br>TWS80 | TWA45<br>TWA80 |
|----------------|----------------|
|                |                |
| Steel          | PC             |

#### • Pole Mount Brackets

| Standard | LB18<br>LB24 | LW18<br>LW24 | QZ18<br>QZ24 | SZ18<br>SZ24 | QL18<br>QL24 | SL18<br>SL24 | QLA18<br>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

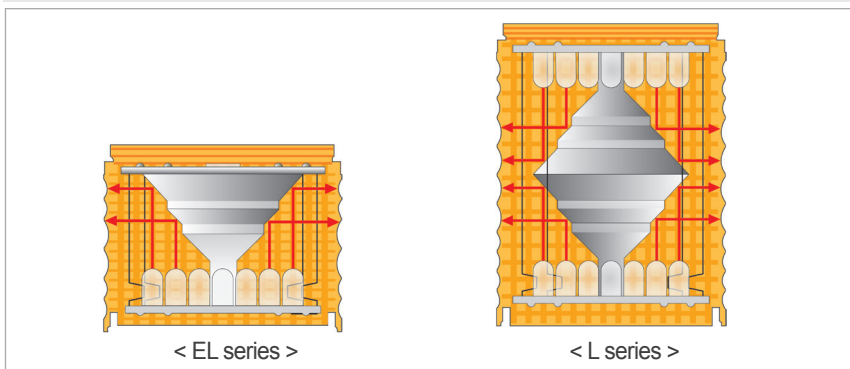
ST45L/ ST56L/ ST80L series product allows for the lens arrangement to be adjusted after removing the bolt that secures the cover. If additional lenses are required for this product please reach out to us. ST45L/ ST56L/ ST80L series can be stacked up to 5 layers.



## 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  |
| <br>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 Alarms                  | ST45ML(F)-WA   | ST56MEL(F)-WA | ST56ML(F)-WA | ST80MEL(F)-WA | ST80ML(F)-WA |
| <br>Pole mount   | 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 Alarms                  | ST45L(F)-WA    | ST56EL(F)-WA  | ST56L(F)-WA  | ST80EL(F)-WA  | ST80L(F)-WA  |



Warning/Signal/Stackable



Signal & Electric Horn/Speakers



Vessels and Heavy-Duty Equipment



Explosion Proof



Warning Light Bar



Aviation Obstruction Lights



Signal Tower Lights



USB/ETN Signal Tower Lights



Wireless Network System



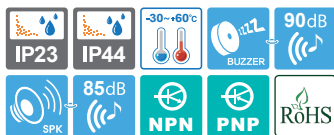
Electric Horn/Speakers



Industrial LED Lights

# ST45ML

## Ø45mm LED Steady/Flashing Tower Lights



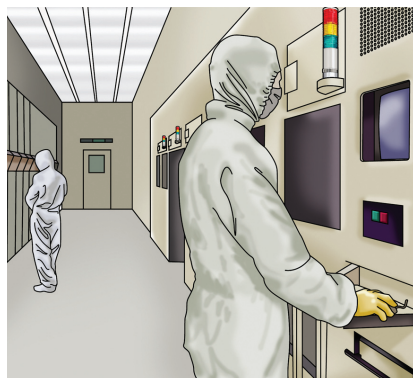
ST45ML series

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<br>ST45ML-BZ<br>ST45ML-WS<br>ST45ML-WM<br>ST45ML-WA<br>ST45MLF<br>ST45MLF-BZ<br>ST45MLF-WS<br>ST45MLF-WM<br>ST45MLF-WA | 1        | AC/DC12V | 0.040A  | <br>DC24V only<br><br>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<br>● G-Green                          |
|   |          | AC/DC24V | 0.080A  |  | 0.21kg |   |
|   |          | AC110V   | 0.026A  |  | 0.29kg |   |
|   |          | AC220V   | 0.013A  |  | 0.29kg |   |
|   | 3        | AC/DC12V | 0.120A  |  | 0.25kg | ● R-Red<br>● A-Amber<br>● G-Green             |
|   |          | AC/DC24V | 0.120A  |  | 0.25kg |   |
|   |          | AC110V   | 0.028A  |  | 0.34kg |   |
|   |          | AC220V   | 0.014A  |  | 0.34kg |   |
|   | 4        | AC/DC12V | 0.160A  |  | 0.30kg | ● R-Red<br>● A-Amber<br>● G-Green<br>● B-Blue |
|   |          | AC/DC24V | 0.160A  |  | 0.30kg |   |
|   |          | AC110V   | 0.031A  |  | 0.38kg |   |
| AC220V  |          | 0.015A   | 0.38kg  |  |        |   |
| 5   | AC/DC12V | 0.200A   | 0.34kg  | ● R-Red<br>● A-Amber<br>● G-Green<br>● B-Blue<br>● 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

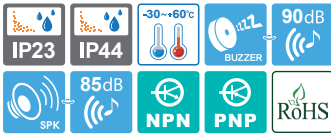


### Ordering Specification

| 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<br>ST45L-BZ<br>ST45L-WS<br>ST45L-WM<br>ST45L-WA<br>ST45LF<br>ST45LF-BZ<br>ST45LF-WS<br>ST45LF-WM<br>ST45LF-WA | 1     | AC/DC12V | 0.040A  | CE<br>DC24V only<br>UL<br>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<br>● G-Green                                       |
|   |       | AC/DC24V | 0.080A  |                                      | 0.39kg |  |
|   |       | AC110V   | 0.026A  |                                      | 0.49kg |  |
|   | 3     | AC/DC12V | 0.120A  |                                      | 0.44kg | ● R-Red<br>● A-Amber<br>● G-Green                          |
|   |       | AC/DC24V | 0.120A  |                                      | 0.44kg |  |
|   |       | AC110V   | 0.028A  |                                      | 0.54kg |  |
|   | 4     | AC/DC12V | 0.160A  |                                      | 0.48kg | ● R-Red<br>● A-Amber<br>● G-Green<br>● B-Blue              |
|   |       | AC/DC24V | 0.160A  |                                      | 0.48kg |  |
|   |       | AC110V   | 0.031A  |                                      | 0.58kg |  |
|   | 5     | AC/DC12V | 0.200A  |                                      | 0.52kg | ● R-Red<br>● A-Amber<br>● G-Green<br>● B-Blue<br>● W-White |
|   |       | AC/DC24V | 0.200A  |                                      | 0.52kg |  |
| AC110V  |       | 0.033A   | 0.62kg  |                                      |        |  |
|   |       | AC220V   | 0.016A  | 0.62kg                               |        |  |

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

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

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

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

### Customization

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

### Ordering Specification

|   |   |  |   |  |   |  |   |  |
|---|---|--|---|--|---|--|---|--|
| <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> |



# ST45ML/ ST45L

Ø45mm LED Steady/Flashing Tower Lights

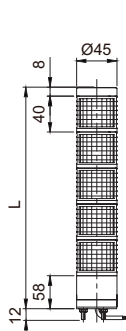


## Technical Diagram

(Units : mm)

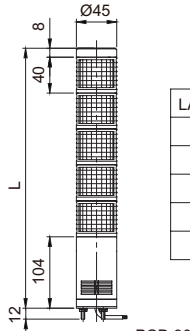


ST45ML : AC/DC  
ST45ML-BZ : DC  
ST45MLF : DC



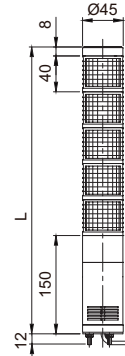
| LAYER | L   |
|-------|-----|
| 1     | 106 |
| 2     | 146 |
| 3     | 186 |
| 4     | 226 |
| 5     | 266 |

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



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

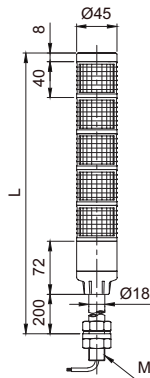
ST45MLF-BZ : AC



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

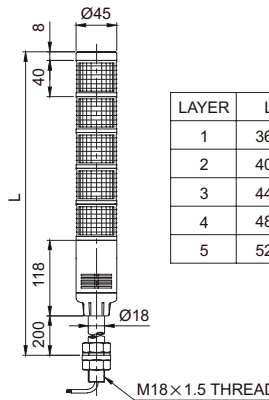


ST45L : AC/DC  
ST45L-BZ : DC  
ST45LF : DC



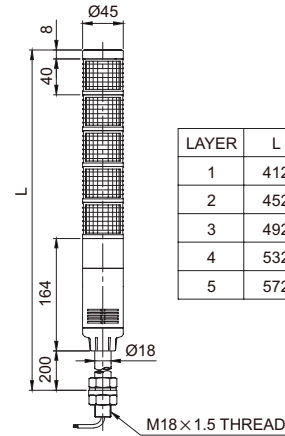
| LAYER | L   |
|-------|-----|
| 1     | 320 |
| 2     | 360 |
| 3     | 400 |
| 4     | 440 |
| 5     | 480 |

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



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

ST45LF-BZ : AC



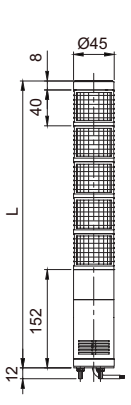
| LAYER | L   |
|-------|-----|
| 1     | 412 |
| 2     | 452 |
| 3     | 492 |
| 4     | 532 |
| 5     | 572 |

ST45ML-W□ : DC  
ST45MLF-W□ : DC

ST45ML-W□ : AC  
ST45MLF-W□ : AC

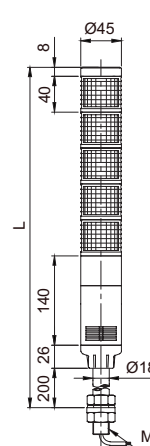
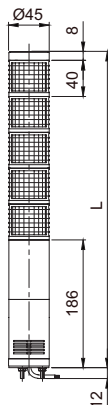
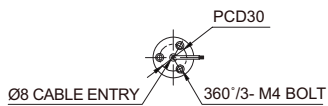
ST45L-W□ : DC  
ST45LF-W□ : DC

ST45L-W□ : AC  
ST45LF-W□ : AC

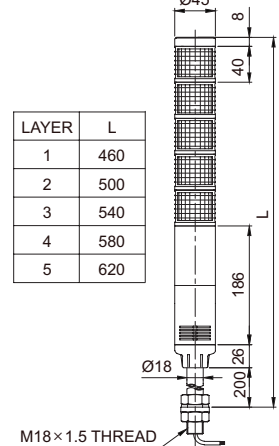


| LAYER | L   |
|-------|-----|
| 1     | 200 |
| 2     | 240 |
| 3     | 280 |
| 4     | 320 |
| 5     | 360 |

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



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



| 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.