CUTLER-HAMMER STACKLIGHTS FAMILY OVERVIEW

Description

The E26 stacklight unit is a modular system that provides illuminated and audible status indication in all directions. It is easily assembled using plug-in modular units. The modular units consist of constant, flashing, and strobe lights, as well as mono-tonal, bi-tonal, and intermittent alarm systems. Stacklights may be assembled in a variety of configurations, which are identified in the Maximum Configuration Chart. Numerous lamp, color and mounting options further enhance the versatility.

Components include:

- Light modules in five colors, including a xenon strobe
- Audible alarm in three tonal patterns
- Standard and flashing bases
- Extension tubes
- Optional LED bulbs
- Available in either 24V AC/DC or 125V AC/DC voltage levels

Modular, "no tools assembly" means installation in minutes and adjustments in seconds.

Extremely easy wiring saves time. The base can be wired through screw terminals; all connections above the base are pin/sleeve, requiring no tools or terminations.

Lights have NEMA 4X outdoor rating for washdown and corrosion resistance.

Diffusers supply even illumination to eliminate "hotspots" and maintain consistent visibility.

Five light module colors, including strobe module, allow you to choose your color configuration. Or, order one of our preassembled models for convenience.

EAT•N | Cutler-Hammer

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 24VDC and six at 120VDC.

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.

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, 6 mS, 15g

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

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 12,000 hrs
  - Xenon flasher: 20,000 hrs.
  - LED: 100,000 hrs.

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 100,000 hours
- 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

PB & Lights

STACKLIGHTS APPLICATION DATA

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
	110-140V	BA15d	36-50mA	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			
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
	White	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.

STACKLIGHT COMPONENTS

Two and three-light pre-assembled stacklights

Stacklights can be purchased in two-light and three-light assemblies in incandescent and LED versions. Pre-assembled stacklights offer the convenience of not having to configure and order separate components.

| Two-light Unit Stacklight — Assembled							Price
Volts AC/DC	Alarm	First Level Color	Illumination Type	Second Level Color	Illumination Type	Catalog Number Base Mounting	
24V	None	Green	Incandescent - Steady	Red	Incandescent - Steady	E26XWWL32W-V2	check
24V	None	Green	Cylindrical LED - Steady	Red	Cylindrical LED - Steady	E26XWWLG1R1W-V2	check
120V	None	Green	Incandescent - Steady	Red	Incandescent - Steady	E26XWWL32W-V4	check
120V	None	Green	Cylindrical LED - Steady	Red	Cylindrical LED - Steady	E26XWWLG1R1W-V4	check

Three-light Unit Stacklight — Assembled									
Volts AC/DC	Alarm	First Level Color	Illumination Type	Second Level Color	Illumination Type	Third Level Color	Illumination Type	Catalog Number Base Mounting	Price
24V	None	Green	Incandescent - Steady	Amber	Incandescent - Steady	Red	Incandescent - Steady	E26XWWL392W-V2	check
24V	None	Green	Cylindrical LED - Steady	Amber	Cylindrical LED - Steady	Red	Cylindrical LED - Steady	E26XWWLG1A1R1W-V2	check
*120V	None	Green	Incandescent - Steady	Amber	Incandescent - Steady	Red	Incandescent - Steady	E26XWWL392W-V4	check
*120V	None	Green	Cylindrical LED - Steady	Amber	Cylindrical LED - Steady	Red	Cylindrical LED - Steady	E26XWWLG1A1R1W-V4	check

*Note: 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 volt AC modules.

Standard three-light unit

Dimensions in inches (mm)

Standard two-light unit

Dimensions in inches (mm)

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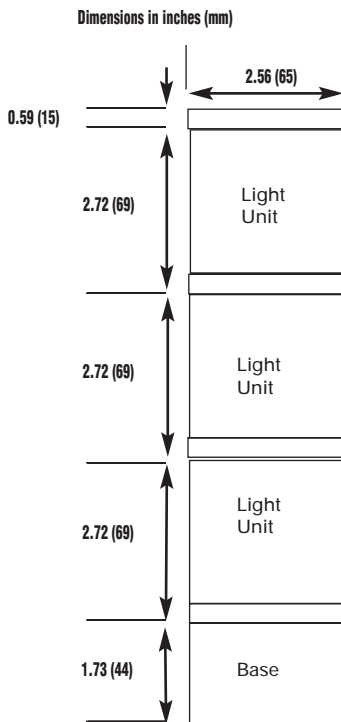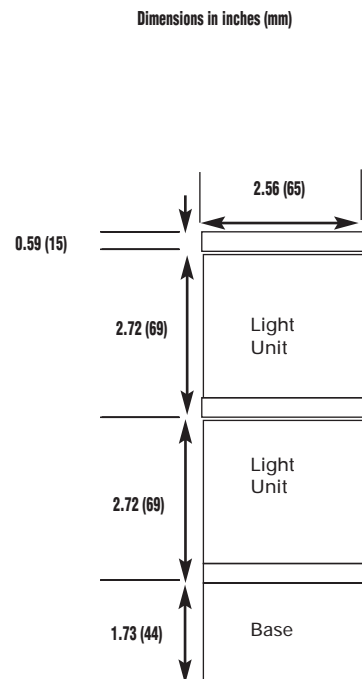
CONFIGURING YOUR STACKLIGHT

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.

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 four 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

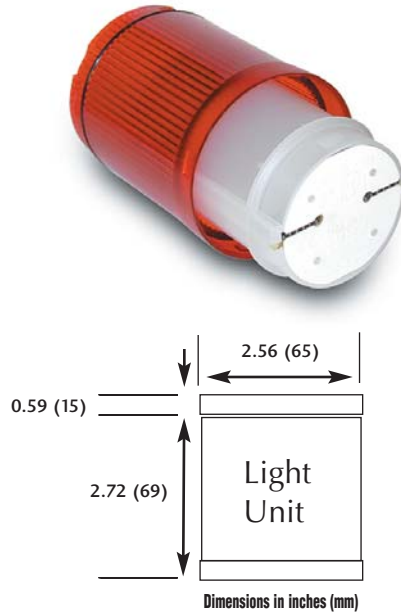*Note: Xenon strobe modules occupy two modules in the stack.
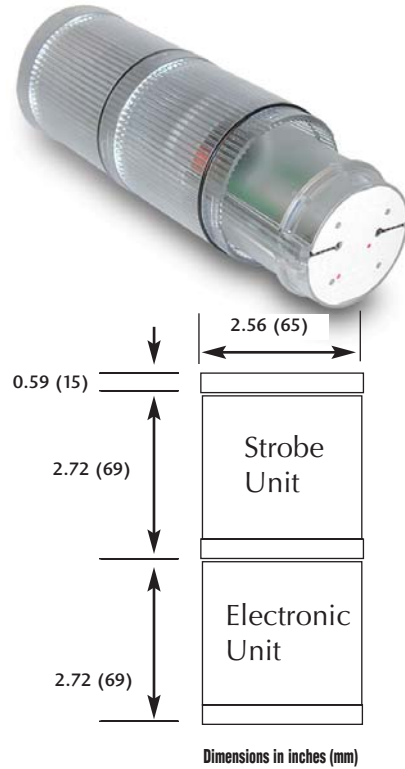
STACKLIGHT LAMPS AND LEDs

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 120VAC 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

0.59 (15)
2.56 (65)
2.72 (69)
Light Unit

Dimensions in inches (mm)

Xenon Strobe Unit

2.56 (65)
0.59 (15)
2.72 (69)
Strobe Unit
2.72 (69)
Electronic Unit

Dimensions in inches (mm)

Light and Xenon Strobe Modules														
Volts AC/DC	Color	Incand-escent	Price	Xenon	Price	Cylindrical LED	Price	Volts AC/DC	Color	Incand-escent	Price	Xenon	Price	Cylindrical LED	Price
24V	Red	E26B2V2	check	E26BX2V2	check	E26BR1V2	check	120V	Red	E26B2V4	check	E26BX2V4	check	E26BR1V4	check
24V	Green	E26B3V2	check	N/A	N/A	E26BG1V2	check	120V	Green	E26B3V4	check	N/A	N/A	E26BG1V4	check
24V	Blue	E26B6V2	check	N/A	N/A	E26BB1V2	check	120V	Blue	E26B6V4	check	N/A	N/A	E26BB1V4	check
24V	Amber	E26B9V2	check	N/A	N/A	E26BA1V2	check	120V	Amber	E26B9V4	check	N/A	N/A	E26BA1V4	check
24V	Clear	E26B0V2	check	E26BX0V2	check	E26BW1V2	check	120V	Clear	E26B0V4	check	E26BX0V4	check	*	

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

PB & Lights

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. Flashing bases can be wired for 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.

Standard Base
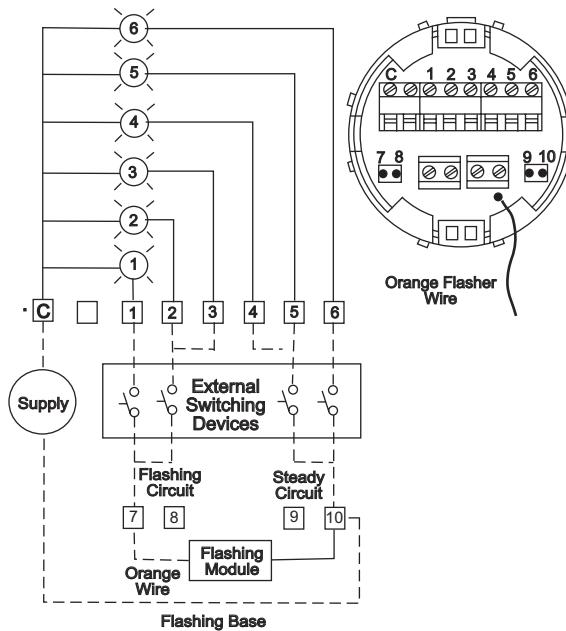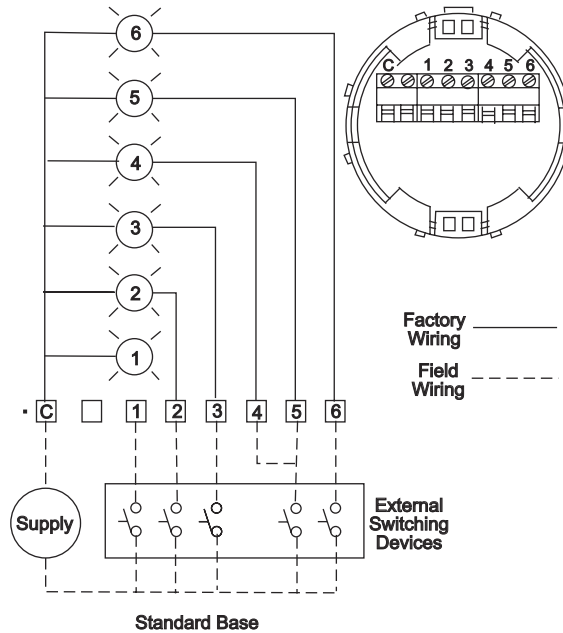
Flashing Base

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

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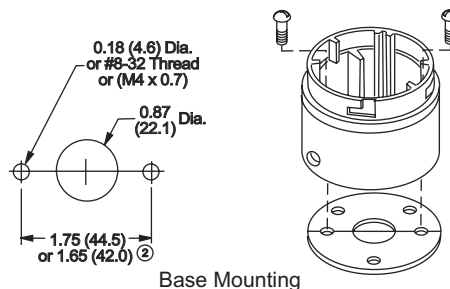
Base Mounting

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 24V and 120V AC/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 120VAC 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 (mA)	Mono-tonal Part Number	Price	Bi-tonal Part Number	Price	Intermittent Part Number	Price
24V	64 dB to 90 dB	12.6	E26BQV2	check	E26BNV2	check	E26BPV2	check
120V	64 dB to 90 dB	11.5	E26BQV4	check	E26BNV4	check	E26BPV4	check

Audible alarm

Alarm Unit Dimensions

2.56 (65)
0.59 (15)
1.69 (42.9)
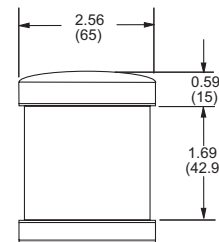
Extension tubes and mounting bases

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 lengths from 3/4" to 30".

| 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" (45)	E26BHU	check
	6.30" (160mm)	7.28" (185)	E26BJU	check
	14.17" (360mm)	15.16" (385)	E26BKU	check
	29.92" (760mm)	30.91" (785)	E26BMU	check
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	check

Mounting base

Extension tube

Extension tube with mounting base
***Height dimension "A"**

A

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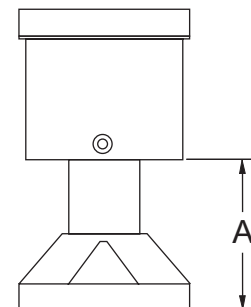
STACKLIGHT REPLACEMENT PARTS

Gasket

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

O-ring

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

Replacement lamps

Incandescent Replacement Lamps			
Description	**Volts AC/DC**	**Part Number**	**Price**
Incandescent replacement lamps	24V	E26S9	check
	110/120V	E26S11	check

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.

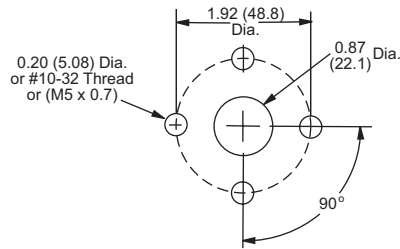| Replacement LEDs							
Volts AC/DC	**Color**	**Part Number**	**Price**	**Volts AC/DC**	**Color**	**Part Number**	**Price**
24V	Red	E26S117	check	120V	Red	E26S138	check
24V	Amber	E26S118	check	120V	Amber	E26S139	check
24V	Green	E26S121	check	120V	Green	E26S142	check
24V	Blue	E26S122	check	120V	Blue	E26S143	check
24V	White	E26S123	check	*			

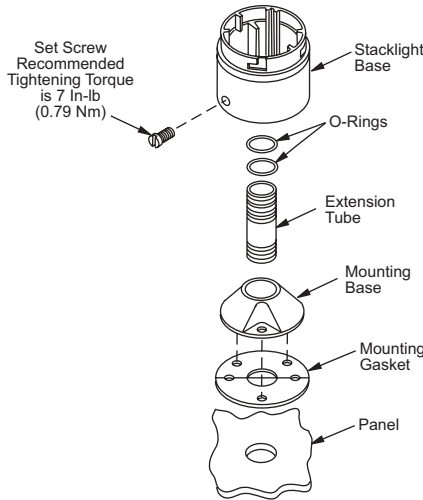**Note: 120V White LED Modules are not available.*
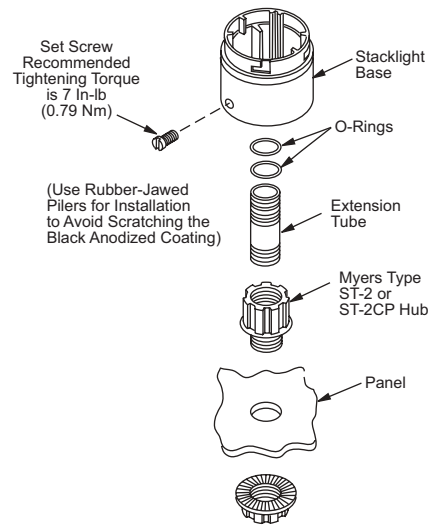
STACKLIGHT INSTALLATION

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

Set Screw Recommended Tightening Torque is 7 In-lb (0.79 Nm)

Stacklight Base

O-Rings

Extension Tube

Mounting Base

Mounting Gasket

Panel

3/4" conduit hub

Set Screw Recommended Tightening Torque is 7 In-lb (0.79 Nm)

Stacklight Base

O-Rings

(Use Rubber-Jawed Pilers for Installation to Avoid Scratching the Black Anodized Coating)

Extension Tube

Myers Type ST-2 or ST-2CP Hub

Panel

1.92 (48.8) Dia.

0.20 (5.08) Dia. or #10-32 Thread or (M5 x 0.7)

0.87 (22.1) Dia.

90°

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