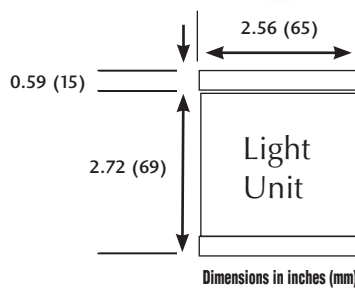


Stacklight Lamps and LEDs

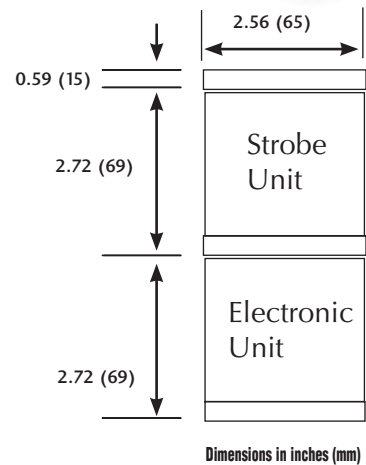
Light and Xenon strobe modules

E26 light modules are offered in incandescent and cylindrical LED versions for 24 and 120 volt AC/DC. Xenon strobe modules are offered in 24 and 120 volt AC/DC. While incandescent modules are less expensive than LED modules, LED modules have an average operating life of 100,000 hours compared to 7,000 to 12,000 hours for incandescent modules. LED modules have very low current draw and should not be used with triac output devices like PLC triac output modules. It is recommended that dry contact outputs be used to switch 120 VAC modules. The Xenon module occupies two module spaces in the stack. One module houses the electronics and the other houses the lamp. Only the top module of the two flashes.

Standard Light Unit



Xenon Strobe Unit



Light and Xenon Strobe Modules							
Volts AC/DC	Color	Incandescent	Price	Xenon	Price	Cylindrical LED	Price
24V	Red	E26B2V2		E26BX2V2		E26BR1V2	
24V	Green	E26B3V2		-	-	E26BG1V2	
24V	Amber	E26B9V2		-	-	-	-
24V	Clear	E26B0V2		E26BX0V2		E26BW1V2	
120V	Red	E26B2V4		E26BX2V4		E26BR1V4	
120V	Green	E26B3V4		-	-	E26BG1V4	
120V	Blue	E26B6V4		-	-	E26BB1V4	
120V	Amber	E26B9V4		-	-	E26BA1V4	
120V	Clear	E26B0V4		E26BX0V4		*	-

*Note: Cylindrical LED modules are not available in 120V Clear.

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Power Transmission

Motion: Servos and Steppers

Motor Controls

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Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

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Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

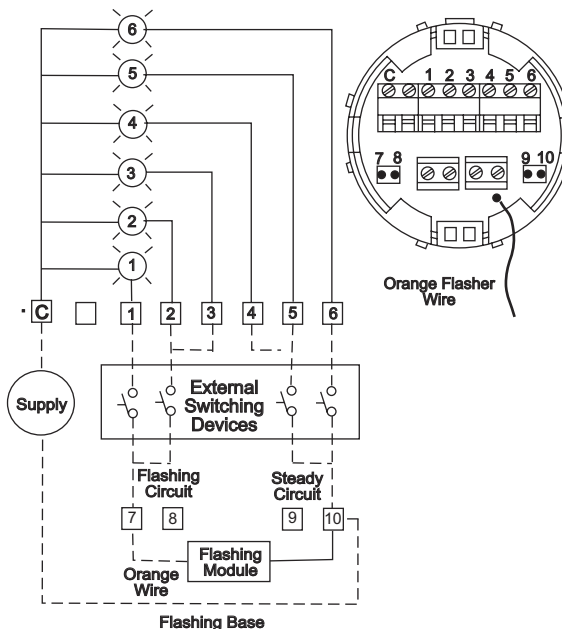
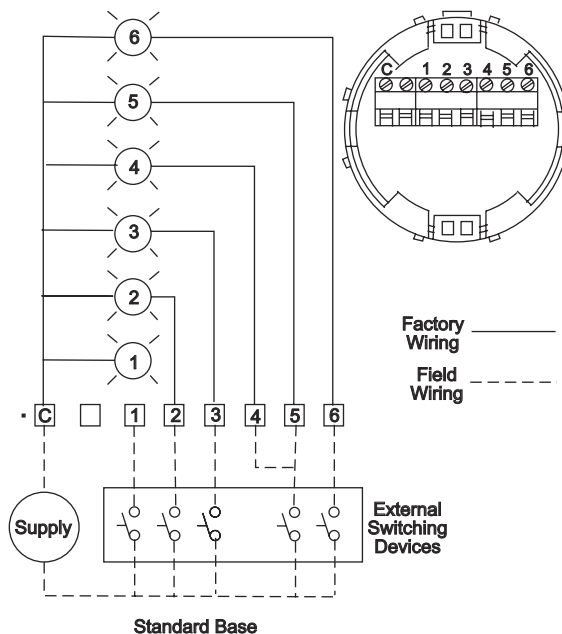
Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

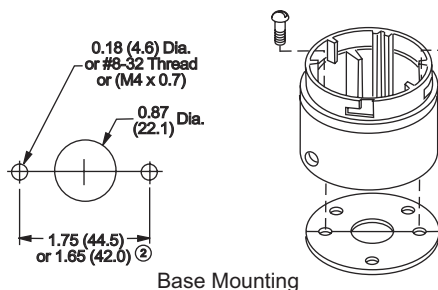
Stacklight Bases

Each E26 stacklight requires a base. There are two kinds of bases: standard and flashing. Flashing bases are most often used for non-PLC applications, as the PLC can provide many flashing options with minimal programming when a standard base is used. A standard base allows up to six modules, including an audible alarm module. The flashing base will allow up to four flashing modules at 24 volts AC/DC and six modules at 120 volts AC/DC, including an audible alarm module. Flashing bases can be wired for a steady or flashing condition for each module. Only incandescent lamps may be used with flashing bases. LED modules will not work. The bases flash at a rate of 60 times per minute. The E26 stacklight base includes a gasket and a cap to top off the stack.



Stacklight Bases			
Volts AC/DC	Type	Part Number	Price
24V and 120V	Standard	E26BL	
24V	Flashing	E26BFV2	
120V	Flashing	E26BFV4	

Flasher	
Flasher Base Voltage	Max Allowable No. of Light Modules
24 VAC/DC	4
120 VAC/DC	6



Drill 2 mounting holes to 0.18" (4.6mm) and one wiring hole to 0.87"(22.1mm) dia. in enclosure. Mount stacklight with #8-32 (M4) Screws. Tighten to torque of 7 in-lb (0.79 Nm).

Stacklight Accessories and Replacement Parts

Audible alarms

Three different audible alarms are available for E26 stacklights in 24 and 120 VAC/DC. One alarm per stacklight may be included in the assembly and is mounted atop the stacklight. No tools are required for attaching or wiring the alarm.

The alarm draws very little current and units used in 120 VAC applications should be switched with dry contact type output devices. Leakage from triac modules will activate the alarm in the "OFF" condition.

Alarms are available in mono-tonal, bi-tonal, and intermittent tones. The sound levels can be adjusted from 64 to 90 dB.

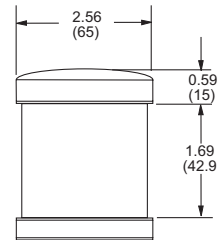
Typical current draw is 11 to 13 mA for 24V and 120V versions. Check out our Web site for .wav samples of the alarm tones.

Alarm Units Specifications								
Volts AC/DC	Adjustment Range	Typical Current Draw	Mono-tonal Part Number	Price	Bi-tonal Part Number	Price	Intermittent Part Number	Price
24V	64 dB to 90 dB	12.6 mA	E26BQV2		E26BNV2		E26BPV2	
120V	64 dB to 90 dB	11.5 mA	E26BQV4		E26BNV4		E26BPV4	



Audible alarm

Alarm Unit Dimensions



Dimensions in inches (millimeters)

Extension tubes and mounting bases

The E26 stacklight base may be mounted directly to the machine or control cabinet. For greater height, extension tubes and mounting bases are available.

The mounting base is anodized alloy and threaded to 3/4" NPT for compatibility with standard pipe and conduit threads.

The extension tubes are also anodized alloy and threaded to 3/4" NPT. Extension tubes are available in four straight lengths from 3/4" to 30", and a 2" x 2.5" right-angle extension model.

Extension Tube Specifications				
Description	Length	Height A* with Mounting Base	Part Number	Price
For use with standard mounting base or 3/4" NPT threaded hub --black anodized aluminum.	0.79" (20mm)	1.77" (45mm)	E26BHU	
	6.30" (160mm)	7.28" (185mm)	E26BJU	
	14.17" (360mm)	15.16" (385mm)	E26BKU	
	29.92" (760mm)	30.91" (785mm)	E26BMU	
Description	Dimensions	Part Number	Price	
Right angle extension tube for E26 stacklights	2.00"(50.8 mm) x 2.50"(63.5 mm)	E26BRU		

Mounting Base Specifications			
Description	Notes	Part Number	Price
Mounting base for optional elevated mounting using extension tube. Black anodized cast zinc.	Standard 4-hole mounting base.	E26S109	

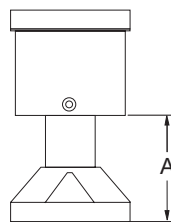
Extension tube with mounting base *Height dimension "A"



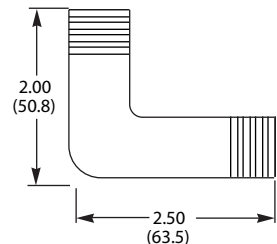
Mounting base



Extension tube



Right angle extension tube



Stacklight Replacement Parts

Gasket



Gasket Specifications			
Description	Notes	Part Number	Price
Replacement mounting gasket	Included with stacklight base.	E26S105	

O-ring



O-ring Specifications			
Description	Notes	Part Number	Price
Replacement lens O-ring	Included with light modules.	E26S106	

Replacement lamps



Incandescent Replacement Lamps			
Description	Volts AC/DC	Part Number	Price
Incandescent replacement lamps	110/120V	E26S11 (marked on base 28-6019-4)	

LEDs

These LEDs can be used as replacement bulbs to convert a standard incandescent lamp to an LED type.

Note: Use with dry contact outputs when operating with AC. Triac leakage current will illuminate the LED module.



Replacement LEDs							
Volts AC/DC	Color	Part Number	Price	Volts AC/DC	Color	Part Number	Price
–	–	–	–	120V	Red	E26S138	
24V	Amber	E26S118		120V	Amber	E26S139	
24V	Green	E26S121		120V	Green	E26S142	
–	–	–	–	120V	Blue	E26S143	

**Note: 120V White LED Modules are not available.*

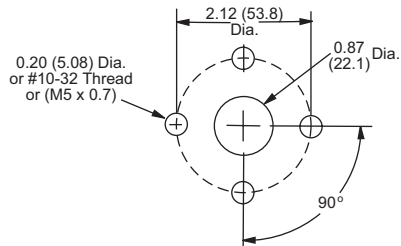
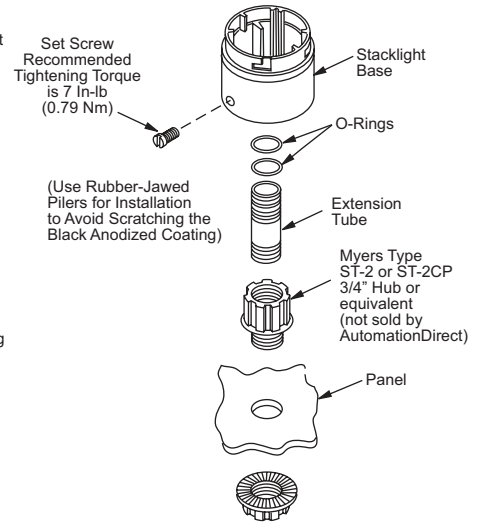
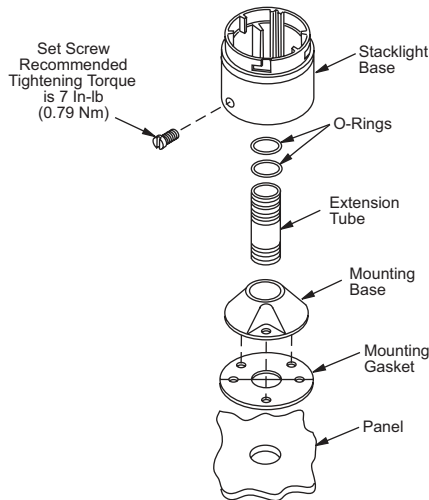
Stacklight Installation

Mounting options

Stacklight bases may be mounted without the use of an extension tube or mounting base. If additional height is required, choose extension tubes that fit between the mounting base and stacklight base. The extension tubes are threaded with 3/4" NPT threads, allowing for direct connection to conduit fittings or threaded holes without the use of a mounting base.



Four-hole mounting for E26S109 3/4" conduit hub



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Configuring Your Stacklight

1. Choose your base

Use the E26BL for 24V or 120V configurations. Use this base for applications where no flashing is needed or if you will be flashing the light modules with a control system such as a PLC. Use the E26BFV2 for automatic flashing in 24V configurations, and the E26BFV4 for 120V configurations. Individual modules in the stack will be selected as flashing or non-flashing.

2. Choose your light modules

Up to six modules can be used in a standard assembly, four modules in a 24V flashing assembly, and six modules in a 120V flashing assembly (including the audible alarm when used). Xenon strobe modules occupy two modules in the stack. See the Maximum Configuration Chart below.

3. Choose your audible alarm

You may add one audible alarm to each stacklight assembly. Choose from one of three different alarm types in two different voltages. Remember, when using an audible alarm, the stacklight assembly is no longer protected to NEMA 4X. Cutler-Hammer rates the audible alarm at IP20, NEMA 1 protection level.

4. Choose your mounting base and extension tube

The E26BL stacklight base can be mounted directly onto an enclosure or machine surface and includes the E26S105 gasket. If you need additional height, use the optional ES109 mounting base and one of the five available extension tubes.

Maximum Configuration Chart			
Incandescent or LED Modules	Xenon Strobe Modules*	Alarm Modules	Maximum Number of Modules
6	-	-	6
5	-	1	6
4	1	-	5
3	1	1	5
2	2	-	4
1	2	1	4

**Note: Xenon strobe modules occupy two modules in the stack.*



Stacklights Application Data

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Terms and Conditions

Application Data				
Type of Light	Voltage AC/DC	Lamp Used	Approximate Current, mA per Light	Theoretical Lamp Life, Hours As Applied
Incandescent	24V	BA15d	208mA	7,000
	110-140 V	BA15d	36-50 mA	7,000

Application Data				
Type of Light	Voltage AC/DC	Current	Approximate Current, mA per Light	Theoretical Lamp Life, Hours As Applied
E26 Xenon flasher	24V strobe	DC	190mA	20,000
		AC	320mA	20,000
	120V	AC	60mA*	20,000

* Represents average current draw, 1.6A peak for 120V

Application Data			
Type of Light	Color	Cylindrical LED Approximate Current, mA at Rated Volts	Theoretical Lamp Life, Hours As Applied
24V AC/DC Continuous/flashing LED	Red	47mA	100,000
	Amber	47mA	100,000
	Green	59mA	80,000
	Blue	59mA	60,000
	White	59mA	60,000
120V AC/DC LED	Red	24mA	100,000
	Amber	24mA	100,000
	Green	17mA	80,000
	Blue	16mA	60,000

Note: Published theoretical lamp lives are based on ideal laboratory conditions and should be used for comparison only. Actual life may be shorter due to various application conditions.

Cutler-Hammer Stacklights Family Overview

Component descriptions

Bases

A standard base is used with incandescent or standard LED lamps for steady, non-flashing illumination. Bases include terminal block, stacklight cover and gasket.



A flashing stacklight base configures each light in the stack for either steady or 60 times-per-minute flashing illumination. Flashing circuits are for use with incandescent lamps only. The maximum allowable number of flashing light modules is four at 24 VDC and six at 120 VDC.

Light Modules

Light modules are available in a variety of colors for both incandescent lamps and LEDs. To maximize illumination and light dispersion, incandescent units include an opal white diffuser. LEDs also work with the opal diffuser. Factory configured LED modules include a clear diffuser.



Alarms

An alarm unit is fitted to the top of the stacklight module or directly to the stacklight base. Alarm units are available in three versions, each with adjustable sound levels. The sound levels can be adjusted from 64 to 90 dB via a potentiometer on underside of device.



Xenon Strobe

A Xenon strobe unit is similar to the standard lens/diffuser unit, except that it consists of two lens units. The lower unit includes the electronics and is permanently fused to the upper unit, which houses the Xenon lamp.

Xenon units may be placed in any position in a complete stacklight module. The Xenon flashes 60 times per minute when used with standard or flashing bases. The Xenon strobe unit occupies two module slots in the assembly.



Technical data

Mechanical ratings:

- Shock (IEC68-2-27): 11 mS, 15g
- Vibration (IEC 68-2-6): 10 sweeps 10 - 150 Hz, 2g
- Bump (IEC 68-2-29): 1000 pulses, 6ms, 15g

Climate conditions:

- Operating: maximum 104°F (40°C) at 95% RH, temperature -4 to 140°F (-20° to 60°C).
- Storage: temperature -40°F to 176°F (-40° to 80°C).

Materials:

- Cover: polycarbonate
- Lenses: polycarbonate
- Stacklight Base: nylon
- Extension Tubes: aluminum
- Mounting Base: zinc die cast

Terminals

- 14-30 AWG (2.5-0.05 mm²) for single conductors and 18-26 AWG (0.75-0.14 mm²) for two conductors of the same size. (Do not mix solid and stranded wire in the same terminal.)
- Recommended tightening torque is 4.4-5.3 lb/in (0.5-0.6 N·m)

Electrical ratings

- Insulation voltage (Ui): 690V
- Operational voltage (Ue): 250V
- Impulse withstand voltage (Uimp): 1.5 kV

Bulb specifications

- Incandescent lamp type: BA15d
- Maximum lamp wattage: 6W
- Bulbs - average life:
 - Incandescent: 7,000 to 12,000h
 - Xenon flasher: 20,000h
 - LED: 100,000h

LED/incandescent comparison

Incandescent lamps

- Average operating life of 7,000 hours
- Each lamp can be used with any color lens
- Low cost results in short-term savings

LED lamps

- Average operating life of 100,000h
- Low power consumption
- Extended life results in long-term savings

Standards and certifications

- CE 60947-5-1
- UL 508 - File # E131568
- CUL C22.2 No. 14 - File #E131568

Ingress protection

- Stacklight base and light units: IP65, NEMA 4, 4X and 13
- Alarm Units: IP20, NEMA 1

Electrical shock protection

- Stacklight base and light unit: IP2X
- Alarm units: IP0X