Bulletin 855E — 50 mm Control Tower Stack Lights

Light Modules

Flashing Incandescent

855E	–	10	FN	4
		a	b	c

a	
Voltage	
Code	Description
00	0…250V AC/DC (no lamp module) (1)
12	12V AC/DC
24	24V AC/DC
10	120V AC
20	240V AC

b	
Light Module Type	
Code	Description
XN	Steady no lamp (1)
DN	Steady incandescent
FN	Flashing incandescent
TL	Steady socket-mount LED
GL	Flashing socket-mount LED
BL	Strobe

c	
Lens Color	
Code	Description
3	Green
4	Red
5	Amber
6	Blue
7	Clear
8	Yellow

(1) Can only be selected with module type XN, voltage code 00. Accepts socket mount incandescent lamp types only.

Sound Modules

Sound modules have continuous and pulsing tones. Maximum sound output is 103 dB at 1 m (3.3 ft). A reduced volume setting is available by changing the position of the volume DIP switch, which produces a sound output of 88 dB(A) at 1 (3.3 ft). Maximum sound output is 80 dB(A) at 1 m (3.3 ft).

Black Two-tone Sound Module

855E	–	B	10	TA3
		a	b	c

a	
Housing Color	
Code	Description
B	Black
G	Gray

b	
Voltage	
Code	Description
12	12V AC/DC
24	24V AC/DC
10	120V AC
20	240V AC

c	
Module Type	
Code	Description
SA3	Single circuit/single tone piezo style steady/pulsing DIP switch selectable
TA	Two circuit/two-tone piezo style steady/pulsing DIP switch selectable

Standard Stack Light Bases

Surface-mount Base with Cap

Vertical-mount Base with Cap


Pole-mount Bases


Quick-release Base

855E – B VM C

a b c

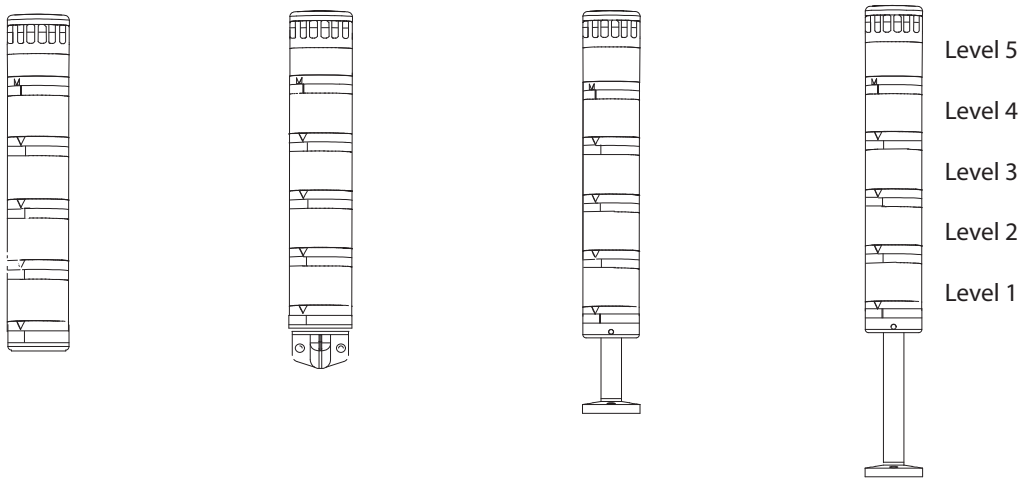
a	
Housing Color	
Code	**Description**
B	Black
G	Gray

b	
Base Type	
Code	**Description**
CB	Surface mount with 1/2 in. NPT threading
RB	Surface mount with M20 metric threading
SB	Surface mount with PG16 threading
TM	25 mm tube mount
VM	Vertical mount
PM10	10 cm aluminum pole-mount base
PM25	25 cm aluminum pole-mount base
PM40	40 cm aluminum pole-mount base
PM60	60 cm aluminum pole-mount base
PM80	80 cm aluminum pole-mount base
MM10	10 cm quick-release base
MM25	25 cm quick-release base
MM40	40 cm quick-release base

c	
Cap Option (1)	
Code	**Description**
Blank	No cap
C	Cap included

(1) Quick-release bases always include a cap.

Pre-configured Tower Lights, 1…5 Modules



Surface Mount | Vertical Mount | 10 cm Pole Mount | 25 cm Pole Mount

855	EC	–	B	10	Y	3	L	5	B	3	F	7	Y	6
	a		b	c	d	e	d	e	d	e	d	e	d	e
					(Level 1, d+e)		(Level 2, d+e)		(Level 3, d+e)		(Level 4, d+e)		(Level 5, d+e)	

a	
Base Type	
Code	**Description**
EC	Surface mount - 1/2 in. NPT threading
ES	Surface mount - PG16
EV	Vertical mount
EM	25 mm tube mount
EP	10 cm pole mount
EE	25 cm pole mount

b	
Base & Cap Color	
Code	**Description**
B	Black
G	Gray

c	
Voltage	
Code	**Description**
12	12V AC/DC
24	24V AC/DC
10	120V AC
20	240V AC

d	
Module Type	
Code	**Description**
D	Steady incandescent
F	Flashing incandescent
Y	Steady LED
L	Flashing LED
B	Strobe
P	Single-circuit piezo sound module
Q	Two-circuit piezo sound module(1)

e	
Lens Color/Sound	
Code	**Description**
1	Sound module (2)
3	Green
4	Red
5	Amber
6	Blue
7	Clear
8	Yellow

(1) If the two-circuit sound module (option Q in Table d) is selected, the maximum number of light modules that are allowed is three.
(2) Sound module option can only be selected with Module Type option P or Q in Table d. They must be located in the top position of the stack.

Specifications (Bulletin 855E)

Table 62 - Mechanical

Standard Bases		Based on the weight and style of mounting; tower lights are subject to damage from shock and vibration. Listed below are reference guidelines for maximum acceptable conditions.	
		Shock [G]	Vibration [G]
Surface Mount Base or 10 cm Aluminum Pole Base	1 module stack	150	5
	3 module stack	45	1.5
	5 module stack	35	0.75
Vertical Base or 25 cm Aluminum Pole Base	1 module stack	95	3.5
	3 module stack	30	1.25
	5 module stack	20	0.5
Recommended Wire Sizes		0.5…1.5 mm^2 (22…16 AWG)	
Recommended Terminal Torque		0.87 N•m (7 lb•in)	

Table 63 - Environmental

Attribute		Value
Ingress Ratings	Light Modules with Cap	IP66/UL Type 4/4X/13
	Sound Modules	IP66/UL Type 4/4X/13
	Surface, Vertical, Tube Mount Bases	IP66/UL Type 4/4X/13
	Pole Mount Bases	IP66/UL Type 4/4X/13
	Flange-style Base with M12 Micro Connector(1)	IP66/UL Type 4/4X/13
Temperature Ranges	Operating	-25…+50 °C (-13…+122 °F)
	Storage	-40…+85 °C (-40…+185 °F)

(1) UL Type 1 when used with Cat. No. 855T-AVM mounting bracket.

Table 64 - Materials

Part	Material
Bases, Caps, Lens Covers, Sound Module Housings, Lenses	Polycarbonate
Lamp Socket	Polycarbonate
Rubber Seals and Gaskets	Nitrile rubber
Pole (for aluminum pole assembly)	Aluminum
Pole Base Footing (for aluminum pole base)	Polycarbonate
Insulation Sleeve (for pole insulation)	Polyolefin
Mounting Screw Washers	Polypropylene

Table 65 - Light Output

Device		Light Output			
		12V AC/DC	24V AC/DC	120V AC	240V AC
Steady Incandescent		0.5 MSCP 6.3 Lumens	2.5 MSCP 31.4 Lumens	3.0 MSCP 37.7 Lumens	0.49 MSCP 6.2 Lumens
Flashing Incandescent					
Strobe		1 J per lamp			
Steady, Flashing Socket Mount LED	Red	900…2240 mcd			
	Green	900…1800 mcd			
	Amber	1400…3550 mcd			
	Blue	224…560 mcd			
	White and Yellow	900…1800 mcd			

Table 66 - Operating Voltage

Device	Operating Voltage			
	12V AC/DC	24V AC/DC	120V AC	240V AC
Light modules and sound modules	12V AC/DC (±10%)	24V AC/DC (±10%)	110V AC, 50 Hz (±10%) 120V AC, 60 Hz (±10%)	230V AC, 50 (±10%) 240V AC, 60 (±10%)

Table 67 - Lamp Life Ratings (Design Life) Average Life Under Static, No Vibration, Conditions

Device	Lamp Life Rating			
	12V AC/DC	24V AC/DC	120V AC	240V AC
Incandescent Modules[1] [2]	8000 hr	7000 hr	3000 hr	1600 hr
LED Modules	100,000 hr			
Strobe Modules	15,000 hr			
Sound modules	20,000 hr			

(1) First failures at about 35% of average life. Severe vibration can reduce life to 44% of average life.
(2) Flashing applications can reduce life to 50% of average life.

Table 68 - Current Consumption

Device		Current Consumption [mA]		
		24V AC/DC	120V AC	240V AC
Light only modules	Steady LED	22 (red, amber, and yellow) 33 (green, blue, and white)	30 (red, amber, and yellow) 29 (green, blue, and white)	
	Flashing LED	28 (red, amber, and yellow) 36 (green, blue, and white)	30 (red, amber, and yellow) 29 (green, blue, and white)	
	Strobe LED	35 (red, amber, and yellow) 65 (green, blue, and white)	10	
Sound modules	Single-tone	65	31	32

Table 69 - Flashing and Tone Frequency

Attribute	Value
Flashing Frequency (Light Only Modules)	
Flashing Incandescent Modules	12V module approximately 1.5 Hz 24V, 120V, and 240V modules approximately 2 Hz Time ON/Time OFF = 1:1
Flashing LED Modules	Approximately 1.5 Hz; Time On/Time OFF = 1:1
LED Strobe Modules	Approximately 2 Hz (flash duration 1/50,000 second)
Flashing and Tone Frequency (Light Modules/with Sound Set at Continuous Tone)	
Tone Frequency	Tone frequency is preset at 2800 Hz
Flashing and Tone Pulsing Frequencies (Light Modules/with Sound Set at Pulsing Tone)	
Tone Frequency	Tone frequency is preset at 2800 Hz

Table 70 - Decibel Rating (Sound Modules) [1]

Device	Decibel Rating
Single-tone Sound Module (SA3)	Maximum volume ranges from 88 dB(A) or 103 dB(A) (volume adjustable by DIP switch)
Two-tone Sound Module (TA3)	

(1) All dB(A) ratings are determined at a distance of 1 m (3.3 ft) from the sound module.

Table 71 - Leakage Current Impact

All light and sound modules can absorb up to 3 mA of leakage current from solid-state outputs without module activation.

Standards Compliance

- UL 508
- CSA C22.2 No. 14
- EN/IEC 60947-1
- EN/IEC 60947-5-1

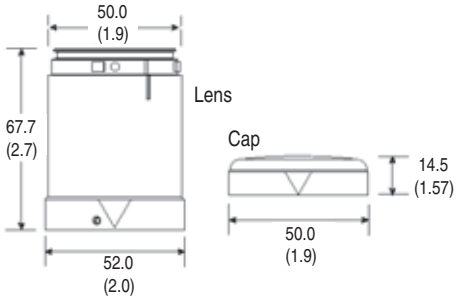
Certifications

- cULus Listed (File No. E14840, Guides NKCR, NKCR7)
- CE Marked

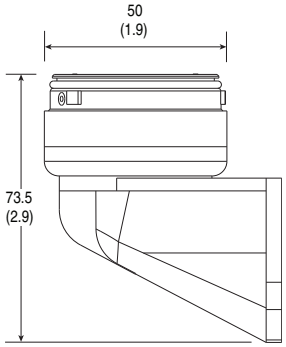
Approximate Dimensions (Bulletin 855E)

Dimensions in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

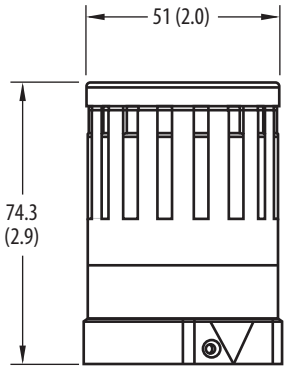
Light Modules



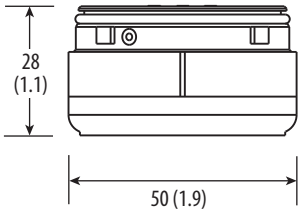
Vertical Mount Base



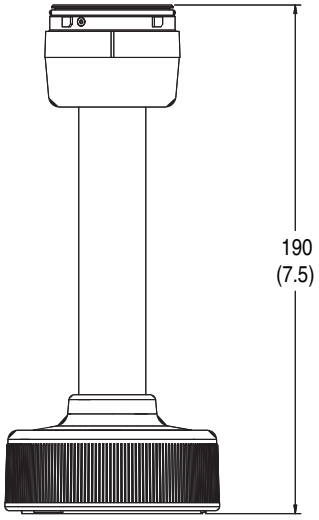
Sound Module



Surface Mount Base



Quick Release Base



Pole Mount Bases