

# TL70 Modular Tower Light



## Datasheet

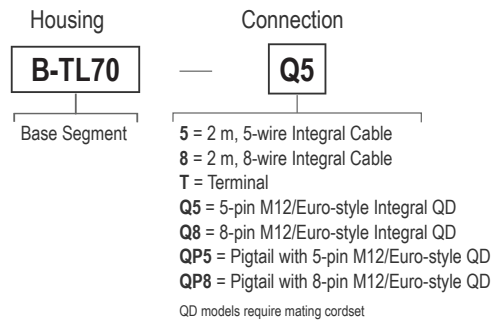


Banner's TL70 Tower Light is a 70 mm, modular LED indicator with extremely bright and uniform light. The modularity gives the user flexibility to customize tower lights as needed and change positions in the field. The TL70 is also available preassembled for easy installation.

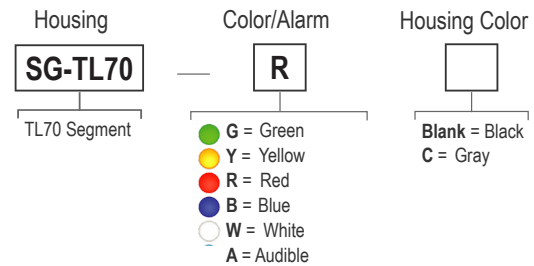
- Light segments have user-selectable solid ON or flashing
- Up to five colors plus audible in one device
- Rugged, water-resistant IP65 housing with UV-stabilized material
- Bright, uniform indicator segments appear gray when off to eliminate false indication from ambient light
- Several connection options to choose from including M12/Euro-style quick-disconnect, cabled, and terminal-wired

### Models Key

#### TL70 Base



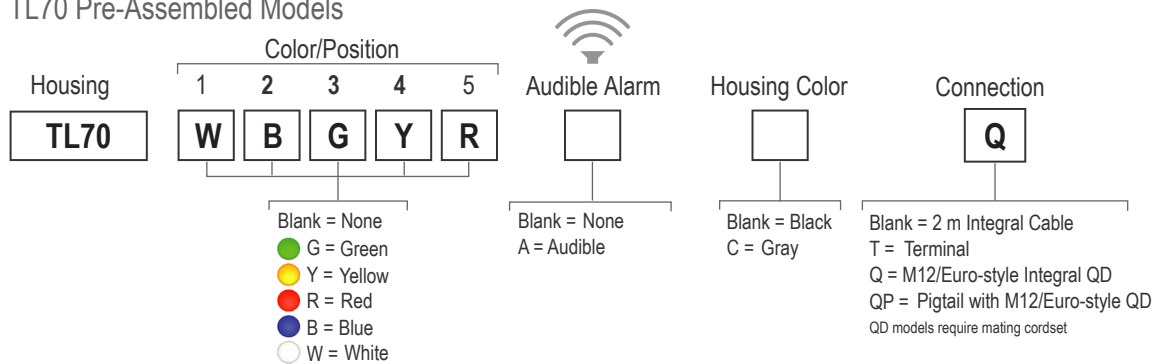
#### TL70 Segments



Select the 5-pin base for tower light configurations of up to 4 modules. Select the 8-pin base for tower light configurations of up to 6 modules.

- Example base model number: B-TL70-Q5
- Example light segment model number: SG-TL70-G
- Example audible segment model number: SG-TL70-A

### TL70 Pre-Assembled Models

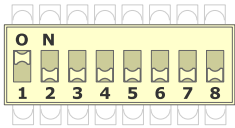


- Example pre-assembled model number: TL70GYRAQ.

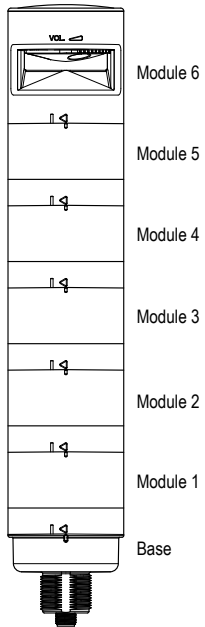
Use a 5-pin cordset for 1 to 4 modules. Use a 8-pin cordset for 5 or 6 modules.



## Configuring the Modules



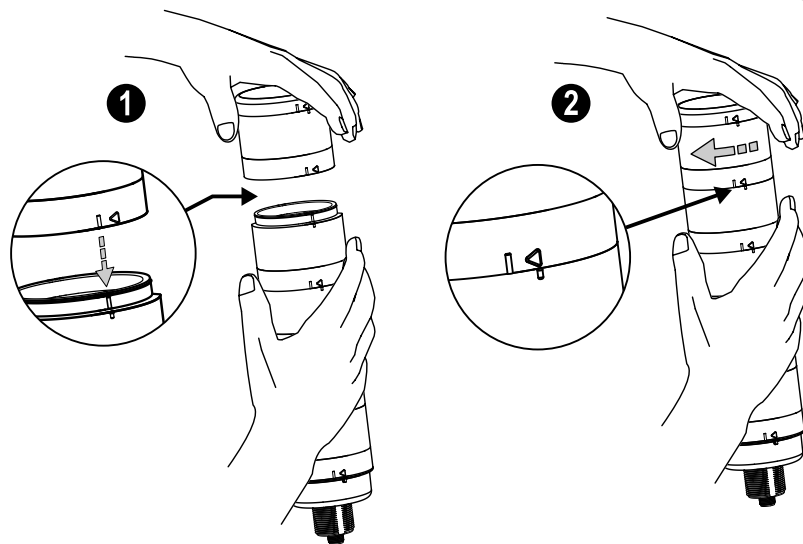
Turn on the appropriate DIP switch to set the order of the components, counting up from the tower light's base.



Assembly Options		DIP Switches							
		1	2	3	4	5	6	7	8
Light and Audible Components	Module 1	ON							
	Module 2		ON						
	Module 3			ON					
	Module 4				ON				
	Module 5					ON			
	Module 6						ON		
Light Module Flash Rate	3 Hz							ON	OFF
	1.5 Hz							ON	ON
	Solid On*							OFF	OFF
Audible Module Settings	Pulse 1.5 Hz							ON	OFF
	Chirp Alarm							ON	ON
	Siren Alarm							OFF	ON
	Continuous Alarm*							OFF	OFF

\* Factory default setting

## Assembling the Modules



To assemble the modules:

1. Align the notches on each module.
2. Press together.
3. Rotate the top module clockwise to lock into place (notches shown in the locked position).

## Specifications

### Supply Voltage and Current

12 to 30 V dc

Indicators - Maximum current per LED color:

Blue, Green, White: 420 mA at 12 V dc; 145 mA at 30 V dc

Red, Yellow: 285 mA at 12 V dc; 120 mA at 30 V dc

Audible: 30 mA at 12 to 30 V dc

### Supply Protection Circuitry

Protected against transient voltages

### Indicator Response Time

Off Response: 150  $\mu$ s (maximum) at 12 to 30 V dc

On Response: 180 ms (maximum) at 12 V dc; 50 ms (maximum) at 30 V dc

### Audible Alarm

2.6 KHz  $\pm$  250 Hz oscillation frequency; maximum intensity 92 dB at 1 m (3.3 ft) (typical)

### Segment Lumens

Color	Typical Wavelength or Color Temp	Typical Intensity (lm)
Green	525 nm	92
Red	625 nm	40
Yellow	590 nm	22
Blue	470 nm	32
White	5000 K	125

### Audible Adjustment

Rotate the cover until the desired volume is reached

Change in sound intensity from fully open to fully closed is 8 dB

### Construction

Bases, segments, covers: polycarbonate

### Indicators

1 to 5 colors depending on model: Green, Red, Yellow, Blue, and White

Flash rates: 1.5 Hz  $\pm$  10% and 3 Hz  $\pm$  10%

LEDs are independently selected

### Terminal Block Model

14 to 28 AWG wire

### Connections

5-pin M12/Euro-style quick disconnect connector, 8-pin M12/Euro-style quick disconnect connector, 150 mm (5.9 in) PVC cable with an M12/Euro-style quick disconnect connector, terminal block, or 2 m (6.5 ft) unterminated cable, depending on model

### Operating Conditions

-40  $^{\circ}$ C to +50  $^{\circ}$ C (-40  $^{\circ}$ F to +122  $^{\circ}$ F)

95% at +50  $^{\circ}$ C maximum relative humidity (non-condensing)

### Environmental Rating

IEC IP65

### Vibration and Mechanical Shock

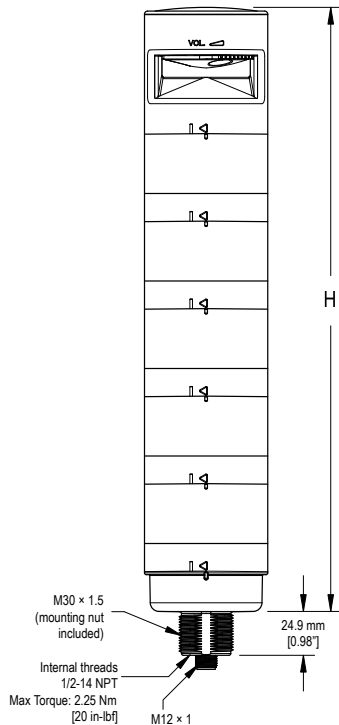
Vibration 10 to 55 Hz 0.5 mm p-p amplitude per IEC60068-2-6

Shock 15G 11 ms duration, half sine wave per IEC60068-2-27

### Certifications



## Dimensions



Model	Height (H)
1 light module	87.6 mm (3.45 in)
1 light module, 1 audible module	144.3 mm (5.68 in)
2 light modules	137.3 mm (5.41 in)
2 light modules, 1 audible module	194 mm (7.64 in)
3 light modules	187 mm (7.36 in)
3 light modules, 1 audible module	243.7 mm (9.59 in)
4 light modules	236.7 mm (9.32 in)
4 light modules, 1 audible module	293.4 mm (11.55 in)
5 light modules	286.4 mm (11.28 in)
5 light modules, 1 audible module	343.1 mm (13.5 in)

## Wiring Diagrams

Sourcing (PNP) Input	Sinking (NPN) Input	Euro-style Male Pinouts	Key
			<p>1 = brown                  2 = white                  3 = blue                  4 = black                  5 = gray</p> <p>M1 = Module 1                  M2 = Module 2                  M3 = Module 3                  M4 = Module 4</p>
			<p>1 = white                  2 = brown                  3 = green                  4 = yellow                  5 = gray                  6 = pink                  7 = blue                  8 = red</p> <p>M1 = Module 1                  M2 = Module 2                  M3 = Module 3                  M4 = Module 4                  M5 = Module 5                  M6 = Module 6</p>

Wiring Terminal Block	Terminal Block Key
	<p>0 = dc common                  1 = Module 1                  2 = Module 2                  3 = Module 3                  4 = Module 4                  5 = Module 5                  6 = Module 6</p>

## Accessories

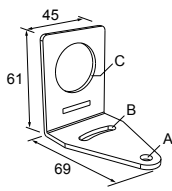
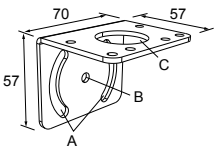
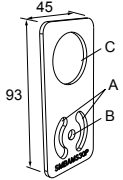
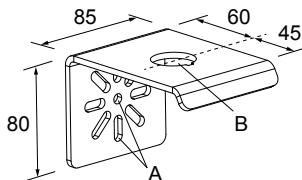
### Cordsets

5-Pin Threaded M12/Euro-Style Cordsets (Single Ended)				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.50 m (1.5 ft)	Straight		
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)			
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

8-Pin Threaded M12/Euro-Style Cordsets with Open-Shield				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC2S-806	1.83 m (6 ft)	Straight		
MQDC2S-815	4.57 m (15 ft)			
MQDC2S-830	9.14 m (30 ft)			
MQDC2S-850	15.2 m (50 ft)	Right-Angle		
MQDC2S-806RA	1.83 m (6 ft)			
MQDC2S-815RA	4.57 m (15 ft)			
MQDC2S-830RA	9.14 m (30 ft)			
MQDC2S-850RA	15.2 m (50 ft)			




All measurements are listed in millimeters, unless noted otherwise.

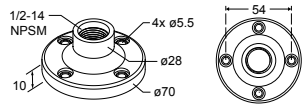
Mounting Brackets

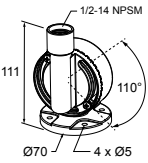
<p><b>SMB30A</b></p> <ul style="list-style-type: none"> <li>• Right-angle bracket with curved slot for versatile orientation</li> <li>• Clearance for M6 (¼ in) hardware</li> <li>• Mounting hole for 30 mm sensor</li> <li>• 12-ga. stainless steel</li> </ul>  <p>Hole center spacing: A to B=40 Hole size: A=∅ 6.3, B= 27.1 x 6.3, C=∅ 30.5</p>	<p><b>SMB30MM</b></p> <ul style="list-style-type: none"> <li>• 12-ga. stainless steel bracket with curved mounting slots for versatile orientation</li> <li>• Clearance for M6 (¼ in) hardware</li> <li>• Mounting hole for 30 mm sensor</li> </ul>  <p>Hole center spacing: A = 51, A to B = 25.4 Hole size: A = 42.6 x 7, B = ∅ 6.4, C = ∅ 30.1</p>
<p><b>SMBAMS30P</b></p> <ul style="list-style-type: none"> <li>• Flat SMBAMS series bracket</li> <li>• 30 mm hole for mounting sensors</li> <li>• Articulation slots for 90° + rotation</li> <li>• 12-ga. 300 series stainless steel</li> </ul>  <p>Hole center spacing: A=26.0, A to B=13.0 Hole size: A=26.8 x 7.0, B=∅ 6.5, C=∅ 31.0</p>	<p><b>SSA-MBK-EEC1</b></p> <ul style="list-style-type: none"> <li>• Single 30 mm hole</li> <li>• 8 gauge steel, black finish (zinc-plated)</li> <li>• Front surface for customer applied labels</li> </ul>  <p>Hole size: A = ∅ 7 , B = ∅ 30</p>

All measurements are listed in millimeters, unless noted otherwise.

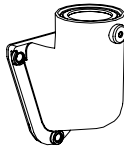
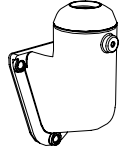
Elevated Mount System

Model	Features	Components												
<p>SA-M30 - Black Polycarbonate</p> <p>SA-M30C - Gray Polycarbonate</p>	<ul style="list-style-type: none"> <li>• Streamlined black PC or Gray PC thread cover</li> <li>• Covers M30 thread on the light base</li> <li>• Mounting hardware included</li> </ul>													
<table border="1"> <tr> <td data-bbox="149 1312 365 1375">Polished 304 Stainless Steel</td> <td data-bbox="371 1312 576 1375">Black Anodized Aluminum</td> <td data-bbox="583 1312 792 1375">Clear Anodized Aluminum</td> </tr> <tr> <td data-bbox="149 1383 365 1438">SOP-E12-150SS 150 mm (6 in) long</td> <td data-bbox="371 1383 576 1438">SOP-E12-150A 150 mm (6 in) long</td> <td data-bbox="583 1383 792 1438">SOP-E12-150AC 150 mm (6 in) long</td> </tr> <tr> <td data-bbox="149 1446 365 1501">SOP-E12-300SS 300 mm (12 in) long</td> <td data-bbox="371 1446 576 1501">SOP-E12-300A 300 mm (12 in) long</td> <td data-bbox="583 1446 792 1501">SOP-E12-300AC 300 mm (12 in) long</td> </tr> <tr> <td data-bbox="149 1509 365 1564">SOP-E12-900SS 900 mm (36 in) long</td> <td data-bbox="371 1509 576 1564">SOP-E12-900A 900 mm (36 in) long</td> <td data-bbox="583 1509 792 1564">SOP-E12-900AC 900 mm (36 in) long</td> </tr> </table>	Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum	SOP-E12-150SS 150 mm (6 in) long	SOP-E12-150A 150 mm (6 in) long	SOP-E12-150AC 150 mm (6 in) long	SOP-E12-300SS 300 mm (12 in) long	SOP-E12-300A 300 mm (12 in) long	SOP-E12-300AC 300 mm (12 in) long	SOP-E12-900SS 900 mm (36 in) long	SOP-E12-900A 900 mm (36 in) long	SOP-E12-900AC 900 mm (36 in) long	<ul style="list-style-type: none"> <li>• Elevated-use stand-off pipe (½ in. NPSM/DN15)</li> <li>• Polished 304 stainless steel, black anodized aluminum, or clear anodized aluminum surface</li> <li>• ½ in. NPT thread at both ends</li> <li>• Compatible with most industrial environments</li> </ul>	
Polished 304 Stainless Steel	Black Anodized Aluminum	Clear Anodized Aluminum												
SOP-E12-150SS 150 mm (6 in) long	SOP-E12-150A 150 mm (6 in) long	SOP-E12-150AC 150 mm (6 in) long												
SOP-E12-300SS 300 mm (12 in) long	SOP-E12-300A 300 mm (12 in) long	SOP-E12-300AC 300 mm (12 in) long												
SOP-E12-900SS 900 mm (36 in) long	SOP-E12-900A 900 mm (36 in) long	SOP-E12-900AC 900 mm (36 in) long												
<p>SA-E12M30 - Black Acetal</p> <p>SA-E12M30C - White UHMW</p>	<ul style="list-style-type: none"> <li>• Streamlined black acetal or white UHMW mounting base adapter/cover</li> <li>• Connects between ½ in. NPSM/DN15 pipe and 30 mm (1-3/16 in) drilled hole</li> <li>• Mounting hardware included</li> </ul>													

Pipe Mounting Flange			
Model	Features	Construction	
SA-F12	<ul style="list-style-type: none"> <li>For use elevated stand-off pipes (1/2 in, NPSM/DN15)</li> <li>M5 mounting hardware and nitrile gasket included</li> </ul>	Die-cast zinc base with black paint	

Foldable Mounting Brackets			
Model	Features	Construction	
SA-FFB12	<ul style="list-style-type: none"> <li>For use with 1/2 inch stand-off pipes</li> <li>Stainless steel hardware</li> </ul>	Black polycarbonate	
SA-FFB12C		Gray polycarbonate	

LMB Sealed Right-Angle Brackets

Model	Description	Construction	
LMB30RA	Direct-Mount Models: Bracket kit with base, 30 mm adapter, set screw, fasteners, o-rings, and gaskets	Black polycarbonate	
LMB30RAC		Gray polycarbonate	
LMBE12RA	Pipe-Mount Models: Bracket kit with base, 1/2-14 pipe adapter, set screw, fasteners, o-rings, and gaskets. For use with stand-off pipe (listed and sold separately)	Black polycarbonate	
LMBE12RAC		Gray polycarbonate	

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