Bulletin 855E/855T Control Tower Stack Lights

This product line includes 50 mm (855E) and 70 mm (855T) stack lights.

Bulletin 855E — 50 mm Control Tower Stack Lights

These devices are designed to communicate application status, alerting you to critical equipment and system needs on the plant floor. They can be preassembled to save time or ordered as separate light and sound modules for customized field assembly.

Light Modules

Flashing Incandescent

$$855E \quad - \quad \underset{a}{10} \quad \underset{b}{FN} \quad \underset{c}{4}$$

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

Black Two-tone Sound Module

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 m (3.3 ft). Maximum sound output is 80 dB(A) at 1 m (3.3 ft).

$$855E \quad - \quad \underset{a}{B} \quad \underset{b}{10} \quad \underset{c}{TA3}$$

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
TA3	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 (0.98 in.) tube mount
VM	Vertical mount
PM10	10 cm (3.9 in.) aluminum pole-mount base
PM25	25 cm (9.8 in.) aluminum pole-mount base
PM40	40 cm (15.7 in.) aluminum pole-mount base
PM60	60 cm (23.6 in.) aluminum pole-mount base
PM80	80 cm (31.5 in.) aluminum pole-mount base
MM10	10 cm (3.9 in.) quick-release base
MM25	25 cm (9.8 in.) quick-release base
MM40	40 cm (15.7 in.) 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

Level 5
Level 4
Level 3
Level 2
Level 1

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 (3.9 in.) pole mount
EE	25 cm (9.8 in.) 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 in the top position of the stack.

Accessories — Bulletin 855E/855T

	Description		Cat. No.
(BA15d Bayonet) 19 mm Socket Height	Incandescent Lamps	12V AC/DC	855T-L12
		24V AC/DC	855T-L24
		120V AC	855T-L10
		240V AC	855T-L20
	LED Lamps for Socket-Mounted Modules (For Industrial Use Only)	**Color**	**Cat. No.**
	12V AC/DC	Red	855E-LL12R
		Green	855E-LL12G
		Amber	855E-LL12A
		Blue	855E-LL12B
		Yellow	855E-LL12Y
		White [1]	855E-LL12W
	24V AC/DC	Red	855E-LL24R
		Green	855E-LL24G
		Amber	855E-LL24A
		Blue	855E-LL24B
		Yellow	855E-LL24Y
		White [1]	855E-LL24W
	120V AC	Red	855E-LL10R
		Green	855E-LL10G
		Amber	855E-LL10A
		Blue	855E-LL10B
		Yellow	855E-LL10Y
		White [1]	855E-LL10W
	240V AC	Red	855E-LL20R
		Green	855E-LL20G
		Amber	855E-LL20A
		Blue	855E-LL20B
		Yellow	855E-LL20Y
		White [1]	855E-LL20W

(1) White LED lamps are to be used with a clear lens option.

	Description	Color	Cat. No.
	Caps (top of stack) The cap is installed to the top of the uppermost light module. No cap is needed if the top module is a sound module, or a light/with sound module.	Black	855E-ABCAP [1]
		Gray	855E-AGCAP [1]
		Black	855T-ABCAP [2]
		Gray	855T-AGCAP [2]
	Module Securing Screws (Bag of 5)		855E-ASC [1]

(1) For use with Bulletin 855E Control Tower™ stack lights only.
(2) For use with Bulletin 855T Control Tower stack lights only.

Table 98 - Gaskets

	Description	Cat. No.
	Lens O-ring Seal	855E-ALSG [1]
	Replacement rubber O-rings are to be installed between all bases, light, sound, and light/with sound modules.(Package quantity = 5)	855T-ALSG [2]
	Surface Mount Gasket	855E-ASFG [3]
	Replacement flat gasket is to be placed between the mounting surface and the surface mount base.(Package quantity = 5)	855T-ASFG [4]
	Pole Foot Gasket Replacement flat gasket is to be placed between the mounting surface and the pole base bottom foot. (Must order multiples of 5.) For use with Cat. No. 855T-BPM10C and 855T-BPM25C pole bases, Cat. No. 854J-BSFC and 854J-BSFQD5C bases, and Bul. 855T, 855E, 855F, 855D, 854J, and 854K quick release bases.	855T-APFG
	Vertical Mount Gasket Replacement flat gasket is to be placed between the mounting surface and the vertical mount base (Cat. No. 854J-BVMC). (Package quantity = 5)	855T-AVFG
	Tube Mount Gasket Replacement O-ring gasket is to be placed in the tube mount pole opening before the tube is installed (BTM- and GTM- type bases). (Package quantity = 5)	855T-AVTG
	Mounting Screw Washer Kit Replacement flat washers are used to provide a seal where the mounting screw meets the pole base. (1 kit includes 20 pieces) (Package quantity = 20)	855T-AMSG

(1) For use with Bulletin 855E Control Tower stack lights only.
(2) For use with Bulletin 855T Control Tower stack lights only.
(3) For use with Bulletin 855E Control Tower stack lights (SB, RB, & CB bases) only.
(4) For use with Bulletin 855T Control Tower stack lights (BSB and BCB bases) only.

Table 99 - Pole Connection Boxes[1], Hole Plugs, and Cable Glands

	Description	Cat. No.
	Black surface mount with PG16 threaded side entrance	855T-BSMP
	Black surface mount with M20 threaded side entrance	855T-BSMR
	Black vertical mount with PG16 threaded side entrance	855T-BVMP
	Black vertical mount with M20 threaded side entrance	855T-BVMR
	Black magnetic mount with PG16 threaded side entrance	855T-BMMP
	Black magnetic mount with M20 threaded side entrance	855T-BMMR
	Black magnetic mount with 1/2 in. NPT threaded side entrance	855T-BMMN
	Black PG16 threaded hole plug	855T-ABUP
	Black M20 threaded hole plug	855T-ABUR
	Black PG16 threaded cable gland	855T-ABCP
	Black M20 threaded cable gland	855T-ABCR
	Black 1/2 in. NPT sealing connector	855T-ABHN
	Mounting Screws (M5 x 40 screws) for mounting Pole Mount Base to Pole Connection Box	855T-AJBS

(1) For use with Bulletin 855E and 855T pole mount bases, except for stainless steel and quick release base types.

Table 100 - Mounting Kits

	Description	Cat. No.
	Vertical Mount Kit Kit includes vertical bracket and set of three sealing washers. For use with 855E surface mount base.	855E-AVM
	Vertical Mount Kit Kit includes vertical bracket and set of three sealing washers. For use with 855T and 855E pole mount base and for use with 855T surface mount base.	855T-AVM

Specifications

Table 101 - Mechanical

Standard Bases		Based on the weight and style of mounting; tower lights are subject to damage from shock and vibration. The following are reference guidelines for maximum acceptable conditions.	
		Shock [G]	Vibration [G]
Surface-mount Base or 10 cm Aluminum Pole Base	One module stack	150	5
	Three module stack	45	1.5
	Five module stack	35	0.75
Vertical Base or 25 cm Aluminum Pole Base	One module stack	95	3.5
	Three module stack	30	1.25
	Five 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 102 - Environmental

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

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

Table 103 - 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 104 - 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 105 - 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 Hz (±10%) 240V AC, 60 Hz (±10%)

Table 106 - 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 107 - 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 108 - 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 109 - 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 110 - Leakage Current Impact

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

Table 111 - Standards and Certifications

Attribute	Bulletin 855E — 50 mm Control Tower Stack Lights
Standards Compliance	• UL 508 • EN/IEC 60947-1 • CSA C22.2 No. 14 • EN/IEC 60947-5-1
Certifications	• c-UL-us Listed (File No. E14840, Guides NKCR, NKCR7) • CE Marked

Approximate Dimensions

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

Light Modules

Vertical-mount Base

Sound Module

Surface-mount Base

Pole-mount Bases

Quick Release Base

PM10 PM25 PM40 PM60 PM80