

# *Brilliance by design*

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## PANEL MOUNT INDICATOR LIGHTS

- |                  |   |              |
|------------------|---|--------------|
| <b>Section 1</b> | <b>Indicator Lights - Screw-in Panel Mount, Relampable</b><br>Panel mount indicator lights in a variety of mounting diameters, voltages, light sources, body and lens materials and colors. All products in this section are relampable.                            | Section<br>1 |
| <b>Section 2</b> | <b>Indicator Lights - Screw-in Panel Mount, Fixed Lamp</b><br>An expanded line of non-relampable lights that include all of SloanLED's rugged, high quality products as well as new designs for economical applications, in all voltages, colors and light sources. | Section<br>2 |
| <b>Section 3</b> | <b>Indicator Lights - Snap-in Panel Mount, Fixed Lamp</b><br>A complete line of low cost plastic body, snap-in panel mount indicator lights for all consumer, commercial and industrial applications.   | Section<br>3 |
| <b>Section 4</b> | <b>Waterproof and Splashproof Panel Mount Indicator Lights</b><br>The industries most complete line of sealable indicator lights available. These wet environment products come in varying degrees of liquid resistance, colors, materials and light sources.       | Section<br>4 |

## DISCRETE AND PCB MOUNT LED PRODUCTS

- |                  |   |              |
|------------------|---|--------------|
| <b>Section 5</b> | <b>Discrete LED Products</b><br>T-1, T 1 3/4, SMT and special size and profile LEDs in all colors and intensity.  | Section<br>5 |
| <b>Section 6</b> | <b>Printed Circuit Board Mount LEDs</b><br>A large variety of LEDs in mounting packages for thru-hole PCB application. T-1, T-1 3/4 and special relampable products in the latest LED colors and intensity. | Section<br>6 |

## LED REPLACEMENT FOR INCANDESCENT LAMPS

- |                  |   |              |
|------------------|---|--------------|
| <b>Section 7</b> | <b>Incandescent Replacement LED Products</b><br>Long life, low power direct replacement based LEDs for all the most popular incandescent lamps. These products cover the complete range of based options and colors | Section<br>7 |
|------------------|---|--------------|

## INDIVIDUAL INCANDESCENT AND NEON LAMPS

- |                   |  |               |
|-------------------|--|---------------|
| <b>Appendix A</b> | <b>Individual Lamp Specifications</b><br>Incandescent and Neon lamp options for relampable indicator light products. | Appendix<br>A |
|-------------------|--|---------------|

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## Contents By Model

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102-S	1-2	1/4
102-SI	1-2	5/16
103	2-4	1/4
105	1-1	7/32
109	2-1	13/64
110	6-2	PCB
111	6-8	PCB
120	6-6	PCB
121	1-3	9/32
122	4-3	9/32
123	1-4	5/16
124	4-4	5/16
135	4-1	1/4
141	6-10	PCB
145	4-2	1/4
150	3-1	5/32
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160	7-8	S6
171	6-3	PCB
172	6-4	PCB
173	6-5	PCB
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207	2-8	5/16
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211	6-1	PCB
220	6-7	PCB
240	3-1	1/4

Model	Page	Size
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311	7-4	T-1
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344	2-9	21/64
345	4-7	21/64
444	4-10	5/16
460	7-5	S8
500	3-3	1/2
502	3-4	19/64
510	7-4	T-1 3/4
513	7-7	T-1 3/4
516	7-7	T-3 1/4
522	7-6	T-1 3/4
532	7-3	T-1 3/4
541	7-6	T-1 3/4
600	5-8	HI FLUX
614	2-10	1/4
615	4-8	1/4
621	2-2	1/4
622	2-2	1/4
761	2-15	13/32
762	2-15	13/32
763	2-16	13/32
764	2-16	13/32
765	2-17	13/32
766	2-17	13/32
767	2-13	13/32
768	2-13	13/32
771	2-19	19/32
772	2-18	19/32
773	2-18	19/32

Model	Page	Size
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775	2-12	19/64
776	3-2	21/64
786	2-14	13/32
790	3-2	21/64
855-S	1-5	3/8
855-SI	1-5	27/64
856	1-7	7/16
857	2-11	3/8
858	3-5	5/16
859	3-6	5/16
862	3-5	5/16
864	6-9	PCB
874	6-9	PCB
886	1-8	31/64
887	4-9	31/64
902	5-1	SMT
903	5-2	T-1
905	5-2	T-1 3/4
907	5-6	T-1 3/4
915	5-3	T-1 3/4
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## Brilliance by design

### Contents By Size

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Size	Model	Page	Description	Size	Model	Page	Description
5/32	150	3-1	LED	21/64	776	3-2	LED, Neon or Incandescent
13/64	109	2-1	LED or Incandescent	21/64	790	3-2	LED, Neon or Incandescent
7/32	105	1-1	LED or Incandescent	3/8	857	2-11	Neon
1/4	103	2-4	LED	3/8	855-S	1-5	LED or Incandescent
1/4	135	4-1	LED	13/32	761	2-15	LED, Neon or Incandescent
1/4	145	4-2	LED	13/32	762	2-15	LED, Neon or Incandescent
1/4	194	2-3	LED	13/32	763	2-16	LED, Neon or Incandescent
1/4	205	2-5	LED	13/32	764	2-16	LED, Neon or Incandescent
1/4	206	2-6	LED	13/32	765	2-17	LED, Neon or Incandescent
1/4	240	3-1	LED	13/32	766	2-17	LED, Neon or Incandescent
1/4	614	2-10	LED	13/32	767	2-13	LED, Neon or Incandescent
1/4	615	4-8	LED	13/32	768	2-13	LED, Neon or Incandescent
1/4	621	2-2	LED	13/32	786	2-14	LED, Neon or Incandescent
1/4	622	2-2	LED	27/64	855-SI	1-5	LED or Incandescent
1/4	102-S	1-2	LED or Incandescent	7/16	856	1-7	LED or Incandescent
1/2	500	3-3	LED	31/64	886	1-8	LED or Incandescent
9/32	121	1-3	LED or Incandescent	31/64	887	4-9	LED or Incandescent
9/32	122	4-3	LED or Incandescent	19/32	771	2-19	LED, Neon or Incandescent
19/64	502	3-4	LED, Neon or Incandescent	19/32	772	2-18	LED, Neon or Incandescent
19/64	774	2-12	LED, Neon or Incandescent	PCB	773	2-18	LED, Neon or Incandescent
19/64	775	2-12	LED, Neon or Incandescent	PCB	101	6-8	LED or Incandescent
5/16	123	1-4	LED or Incandescent	PCB	110	6-2	LED
5/16	124	4-4	LED or Incandescent	PCB	111	6-8	LED or Incandescent
5/16	207	2-8	LED	PCB	120	6-6	LED
5/16	208	4-5	LED	PCB	141	6-10	LED
5/16	252	2-7	LED	PCB	211	6-1	LED
5/16	253	4-10	LED	PCB	220	6-7	LED
5/16	444	4-10	LED				
5/16	858	3-5	Neon or Incandescent				
5/16	859	3-6	Neon or Incandescent				
5/16	862	3-5	Neon or Incandescent				
5/16	102-SI	1-2	LED or Incandescent				
21/64	336	4-6	LED				
21/64	344	2-9	LED				
21/64	345	4-7	LED				

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Contents By Size continued...

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Size	Model	Page	Description
PCB	171	6-3	LED
PCB	172	6-4	LED
PCB	173	6-5	LED
PCB	864	6-9	LED or Incandescent
PCB	874	6-9	LED or Incandescent
SMT	902	5-2	LED
T-1	311	7-4	LED
T-1	903	5-2	LED
T-1 3/4	510	7-4	LED
T-1 3/4	513	7-7	LED
T-1 3/4	522	7-6	LED
T-1 3/4	532	7-3	LED
T-1 3/4	541	7-6	LED
T-1 3/4	905	5-2	LED
T-1 3/4	907	5-6	LED
T-1 3/4	917	5-7	LED
T-1 3/4	925	5-4	LED
T-1 3/4	995	5-5	LED
T-1 1/2	159	7-2	LED
T-1 1/2	197	7-2	LED
T-3 1/4	516	7-7	Wedge Base LED
S6	160	7-8	LED
S8	460	7-5	Stack Light LED

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## SLOANLED

**TIME PROVEN QUALITY** - SloanLED, a leading manufacturer of indicator lights, has provided the finest indicator lights available for 45 years. As an ISO 9001 registered company, our Quality Assurance Standards meet the Industries most stringent requirements.

**SERVICE** - We offer “just-in-time” delivery to meet your production schedule. Our aim is to meet your requirements. In most cases, samples can be shipped within two days.

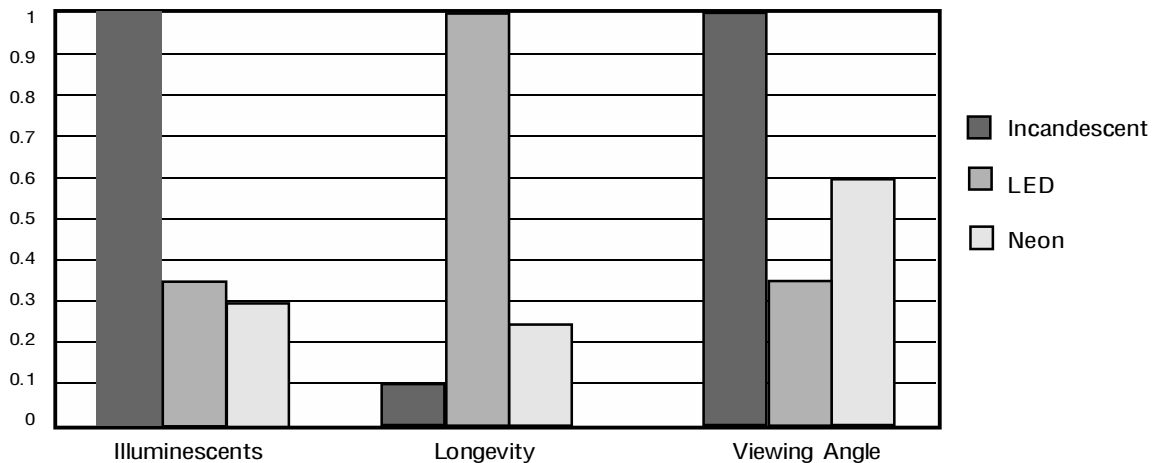
**CUSTOM DESIGN** - In the event that you don't see what you are looking for in this catalog, call us! You will find our staff and engineering team most obliging to help you design a light to your needs. We will be glad to help you develop and prototype the product you envisioned.

**SPECIALS** - Major or Minor alterations can be made to our product line to accommodate your special needs.

\*special terminals \* longer leads \* waterproof / splashproof \* EMI/RFI shielding \* front or rear relampability \* special finishing \* NVIS

**ENGINEERING NOTES** - The first pages of this catalog will help you in understanding design considerations and allow you to understand the advantages and disadvantages between LED, Incandescent and Neon lamps.

*Light Source Comparison*



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## DESIGN CONSIDERATIONS:

### LEDS

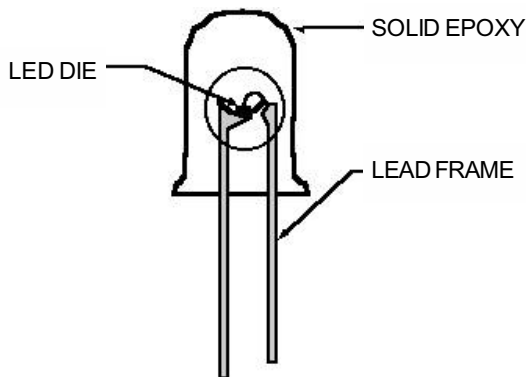
- Available in different brightness configurations, measured in “millicandelas”
- Extremely long life
- Excellent for low voltage applications
- Available in different viewing angles
- TTL compatible
- Low heat
- Fast switching speed
- Low power consumption

### CONSIDERATIONS

- Limited colors
- Narrow viewing angles
- Current limiting resistor needed
- Device is polarized

\* See lamp section for specifications

### GENERAL INFORMATION ON LEDES



Light Emitting Diodes or LEDs are very reliable, solid state devices. They are shock resistant and require very little power, hence, generate very little heat. The LED consist of a die mounted on a reflector cup that is wire bonded. This assembly is then encapsulated in epoxy (lens) to form the LED. This small device is monochromatic and is available in all colors, RED, YELLOW, AMBER, GREEN, BLUE and WHITE. Color is determined by the peak wavelength of the photons emitted by the substrate. Wavelengths vary from 400nm to 700nm to make up the spectrum of colors available (see front catalog cover). The color of LEDs are determined exclusively by the substrate material

used. The color of the epoxy can have a subtle effect and if using a color other than that of the die, can act as a filter.

The lens shape along with the diffusing properties of the epoxy, determines the viewing angle which can be narrow (non-diffused) or wide angle (diffused). An LED does not emit light uniformly in all directions and decreases when viewed away from the centerline axis of the lamp dome. The viewing angle is measured at the angle where the lamination is 50% of the on-axis value. The angle can also vary from the distance of the LED chip to the top of the dome. The closer the chip to the dome the wider the viewing angle, in turn the lamination decreases at the centerline angle. Another factor is the shape of the reflector cup in the LED.

The three popular types of LED lenses are:

**Water Clear** - non-tinted clear epoxy lens with no diffusion properties. These LEDs produce the greatest lamination but have narrow viewing angles, (12 deg.) from centerline.

**Tinted** - transparent tinted epoxy lens indicating the color of the LED while it is in its “off state”.

**Diffused** - tinted epoxy with small glass particles or surface modifications, that disperse the emitting light.

The brightness or luminance, measured in millicandelas, is a function of the forward bias current supplied to the LED. A LED can be dimmed by decreasing the forward current, thereby reducing the lamination. A typical LED has a forward voltage current of 2 Volts and draws 20 ma of current. Power consumed is calculated using:

$$(Voltage \times Current = Watts) \quad 2V \times 20ma = 40mw$$

Thus, LEDs are a very low power, low heat generating devices.

*(Continued on next page)*

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Life of an LED is generally expressed in terms of 100,000 hrs. (MTTF) of use, which usually outlast the lifetime of the associated product. The LEDs lifetime however can be decreased when current exceeding the maximum rated current (usually 30 ma) is applied.

This measurement can be converted into Lumens by the following equation:

$$MSCd = LUMENS \times 12.57$$

This type of light source is used where high brightness and excellent illumination is desired.

Voltage is directly related to the length of the filament. The higher the voltage the longer the filament. Lamps rated at higher voltages have filaments that are sometimes coiled to create the length needed within the limited space of the bulb.

Avoid high ambient temperatures (above 100 degree Celsius) when using incandescent lamps. If a lamp is subjected to this environment for a long period of time, the life of the lamp may be reduced because of the "water cycle". This cycle develops when the water vapor molecules, that developed inside the glass bulb, start to break down and the oxygen combines with the tungsten filament to form tungsten oxide which deposits on the walls of the bulb. The oxygen then combines with the hydrogen again to form water molecules and returns to the filament to start a new cycle. The tungsten is left on the walls of the bulb and is visually seen as the darkening of the glass.

Although life ratings for incandescent lamps are calculated in shock-free, vibration-free environments and are not cycled on and off repeatedly all of which will degrade the life of the lamp. There is a way to increase the life of the bulb simply by using a lamp with a higher current rating. These lamps typically have larger diameter and shorter length filaments and therefore are more durable and rugged. This derating of the lamp will slightly diminish the light output but will greatly increase the life of the lamp.

The following list will help in your application selection of Incandescent Lamps:

- Use low voltage, high amperage lamps for shock and vibration environment..
- Derate lamps whenever possible, this reduces the tungsten evaporation thus increases the life of the lamp.
- Design your system to avoid the effects of shock and vibration.

*(Continued on next page)*

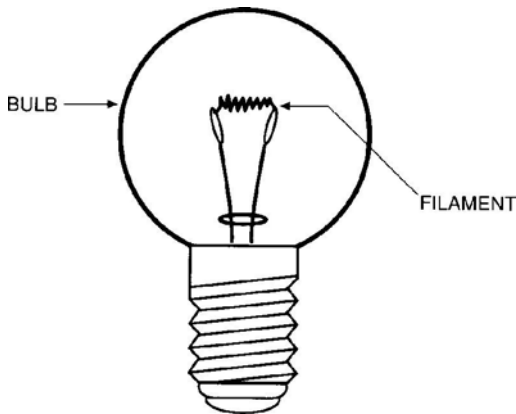
## INCANDESCENT LAMPS

- Available from 2 to 28 volts
- Excellent for high illumination applications
- Available in white light and all lens colors
- Spherical light pattern

### CONSIDERATIONS

- Not as stable in hostile environments, eg. heat, vibration
- High power consumption
- High heat
- Limited life

### GENERAL INFORMATION ON INCANDESCENT LAMPS



**INCANDESCENT LAMPS:** These lamps consist of a resistive tungsten filament suspended by support wires within a vacuum inside a glass bulb. Electrical current is passed through this filament whose resistance to the passage of current produces heat. This thermal energy is measured in terms of temperature (Kelvin). Kelvin is the color temperature of the filament. A filament must be heated to a temperature of 1000-1200 Kelvin to produce a visible light. The vacuum inside the bulb holds this heat near the filament. The higher the temperature the greater the light output. The measurement used to indicate the intensity of a subminiature lamp is mean spherical candelas (MSCd). MSCd is the total Lumens (flux) emitted from the lamps, measured from the center of the sphere.

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- Provide a good heat sink and ventilation to allow the ambient temperature to stay below 100 degrees Celsius.

\* See lamp section for specifications

### NEON LAMPS

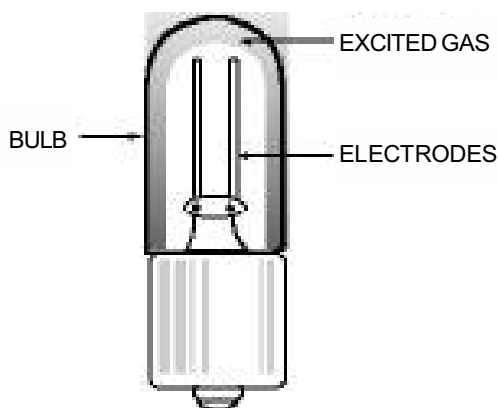
- Low current / high voltage applications
- Long life / reliability
- Excellent for rugged applications, shock resistance
- Not affected by voltage fluctuations, compared to filament type lamps

### CONSIDERATIONS

- High voltage needed to light
- Current limiting resistor required

\*See lamp section for specifications

### GENERAL INFORMATION



Neon bulbs consist of two electrodes encased in a glass bulb filled with phosphorescent gas. Voltage is applied across the electrodes igniting the gas and thereby producing a glow of light. Ignition voltage is relatively high; usually 90 volts. With the proper resistor, neon lamps can be used on 110 volt AC power source. These lamps run on a very low current usually .6 to 1.2 milliamps and therefore generate very little heat. Neon lamps are inexpensive and can withstand shock and vibration.

The neon glow is contained within the red and yellow wavelength portion of the color spectrum, as opposed to

the broader distribution on incandescent lamps. This restricts the lens colors for neon lights to red, green, amber and clear. Blue and white shades almost completely blacken out the neon glow.

Although the light output is relatively low compared to incandescents, it is usually quite sufficient for indication applications. In DC applications only one electrode fires versus both in the AC applications, hence, a neon lamp operated on an AC application will seem a little brighter than the DC application.

Operating current determines the light output and life expectancy. Neon lamps can be derated similar to incandescent lamps. A small decrease in current can extend the life of the lamp considerably with only a slight decrease in light output. Neon lamps typically have 2 1/2 times longer life than incandescent lamps.

SloanLED offers all three types of lamps (LEDs, Incandescents, Neons) in our products. Should you have questions about which type may be best for your application, please contact our Technical Support Department.

# Brilliance by design

## Panel Mount Front Relampable Incandescent or LED

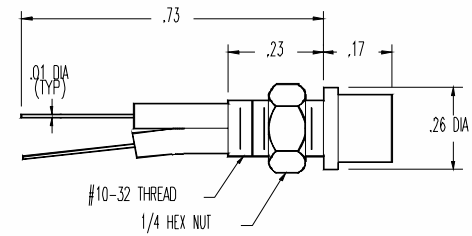
www.SloanLED.com

### MODEL 105

Featuring a T-1 unbased LED or a commercial, MIL-Spec. bulb. Standard unit incandescent has two 1/2" long leads. Longer leads furnished upon request. RFI shielding and waterproof version available. Lenses can be hot stamped. (See page A-1 for hot stamping particulars).



Suggested mounting diameter 5mm



5/16 (.31) suggested min. ctr to ctr spacing

105

#### FEATURES

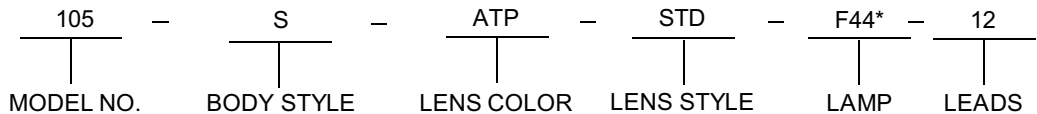
- Panel mount in 5mm (.196") diameter hole.
- LED version supplied with 6" to 48" long wire leads
- For operation from 5V., 12V., or 28V sources with or without external resistor.

LENS STYLES	LED COLORS	LENS COLORS	MATERIAL
<p>Clear anodized bezel prevents sidelight HDWE. emission .</p> <p style="text-align: center;"><b>DSC</b></p> 	<p>A - Amber G - Green R - Red</p>	<p><b>LEXAN</b> <i>Transparent</i> RTP - Red BTP - Blue GTP - Green ATP - Amber CTP - Clear</p> <p><i>Translucent</i> RTL - Red WTL - White BTL - Blue GTL - Green ATL - Amber</p>	<p><b>BODY</b> Brass SAE 72 Nickel Plate QQ-N-290</p> <p><b>LENS</b> Lexan LP-393 Nylon M I L-M-20693 Aluminum 202 4-T4 Anodize MIL-A-8625</p> <p><b>HARDWARE</b> Brass SAE 72 Nickel Plate QQ-N-290</p> <p><b>TERMINALS</b> 26 AWG Wire</p>
<p>Same as DSC lens except with black anodized bezel.</p> <p style="text-align: center;"><b>DS</b></p> 			
<p>Full 180° visibility and maximum illumination.</p> <p style="text-align: center;"><b>STD</b></p> 			

\* For Lamp Specs, see page A-3  
\*\* For Voltage/Current Specs, see page A-1

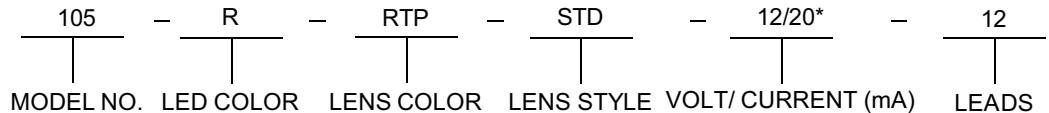
### HOW TO ORDER

#### EXAMPLE: INCANDESCENT



### HOW TO ORDER

#### EXAMPLE: LED



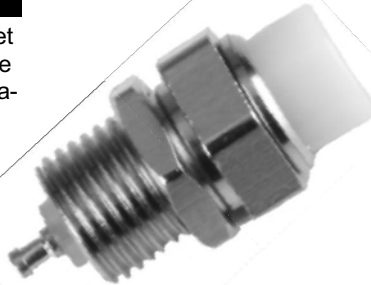
# Brilliance by design

## Panel Mount Front Relampable Incandescent or LED

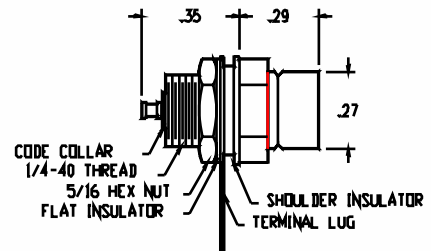
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### MODEL 102-S (standard body)

Utilizes the extremely reliable T-1 Midget Flanged-Based incandescent bulb or the long-life LED. Recommended for installation where indicator lights must be mounted close together. An internal silicone rubber pressure pad maintains electrical contact inside the lamp body. Because of its high spring rate, the pad cannot take a permanent set. It also provides an effective front-to-back moisture seal.



Suggested mounting diameter 1/4"



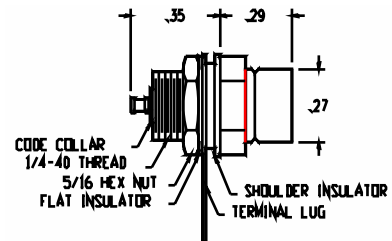
3/8 (.38) suggested min. ctr to ctr spacing

### MODEL 102-SI (insulated body)

This two-terminal version of the basic 102 Model is offered in the SI, SKI, SSI and SRI body styles (Call factory for more information). Special insulating hardware prevents moisture from leaking through the panel mounting hole. Electrical contact with the indicator light body is made by means of a solder lug.



Suggested mounting diameter 5/16.



25/64 suggested min. ctr to ctr spacing.

See page A-1 for hot stamping particulars.

### LENS STYLES

Clear anodized bezel allows 180½ visibility

Q



Same as Q lens except with black anodized bezel.

QB



Clear anodized bezel prevents sidelight emission.

DSC



Same as DSC lens except with black anodized bezel.

DS



Full 180° visibility and maximum illumination

STD



### LENS COLORS

#### NYLON

##### Translucent

- R - Red
- W - White
- \*B - Blue
- G - Green
- A - Amber

#### LEXAN

##### Transparent

- RTP - Red
- \*BTP - Blue
- GTP - Green
- ATP - Amber
- CTP - Clear

##### Translucent

- RTL - Red
- WTL - White
- \*BTL - Blue
- GTL - Green
- ATL - Amber

### MATERIAL

#### BODY

- Brass SAE72
- Nickle Plate QQ-N-290
- Derlin per LP-392

#### LENS

- Lexan LP-393
- Nylon MIL-M-20693
- Aluminum 2024-T4
- Anodize MIL-A-8625

#### TERMINALS

- Brass SAE 72
- Tin Plate MIL-T-10727

#### HARDWARE

- Brass SAE 72
- Nickel Plate QQ-N-290
- Phenolic per MIL-P-15035
- Nylon MIL-M-20693

\*Not recommended for LED.

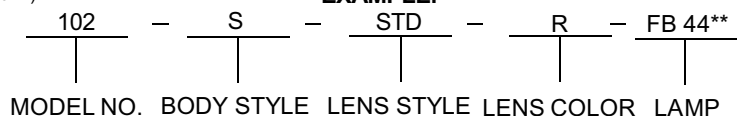
\*\*For Lamp Specs, see page A-3

Facts About the basic 102 (single term). And insulated version (two term).

1. Both Models can be furnished in moisture resistant versions (Contact Factory)
2. Both Models can be RFI shielded. (Contact Factory)
3. Both Models can provide hot stamping on the lens (See page A-1 for particulars)

### HOW TO ORDER

#### EXAMPLE:



102

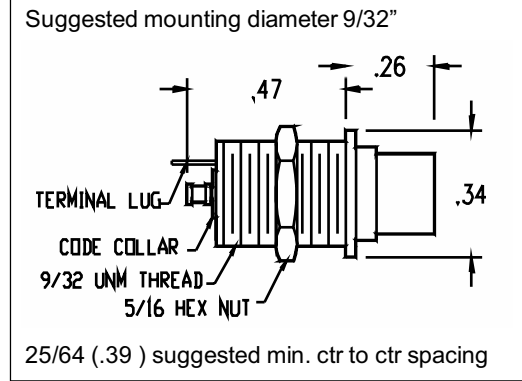
# Brilliance by design

## Panel Mount Front Relampable Incandescent or LED

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### MODEL 121

The 121 Model lamp holder is a two terminal, front relampable indicator light specifically designed for use with T-1 Midget Flange Based Incandescent bulb or LED lamps.



121

#### FEATURES

- Panel mounts in 9/32" (0.281") diameter hole
- Aluminum body in clear or black finish
- Uses T-1 flange base incandescent or LED
- For operation from 5V., 12V., 14V., 18V., or 28V sources
- Waterproof version available ( Model 122)

See page A-1 for hot stamping particulars.

LENS STYLES	LENS COLORS	MATERIAL
-------------	-------------	----------

Full 180½visibility. Maximum illumination. Black bezel.	STB	
Full 180½visibility. Maximum illumination. Clear bezel.	STC	
Black anodized aluminum bezel prevents sidelight emission.	DS	
Same as DS lens except with black anodized bezel.	DSC	
Black anodized bezel allows 180½ visibility.	QB	
Same as QB lens except with clear anodized bezel.	Q	

#### GENERAL PURPOSE

- Transparent*
- RTP - Red
  - \*BTP - Blue
  - GTP - Green
  - ATP - Amber
  - CTP - Clear

#### *Translucent*

- RTL - Red
- WTL - White
- \*BTL - Blue
- GTL - Green
- ATL - Amber

#### BODY STYLE

- B - Black
- C - Clear

#### BODY

- Alum. 2024-T4
- Anodize MIL-A-8625
- Nylon MIL-M-20693
- Delrin per LP-392

#### LENS

- Lexan LP-393
- Alum. 2024-T4
- Brass SAE 72
- Anodize per MIL-A-8625
- Nickel Plate QQ-N-290

#### HARDWARE

- Brass SAE 72
- Nickel Plate QQ-N-290

#### TERMINALS

- Brass SAE 72
- Tin Plate MIL-T-10727

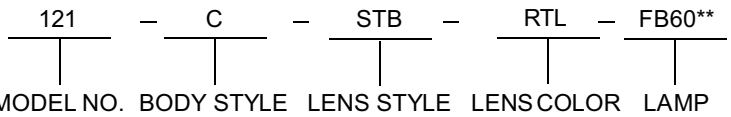
\*Not recommended for LED.  
\*\*For Lamp Specs, see page A-3 and for LED see model 311 on page 7-4

Note 1: For splashproof applications specify Model 122 (identical to Model 121) or Model 124 (identical to Model 123). The addition of a panel seal prevents water or moisture from leaking through the panel mounting hole.

Note 2: RFI Shielding available. (Contact Factory).

### HOW TO ORDER

#### EXAMPLE:



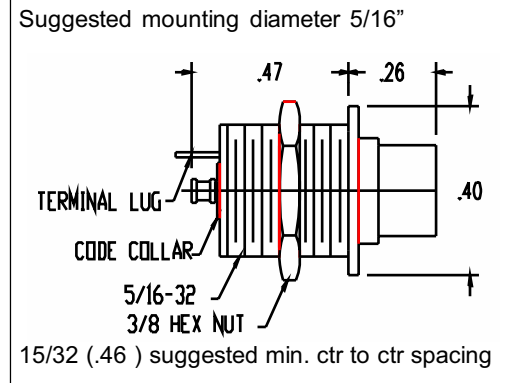
# Brilliance by design

## Panel Mount Front Relampable Incandescent or LED

www.SloanLED.com

### MODEL 123

The 123 Series lamp holder is a two terminal, front relampable indicator light. Use with T-1 Midget Flange Based Incandescent and LED Lamps.




123


#### FEATURES


- Panel mounts in 5/16" (0.312") diameter hole, 2-terminal electrical connection
- Choice of incandescent lamp or LED
- Uses T-1 flange base size lamp
- Has aluminum clear or black body for neat panel appearance
- Has variety of lens colors


See page A-1 for hot stamping details.


LENS STYLES	LENS COLORS	MATERIAL
-------------	-------------	----------


Full 180½visibility. Maximum illumination. Black bezel.	<b>STB</b>	
---	------------	---

Full 180½visibility. Maximum illumination. Clear bezel.	<b>STC</b>	
---	------------	---

Black anodized aluminum bezel prevents sidelight emission.	<b>DS</b>	
--	-----------	---

Same as DS lens except with black anodized bezel.	<b>DSC</b>	
---	------------	---

Black anodized bezel allows 180½ visibility.	<b>QB</b>	
--	-----------	---

Same as QB lens except with clear anodized bezel.	<b>Q</b>	
---	----------	---

- GENERAL PURPOSE**  
*Transparent*
- RTP - Red
  - \*BTP - Blue
  - GTP - Green
  - ATP - Amber
  - CTP - Clear
- Translucent*
- RTL - Red
  - WTL - White
  - \*BTL - Blue
  - GTL - Green
  - ATL - Amber

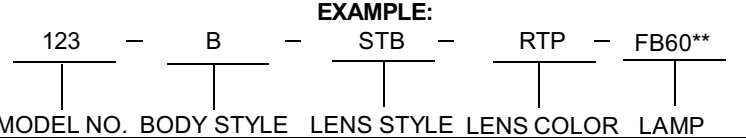
- BODY**
- Alum. 2024-T4
  - Anodize MIL-A-8625
  - Nylon MIL-M-20693
  - Delrin per LP-392
- LENS**
- Lexan LP-393
  - Alum. 2024-T4
  - Brass SAE 72
  - Anodize per MIL-A-8625
  - Nickel Plate QQ-N-290
- HARDWARE**
- Brass SAE 72
  - Nickel Plate QQ-N-290
- TERMINALS**
- Brass SAE 72
  - Tin Plate MIL-T-10727

### BODY STYLE

- B - Black Oxide
- C - Nickel Plate

\*Not recommended for LED.  
\*\*For Lamp Specs, see page A-3 and for LED see model 311 on page 7-4

### HOW TO ORDER



*Note 1: For splashproof applications specify Model 122 (identical to Model 121) or Model 124 (identical to Model 123). The addition of a panel seal prevents water or moisture from leaking through the panel mounting hole.*

*Note 2: RFI Shielding available. (Contact Factory).*

# Brilliance by design

## Panel Mount Front Relampable Incandescent or LED www.SloanLED.com

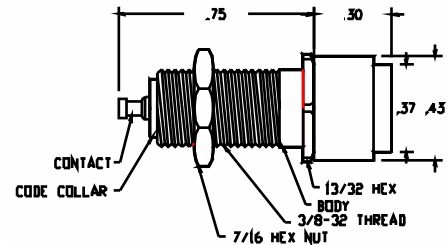
(page 1 of 2)

### MODEL 855-S (standard body)

Among the outstanding features of the 855 Series are • Small Mounting Size • Front Bulb Servicing • Interchangeable Lens Assemblies. Contact pressure is maintained by a silicone rubber pressure pad. Pressure pad seals out moisture front to back. Uses T-1 3/4 Midget Flange Based bulb, Incandescent bulb or LED.



Suggested mounting diameter 3/8"



17/32 (.53) suggested min. ctr to ctr spacing

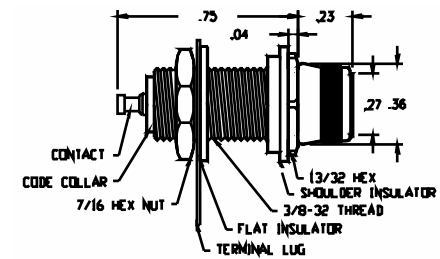
855

### MODEL 855-SI (insulated body)

The 855-SI Model is the two-terminal version of the 855-SI Model. The body is insulated from the panel (or case) by insulating washers. Electrical contact with the body is made through a solder lug. Designed specifically to use T-1 3/4 Midget Flange Based Bulbs, Incandescent or LED.















Suggested mounting diameter 27/64"



17/32 (.53) suggested min. ctr to ctr spacing

## LENS STYLES

<p><b>Q</b></p> <p>Clear anodized bezel allows 180½ visibility</p> 	<p><b>STD</b></p> <p>Full 120° visibility and maximum illumination</p> 	<p><b>SE</b></p> <p>Edgelight for plastic panels Small diameter light gasket minimizes wasted panel space.</p> 
<p><b>QB</b></p> <p>Same as Q lens except with black anodized bezel.</p> 	<p><b>M</b></p> <p>Large lens for maximum visibility from all angles. Engineered to offer the most uniform light distribution. Full 180° visibility</p> 	<p><b>DDS</b></p> <p><b>DIMMER:</b> Rotating outer collar changes light output from full to minimum. Rotation to dim can be clockwise or counter-clockwise. Easy adjustment.</p> 
<p><b>DSC</b></p> <p>Clear anodized bezel prevents sidelight emission.</p> 	<p><b>MB</b></p> <p>Same as M lens except with black anodized bezel.</p> 	<p><b>U</b></p> <p><b>UNLIMITED:</b> Has no lens to diminish light output. Specifically suited to T-1 3/4 flanged based LED for maximum light output</p> 
<p><b>DS</b></p> <p>Same as DSC lens except with black anodized bezel.</p> 	<p><b>D</b></p> <p>Skirted lens covers metal parts for neat panel appearance Large lighted surface assures positive indication.</p> 	<p><b>I</b></p> <p><b>ILLUMINATOR:</b> Slot on one side emits light for illuminating copy on mounting surface. Available with metal front preventing outward illumination, or with colored lens for easy item identification.</p> 

# Brilliance by design

## Panel Mount Front

www.SloanLED.com

MODEL 855

## Relampable Incandescent or LED (page 2 of 2)

855

LENS COLORS	MATERIAL	CODING COLLAR COLORS**
-------------	----------	------------------------

**GENERAL PURPOSE**

- Translucent*
- R - Red
  - W - White
  - B - Blue
  - G - Green
  - A - Amber

**LEXAN**

- Transparent*
- RTP - Red
  - BTP - Blue
  - GTP - Green
  - ATP - Amber
  - CTP - Clear

*Translucent*

- RTL - Red
- WTL - White
- BTL - Blue
- GTL - Green
- ATL - Amber

**BODY**

- Brass SAE 72
- Nickel Plate QQ-N-290

**LENS**

- Lexan LP-393
- Nylon MIL-M-20693
- Aluminum 2024-T4
- Anodize MIL-A-8625
- Brass SAE 72
- Nickel Plate QQ-N-290

**TERMINALS**

- Brass SAE 72
- Tin Plate MIL-T-10727

**CODE COLLAR**

- Nylon MIL-M-20693

**HARDWARE**

- Brass SAE 72
- Nickel Plate QQ-N-290
- Nylon MIL-M-20693
- Linen Base Phenolic MIL-P-15035

- |            |                     |
|------------|---------------------|
| 0 — BLACK  | 5 — GREEN           |
| 1 — BROWN  | 6 — BLUE            |
| 2 — RED    | 7 — VIOLET          |
| 3 — ORANGE | 8 — GREY            |
| 4 — YELLOW | 9 — WHITE (default) |

**LEGEND FOR LENS DIMENSION**

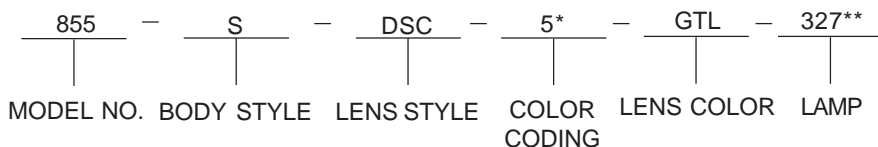
LENS STYLES	Height		Lens Dia.	Bezel Dia.
	S	SI		
STD, I	5/16	11/32	17/64	3/8
D	21/64	3/8	3/8	1/2
DS, DSC, Q, QB	23/64	25/64	23/64	7/16
M, MB	5/8	21/32	7/16	1/2
SE	27/64	15/32	-	1/2
DDS	25/64	7/16	-	3/8
U	15/64	17/64	-	3/8

**FACTS PERTINENT TO THE MODEL 855**

1. Both Series are available with color coding collars to simplify wiring.
2. Both body styles are available with STD, DS, D, DSC, Q, QB, DDS, U, I, SE, M and MB lenses.
3. Both Series can be furnished in splashproof versions upon request. (Contact Factory for Unique part number).
4. The D, DS, DSC, Q and QB lenses can be furnished as a bi-color (Bi-color lenses show white when not lit, color when lit).
5. Both Series can be furnished with RFI Shielding (Contact Factory for Unique part number).
6. Q, QB, DSC and DS lenses only are available in plain lens styles (Contact Factory for information).
7. Both body styles can be furnished in rear relampable versions.
8. Both body styles can be furnished in rear mounting versions.

**HOW TO ORDER**

EXAMPLE:



\*Color Collars are available in choice of EIA colors to simplify wiring by color coding

\*\*For Lamp Specs, see page A-4  
For LED Specs, see Model 510 page 7-4

# Brilliance by design

## Panel Mount Front

www.SloanLED.com

MODEL 855

## Relampable Incandescent or LED (page 2 of 2)

855

LENS COLORS	MATERIAL	CODING COLLAR COLORS**
-------------	----------	------------------------

**GENERAL PURPOSE**  
*Translucent*  
 R - Red  
 W - White  
 \*B - Blue  
 G - Green  
 A - Amber

**LEXAN**  
*Transparent*  
 RTP - Red  
 \*BTP - Blue  
 GTP - Green  
 ATP - Amber  
 CTP - Clear

*Translucent*  
 RTL - Red  
 WTL - White  
 \*BTL - Blue  
 GTL - Green  
 ATL - Amber

**BODY**  
 Brass SAE 72  
 Nickel Plate OQ-N-290  
**LENS**  
 Lexan LP-393  
 Nylon MIL-M-20693  
 Aluminum 2024-T4  
 Anodize MIL-A-8625  
 Brass SAE 72  
 Nickel Plate QQ-N-290  
**TERMINALS**  
 Brass SAE 72  
 Tin Plate MIL-T-10727  
**CODE COLLAR**  
 Nylon MIL-M-20693  
**HARDWARE**  
 Brass SAE 72  
 Nickel Plate QQ-N-290  
 Nylon MIL-M-20693  
 Linen Base Phenolic  
 MIL-P-15035

0 — BLACK	5 — GREEN
1 — BROWN	6 — BLUE
2 — RED	7 — VIOLET
3 — ORANGE	8 — GREY
4 — YELLOW	9 — WHITE (default)

**LEGEND FOR LENS DIMENSION**

LENS STYLES	Height		Lens Dia.	Bezel Dia.
	S	SI		
STD, I	5/16	11/32	17/64	3/8
D	21/64	3/8	3/8	1/2
DS, DSC, Q, QB	23/64	25/64	23/64	7/16
M, MB	5/8	21/32	7/16	1/2
SE	27/64	15/32	-	1/2
DDS	25/64	7/16	-	3/8
U	15/64	17/64	-	3/8

**FACTS PERTINENT TO THE MODEL 855**

1. Both Series are available with color coding collars to simplify wiring.
2. Both body styles are available with STD, DS, D, DSC, Q, QB, DDS, U, I, SE, M and MB lenses.
3. Both Series can be furnished in splashproof versions upon request. (Contact Factory for Unique part number).
4. The D, DS, DSC, Q and QB lenses can be furnished as a bi-color (Bi-color lenses show white when not lit, color when lit).
5. Both Series can be furnished with RFI Shielding (Contact Factory for Unique part number).
6. Q, QB, DSC and DS lenses only are available in plain lens styles (Contact Factory for information).
7. Both body styles can be furnished in rear relampable versions.
8. Both body styles can be furnished in rear mounting versions.

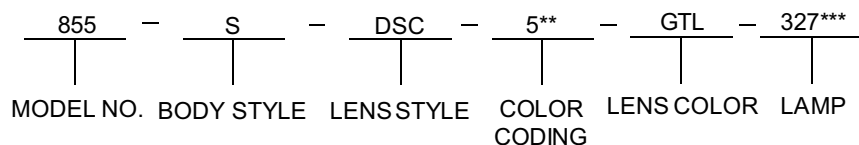
\*Not recommended for LEDs

\*\*Color Collars are available in choice of EIA colors to simplify wiring by color coding.

\*\*\* For Lamp Specs, see page A-4  
 For LED Specs, see Model 510  
 page 7-4

### HOW TO ORDER

EXAMPLE:



# Brilliance by design

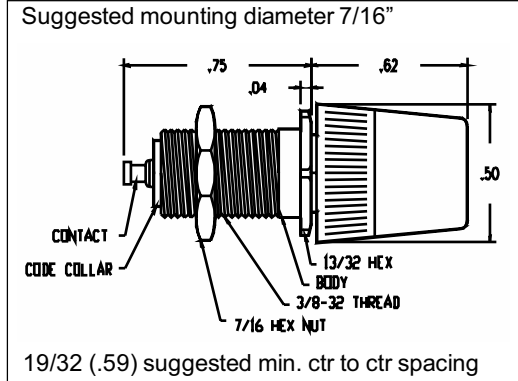
## Panel Mount Front Relampable Incandescent or LED

www.SloanLED.com

### MODEL 856

A two-terminal, front relampable indicator light designed to use the T- 1 3/4 midget flange based incandescent bulb or LED.


An internal silicone-rubber pressure-pad maintains electrical contact inside the lamp body. Because of its high spring rate, the pad cannot take a permanent set.





856


See page A-1 for hot stamping particulars


LENS STYLES	LENS COLORS	MATERIAL
-------------	-------------	----------


Clear anodized bezel allows 180½ visibility **Q** 

Same as Q lens except with black anodized bezel. **QB** 

Clear anodized bezel prevents sidelight emission. **DSC** 

Same as DSC lens except with black anodized bezel. **DS** 

Large lens for maximum visibility from all angles. Engineered to offer the most uniform light distribution. Full 180½ visibility. Bright metal bezel **M** 

Offers the same features as Style M. Black metal bezel. **MB** 

**LEXAN**  
*Transparent*  
RTP - Red  
\*BTP - Blue  
GTP - Green  
ATP - Amber  
CTP - Clear

*Translucent*  
RTL - Red  
WTL - White  
\*BTL - Blue  
GTL - Green  
ATL - Amber

**BODY**  
Brass SAE72  
Nickle Plate QQ-N-290  
Nylon MIL-M-20693

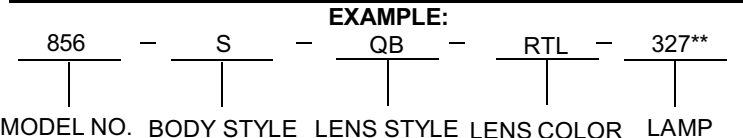
**LENS**  
Lexan LP-393  
Brass SAE 72  
Aluminum 2024-T4  
Nickel Plate QQ-N-290  
Anodize MIL-A-8625

**TERMINALS**  
Brass SAE 72  
Tin Plate MIL-T-10727

**HARDWARE**  
Brass SAE 72  
Nickel Plate QQ-N-290

\*Not recommended for LED.  
\*\* For Lamp Specs, see page A-4  
For for LED see model 510 on page 7-4

### HOW TO ORDER



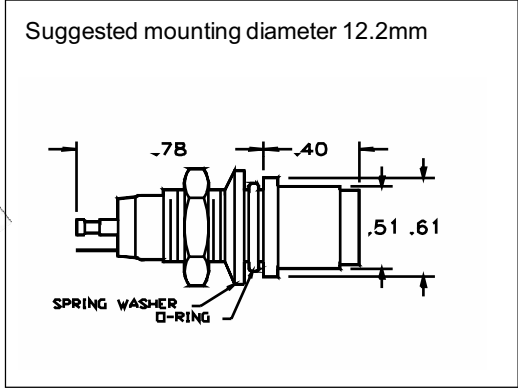
# Brilliance by design

## Panel Mount, 2-Terminal Relampable LED or Incandescent Indicator

www.SloanLED.com

### MODEL 886

The 886 Model incorporates a relampable T-1 3/4 size flange based incandescent bulb or LED with a variety of lens colors. For panel mounting through a 12.2mm (0.480") dia. hole. Black oxide or Nickel Plate finish on a brass body for neat panel appearance. Relampable. Available in various degrees of waterproofness (See Model 887). Three lens styles available.



886

#### FEATURES

- Panel mount in 12.2mm (0.480") diameter hole
- Black oxide finish on brass body
- Uses relampable T-1 3/4 LED or incandescent lamp
- For operation from 5V., 12V., 24V. or 28V sources, with built-in resistor.

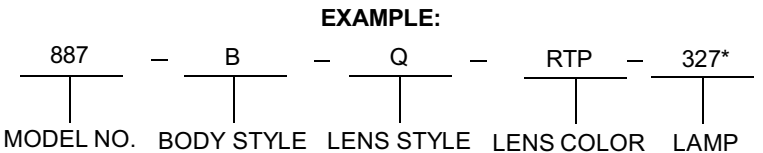
LENS STYLE	LENS COLOR	BODY STYLE
------------	------------	------------

Q	- Clear Anodized Bezel	<i>Transparent</i> RTP - Red **BTP - Blue GTP - Green ATP - Amber CTP - Clear	B - Black Oxide C - Nickel Plate
QB	- Black Anodized Bezel		
M	- Large tapered lens		

<i>Translucent</i>	
RTL	- Red
**BTL	- Blue
GTL	- Green
ATL	- Amber
WTL	- White

NOTE:  
 \*Not recommended for LED  
 \*\*For Lamp Specs, see page A-4 and for LED see model 510 on page 7-4

### HOW TO ORDER



# Brilliance by design

## Panel Mount Front Incandescent or LED

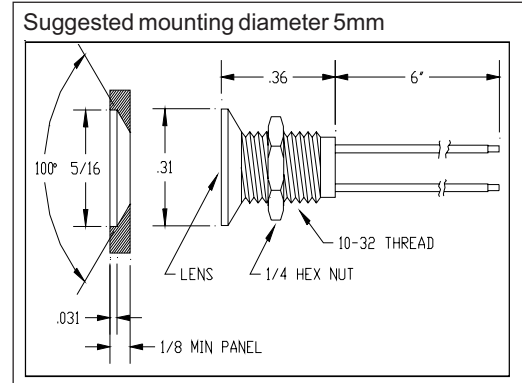
www.SloanLED.com

### MODEL 109

This flush mount design can be used with any T-1 size LED or incandescent lamp.

LED colors include Red, Green, Amber, Yellow, Ultra Green, Blue and White. This model is available with or without an external resistor and RFI shielding. All colors have a transparent lens that is the same color as the LED.

The incandescent models offer the brightness and variety of all colors, including red, green, amber, blue, white and clear with transparent lens, and the option of RFI shielding.



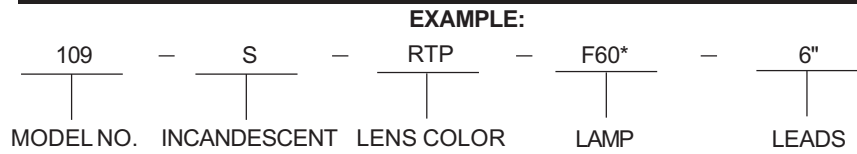
#### FEATURES

- Panel mount in 5mm diameter hole
- 40 degree draft angle
- 0.087" draft angle width
- T-1 LED
- Incandescent also available

109

LEADS	LENS COLORS	MATERIAL
6" Standard	LEXAN	<b>BODY</b>
Please specify if different length required	<i>Transparent</i>	Brass SAE 72
Wire wrap posts available, contact factory on how to order	RTP - Red	Nickel Plate QQ-N-290
	CTP - Clear	<b>LENS</b>
	BTP - Blue	Lexan LP-393
	GTP - Green	<b>HARDWARE</b>
	ATP - Amber	Brass SAE 72
	<i>Translucent</i>	Nickel Plate QQ-N-290
	<i>Contact Factory</i>	<b>TERMINALS</b>
		26 AWG Stranded Cu.

### HOW TO ORDER: Incandescent



### HOW TO ORDER: LED

<u>Voltage</u>	<u>Model No.</u>
2vdc*	109-2X
5vdc	109-5X
12vdc	109-12X
28vdc	109-28X

\*external resistor required

Where the 'X' appears insert:  
 1-Red  
 2-Green  
 3-Yellow  
 4-Amber  
 5-Ultra Green  
 6-Ultra Blue  
 7-Pure White

NOTE:  
 \* For Lamp Specs, see page A-3.  
 \*\* For Voltage/Current Specs, see page A-1.

# Brilliance by design

## Metal Bodied Front Mountable LED Indicator

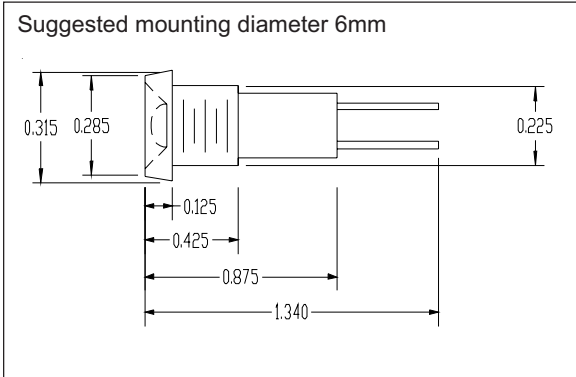
www.SloanLED.com

### MODEL 621

Model 621 front mountable LED indicator light. Available in all colors. Metal thread body with 6" wire leads. Reflector engineered to allow maximum light distribution. For panel mounting through 6mm (0.236") dia. hole. Fits panel thickness up to 5/32.

#### FEATURES

- Metal Body
- Long lasting, rugged LED
- Panel mount in 6mm (0.236") diameter hole
- For panel thickness up to 5/32
- External resistor required
- 26 AWG stranded cu.



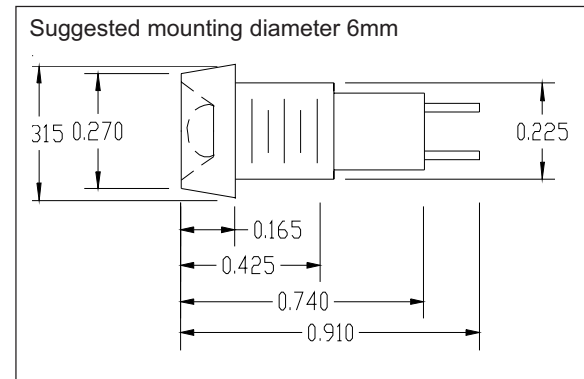
621 622

### MODEL 622

Model 622 front mountable LED indicator light. Choice of Red, Green or Amber colors. Reflector engineered to allow maximum light distribution. For panel mounting through 6mm (0.236") dia. hole. Fits panel thickness up to 5/32.

#### FEATURES

- Metal Body
- Long lasting, rugged LED
- Panel mount in 6mm (0.236") diameter hole
- For panel thickness up to 5/32
- External resistor required



### HOW TO ORDER

Voltage  
 2vdc\*  
 5vdc  
 12vdc  
 24vdc  
 28vdc

Model No.  
 621-2X  
 621-5X  
 621-12X  
 621-24X  
 621-28X

\*external resistor required

Where the 'X' appears insert:  
 1-Red  
 2-Green  
 3-Yellow  
 4-Amber  
 5-Ultra Green  
 6-Ultra Blue  
 7-Pure White

NOTE:

\*For Voltage Specs, see page A-1

2-2

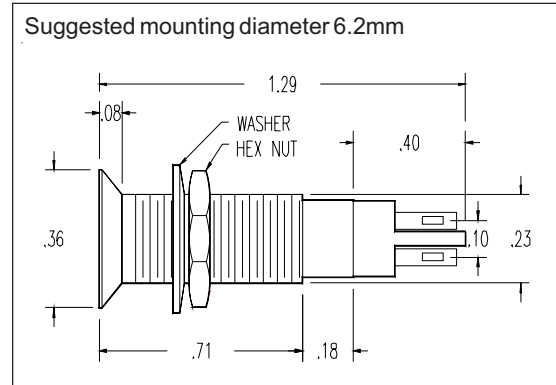
# Brilliance by design

## Panel Mount, Single Non-Relampable LED

www.SloanLED.com

### MODEL 194

The 194 Model incorporates a T-1 size LED in a variety of colors. For panel mounting through a 6.2 mm (0.244") dia. hole. Nickel plated finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness (See Model 195). Fluted lens design for increased viewing angle. Supplied with and without internal resistor. Mounts flush with panel.



194

#### FEATURES:

- Panel mount in 6.2 mm (0.244") diameter hole
- Nickel plated finish
- Uses high brightness T-1 LED
- For operation from 5V., 12V., 24V. or 28V. sources, with built-in resistor
- Fluted lens design for increased viewing angle.

### LED COLOR      LENS COLOR

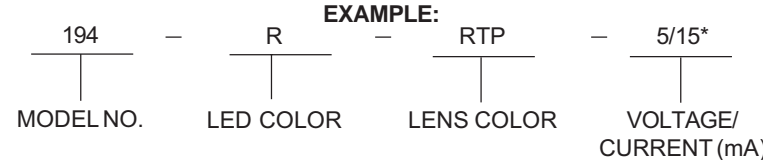
A	- Amber	<i>Transparent</i>
G	- Green	RTP - Red
R	- Red	WTP - White
		GTP - Green
		ATP - Amber
		CTP - Clear

#### NOTE:

\* For Voltage/Current Specs, see page A-1.

Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER



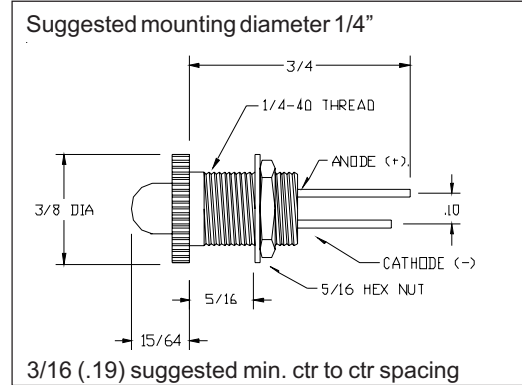
# Brilliance by design

## Panel Mount Fixed Lamp LED

www.SloanLED.com

### MODEL 103

The 103 Model is designed specifically for applications requiring LED indication without the use of a lens. The unique feature of the 103 Model is that it provides brightness in the smallest threaded metal body available in the industry. Termination is by wire leads suitable for soldering. Built-in resistors allow these units to be powered from sources up to 28 VDC.



103

### FEATURES

- LED
- Panel mount in 1/4" (0.250") diameter hole
- Built in resistor

### LED COLOR

- A - Amber
- G - Green
- R - Red

### MATERIAL

#### BODY

Brass SAE72  
Nickle Plate QQ-N-290  
Nylon MIL-M-20693

#### HARDWARE

Brass SAE 72  
Nickel Plate QQ-N-290

#### TERMINALS

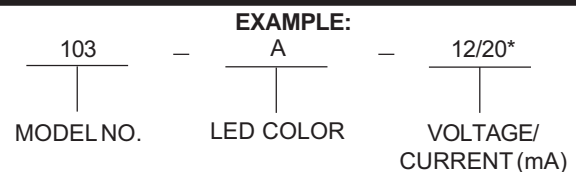
.02 Sq. Solid Cu.  
Tin plated for soldering

### NOTE:

\* For Voltage/Current Specs, see page A-1.

To order without resistor, omit callout for voltage and current

### HOW TO ORDER



# Brilliance by design

## Panel Mount Fixed Lamp LED

www.SloanLED.com

### MODEL 205

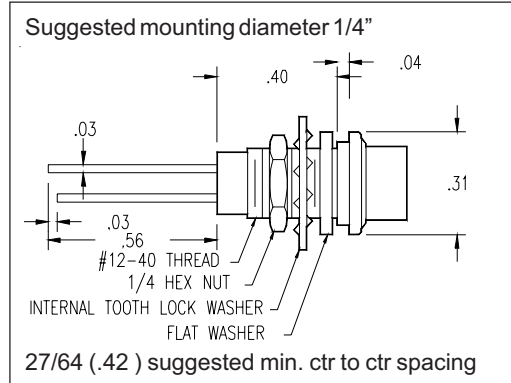
This Series incorporates a T-1 size LED in an all metal threaded body. Lamp supplied with flat Lexan transparent lens the same color as the LED and 6" wire leads.




Built-in resistors allow these units to be powered from sources up to 28VDC.

#### FEATURES

- LED
- Fluted lens for maximum light distribution



205

LENS STYLES	LED COLOR	LENS COLOR	MATERIAL
F-FLAT 	Red Green Yellow Amber Ultra Green Ultra Blue Pure White	LEXAN <i>Transparent</i> RTP - Red BTP - Blue GTP - Green ATP - Amber CTP - Clear  <i>Translucent</i> <i>Contact Factory</i>	<b>BODY</b> Brass SAE No. 72 Nickel Plate per QQ-N-290 <b>LENS</b> Lexan LP-393 <b>HARDWARE</b> Brass SAE 72 Spring Steel per MIL-W-6986 Nickel Plate per QQ-N-290 <b>TERMINALS</b> 26 AWG Stranded Cu.

### HOW TO ORDER

<u>Voltage</u>	<u>Model No.</u>
2vdc*	205-2X
5vdc	205-5X
12vdc	205-12X
24vdc	205-24X
28vdc	205-28X

\*external resistor required

Where the 'X' appears insert:

1-Red  
2-Green  
3-Yellow  
4-Amber  
5-Ultra Green  
6-Ultra Blue  
7-Pure White

Supplied with 6" wire leads

NOTE:

\* For Voltage/Current Specs, see page A-1.

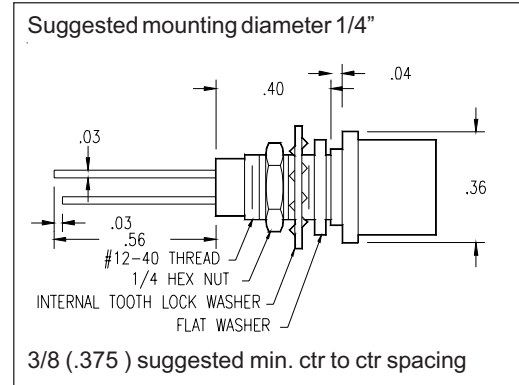
# Brilliance by design

## Panel Mount Fixed Lamp LED

www.SloanLED.com

### MODEL 206

The 206 Model incorporates a red, green or amber T-1 3/4 size LED in an all-metal threaded body suitable for panel mounting. Large lens for maximum visibility. Termination is by wire-wrap™ posts (suitable for soldering), or wire leads. Lense: can be furnished in transparent material for head-on viewing or translucent material for side viewing. Built-in resistors allow these units to be powered from sources up to 28 VDC.



206

### FEATURES

- Panel mount in 1/4" (0.250") diameter hole
- Supplied with wire leads or wire wrap posts
- For operation from 5V., 12V., 24V. or 28V. sources, with built-in resistor
- Nickel plated brass body

LED COLOR	TERMINALS	LENS COLOR	MATERIAL
A - Amber G - Green R - Red	W-Wire wrap™ L -Wire leads  6" standard Please specify if different length required	<b>LEXAN</b> <i>Transparent</i> RTP - Red BTP - Blue GTP - Green ATP - Amber CTP - Clear  <i>Translucent</i> RTL - Red WTL - White BTL - Blue GTL - Green ATL - Amber	<b>BODY</b> Brass SAE No. 72 Nickel Plate per QQ-N-290 <b>LENS</b> Lexan LP- 393 <b>HARDWARE</b> Brass SAE 72 Spring Steel per MIL-W-6986 Nickel Plate per QQ-N-290 <b>TERMINALS</b> Phosphor Bronze - 3/4 Hard Tin Plate per MIL-T-10727 Wire per MIL-W-16878 24 AWG Solid Cu. 26 AWG Stranded Cu.

NOTE:  
\* For Voltage/Current specs, see page A-1.

To order without internal resistor, omit callout for voltage and current

### HOW TO ORDER

**EXAMPLE:**

206	—	A	—	W	—	RTP	—	5/20*
MODEL NO.		LED COLOR		TERMINALS		LENS COLOR		VOLTAGE/ CURRENT (mA)

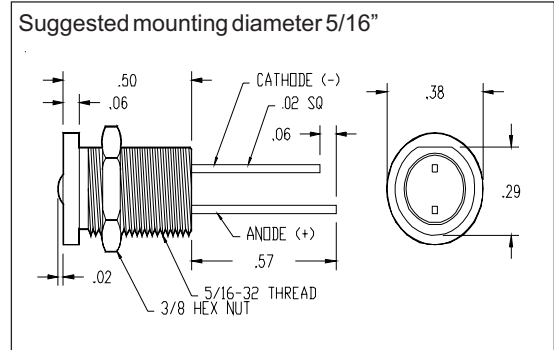
# Brilliance by design

## Panel Mount Non-relampable LED

www.SloanLED.com

### MODEL 252

The 252 Model incorporates a non-relampable T 1 3/4 LED in a variety of colors. For panel mounting through a 5/16" (0.312") dia. hole. Black anodized aluminum for neat panel appearance. Available with O-ring for panel sealing (See Model 253). No lens for maximum viewing angle. Supplied with or without internal resistor, for operation up to 28V.



252

### FEATURES

- Panel mount in 5/16" (0.312") diameter hole
- Black anodized aluminum body
- All LED colors available
- For operation from sources up to 28V., with built-in resistor
- No lens for maximum viewing angle
- Hardware includes hex nut and lug washer
- Supplied with 6" wire leads

### HOW TO ORDER

<u>Voltage</u>	<u>Model No.</u>
2vdc*	252-2X
5vdc	252-5X
12vdc	252-12X
24vdc	252-24X
28vdc	252-28X

\*external resistor required

Where the 'X' appears insert:

- 1-Red
- 2-Green
- 3-Yellow
- 4-Amber
- 5-Ultra Green
- 6-Ultra Blue
- 7-Pure White

NOTE:

\*For Voltage/Current Specs, see page A-1.  
LEDs continuous forward current = 20 mA

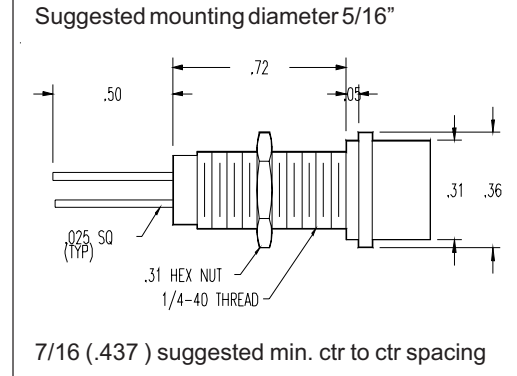
# Brilliance by design

## Panel Mount Fixed Lamp LED

www.SloanLED.com

### MODEL 207

Utilizes a T-1 3/4 LED available in all colors. Large lens for maximum visibility. The lens also incorporates Fresnel rings and flutes which allows maximum distribution of light output. Lenses are available in transparent or translucent material. Also available with plain lens (no flutes or rings). Termination is by wire leads or wire-wrap™ post (suitable for soldering). Built-in resistors allow these units to be powered from sources up to 28 VDC. Splashproof model available, see Model 208.



207

### FEATURES

- T-1 3/4 LED
- Fluted lens for maximum light distribution
- Panel mount in 5/16" (0.250) diameter hole

LED COLOR	TERMINALS	LENS COLOR	LENS	MATERIAL
R - Red	W - Wire wrap™ posts	LEXAN	L - Fresnel rings	<b>BODY</b> Brass SAE No. 72 Nickel Plate per QQ-N-290 Nylon per MIL-M-20693
G - Green	L - Wire Leads	<i>Transparent</i>	P - Plain	
UG - Ultra Green		RTP - Red		<b>LENS</b> Lexan LP-393
A - Amber		BTP - Blue		
B - Blue		GTP - Green		<b>HARDWARE</b> Brass SAE 72 Spring Steel per MIL-W-6986 Nickel Plate per QQ-N-290
W - White		ATP - Amber		
		CTP - Clear		<b>TERMINALS</b> Phosphor Bronze - 3/4 Hard Tin Plate per MIL-T-10727 Wire per MIL-W-16878 24 AWG Solid Cu. 26 AWG Stranded Cu.
		<i>Translucent</i>		
		RTL - Red		
		WTL - White		
		BTL - Blue		
		GTL - Green		
		ATL - Amber		

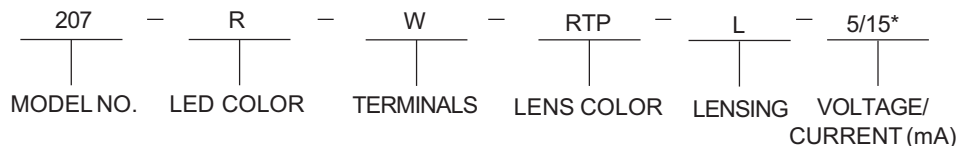
D-Flat body style available at additional cost. If no preference indicated in order, round body will be supplied.

\* For Voltage/Current Specs, see page A-1.

To order without internal resistor, omit callout for voltage and current

### HOW TO ORDER

#### EXAMPLE:



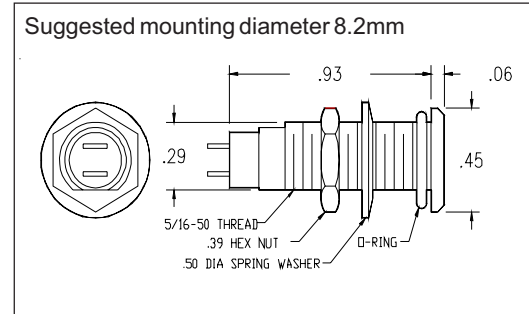
# Brilliance by design

## Panel Mount, Single Non-Relampable LED

www.SloanLED.com

### MODEL 344

The 344 Model incorporates a T-1 3/4 size LED in a variety of colors. For panel mounting through a 8.2 mm (0.322") dia. hole. Black oxide finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness (see Model 345). Fluted lens for increased viewing angle. Supplied with or without internal resistor.



344

#### FEATURES:

- Panel mount in 8.2 mm (0.322") diameter hole
- Black oxide finish
- Uses high brightness T-1 3/4 LED
- For operation from 5V., 12V., or 28V sources, with optional built-in resistor
- Fluted lens for increased viewing angle

### LED COLOR

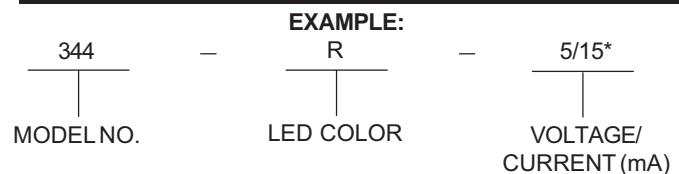
- A - Amber
- G - Green
- R - Red

**NOTE:**

\* For Voltage/Current Specs, see page A-1

Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER



# Brilliance by design

## Panel Mount, Non-Relampable LED

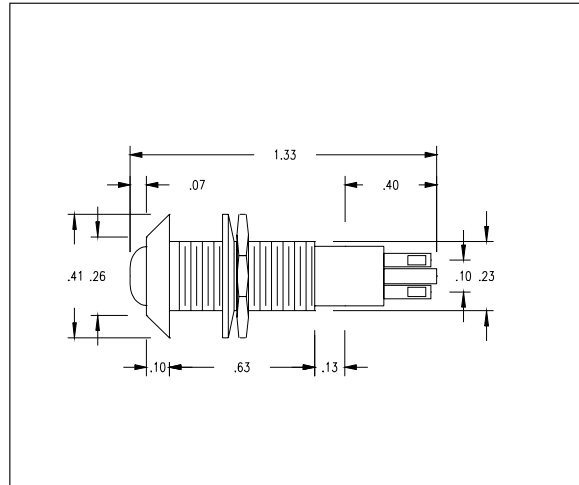
www.SloanLED.com

### MODEL 614

The 614 Model incorporates a high brightness T-1 3/4 size LED in a variety of colors. For panel mounting through a 6.2mm (0.244") diameter hole. Black oxide or Nickel plated finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness (see model 615). No lens for maximum viewing angle. Supplied with or without internal resistor.

#### FEATURES:

- Panel mount in 6.2mm (0.244") diameter hole
- Black oxide or Nickel plated finish
- Uses high brightness T-1 3/4 LED
- For operation from 5V., 12V., or 28V sources, with built-in resistor
- No lens for maximum viewing angle



614

LED COLOR		BODY STYLE	
-----------	--	------------	--

A	- Amber	B	- Black oxide
G	- Green	C	- Nickel plated
R	- Red		

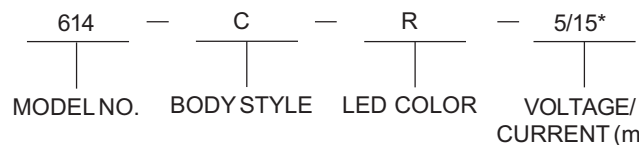
#### NOTE:

\* For Voltage/Current Specs, see page A-1.

Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER

#### EXAMPLE:



**2-10**

# Brilliance by design

## Panel Mount Fixed Lamp Neon

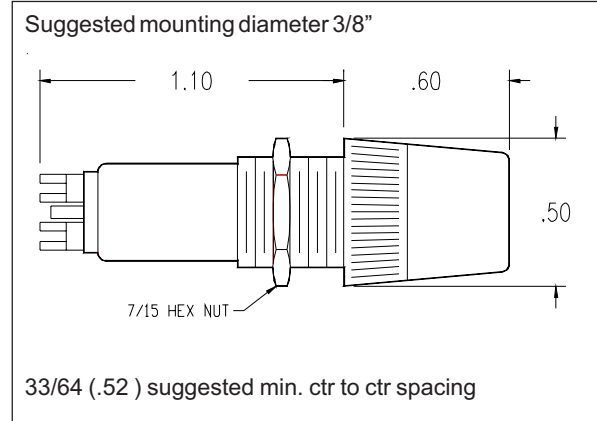
www.SloanLED.com

### MODEL 857

A sub-miniature fixed neon, offering optimum light. Uses C2A, Hi-Brightness or other NE-2 Series unbased bulb with or without resistors. The assembly is small and compact. Mounted in a 3/8 dia. hole. With resistor, the Model 857 can be used directly on commercial line currents (115, 220 VAC).



Uses T-2 unbased lamp.  
All metal body



857

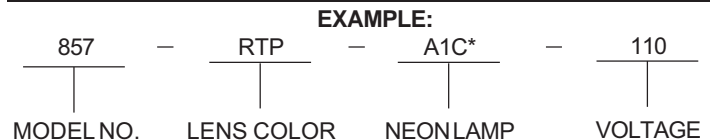
### FEATURES

- Panel mount non-relampable neon indicator light
- Nickel plated brass body
- Uses C2A or other NE-2 series unbased bulb
- With built-in resistor for direct connection to 115, 220 VAC
- Mounts in 3/8" (0.375") diameter hole.

LENS COLOR	LAMP	VOLTAGE	MATERIAL
<i>Transparent</i> RTP - Red ATP - Amber CTP - Clear	A1C 95V., 12mA, 25,000 hrs with a 47K resistor C2A95V, 1.9mA 25,000 hrs with a 30K resistor	110 220 (for other voltages, contact factory)	<b>BODY</b> Brass SAE 72 Nickel Plate QQ-N-290 General Purpose Phenolic <b>LENS</b> Lexan LP-393 <b>HARDWARE</b> Brass SAE 72 Nickel Plate QQ-N-290 <b>TERMINALS</b> Brass SAE 72 Tin Plate per MIL-T-10727
<i>Translucent</i> WTL - White			

NOTE:  
\*For Lamp Specs, see page A-1

### HOW TO ORDER



# Brilliance by design

www.SloanLED.com

## Front Mountable Indicator LED, Neon, or Incandescent

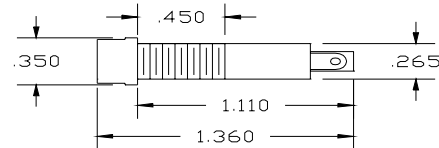
774 775

### MODEL 774

Model 774 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors. For panel mounting through 7.5 (0.295") dia. hole. Fits panel thickness 17/64". Please specify voltage configuration when ordering.



Suggested mounting hole diameter 7.5mm



#### FEATURES

- Neon available in 120V.
- LED, Incandescent: 6V., 12V., 24V.
- Panel mount in 7.5mm (0.295") diameter hole
- For panel thickness up to 17/64"
- Includes internal resistor

### HOW TO ORDER

EXAMPLE:

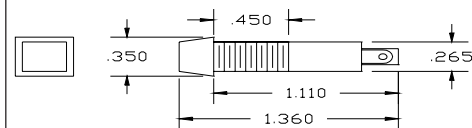


### MODEL 775

Model 775 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors. The square lens provides enhanced panel appearance. For panel mounting through 7.5mm (.295") dia. hole. Fits panel thickness up to 17/64". Please specify voltage configuration when ordering.



Suggested mounting hole diameter 7.5mm



- Neon available in 120V.
- LED, Incandescent: 6V., 12V., 24V.
- Panel mount in 7.5mm (.295") diameter hole
- For panel thickness up to 17/64"
- Includes with internal resistor

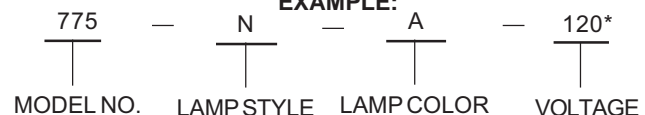
### LAMP STYLE

### LAMP COLOR

L	- LED	A	- Amber
N	- Neon	G	- Green
P	- Incandescent	R	- Red
		C	- Clear

### HOW TO ORDER

EXAMPLE:



## Brilliance by design

### Front Mountable Indicator LED, Neon or Incandescent

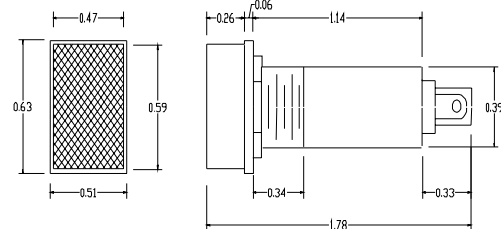
www.SloanLED.com

#### MODEL 767

Model 767 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with diffused pixel lens for maximum light distribution. For panel mounting through 10mm (0.393") dia. hole. Fits panel thickness up to 17/64". This unit has a square lens for special panel appearance. Please specify voltage configuration when ordering.



Suggested mounting hole diameter 10mm



767 768

#### FEATURES

- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole
- For panel thickness up to 17/64"
- Includes internal resistor

NOTE:

\*For Voltage Specs, see page A-1

#### HOW TO ORDER

EXAMPLE:



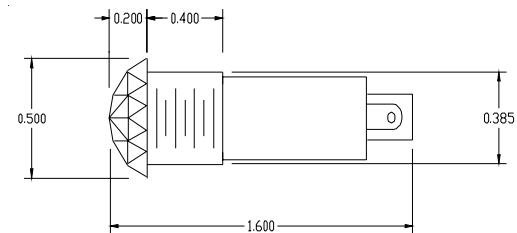
### Low Profile Front Mountable Indicator. LED, Neon or Incandescent

#### MODEL 768

Model 768 low profile front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with multi-faceted lens for maximum light distribution. For panel mounting through 10mm (0.393") dia. hole. Fits panel thickness up to 1/4". Please specify voltage configuration when ordering.



Suggested mounting hole diameter 10mm



#### FEATURES

- Neon available in 120V,
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole
- For panel thickness up to 1/4"
- Includes internal resistor

NOTE:

\*For Voltage Specs, see page A-1

#### HOW TO ORDER

EXAMPLE:



2-13

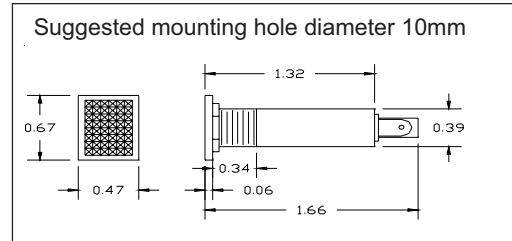
# Brilliance by design

## Low Profile Front Mountable Indicator LED, Neon or Incandescent

www.SloanLED.com

### MODEL 786

Model 786 low profile front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with a multi-faceted lens for maximum light distribution. For panel mounting through 10mm (0.393") dia. hole. Fits panel thickness up to 3/16". Please specify voltage configuration when ordering.



786

#### FEATURES

- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole
- For panel thickness up to 3/16"
- Includes internal resistor

LAMP STYLE	LAMP COLOR
------------	------------

L	- LED	A	- Amber
N	- Neon	G	- Green
P	- Incandescent	R	- Red

### HOW TO ORDER

EXAMPLE:



NOTE:  
\*For Voltage Specs, see page A-1

**2-14**

# Brilliance by design

## Front Mountable Indicator LED, Neon or Incandescent

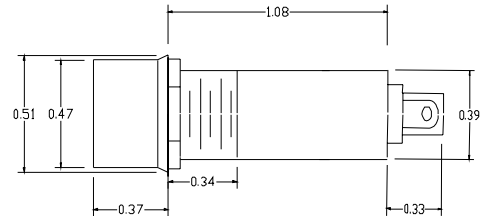
www.SloanLED.com

### MODEL 761

Model 761 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with fresnel rings for maximum light distribution. For panel mounting through 10mm (0.393") dia. hole. This unit comes with a removable chrome bezel. Fits panel thickness up to 1/4". Please specify voltage configuration when ordering.



Suggested mounting diameter 10mm



761 762

#### FEATURES

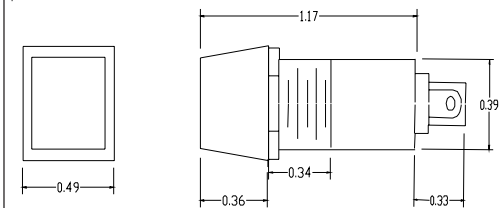
- Neon available in 120V.
- LED, Incandescent: 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole

### MODEL 762

Model 762 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors. For panel mounting through 10mm (0.393") dia. hole. Unit has a square lens for your special panel needs. Please specify voltage configuration when ordering.



Suggested mounting diameter 10mm



#### FEATURES

- Neon available in 120V.
- LED, Incandescent: 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole

LAMP STYLE	LAMP COLOR
------------	------------

L	- LED	A	- Amber
N	- Neon	G	- Green
P	- Incandescent	R	- Red

NOTE:

\*For Voltage Specs, see page A-1

### HOW TO ORDER

EXAMPLE:

761	—	L	—	R	—	12*
MODEL NO.		LAMP STYLE		LAMP COLOR		VOLTAGE

2-15

## Brilliance by design

# Front Mountable Indicator LED, Neon or Incandescent

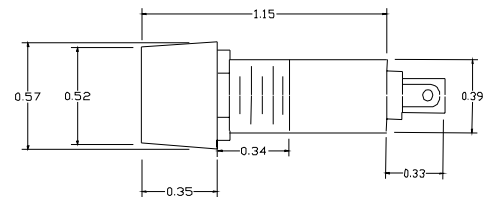
www.SloanLED.com

### MODEL 763

Model 763 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with fresnel rings for maximum light distribution. For panel mounting through 10mm (0.393") dia. hole. Please specify voltage configuration when ordering.



Suggested mounting diameter 10mm



763 764

#### FEATURES

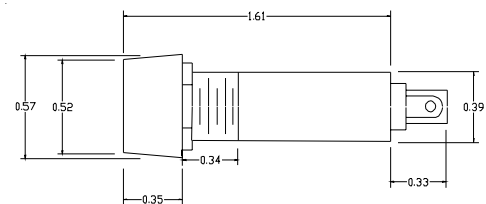
- Neon available in 120V.
- LED, Incandescent: 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole

### MODEL 764

Model 764 front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors. Translucent lens provides great lumination. For panel mounting through 10mm (.393") dia. hole. Please specify voltage configuration when ordering.



Suggested mounting diameter 10mm



#### FEATURES

- Neon available in 120V.
- LED, Incandescent: 6V., 12V., 24V.
- Panel mount in 10mm (0.393") diameter hole

### LAMP STYLE

### LAMP COLOR

L	- LED	A	- Amber
N	- Neon	G	- Green
P	- Incandescent	R	- Red
		C	- Clear

### HOW TO ORDER

#### EXAMPLE:

763 — L — R — 12\*  
 MODEL NO. LAMP STYLE LAMP COLOR VOLTAGE

NOTE:

\*For Voltage Specs, see page A-1

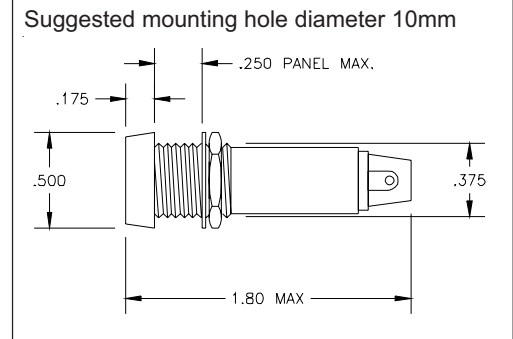
**2-16**

# Brilliance by design

## Low Profile Front Mountable Indicator. LED, Neon or Incandescent [www.SloanLED.com](http://www.SloanLED.com)

### MODEL 765

Model 765 low profile front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with a flat transparent lens. For panel mounting through 10mm (0.393") dia. hole. Fits panel thickness up to 13/64". Please specify voltage configuration when ordering.



765 766

#### FEATURES

- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V., 28V., 48V.
- Panel mount in 10mm (0.393") diameter hole
- For panel thickness up to 13/64"
- Includes internal resistor

NOTE:

\*For Voltage Specs, see page A-1

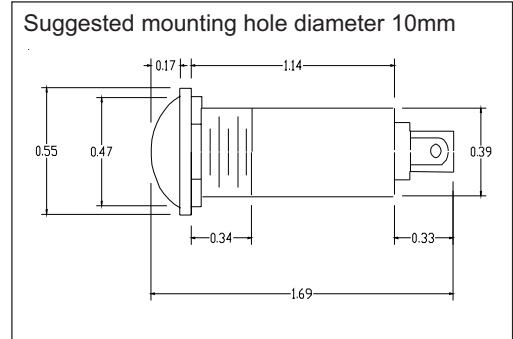
### HOW TO ORDER

EXAMPLE:



### MODEL 766

Model 766 low profile front mountable indicator, available in LED, Neon or Incandescent lamps with internal resistors. Choice of Red, Green or Amber colors with a domed lens for neat panel appearance. For panel mounting through 10mm (0.393") dia. hole. Fits panel thickness up to 3/16". Please specify voltage configuration when ordering.



#### FEATURES

- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V., 28V., 48V.
- Panel mount in 10mm (0.393") diameter hole
- For panel thickness up to 3/16"
- Includes internal resistor

NOTE:

\*For Voltage Specs, see page A-1

### LAMP STYLE

- L - LED
- N - Neon
- P - Incandescent

### HOW TO ORDER

EXAMPLE:

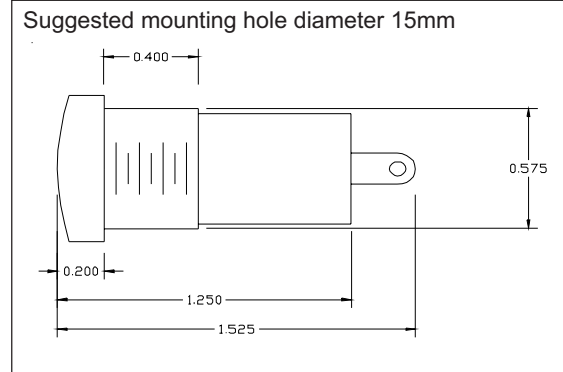


## Brilliance by design

# Low Profile Front Mountable Indicator. LED, Neon or Incandescent [www.SloanLED.com](http://www.SloanLED.com)

### MODEL 772

Model 772 low profile front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with fresnel rings for maximum light distribution. For panel mounting through 15mm (.590") dia. hole. Fits panel thickness up to 1/4". Please specify voltage configuration when ordering.



772 773

#### FEATURES

- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 15mm (.590") diameter hole
- For panel thickness up to 1/4"
- Includes internal resistor

NOTE:

\*For Voltage Specs, see page A-1

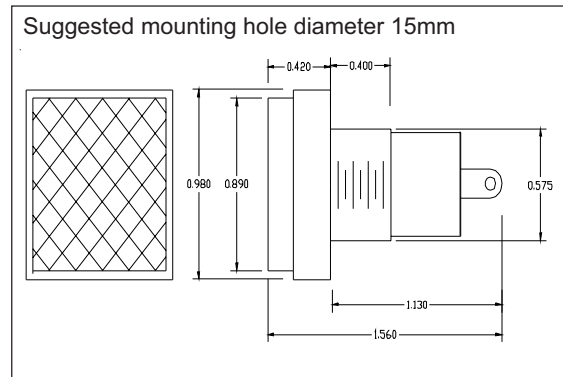
### HOW TO ORDER

EXAMPLE:



### MODEL 773

Model 773 low profile front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with pixel lens for maximum light distribution. For panel mounting through 15mm (.590") dia. hole. Fits panel thickness up to 1/4". This unit has a square lens for enhanced panel appearance. Please specify voltage configuration when ordering.



#### FEATURES

- Neon available in 120V., AIC Lamp
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 15mm (.590") diameter hole
- For panel thickness up to 1/4"
- Includes internal resistor

NOTE:

\*For Voltage Specs, see page A-1

### LAMP STYLE

- L - LED
- N - Neon
- P - Incandescent

### HOW TO ORDER

EXAMPLE:



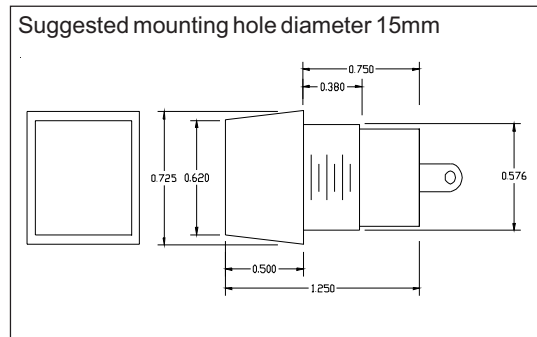
2-18

# Brilliance by design

## High Profile Front Mountable Indicator. LED, Neon or Incandescent [www.SloanLED.com](http://www.SloanLED.com)

### MODEL 771

Model 786 high profile front mountable indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors with a square, pixel lens for maximum light distribution and neat panel appearance. For panel mounting through 15mm (.590") dia. hole. Fits panel thickness up to 1/4". Please specify voltage configuration when ordering.



771

#### FEATURES

- Neon available in 120V.
- Incandescent 6V., 12V., 24V.
- Panel mount in 15mm (.590") diameter hole
- For panel thickness up to 1/4"
- Includes internal resistor

LAMP STYLE	LAMP COLOR
------------	------------

L	- LED	A	- Amber
N	- Neon	G	- Green
P	- Incandescent	R	- Red

NOTE:

\*For Voltage Specs, see page A-1

### HOW TO ORDER

EXAMPLE:



2-19

## Brilliance by design

### Panel Mount LED Indicator Models 150 & 240

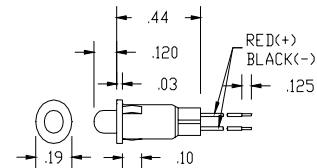
www.SloanLED.com

#### MODEL 150

The 150 Model incorporates a non-relampable diffused LED in a choice of colors. For panel mounting through a 5/32" (0.156") dia. hole; snap fits, needs no mounting hardware. No lens for maximum viewing angle. Supplied with 6" wire leads. Can be supplied with or without built in current limiting resistor.



Suggested mounting diameter 5/32"



150 240

#### FEATURES

- Snap mounts in 5/32" (0.156") diameter hole, with mounting clip
- Supplied with 6" wire leads
- 26 AWG Stranded Cu
- Uses T-1 LED
- For operation from 5V., 12V., 24V. or 28V. sources, with built-in resistor
- No lens for maximum viewing angle
- Fits 1/8" panel thickness

#### HOW TO ORDER

For model no. 150-2X colors available are Red, Green, Yellow and Amber.

Where the 'X' appears insert:

- |          |               |
|----------|---------------|
| 1-Red    | 5-Ultra Green |
| 2-Green  | 6-Ultra Blue  |
| 3-Yellow | 7-Pure White  |
| 4-Amber  |               |

<u>Voltage</u>	<u>Model No.</u>
2vdc*	150-2X
5vdc	150-5X
12vdc	150-12X
24vdc	150-24X
28vdc	150-28X

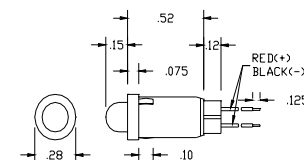
\*external resistor required

#### MODEL 240

The 240 Model incorporates a non-relampable diffused LED in a choice of colors. For panel mounting through a 1/4" (0.250") dia. hole; snap fits, needs no mounting hardware. No lens for maximum viewing angle. Supplied with 6" wire leads. Can be supplied without built in current limiting resistor.



Suggested mounting diameter 1/4"



#### FEATURES

- Snap mounts in 1/4" (0.250") diameter hole; needs no mounting hardware
- Supplied with 6" wire leads
- 26 AWG Stranded Cu
- No lens for maximum viewing angle
- Uses T-1 3/4 LED
- Fits 1/8" panel thickness

#### NOTE:

\* For Voltage/Current Specs, see page A-1.  
 LEDs continuous forward current = 20 mA  
 Omit voltage/current specification to order without built-in resistor.

#### HOW TO ORDER

\*external resistor required

<u>Voltage</u>	<u>Model No.</u>	Where the 'X' appears insert:
2vcd*	240-2X	1-Red            6-Ultra Blue
5vcd	240-5X	2-Green        7-Pure White
12vcd	240-12X	
24vcd	240-24X	3-Yellow
28vcd	240-28X	4-Amber
		5-Ultra Green

3-1

## Brilliance by design

# Low Profile Snap Mount Indicator LED, Neon or Incandescent

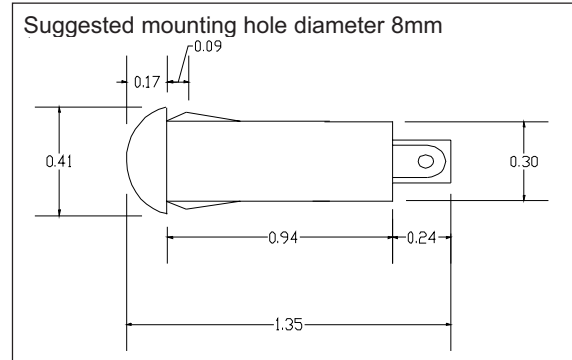
www.SloanLED.com

### MODEL 776

Model 776 snap mount indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors. For panel mounting through 8mm (0.315") dia. hole. Fits panel thickness up to 1/16. Please specify voltage configuration when ordering.



- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 8mm (0.315") diameter hole
- For panel thickness up to 1/16"
- Includes internal resistor



776 790

### LAMP STYLE

- L - LED
- N - Neon
- P - Incandescent

### HOW TO ORDER

#### EXAMPLE:



## Snap Mount Indicator LED, Neon or Incandescent

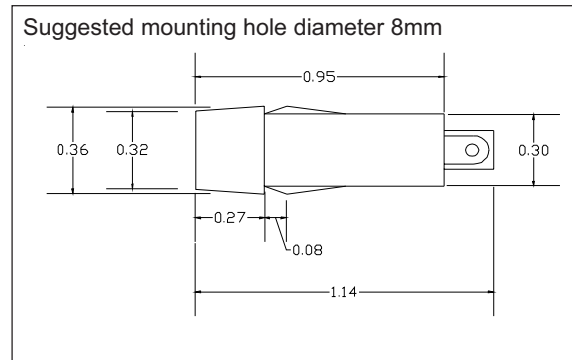
### MODEL 790

Model 790 snap mount indicator, available in LED, Neon or Incandescent lamps. Choice of Red, Green or Amber colors. For panel mounting through 8mm (0.315") dia. hole. Please specify voltage configuration when ordering.



#### FEATURES

- Neon available in 120V.
- LED, Incandescent 6V., 12V., 24V.
- Panel mount in 8mm (0.315") diameter hole
- Supplied with internal resistor



### LAMP STYLE

- L - LED
- N - Neon
- P - Incandescent

### HOW TO ORDER

#### EXAMPLE:



**3-2**

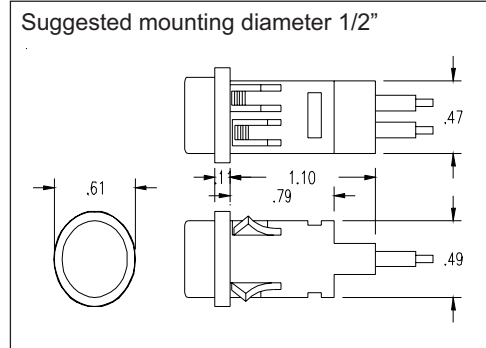
# Brilliance by design

## Panel Mount, Non-Relampable LED Snap Mount Indicator

www.SloanLED.com

### MODEL 500

The 500 Model incorporates a non-relampable T-1 3/4 size LED in a choice of colors. For panel mounting through a 1/2" (0.500") dia. hole; snap fits, needs no mounting hardware. Transparent lens for maximum viewing angle. Supplied standard with 6" wire leads, although any length may be ordered. Optional .187" QC terminals may be specified. Can be supplied with or without built in current limiting resistor.



500

#### FEATURES

- Snaps mounts in 1/2" (0.500") diameter hole; needs no mounting hardware.
- Supplied standard with 6" wire leads, unless otherwise specified.
- Can be supplied with .187" QC terminals.
- Uses T-1 3/4 LED.
- For operation from 5V., 12V., 24V., 28V or 120VAC sources, with built-in resistor.
- Transparent lens for maximum viewing angle.
- Fits 1/8" panel thickness.

#### NOTE:

For Voltage/Current Specs, see page A-1.  
 LEDs continuous forward current = 20 mA

### HOW TO ORDER: Incandescent

0.187" QC Termination		6" Lead Termination	
<u>Voltage</u>	<u>ModelNo.</u>	<u>Voltage</u>	<u>ModelNo.</u>
5vdc	5001-5XQC	5vdc	5001-5X6
12vdc	5001-12XQC	12vdc	5001-12X6
24vdc	5001-24XQC	24vdc	5001-24X6
28vdc	5001-28XQC	28vdc	5001-28X6

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

### HOW TO ORDER: LED

0.250" QC Termination		6" Lead Termination	
<u>Voltage</u>	<u>ModelNo.</u>	<u>Voltage</u>	<u>ModelNo.</u>
5vdc	5002-5XQC	5vdc	5002-5X6
12vdc	5002-12XQC	12vdc	5002-12X6
24vdc	5002-24XQC	24vdc	5002-24X6
28vdc	5002-28XQC	28vdc	5002-28X6
		120vac	5002-120X6

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

# Brilliance by design

## Panel Mount Fixed Lamp LED/Incandescent/Neon

www.SloanLED.com

### MODEL 502

Extremely rugged in construction, these cartridges consist of an aluminum body incorporating either an LED, incandescent or neon light source. Termination is by stainless steel pins suitable for use with a solder lug socket connector, wire wrap™ post adapter or lead wire terminal connector.

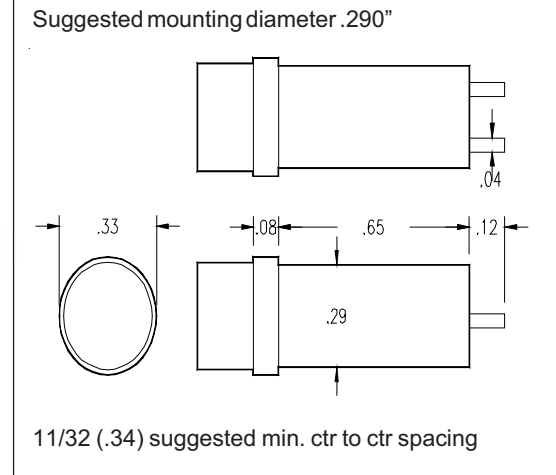
Lens styles are flat or domed in transparent or translucent material. All lenses are furnished with Fresnel rings for maximum distribution of light output. A wide variety of lens colors make the SloanLED Cartridge line even more versatile.

Mounts through .290 diameter holes and are non-relampable. LED and neon versions can be supplied with or without built-in resistors.

#### FEATURES

- Mounts in 0.290 diameter hole or in cartridge holder
- Black or clear anodized aluminum body
- LED and Incandescent operation from 2V to 28V
- Neon operation from 110 to 125V.

See page A-1 for hot stamping particulars.



502

LED COLOR	LENS STYLE	LENS COLOR	MATERIAL
R - Red	F - Flat	LEXAN	<b>BODY</b>
G - Green	D - Domed	<i>Transparent</i>	Aluminum 3003
A - Amber		<i>Translucent</i>	Anodize MIL-A-8625
W - White		RTP - Red	Brass SAE 72
		BTP - Blue	H.T.Spring Steel
		GTP - Green	(Not Shown)
		ATP - Amber	<b>TERMINALS</b>
		CTP - Clear	Stainless Steel
			<b>HARDWARE</b>
			General Purpose
			Phenolic

SloanLED Cartridge line is interchangeable with most cartridge units on the market.

### HOW TO ORDER

NOTE:

\*For Lamp Specs, see page A-1

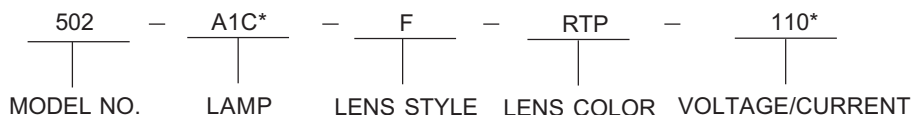
\*\*For Voltage/Current Specs, see page A-1

#### EXAMPLE: LED



### HOW TO ORDER

#### EXAMPLE: NEON AND INCANDESCENT CARTRIDGE



## Brilliance by design

### Panel Mount Fixed Lamp Neon or Incandescent

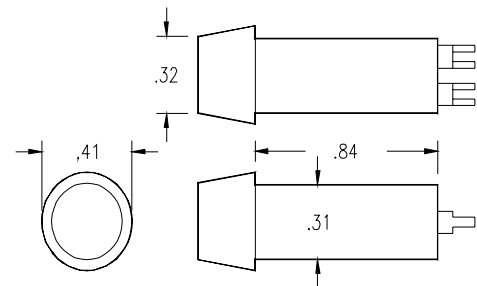
www.SloanLED.com

#### MODEL 858

Uses the T-2 unbased neon lamp, or can be supplied with the T-1 3/4 unbased incandescent lamp. It accommodates long neon lamps (C2A Type) without dropping resistor built-in, as well as short neon lamps (A1C Type) with dropping resistor built-in. When resistor is built-in the 858 can be used directly on commercial line current (115 volts A.C.).



Suggested mounting diameter 5/16"



17/32 (.53) suggested min. ctr to ctr spacing

#### MODEL 862

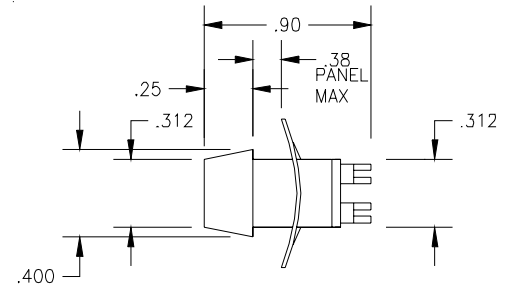
The 862 Series (short version of 858) accommodates short neon lamps only with no resistor built in.



#### FEATURES

- Panel mount in 5/16" dia. hole
- Neon or Incandescent
- Can be used for 110V, 220V application.

Suggested mounting diameter 5/16"



17/32 (.53) suggested min. ctr to ctr spacing

858 862

#### LENS COLOR

LEXAN

Transparent

RTP - Red

\*\*\* BTP - Blue

GTP - Green

ATP - Amber

CTP - Clear

#### MATERIAL

##### LENS

Lexan LP-349

##### TERMINAL

Brass SAE 72

Tin Plate MIL-T-10727

##### TINNERMAN NUT

Carbon Steel

Phosphate Oil Finish

##### INSULATOR

General Purpose Phenolic

#### NOTE:

\* For Neon Lamp Specs., see page A-1, or for Incandescent Lamp Specs, see page A-3

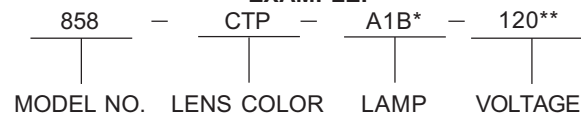
\*\* For Voltage Specs, see page A-1

Omit voltage if External Resistor is used.

\*\*\* Not Recommended for neon application.

#### HOW TO ORDER

##### EXAMPLE:



3-5

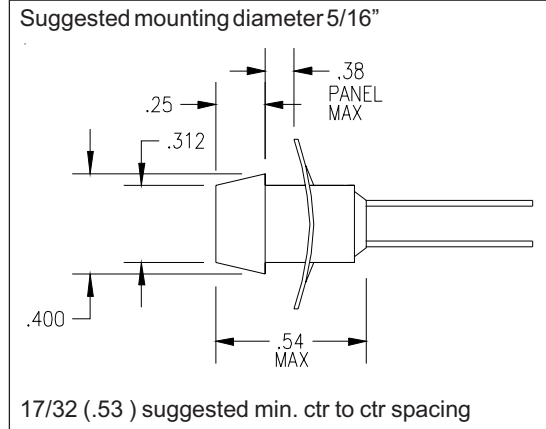
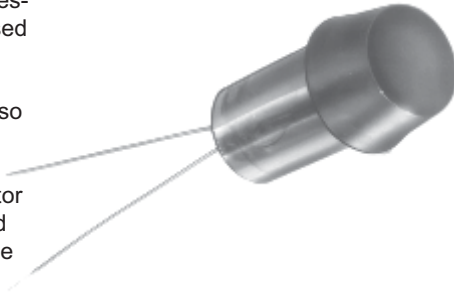
# Brilliance by design

## Panel Mount Fixed Lamp Neon or Incandescent

www.SloanLED.com

### MODEL 859

Uses either T 1-3/4 incandescent lamp or the T-2 unbased neon lamp, and long neon lamps (C2A type) without dropping resistor. It can also accommodate short neon lamps (AIC Type) with or without resistor. With resistor the 859 Series can be used directly with commercial line current (115 volts A.C.).



859

#### FEATURES

- Panel mount in 5/16" dia. hole
- Neon or incandescent
- Can be used for 115V/120V applications

### LENS COLOR

#### LEXAN

*Transparent*

- RTP - Red
- WTP - White
- \*BTP - Blue
- GTP - Green
- ATP - Amber
- CTP - Clear

\* Not recommended for use with neon lamps.

### MATERIAL

#### LENS

Lexan LP-393

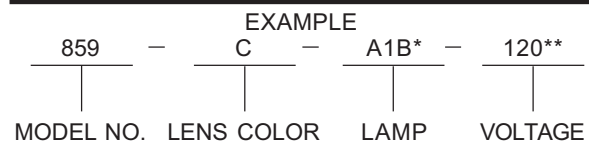
#### TERMINAL

- Carbon Steel
- Phosphate Oil Finish
- Tinnerman Nut
- Carbon Steel
- Phosphate Oil Finish

#### NOTE:

- \* For Neon Lamp Specs., see page A-1
  - \*\* For Voltage/Current Specs, see page A-1
- Omit voltage if External Resistor is used.

### HOW TO ORDER



**3-6**

# Brilliance by design

## Panel Mount, Non-Relampable LED, Water Resistant, Wide Angle Viewing

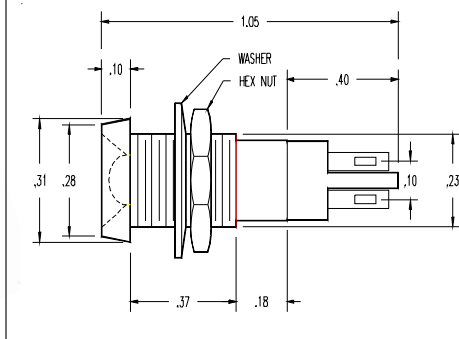
www.SloanLED.com

### MODEL 135

The 135 Model incorporates a T-1 size LED in a variety of colors. For panel mounting through a 6.2 mm (0.244") dia. hole. Black oxide or Nickel plated finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness. Special reflector design increases viewing angle. Supplied with or without internal resistor.



Suggested mounting diameter 6.2mm



#### FEATURES:

- Panel mount in 6.2 mm (0.244") diameter hole
- Black oxide or Nickel plated finish
- Uses high brightness T-1 LED
- For operation from 5V., 12V., 24V. or 28 V. sources, with optional built-in resistor
- Special reflector design increases viewing angle.
- Waterproof & Splashproof

135

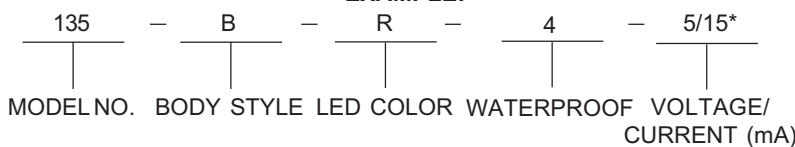
LED COLOR		WATERPROOF	BODY STYLE
A	- Amber	4	Waterproof under pressure
G	- Green		
R	- Red	8	Splashproof

#### NOTE:

\* For Voltage/Current Specs, see page A-1. Omit voltage/current specification to order without built-in resistor.

#### HOW TO ORDER

##### EXAMPLE:



4-1

# Brilliance by design

## Panel Mount, Non-relampable LED, Water Resistant

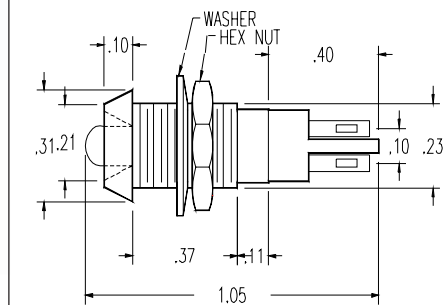
www.SloanLED.com

### MODEL 145

The 145 Model incorporates a T-1 size LED in a variety of colors. For panel mounting through a 6.2mm (0.244") dia. hole. Black oxide or Nickel plated finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness. No lens for maximum viewing angle. Supplied with or without internal resistor.



Suggested mounting diameter 6.2mm



#### FEATURES:

- Panel mount in 6.2mm (0.244") diameter hole
- Black oxide or Nickel plated finish
- Uses T-1 LED
- For operation from 5V., 12V., 24V. or 28V. sources, with built in resistor
- Waterproof and Splashproof

145

#### LED COLOR

#### WATERPROOF

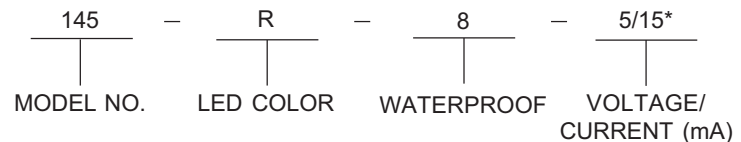
A	- Amber	4	Waterproof
G	- Green		under pressure
R	- Red	8	Splashproof

#### NOTE:

\*For Voltage/Current Specs, see page A-1.  
Omit voltage/current specification to order without built-in resistor.

#### HOW TO ORDER

##### EXAMPLE:



# Brilliance by design

## Panel Mount, Front Relampable Incandescent or LED, Water Resistant

www.SloanLED.com

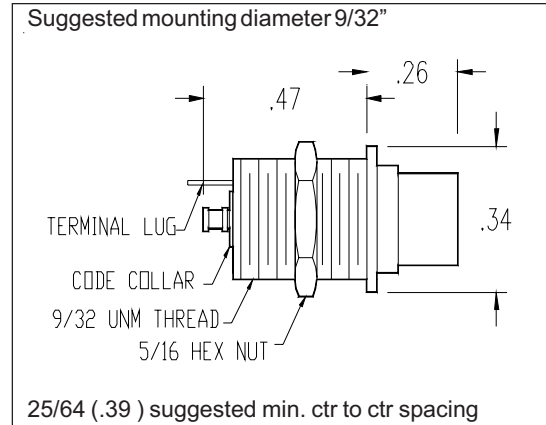
### MODEL 122

The 122 Model lamp holder is a two terminal, front relampable indicator light specifically designed for use with T-1 Midget Flange Based Incandescent or LED lamps.









#### FEATURES

- Water Resistant & Splashproof
- Panel mounts in 9/32" (0.281") diameter hole
- Aluminum body in clear or black finish
- Uses T-1 midget flange base incandescent or LED
- For operation from 5V, 12V, 14V, 18V, or 28V sources



See page A-1 for hot stamping particulars.

122

LENS STYLES	LENS COLORS	MATERIAL
Full 180° visibility. Maximum illumination. Black bezel.	<b>STB</b>	
Full 180° visibility. Maximum illumination. Clear bezel.	<b>STC</b>	
Black anodized aluminum bezel prevents sidelight emission.	<b>DS</b>	
Same as DS lens except with black anodized bezel.	<b>DSC</b>	
Black anodized bezel allows 180° visibility.	<b>QB</b>	
Same as QB lens except with clear anodized bezel.	<b>Q</b>	

LENS COLORS	MATERIAL
<b>GENERAL PURPOSE</b> <i>Transparent</i> RTP - Red *BTP - Blue GTP - Green ATP - Amber CTP - Clear  <i>Translucent</i> RTL - Red WTL - White *BTL - Blue GTL - Green ATL - Amber	<b>BODY</b> Alum. 2024-T4 Anodize MIL-A-8625 Nylon MIL-M-20693 Delrin per LP-392 <b>LENS</b> Lexan LP-393 Alum. 2024-T4 Brass SAE 72 Anodize per MIL-A-8625 Nickel Plate QQ-N-290 <b>HARDWARE</b> Brass SAE 72 Nickel Plate QQ-N-290 <b>TERMINALS</b> Brass SAE 72 Tin Plate MIL-T-10727

BODY STYLE
B - Black C - Clear

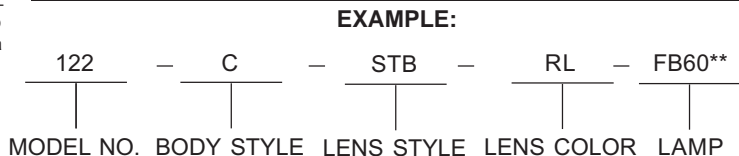
  

\*Not recommended for LED  
 \*\*For Lamp Specs, see page A-3  
 For LED see model 311 on page 7-4

Note 1: For splashproof applications specify Model 122 (identical to Model 121) or Model 124 (identical to Model 123). The addition of a panel seal prevents water or moisture from leaking through the panel mounting hole.

Note 2: RFI Shielding available on all four models. (Contact Factory).

### HOW TO ORDER



# Brilliance by design

## Panel Mount, Front Relampable, Incandescent or LED, Water Resistant

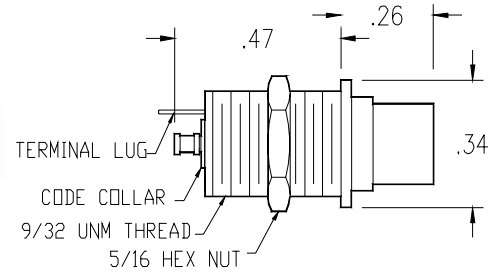
www.SloanLED.com

### MODEL 124

The 124 Series lamp holder is a water resistant, two terminal, front relampable indicator light. Use with T-1 Midget Flange Based Incandescent and LED Lamps.



Suggested mounting diameter 5/16"



15/32 (.46) suggested min. ctr to ctr spacing

### FEATURES

- Water Resistant & Splashproof
- Panel mount in 5/16" (0.312") diameter hole
- 2-terminal electrical connection
- Choice of incandescent lamp or LED
- Uses T-1 midget flange base size lamp
- Has aluminum clear or black body for neat panel appearance
- Has variety of lens colors

124

### LENS STYLES

### LENS COLORS

### MATERIAL

Full 180° visibility.  
Maximum illumination.  
Black bezel.

STB



Full 180° visibility.  
Maximum illumination.  
Clear bezel.

STC



Black anodized aluminum bezel prevents sidelight emission.

DS



Same as DS lens except with black anodized bezel.

DSC



Black anodized bezel allows 180° visibility.

QB



Same as QB lens except with clear anodized bezel.

Q



### GENERAL PURPOSE

*Transparent*

- RTP - Red
- \*BTP - Blue
- GTP - Green
- ATP - Amber
- CTP - Clear

*Translucent*

- RTL - Red
- WTL - White
- \*BTL - Blue
- GTL - Green
- ATL - Amber

### BODY STYLE

- B - Black Oxide
- C - Nickel Plate

### BODY

Alum. 2024-T4  
Anodize MIL-A-8625  
Nylon MIL-M-20693  
Delrin per LP-392

### LENS

Lexan LP-393  
Alum. 2024-T4  
Brass SAE 72  
Anodize per MIL-A-8625  
Nickel Plate QQ-N-290

### HARDWARE

Brass SAE 72  
Nickel Plate QQ-N-290

### TERMINALS

Brass SAE 72  
Tin Plate MIL-T-10727

\*Not recommended for LED

\*\*For Lamp Specs, see page A-3

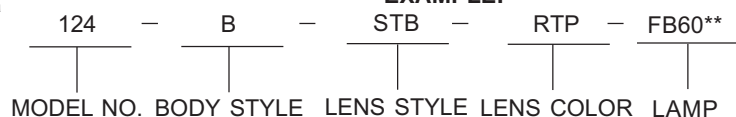
For LED see model 311 on page 7-4

Note 1: For splashproof applications specify Model 122 (identical to Model 121) or Model 124 (identical to Model 123). The addition of a panel seal prevents water or moisture from leaking through the panel mounting hole.

Note 2: RFI Shielding available on all four models. (Contact Factory).

### HOW TO ORDER

#### EXAMPLE:



4-4

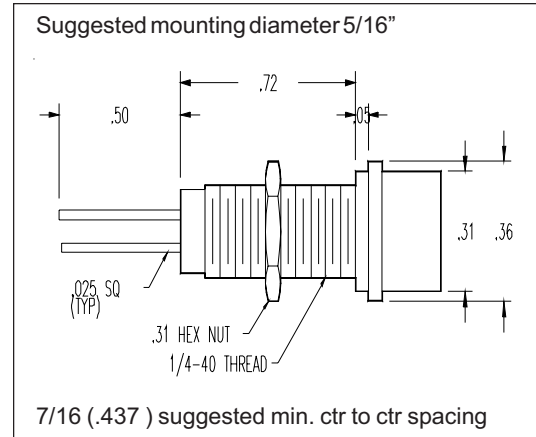
# Brilliance by design

## Panel Mount Fixed Lamp LED, Water Resistant

www.SloanLED.com

### MODEL 208

Utilizes a T-1 3/4 water resistant LED available in red, green or amber. Large lens for maximum visibility. The lens also incorporates Fresnel rings and flutes which allows maximum distribution of light output. Lenses are available in transparent or translucent material. Also available with plain lens (no flutes or rings). Termination is by wire leads or wire-wrap™ post (suitable for soldering). Built-in resistors allow these units to be powered from sources up to 28 VDC.



208

### FEATURES

- LED
- Fluted lens for maximum light distribution
- Panel mount in 5/16" (0.312) diameter hole
- Splashproof

LED COLOR	TERMINALS	LENS COLOR	LENS	MATERIAL
A - Amber	W - Wire wrap™ posts	LEXAN	L - Fresnel rings	<b>BODY</b> Brass SAE No. 72 Nickel Plate per QQ-N-290 Nylon per MIL-M-20693
G - Green	L - Wire Leads	<i>Transparent</i>	P - Plain	<b>LENS</b> Lexan LP-393
R - Red		RTP - Red		<b>HARDWARE</b> Brass SAE 72 Spring Steel per MIL-W-6986 Nickel Plate per QQ-N-290
		BTP - Blue		<b>TERMINALS</b> Phosphor Bronze - 3/4 Hard Tin Plate per MIL-T-10727 Wire per MIL-W-16878 26 AWG Stranded Cu
		GTP - Green		
		ATP - Amber		
		CTP - Clear		
		<i>Translucent</i>		
		RTL - Red		
		WTL - White		
		BTL - Blue		
		GTL - Green		
		ATL - Amber		

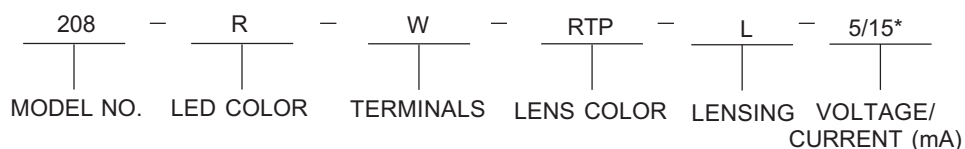
D-Flat available at additional cost. If no preference indicated in order, round body will be supplied.

### NOTE:

\* For Voltage/Current Specs, see page A-1.  
To order without internal resistor, omit callout for voltage and current

### HOW TO ORDER

#### EXAMPLE:



4-5

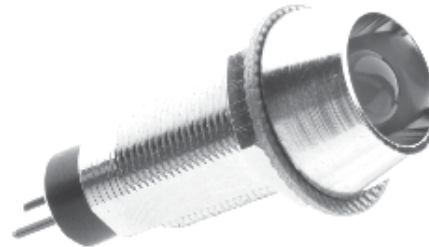
# Brilliance by design

## Panel Mount, Non-Relampable LED, Water Resistant

www.SloanLED.com

### MODEL 336

The 336 Model incorporates a T-1 3/4 size LED in choice of colors. For panel mounting through a 8.2 mm (0.322") dia. hole. Black oxide or Nickel plated finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness. No lens for maximum viewing angle. Supplied with or without internal resistor.

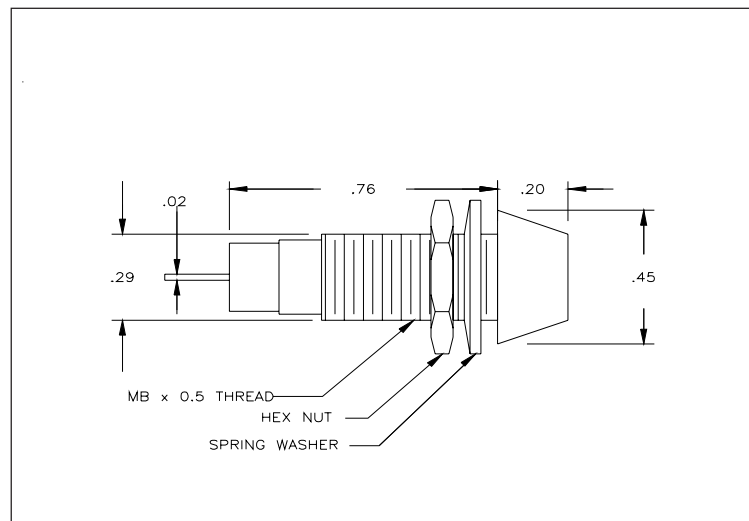


336

#### FEATURES:

- Panel mount in 8.2 mm (0.322") diameter hole.
- Black oxide or Nickel plated finish
- Uses T-1 3/4 LED
- For operation from 5V., 12V., 24V. or 28V. sources, with built-in resistor
- Waterproof & Splashproof

Suggested mounting diameter 8.2mm



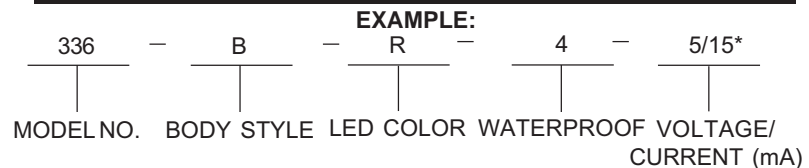
LED COLOR	WATERPROOF	BODY STYLE
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A - Amber	4	Waterproof
G - Green		under pressure
R - Red	8	Splashproof
		B - Black Oxide
		C - Nickel Plated

#### NOTE:

\*For Voltage/Current Specs, see page A-1. Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER



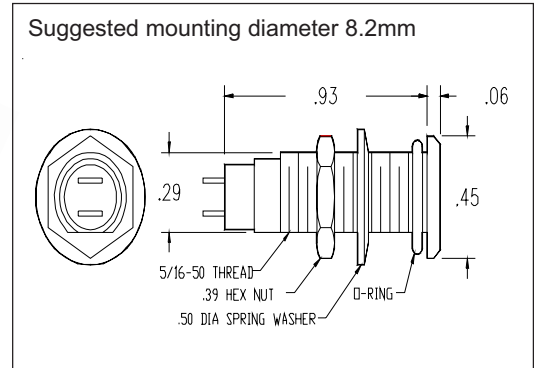
# Brilliance by design

## Panel Mount, Non-Relampable LED, Water Resistant

www.SloanLED.com

### MODEL 345

The 345 Model incorporates a T-1 3/4 size LED in a variety of colors. For panel mounting through a 8.2 mm (0.322") dia. hole. Black oxide finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness. Fluted lens for increased viewing angle. Supplied with or without internal resistor.



345

#### FEATURES:

- Panel mount in 8.2 mm (0.322") diameter hole
- Black oxide finish
- Uses high brightness T-1 3/4 LED
- For operation from 5V., 12V., 24V. or 28V. sources, with optional built-in resistor
- Fluted lens for increased viewing angle
- Waterproof and Splashproof model

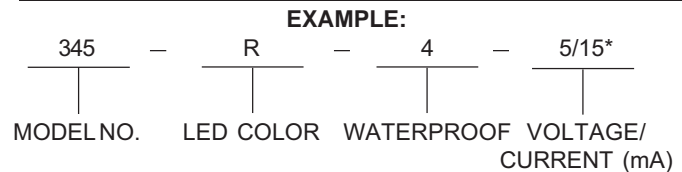
LED COLOR	WATERPROOF
-----------	------------

A	- Amber	4	Waterproof
G	- Green		under pressure
R	- Red	8	Splashproof

#### NOTE:

\* For Voltage/Current Specs, see page A-1.  
Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER



# Brilliance by design

## Panel Mount, Non-Relampable LED, Water Resistant

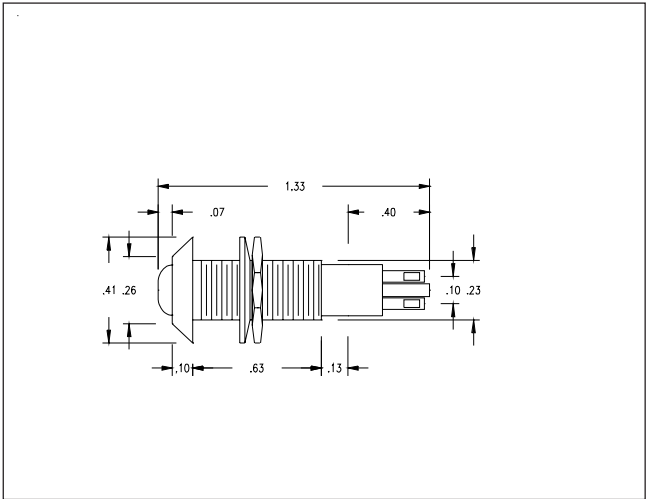
www.SloanLED.com

### MODEL 615

The 615 Model incorporates a high brightness T-1 3/4 size LED in a choice of colors. For panel mounting through a 6.2 mm (0.244") dia. hole. Black oxide or Nickel plated finish on a brass body for neat panel appearance. Non-relampable. Available in various degrees of waterproofness. No lens for maximum viewing angle. Supplied with or without internal resistor.

**FEATURES:**

- Panel mount in 6.2 mm (0.244") diameter hole
- Black oxide or Nickel plated finish
- Uses high brightness T-1 3/4 LED
- For operation from 5V., 12V., 24V. or 28V. sources, with optional built-in resistor
- No lens for maximum viewing angle.



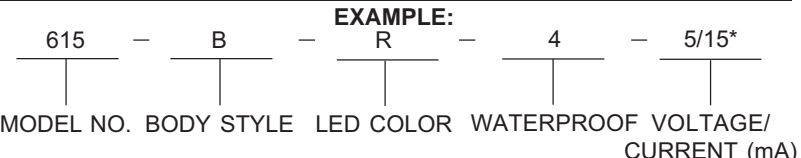
615

LED COLOR		WATERPROOF		BODY STYLE	
A	- Amber	4	Waterproof under pressure	B	- Black Oxide
G	- Green	8	Splashproof	C	- Nickel Plated
R	- Red	0	No waterproof requirement		

**NOTE:**

\* For Voltage/Current Specs, see page A-1.  
Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER



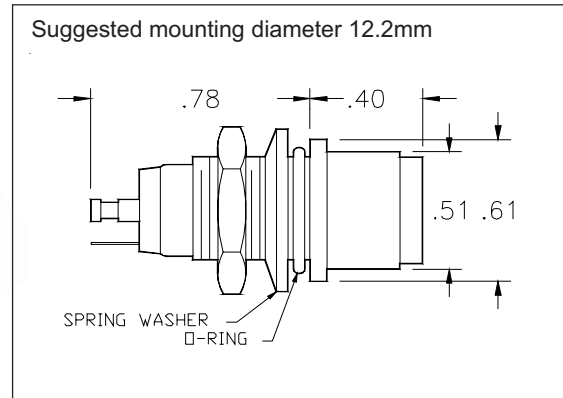
# Brilliance by design

## Panel Mount, 2-Terminal Relampable LED or Incandescent Indicator, Water Resistant

www.SloanLED.com

### MODEL 887

The 887 Model incorporates a relampable T-1 3/4 size LED with a variety of lens colors. For panel mounting through a 12.2mm (0.480") dia. hole. Black oxide or Nickel plate finish on a brass body for neat panel appearance. Relampable, splashproof version. Three lens styles available.



887

### FEATURES

- Panel mount in 12.2mm (0.480") diameter hole
- Black oxide finish on brass body
- Uses relampable T-1 3/4 LED or incandescent lamp
- For operation from 5V., 12V., 24V. or 28V. sources, with built-in resistor.
- Waterproof and Splashproof

LENS STYLE	LENS COLOR	WATERPROOF	BODY STYLE
Q - Clear Anodized Bezel	<i>Transparent</i>	4	B - Black Oxide
QB - Black Anodized Bezel	RTP - Red	8	C - Nickel Plate
M - Large tapered lens	**BTP - Blue		
	GTP - Green		
	ATP - Amber		
	CTP - Clear		
	<i>Translucent</i>		
	RTL - Red		
	**BTL - Blue		
	GTL - Green		
	ATL - Amber		
	WTL - White		

NOTE:

\* For Lamp Specs, see page A-3.

\*\* Not recommended for LED.

### HOW TO ORDER

EXAMPLE:



## Brilliance by design

# Low Profile, Splashproof, Front Mounting Indicator

www.SloanLED.com

### MODEL 253

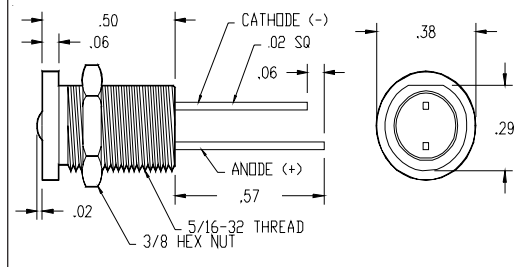
Same features as 252 but with O-ring for sealing panel from water & dust.

#### FEATURES

- Panel mount in 5/16" (0.312") diameter hole
- Black anodized aluminum body
- No lens for maximum viewing angle.



Suggested mounting diameter 5/16"



### HOW TO ORDER

Voltage	Model No.	Voltage	Model No.
2vdc*	253-2X	12vdc	253-12Y
5vdc	253-5X	24vdc	253-24Y
12vdc	253-12X	28vdc	253-28Y
24vdc	253-24X		
28vdc	253-28X		

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue  
 Where the 'Y' appears insert: 7-Pure White

Supplied with 6" wire leads

\*external resistor required

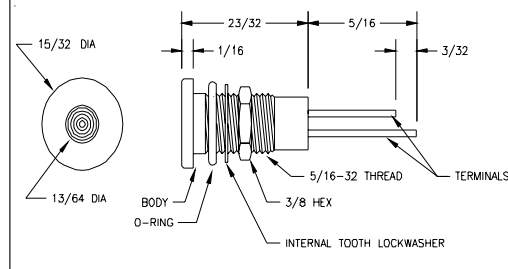
253 444

### MODEL 444

This Splashproof front mounting indicator is a low profile design with a bright LED, comes with or without a lens for neat panel appearance. Suggested 5/16" panel mounting hole. O-ring supplied to seal between the panel and indicator from dust and water. Supplied with a 6 inch wire lead. Available in a variety of colors and voltages (please specify when ordering).



Suggested mounting diameter 5/16"



#### FEATURES

- Splashproof
- Long Life LED
- Low power consumption
- Panel mount in 5/16" (0.312) diameter hole

NOTE:

\*For Voltage/Current Specs, see page A-1.

Omit voltage/current specification to order without built-in resistor.

### HOW TO ORDER

Voltage	Model No.	Voltage	Model No.
5vdc	444-5X	5vdc	444-5Y
12vdc	444-12X	12vdc	444-12Y
24vdc	444-24X	24vdc	444-24Y

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue

Where the 'Y' appears insert: 7-Pure White

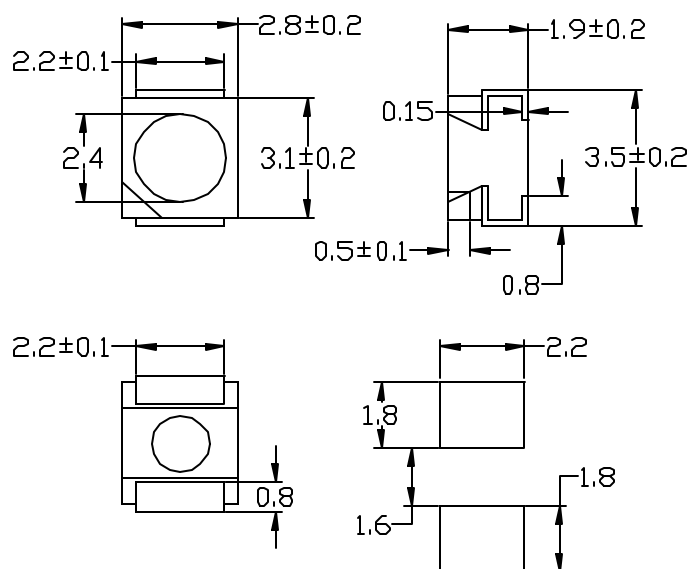
Supplied with 6" wire leads

4-10

# Brilliance by design

## Surface Mount LED Model 902 E Series

www.SloanLED.com



Ta=25°C

Reverse Voltage:	5 Volt
Reverse Current (Vr=5V):	10 uA
Operating Temperature Range:	-40°C - +80°C
Storage Temperature Range:	-40°C - +100°C
Lead Soldering Temperature:	260°C for 5 seconds (1.6mm(1/16inch) from body)

Ta=25°C

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Electo-Optical Characteristics			Absolute Max Ratings		
	Raw Material	Emitted Color				Vf(V)		IV (mcd)	Pd mW	If mA	If mA (Peak)
						Typ.	Max.				
SL902WCE	InGaN/YAG	Pure White	-	Water Clear	120	3.6	4.0	150	120	30	100
SL902BCE	GaN/SiC	Blue	430	Water Clear	120	3.8	4.5	45	120	30	100
SL902GCE	AlGaInP	Green	575	Water Clear	120	2.0	2.4	53	120	30	100
SL902RCE	AlGaInP	Red	635	Water Clear	120	2.0	2.4	180	120	30	100
SL902YCE	AlGaInP	Yellow	590	Water Clear	120	2.0	2.4	180	120	30	100
SL902ACE	AlGaInP	Amber	620	Water Clear	120	2.0	2.4	190	120	30	100

Notes:

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Protruded resin under flange is 1.5 mm(0.059") max.
4. Lead spacing is measured where the leads emerge from the package
5. Specifications are subject to change without notice

# Brilliance by design

## 3mm & 5mm Ultra Bright LEDs Model SL903 & SL905

www.SloanLED.com

Figure 1 3mm LED

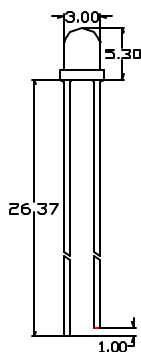


Figure 2 5mm LED

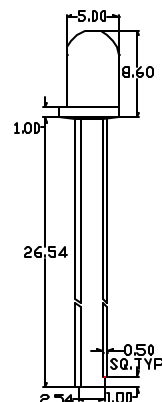


Figure 1

Reverse Voltage:	5 Volt
Reverse Current (Vr=5V):	50 $\mu$ A
Operating Temperature Range:	-20°C- +80°C
Storage Temperature Range:	-30°C- +100°C
Lead Soldering Temperature: (1.6mm (1/16inch) from body)	-260°C for 5 seconds

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Protruded resin under flange is 1.5 mm(0.059") max.
4. Lead spacing is measured where the leads emerge from the package
5. Specifications are subject to change without notice

Figure 1 3mm LED

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Electo-Optical Characteristics			Absolute Max Ratings		
	Raw Material	Emitted Color				Vf(V)		IV (mcd)	Pd mW	If mA	If mA (Peak)
						Typ.	Max.	Typ.			
SL903WCE	InGaN/YAG	Pure White	-	Water Clear	30	3.6	4.0	630	120	30	100
SL903BCE	GaN/SiC	Blue	430	Water Clear	40	3.8	4.5	100	120	30	100
SL903GCE	AlGaInP	Green	575	Water Clear	40	2.0	2.4	120	120	30	100
SL903RCE	AlGaInP	Red	635	Water Clear	40	2.0	2.4	350	120	30	100
SL903YCE	AlGaInP	Yellow	590	Water Clear	40	2.0	2.4	385	120	30	100
SL903ACE	AlGaInP	Amber	620	Water Clear	40	2.0	2.4	420	120	30	100

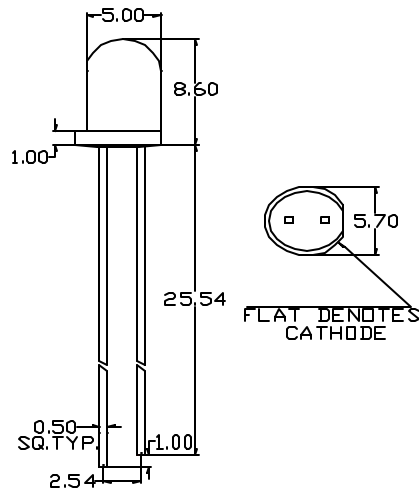
Figure 2 5mm LED

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Electo-Optical Characteristics			Absolute Max Ratings		
	Raw Material	Emitted Color				Vf(V)		IV (mcd)	Pd mW	If mA	If mA (Peak)
						Typ.	Max.	Typ.			
SL905WCE	InGaN/YAG	Pure White	-	Water Clear	45	3.6	4.0	1200	120	30	100
SL905WCE-13	InGaN/YAG	Pure White	-	Water Clear	13	3.6	4.0	3700	120	30	100
SL905WCE-20	InGaN/YAG	Pure White	-	Water Clear	20	3.6	4.0	3300	120	30	100
SL905BCE	GaN/SiC	Blue	430	Water Clear	20	3.8	4.5	400	120	30	100
SL905GCE	AlGaInP	Green	575	Water Clear	20	2.0	2.4	2200	120	30	100
SL905RCE	AlGaInP	Red	635	Water Clear	13	2.0	2.4	7300	120	30	100
SL905YCE	AlGaInP	Yellow	590	Water Clear	13	2.0	2.4	8900	120	30	100
SL905ACE	AlGaInP	Amber	620	Water Clear	13	2.0	2.4	9900	120	30	100

## Brilliance by design

### 5mm Flashing LED Model 915

www.SloanLED.com



Ta=25<sup>0</sup> C

Reverse Voltage:	5 Volt
Reverse Current (Vr=5V):	10 uA
Operating Temperature Range:	-40 <sup>0</sup> C - +80 <sup>0</sup> C
Storage Temperature Range:	-40 <sup>0</sup> C - +100 <sup>0</sup> C
Lead Soldering Temperature:	260 <sup>0</sup> C for 5 seconds (1.6mm(1/16inch) from body)

Ta=25<sup>0</sup> C

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Peak Current		Pulse Rate (Hz) VDD=5V			If mA	Iv (mcd) Typ
	Raw Material	Emitted Color				Typ	Max	Min	Typ	Max		
SL915RD	GaP	Red	700	Red Diffused	60	10	30	1.8	2.4	3.0	10	5.0
SL915OD	GaAsP/GaP	Red	635	Red Diffused	60	15	40	1.8	2.4	3.0	20	20.0
SL915GD	GaP	Green	565	Green Diffused	60	15	40	1.8	2.4	3.0	20	15.0
SL915YD	GaAsP/GaP	Yellow	585	Yellow Diffused	60	15	40	1.8	2.4	3.0	20	20.0
SL915RDH	GaAlAs	Red	660	Red Diffused	60	15	40	1.8	2.4	3.0	20	200
SL915RDV	GaAlAs	Red	660	Red Diffused	60	15	40	1.8	2.4	3.0	20	300
SL915RDS	GaAlAs	Red	660	Red Diffused	60	15	40	1.8	2.4	3.0	20	500

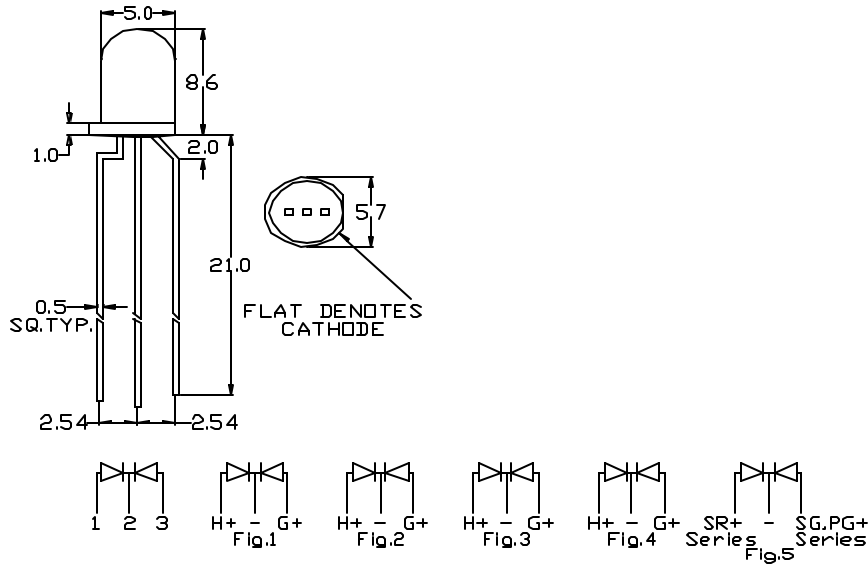
Notes:

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Protruded resin under flange is 1.5 mm(0.059") max.
4. Lead spacing is measured where the leads emerge from the package
5. Specifications are subject to change without notice

# Brilliance by design

## 5mm LED Multi-Color LED Model 925

www.SloanLED.com



Contact Factory for information regarding 3mm Multi-Color LEDs

Ta=25°C

Part No.	Chip		Wave Length	Lens Color	View Angel (deg)	Electro-Optical Characteristics						Absolute Max Ratings		
	Raw Material	Emitted Color				Vf(V)			Iv (mcd)			Pd mW	If mA	If mA (Peak)
						Min.	Typ.	Max.	Min.	Typ.	nm			
SL925OGD	GaAsP/GaP	Hi-effi. Red	635	White	60	1.7	2.1	2.8	8.0	20.0	45	100	30	160
	GaP	Green	565	Diffused		1.7	2.1	2.8	5.0	15.0	30	100	30	160
SL925OYD	GaAsP/GaP	Hi-effi. Red	635	White	60	1.7	2.1	2.8	5.0	15.0	30	100	30	160
	GaAsP/GaP	Yellow	585	Diffused		1.7	2	2.8	8.0	20.0	45	100	30	160
SL925GYD	GaP	Green	565	White	60	1.7	2.1	2.8	5.0	15.0	30	100	30	160
	GaAsP/GaP	Yellow	585	Diffused		1.7	2.1	2.8	5.0	15.0	30	100	30	160
SL925RSGHD	GaAlAs	Super Red	660	White	60	1.6	1.8	2.1	50.0	150	20	60	20	160
	GaP	Green	565	Diffused		1.7	2.1	2.8	20.0	50	30	100	30	160
SL925OGC	GaAsP/GaP	Hi-effi. Red	635	Water	30	1.7	2	2.8	20.0	50	45	100	30	160
	GaP	Green	565	Clear		1.7	2.1	2.8	15.0	30	30	100	30	160
SL925OYC	GaAsP/GaP	Hi-effi. Red	635	Water	30	1.7	2	2.8	20.0	50	45	100	30	160
	GaAsP/GaP	Yellow	585	Clear		1.7	2.1	2.8	15.0	30	30	100	30	160
SL925GYC	GaP	Green	565	Water	30	1.7	2.1	2.8	15.0	30	30	100	30	160
	GaAsP/GaP	Yellow	585	Clear		1.7	2.1	2.8	15.0	30	30	100	30	160
SL925RSGC	GaAlAs	Super Red	660	Water	30	1.6	1.8	2.1	300	500	20	60	20	160
	GaP	Green	565	Clear		1.7	2.1	2.8	50	150	30	100	30	160

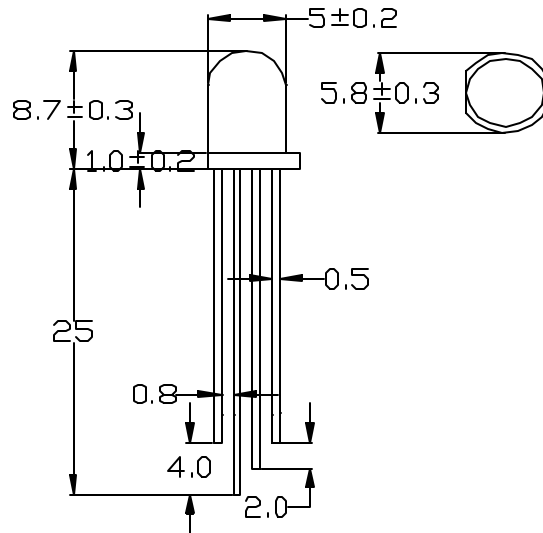
Notes:

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Protruded resin under flange is 1.5mm(0.59") max.
4. Specifications are subject to change without notice

**Brilliance by design**

**5mm Full Color LED  
Model 995**

[www.SloanLED.com](http://www.SloanLED.com)



Ta=25°C

Reverse Voltage:	5 Volt (Red-4 Volt)	
Reverse Current (Vr=5V):	10 uA	
Operating Temperature Range:	Red	-40°C - +85°C
	G & B	-20°C - +800 C
Storage Temperature Range:	Red	-40°C - +85°C
	G & B	-30°C - +100°C
Lead Soldering Temperature: (1.6mm(1/16inch) from body)	260°C for 3 seconds	

Ta=25°C

Part No.	Emitted Color	Wave Length	View Angle	Electro-Optical Characteristi		Absolute Maximum Ratings		
				Vf(V) Typ.	Iv (mcd) Typ.	Pd * mW	If mA	If (Peak)
SL995RBCU	Red	627	15	2.0	1200	120	50	200
	Green	517	15	3.5	3700	120	30	100
	Blue	472	15	3.5	700	120	30	100

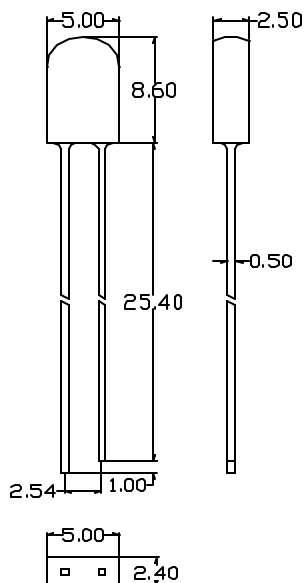
Notes:

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Value for one LED device (single color). Total value should be within the absolute maximum rating when illuminating more than two devices (full colors).\*
4. Specifications are subject to change without notice

## Brilliance by design

### 5mm Tombstone LED Model 907

www.SloanLED.com



Ta=25<sup>o</sup> C

Reverse Voltage:	5 Volt
Reverse Current (Vr=5V):	10 uA
Operating Temperature Range:	-40 <sup>o</sup> C - +80 <sup>o</sup> C
Storage Temperature Range:	-40 <sup>o</sup> C - +100 <sup>o</sup> C
Lead Soldering Temperature:	260 <sup>o</sup> C for 5 seconds (1.6mm(1/16inch) from body)

Ta=25<sup>o</sup> C

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Electo-Optical Characteristics						Absolute Max Ratings		
	Raw Material	Emitted Color				Vf(V)		If mA	Iv (mcd)		Pd mW	If mA	If mA (Peak)	
						Typ.	Max.		Min.	Typ.				
SL907GD	GaP	Green	565	Color Diffused	100	2.1	2.8	20	3.0	12.5	100	30	160	
SL907YD	GaAsP/Gap	Yellow	585	Color Diffused	100	2.1	2.8	20	3.0	12.5	100	30	160	
SL907AD	GaAsP/Gap	Amber	585	Color Diffused	100	2.1	2.8	20	3.0	12.5	100	30	160	
SL907RD	GaP	Red	700	Color Diffused	100	2.1	2.8	10	0.8	30.0	45	15	50	

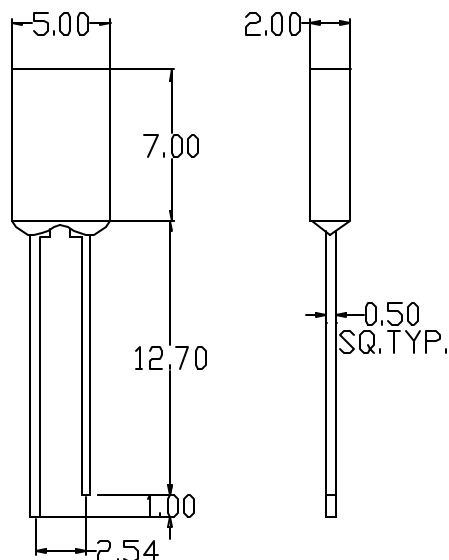
Notes:

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Protruded resin under flange is 1.5 mm(0.059") max.
4. Lead spacing is measured where the leads emerge from the package
5. Specifications are subject to change without notice

# Brilliance by design

## 5mm Rectangular LED Model 917

www.SloanLED.com



Ta=25°C

Reverse Voltage:	5 Volt
Reverse Current (Vr=5V):	10 µA
Operating Temperature Range:	-40°C - +80°C
Storage Temperature Range:	-40°C - +100°C
Lead Soldering Temperature:	260°C for 5 seconds (1.6mm(1/16inch) from body)

Ta=25°C

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Electo-Optical Characteristics					Absolute Max Ratings		
	Raw Material	Emitted Color				Vf(V)		If mA	Iv (mcd)		Pd mW	If mA	If mA (Peak)
						Typ.	Max.		Min.	Typ.			
SL917RD	GaP	Red	700	Color Diffused	150	2.1	2.8	10	0.8	1.8	45	15	50
SL917RDH	GaAsP/GaP	Red	635	Color Diffused	150	2.0	2.8	20	1.8	5.0	100	30	160
SL917RDV	GaAlAs	Red	660	Color Diffused	150	1.8	2.1	20	5.0	15.0	60	20	160
SL917RDS	GaAlAs	Red	660	Color Diffused	150	1.8	2.1	20	15.0	45.0	60	20	160
SL917RDU	GaAlAs	Red	660	Color Diffused	150	1.8	2.1	20	45.0	75.0	60	20	160
SL917GD	GaP	Green	565	Color Diffused	150	2.1	2.8	20	1.8	4.5	100	30	160
SL917OD	GaAsP/GaP	Orange	635	Color Diffused	150	2.0	2.8	20	1.8	5.0	100	30	160
SL917AD	GaAsP/GaP	Amber	585	Color Diffused	150	2.1	2.8	20	1.8	4.5	100	30	160
SL917YD	GaAsP/GaP	Yellow	585	Color Diffused	150	2.1	2.8	20	1.8	4.5	100	30	160

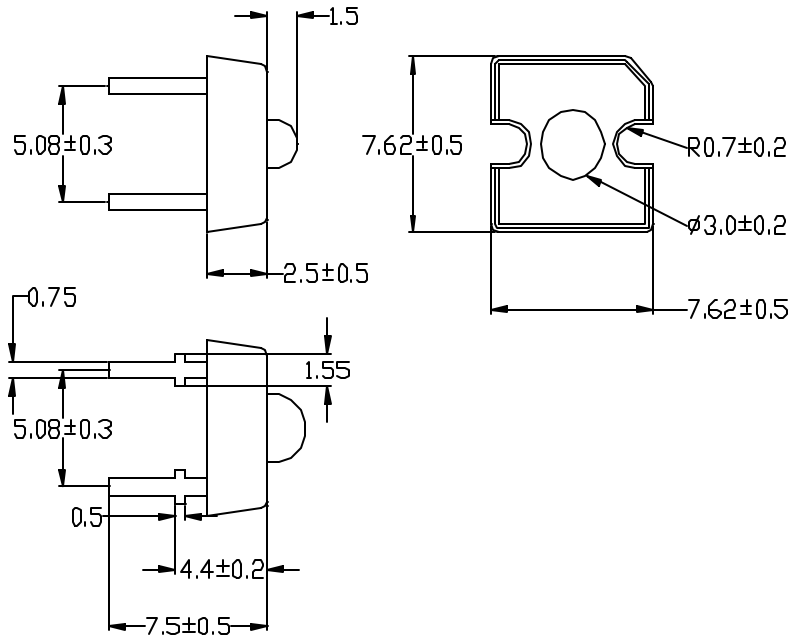
Notes:

1. All Dimensions are in millimeters.
2. Tolerance is +0.25mm(0.10") unless otherwise specified.
3. Protruded resin under flange is 1.5 mm(0.059") max.
4. Lead spacing is measured where the leads emerge from the package
5. Specifications are subject to change without notice

# Brilliance by design

## High Flux LED Model 600

www.SloanLED.com



Reverse Voltage:	5 Volt
Reverse Current (Vr=5V):	10A
Operating Temperature Range:	-40° C - +80° C
Storage Temperature Range:	-40° C - +100° C
Lead Soldering Temperature:	260° C for
(1.6mm(1/16inch) from body)	5 seconds

Ta=25° C

Part No.	Chip		Wave Length	Lens Color	View Angle (deg)	Electro-Optical Characteristics				
	Raw	Emitted				Vf (V)		If	Iv (mIm)	
	Material	Color				Typ.	Max.	mA	Min	Typ.
SL600WCE	GaN	Pure White	-	Water Clear	70	3.6	4.0	20	250	500
SL600RCE	AlGaInP	Super Red	639	Water Clear	70	2.31	2.9	70	500	1310
SL600ACE	AlGaInP	Super Amber	621	Water Clear	70	2.31	2.9	70	500	1310
SL600YCE	AlGaInP	Super Yellow	591	Water Clear	70	2.31	2.9	70	500	1310
SL600GCE	GaN	Super Green	525	Water Clear	70	3.6	4.0	20	250	400
SL600BCE	GaN	Super Blue	475	Water Clear	60	3.6	4.0	20	250	400

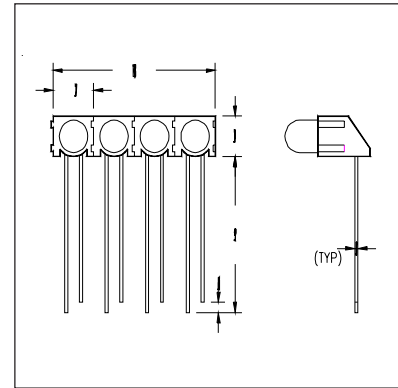
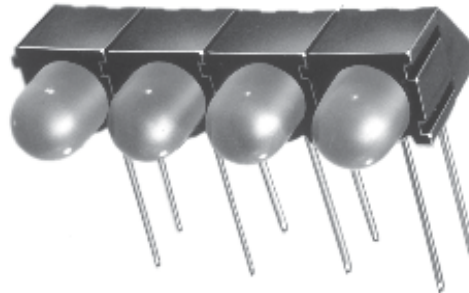
# Brilliance by design

## Horizontal Mount LED/ T-1 3/4

www.SloanLED.com

### MODEL 211

Model 211 incorporates a T-1 3/4 LED and is available as individuals or in an array. Each array offers flexibility in unlimited number of LED color and tints with unlimited number of LEDs. Leads are 90° to LED, for horizontal viewing angle. LED centerline is 0.125" above board surface.



#### FEATURES:

- Printed Circuit Board Horizontal Mount LED
- Choice of diffused, tinted or clear LED
- T-1 3/4 size LED
- LED center is 0.125" above the board
- Just slides together to form an array



211

LED COLOR	LED TINT
-----------	----------

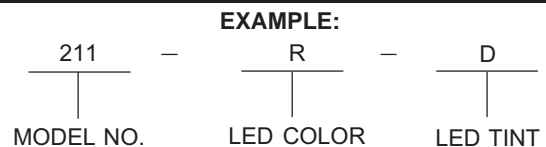
A - Amber	D - Diffused
G - Green	CT - Clear Tinted
R - Red	WC - Water Clear

#### NOTE:

To order an array, please list each LED color & tint

For example an array with two LED's and both are Water Clear.  
211 - AWC - RWC

### HOW TO ORDER



**6-1**

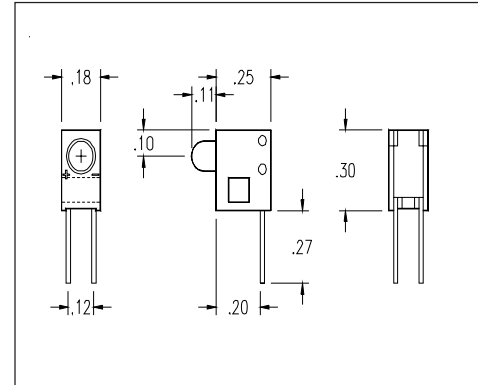
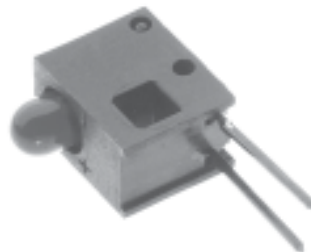
# Brilliance by design

## Horizontal Mount LED

www.SloanLED.com

### MODEL 110

Model 110 incorporates a T-1 LED and is available as individuals or in an array. Each array offers flexibility in LED colors and tints with unlimited number of LEDs. Lead are 90° to LED, for horizontal viewing angle. LED centerline is 0.200" above the board surface.



**FEATURES:**

- Printed Circuit Board Horizontal Mount LED
- Choice of diffused, tinted or clear LED
- T-1 size LED
- LED center is 0.200" above the board
- Just slides together to form an array

110

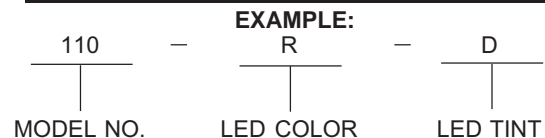
LED COLOR	LED TINT
-----------	----------

A	- Amber	D	- Diffused
G	- Green	CT	- Clear Tinted
R	- Red	WC	- Water Clear
Y	- Yellow		

**NOTE:**  
To order an array, please list each LED color & tint

For example an array with three LED's, colors are Amber, Red and Green, and all are diffused:  
110 - RD - AD - GD

### HOW TO ORDER



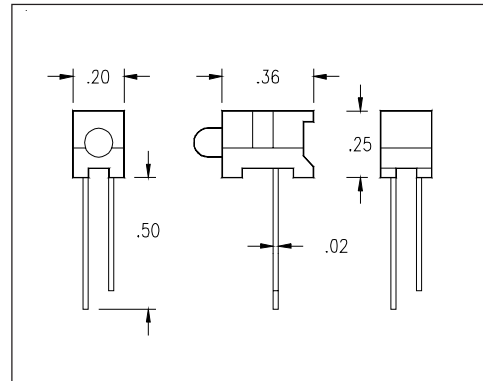
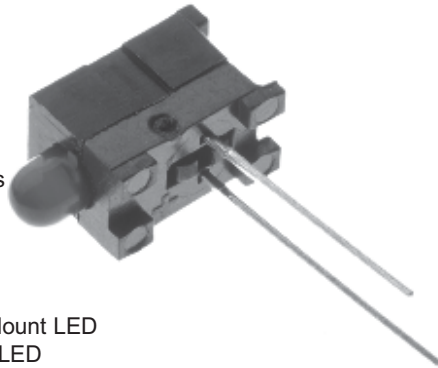
# Brilliance by design

## Horizontal Mount LED

www.SloanLED.com

### MODEL 171

Model 171 incorporates a T-1 LED and is available as individuals or in an array. Each array offers flexibility in LED colors and tints with unlimited number of LEDs. Leads are 90° to LED, for horizontal viewing angle. LED centerline is 0.125" above board surface.



**FEATURES:**

- Printed Circuit Board Horizontal Mount LED
- Choice of diffused, tinted or clear LED
- T-1 size LED
- LED center is 0.125" above the board
- Just slides together to form an array

171

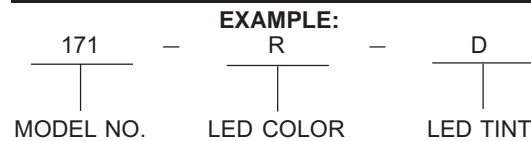
LED COLOR	LED TINT
-----------	----------

A - Amber	D - Diffused
G - Green	CT - Clear Tinted
R - Red	WC - Water Clear
Y - Yellow	

**NOTE:**  
To order an array, please list each LED color & tint

For example an array with three LED's, colors are Amber, Red and Green, and all are diffused:  
171 - RD - AD - GD

### HOW TO ORDER



**6-3**

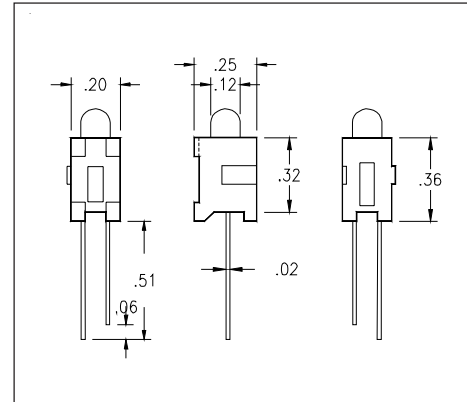
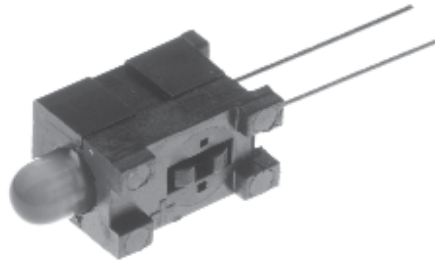
# Brilliance by design

## Vertical Mount LED

www.SloanLED.com

### MODEL 172

Model 172 incorporates a T-1 LED and is available as individuals or in an array. Each array offers flexibility in LED colors and tints with unlimited number of LEDs. Leads attach to circuit to provide a vertical viewing angle. LED centerline is 0.350" above board surface.



#### FEATURES:

- Printed Circuit Board Vertical Mount LED
- Choice of diffused, tinted or clear LED
- T-1 size LED
- LED center is 0.350" above the board
- Just slides together to form an array

172

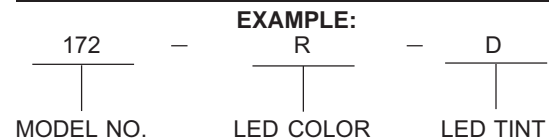
LED COLOR	LED TINT
-----------	----------

- |            |                   |
|------------|-------------------|
| A - Amber  | D - Diffused      |
| G - Green  | CT - Clear Tinted |
| R - Red    | WC - Water Clear  |
| Y - Yellow |                   |

NOTE:  
To order an array, please list each LED color & tint

For example an array with three LED's, colors are Amber, Red and Green, and all are diffused:  
172 - RD - AD - GD

### HOW TO ORDER



**6-4**

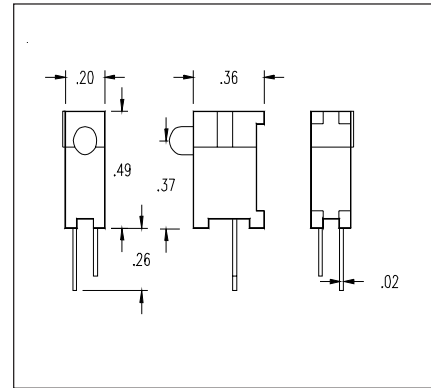
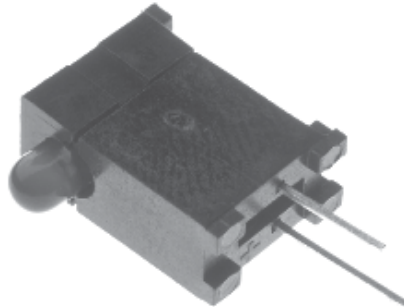
# Brilliance by design

## Horizontal Mount LED

www.SloanLED.com

### MODEL 173

Model 173 incorporates a T-1 LED and is available as individuals or in an array. Each array offers flexibility in LED colors and tints with unlimited number of LEDs. Leads are 90° to LED, for horizontal viewing angle. LED centerline is 0.375" above board surface.



**FEATURES:**

- Printed Circuit Board Verticle Mount LED
- Choice of diffused, tinted or water clear LED
- T-1 size LED
- LED center is 0.375" above the board
- Just slides together to form an array

173

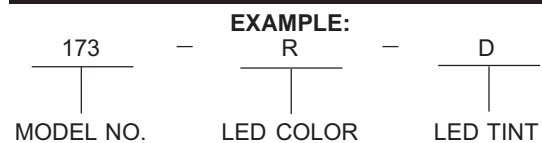
LED COLOR	LED TINT
-----------	----------

A - Amber	D - Diffused
G - Green	CT - Clear Tinted
R - Red	WC - Water Clear
Y - Yellow	

**NOTE:**  
To order an array, please list each LED color & tint

For example an array with three LED's, colors are Amber, Red and Green, and all are diffused:  
173 - RD - AD - GD

### HOW TO ORDER



**6-5**

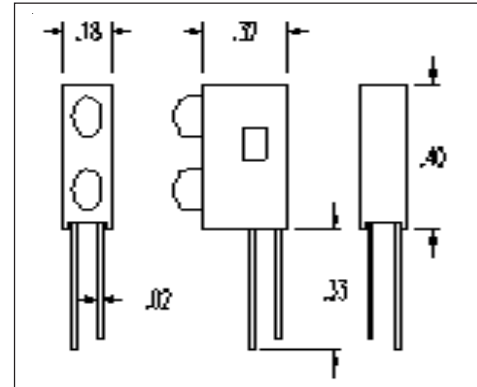
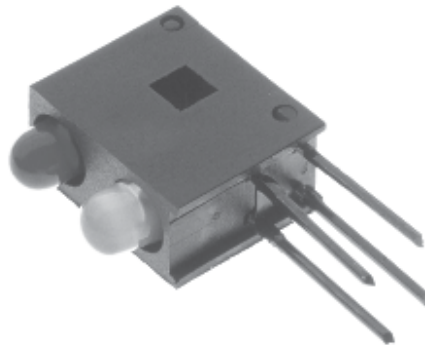
# Brilliance by design

## Horizontal Mount/Bi-level LED/ T-1

www.SloanLED.com

### MODEL 120

Model 120 Bi-level incorporates two T-1 LED's and is available as individuals or in an array. Either top or bottom LED may be any of the color and tint styles. Each array offers flexibility in unlimited number of Bi-level LEDs. Leads are 90° to LED, for horizontal viewing angle. Bottom LED centerline is 0.125" above board surface and the top LED is 0.250".



**FEATURES:**

- Printed Circuit Board Verticle Mount LED
- Choice of diffused, tinted or clear LED
- T-1 size LED
- Bottom LED center is 0.125" above the board
- Top LED center is 0.250" above the board
- Just slides together to form an array

120

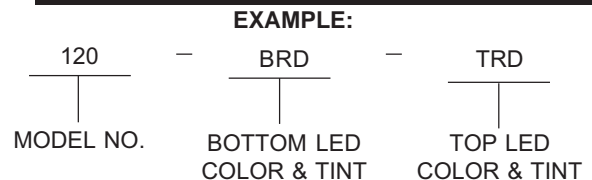
LED COLOR	LED TINT
-----------	----------

A - Amber	D - Diffused
G - Green	CT - Clear Tinted
R - Red	WC - Water Clear
Y - Yellow	

NOTE:  
To order an array, please list each LED color & tint

For example an array with two Bi-level LED's,  
120 - BRD - TAD - BGD - TYD

### HOW TO ORDER



**6-6**

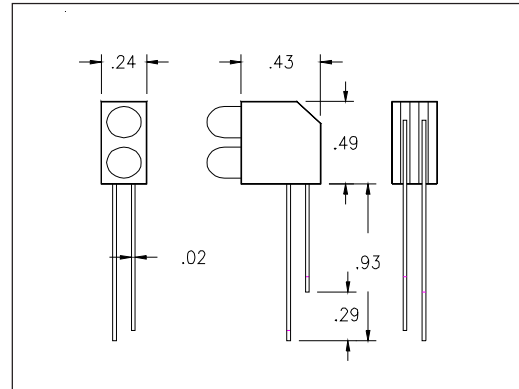
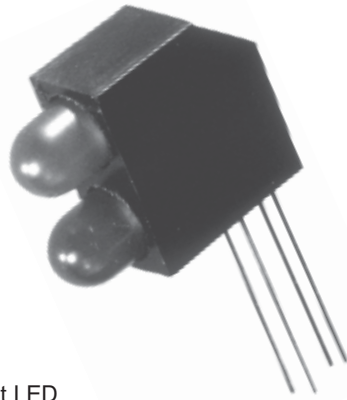
# Brilliance by design

## Horizontal Mount/Bi-level LED/ T-1

www.SloanLED.com

### MODEL 220

Model 220 Bi-level incorporates two T-1 3/4 LED's and is available as individuals or in an array. Either top or bottom LED may be any of the color and tint styles. Each array offers flexibility in unlimited number of Bi-level LEDs. Leads are 90° to LED, for horizontal viewing angle. Bottom LED centerline is 0.125" above board surface and the top LED is 0.375".



**FEATURES:**

- Printed Circuit Board Vertical Mount LED
- Choice of diffused, tinted or clear LED
- T-1 3/4 size LED
- Bottom LED center is 0.125" above the board
- Top LED center is 0.375" above the board
- Just slides together to form an array

220

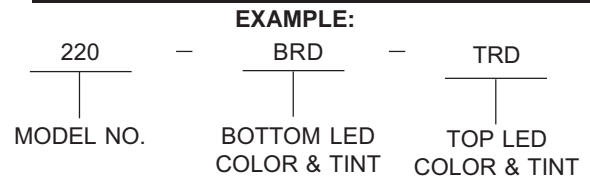
LED COLOR	LED TINT
-----------	----------

A - Amber	D - Diffused
G - Green	CT - Clear Tinted
R - Red	WC - Water Clear
Y - Yellow	

**NOTE:**  
To order an array, please list each LED color & tint

For example an array with two Bi-level LED's,  
220 - BRD - TAD - BGD - TYD

### HOW TO ORDER



**6-7**

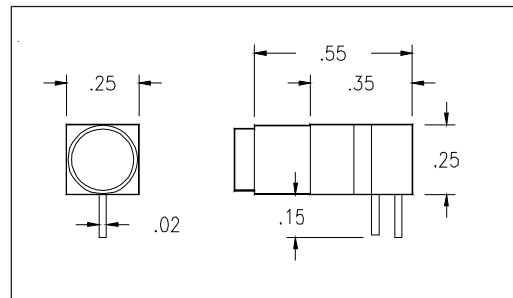
# Brilliance by design

## Circuit Board Mount Front Relampable - Incandescent or LED

www.SloanLED.com

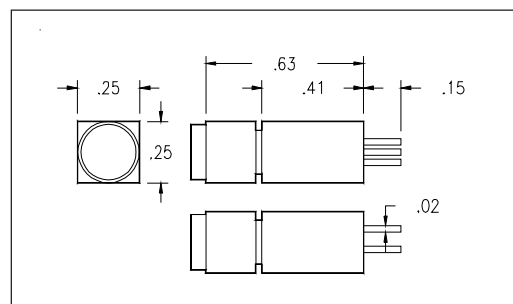
### MODEL 101

Designed specifically for printed circuit board mounting. Terminals insert directly into the board and flow solder into the circuit. Uses any T-1 midget flanged based lamp. Clean, uncluttered design appearance. Suitable for hot stamping.







### MODEL 111

Same features as 101 Model but unit mounts perpendicular to surface of printed circuit board.



See page A-1 for hot stamping particulars.

### LENS STYLES

Clear anodized bezel allows 180½ visibility	Q	
Same as Q lens except with black anodized bezel.	QB	
Clear anodized bezel prevents sidelight emission.	DSC	
Same as DSC lens except with black anodized bezel.	DS	

### LENS COLORS

- LEXAN**  
*Transparent*  
 RTP - Red  
 \*BTP - Blue  
 GTP - Green  
 ATP - Amber  
 CTP - Clear

- Translucent*  
 RTL - Red  
 \*BTL - Blue  
 GTL - Green  
 ATL - Amber  
 WTL - White

\*Not recommended for LED.  
 \*\* For Lamp Specs, see page A-3  
 See model 311 on page 7-4 for LED  
 \*\*\* Standard Body Style

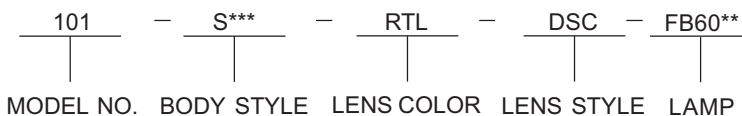
### MATERIAL

- BODY**  
 General Purpose Phenolic  
 Nylon MIL-M-20693
- LENS**  
 Lexan LP-393  
 Aluminum 2024-T4  
 Anodize MIL-A-8625  
 Brass SAE 72  
 Nickel Plate per QO-N-290
- TERMINALS**  
 Brass SAE 72
- PINS**  
 Tin Plate MIL-T-20727  
 Beryllium Copper

101 111

### HOW TO ORDER

#### EXAMPLE:



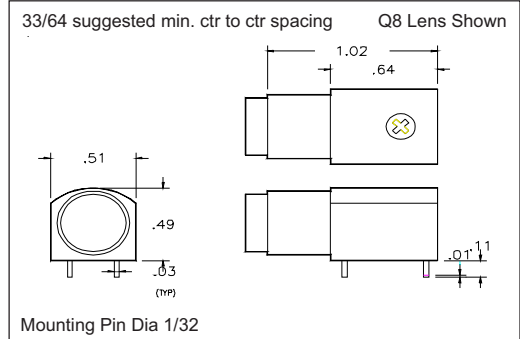
# Brilliance by design

## Circuit Board Mount Front Relampable - Incandescent or LED

www.SloanLED.com

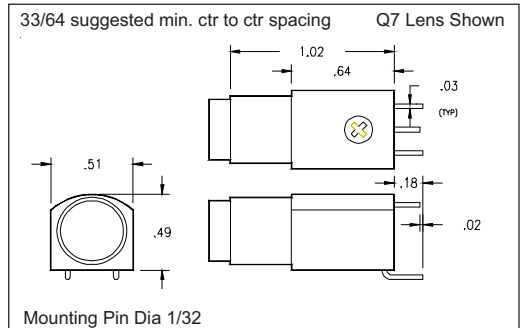
### MODEL 864

These lights are designed specifically for printed circuit board mounting. The terminals may be directly inserted into the board and flow-soldered into place. The indicator light can be used either with front panel, (when lens protrudes through the clearance hole), or without front panel. The lens is secured into the body by four bayonets in J slots. Uses a T1 3/4 midget flange based lamp.







### MODEL 874

Same features as Model 864, but unit mounts perpendicular to surface of printed circuit board.



LENS STYLES	LENS COLORS	MATERIAL
-------------	-------------	----------

Clear anodized bezel allows 180½ visibility	Q	
Same as Q lens except with black anodized bezel.	QB	
Clear anodized bezel prevents sidelight emission.	DSC	
Same as DSC lens except with black anodized bezel.	DS	

**LEXAN**

*Transparent*

- RTP - Red
- \*BTP - Blue
- GTP - Green
- ATP - Amber
- CTP - Clear

*Translucent*

- RTL - Red
- WTL - White
- \*BTL - Blue
- GTL - Green
- ATL - Amber

\*Not recommended for LED.

**BODY**

- Brass SAE 72
- General Purpose Phenolic
- Linen Based Phenolic
- MIL-P-15035
- Nickel Plate QQ-N-290

**LENS**

- Lexan LP-393
- Brass SAE 72
- Aluminum 2024-T4
- Nickel Plate QQ-N-290
- Anodize MIL-A-8625

**TERMINALS**

- Brass SAE 72
- Tin Plate MIL-T-10727
- Phosphor Bronze
- QQ-W-321

864 874

Both Series use a T-1 3/4 midget flanged based incandescent bulb or light emitting diode. For Lamp Specs., see pages A-4, for LED see model 311 on page 7-4.

Lenses are available in four basic styles and a variety of colors, in transparent or translucent lexan. Designed to present a clean, uncluttered appearance, these lenses may be hot-stamped on the front surface. (See page A-1 for hot stamping particulars).

### HOW TO ORDER

**EXAMPLE:**

864	-	S	-	DSC	-	RTP	-	327**
MODEL NO.		BODY STYLE		LENS STYLE		LENS COLOR		LAMP

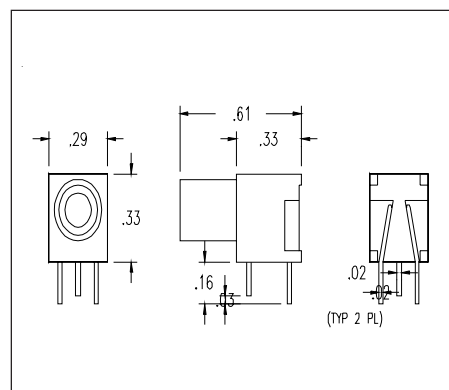
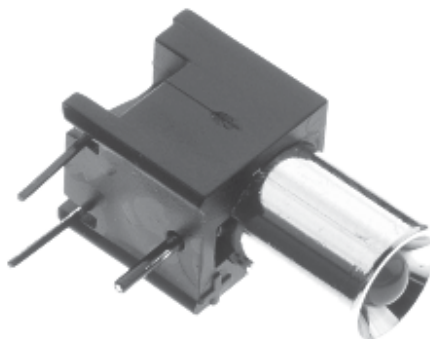
## Brilliance by design

### PCB Horizontal Mount T-1 LED with Locating Pin

[www.SloanLED.com](http://www.SloanLED.com)

#### MODEL 141

The 141 Model incorporates a T-1 size red, amber, or green LED with a choice of tints. Terminals for attachment to printed circuit board with horizontal orientation. Chrome plated bezel for neat panel appearance. With location pin for proper alignment.



#### FEATURES:

- Printed Circuit Board Horizontal Mount LED
- Choice of diffused or non-diffused LEDs
- Uses T-1 size LED
- Has chrome plated bezel for neat panel appearance
- Has front locating pin for proper alignment
- LED is positioned 0.190" above the board.

141

#### LED COLOR

A - Amber  
G - Green  
R - Red

#### LED TINT

D - Diffused  
CT - Clear Tinted  
(Tinted Transparent)  
WC - Water Clear

(Diffused is standard unless requested otherwise)

#### HOW TO ORDER

##### EXAMPLE:

141 - R - D  
 MODEL NO. LED COLOR LED TINT

**6-10**

Lamp Type	Base Type	Designed Voltage	Sloan Model No.	Page No.
11	Sub-Miniature Wedge	2.5*	513	7-7
13	Miniature Screw	3.7	159	7-2
14	Miniature Screw	2.5*	159	7-2
17	Sub-Miniature Wedge	28	513	7-7
18	Sub-Miniature Wedge	14	513	7-7
24MB	Miniature Bayonet	24	197	7-2
27	Miniature Screw	5	159	7-2
28MB	Miniature Bayonet	28	197	7-2
31	Miniature Screw	6.1	159	7-2
37	Sub-Miniature Wedge	14	513	7-7
40	Miniature Screw	6.3	159	7-2
44	Miniature Bayonet	6.3	197	7-2
46	Miniature Screw	6.3	159	7-2
47	Miniature Bayonet	6.3	197	7-2
48	Miniature Screw	2*	159	7-2
50	Miniature Screw	7.5	159	7-2
52	Miniature Screw	14.4	159	7-2
53	Miniature Bayonet	14.4	197	7-2
56	Sub-Miniature Wedge	5	513	7-7
60RB	Miniature Bayonet	60	197	7-2
73	Sub-Miniature Wedge	14	513	7-7
74	Sub-Miniature Wedge	14	513	7-7
79	Sub-Miniature Wedge	6	513	7-7
84	Sub-Miniature Wedge	6.3	513	7-7
85	Sub-Miniature Wedge	28	513	7-7
86	Sub-Miniature Wedge	6.3	513	7-7
120MB	Miniature Bayonet	120	197	7-2
194	Miniature Bayonet	14	516	7-7
222	Miniature Screw	2.25*	159	7-2
245	Miniature Screw	2.5	159	7-2
256	Miniature Bayonet	14	197	7-2
313	Miniature Bayonet	28	197	7-2
316	Miniature Bayonet	6	197	7-2
327	Midget Flange	28	510	7-4
328	Midget Flange	6	510	7-4
330	Midget Flange	14	510	7-4
334	Midget Groove	28	522	7-6
335	Midget Screw	28	532	7-3
336	Midget Groove	14	522	7-6
337	Midget Groove	6	522	7-6
338	Midget Flange	2.7*	510	7-4
342	Midget Screw	6	532	7-3
345	Midget Flange	6	510	7-4
349	Midget Flange	6.3	510	7-4
350	Midget Flange	6.3	510	7-4
356	Miniature Bayonet	28	197	7-2
363	Miniature Bayonet	14	197	7-2
369	Midget Screw	28	532	7-3
370	Midget Flange	18	510	7-4
373	Midget Screw	14	532	7-3
376	Midget Flange	28	510	7-4
377	Midget Flange	6.3	510	7-4
378	Midget Screw	6.3	532	7-3
379	Midget Groove	6.3	532	7-3
380	Midget Flange	6.3	510	7-4
381	Midget Flange	6.3	510	7-4
382	Midget Flange	14	510	7-4
383	Midget Screw	14	532	7-3
385	Midget Flange	28	510	7-4
386	Midget Groove	14	522	7-6
387	Midget Flange	28	510	7-4
388	Midget Groove	28	522	7-6
394	Midget Flange	12	510	7-4
398	Midget Groove	6.3	522	7-6
399	Midget Screw	28	532	7-3
432	Miniature Screw	18	159	7-2
459	Midget Flange	22	510	7-4
509K	Miniature Screw	24	159	7-2

Lamp Type	Base Type	Designed Voltage	Sloan Model No.	Page No.
682	Sub-Midget Flange	5	311	7-4
685	Sub-Midget Flange	5	311	7-4
714	Sub-Midget Flange	5	311	7-4
718	Sub-Midget Flange	5	311	7-4
756	Miniature Bayonet	14	197	7-2
757	Miniature Bayonet	28	197	7-2
1099	Sub-Midget Flange	12	311	7-4
1445	Miniature Bayonet	14.4	197	7-2
1446	Miniature Screw	12	159	7-2
1447	Miniature Screw	18	159	7-2
1449	Miniature Screw	14	159	7-2
1450	Miniature Bayonet	24	197	7-2
1495	Miniature Bayonet	28	197	7-2
1768	Midget Screw	6	532	7-3
1775	Midget Screw	6.3	532	7-3
1813	Miniature Bayonet	14.4	197	7-2
1815	Miniature Bayonet	14	197	7-2
1816	Miniature Bayonet	13	197	7-2
1818	Miniature Bayonet	24	197	7-2
1819	Miniature Bayonet	28	197	7-2
1820	Miniature Bayonet	28	197	7-2
1829	Miniature Bayonet	28	197	7-2
1850	Miniature Bayonet	5	197	7-2
1855	Miniature Bayonet	6.3	197	7-2
1864	Miniature Bayonet	28	197	7-2
1866	Miniature Bayonet	6.3	197	7-2
1891	Miniature Bayonet	14	197	7-2
1892	Miniature Bayonet	14.4	197	7-2
1893	Miniature Bayonet	14	197	7-2
2341	Sub-Miniature Bi-Pin	24	541	7-6
3002	Sub-Miniature Bi-Pin	28	541	7-6
3007	Sub-Midget Flange	5	311	7-4
3020	Sub-Midget Flange	5	311	7-4
3024	Sub-Midget Flange	5	311	7-4
3044	Sub-Midget Flange	12	311	7-4
3071	Sub-Midget Flange	5	311	7-4
3149	Sub-Midget Flange	5	311	7-4
3150	Sub-Miniature Bi-Pin	5	541	7-6
6039	Midget Flange	5	510	7-4
6041	Midget Groove	5	522	7-6
6043	Midget Groove	5	522	7-6
7001	Midget Groove	5	522	7-6
7330	Sub-Miniature Bi-Pin	24	541	7-6
7327	Sub-Miniature Bi-Pin	24	541	7-6
7328	Sub-Miniature Bi-Pin	28	541	7-6
7330	Sub-Miniature Bi-Pin	6	541	7-6
7332	Sub-Miniature Bi-Pin	14	541	7-6
7333	Midget Flange	5	510	7-4
7335	Midget Flange	5	510	7-4
7341	Midget Flange	5	510	7-4
7349	Midget Flange	28	510	7-4
7361	Sub-Miniature Bi-Pin	6.3	541	7-6
7371	Sub-Miniature Bi-Pin	5	541	7-6
7373	Sub-Miniature Bi-Pin	12	541	7-6
7374	Sub-Miniature Bi-Pin	14	541	7-6
7376	Sub-Miniature Bi-Pin	24	541	7-6
7377	Sub-Miniature Bi-Pin	28	541	7-6
7380	Sub-Miniature Bi-Pin	6.3	541	7-6
7381	Sub-Miniature Bi-Pin	6.3	541	7-6
7382	Sub-Miniature Bi-Pin	6.3	541	7-6
7387	Sub-Miniature Bi-Pin	14	541	7-6
7876	Sub-Miniature Bi-Pin	28	541	7-6
7945	Sub-Miniature Bi-Pin	28	541	7-6
8362	Sub-Miniature Bi-Pin	6	541	7-6
8369	Midget Screw	14	532	7-3
8348	Midget Screw	28	532	7-3
8918	Midget Screw	28	532	7-3
	Midget Flange	14	510	7-4

Section 7

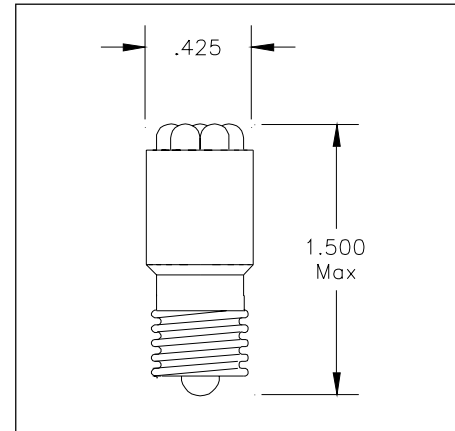
# Brilliance by design

## T 3 1/4 - LED Lamps Bayonet or Screw Base - Models 159 & 197

www.SloanLED.com

### MODEL 159

Miniature screw base incandescent replacement LED cluster for incandescent lamps. All models are dual polarity, which accommodate positive center, negative center and AC applications. This unit uses a cluster of high bright LEDs for maximum lumination at low power consumption.



#### FEATURES

- Long Life LED
- Available in all colors and voltages
- Ultra Bright Green, Blue and White come with single 5mm LED
- Direct incandescent replacement for: 27, 31, 40, 46, 50, 52, 432, 501, 1147, 509K, 1445, 1449

NOTE:

\*for voltage/current specs, see page 7-9

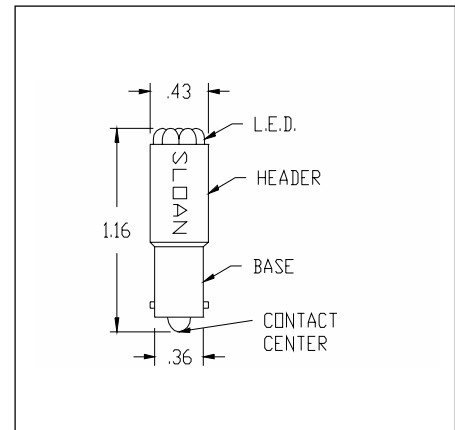
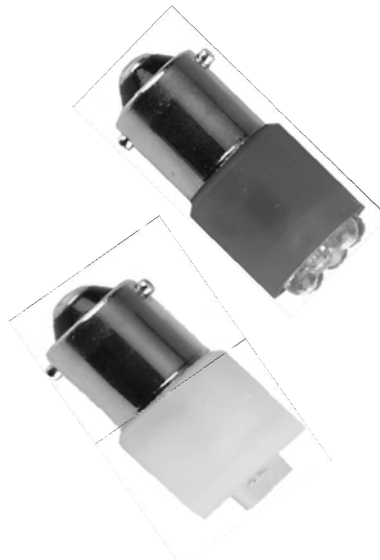
### HOW TO ORDER

Voltage	Model No.
5V	159-DP5X
12V	159-DP12X
24V	159-DP24X
28V	159-DP28X
48V	159-DP48X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

### MODEL 197

BA9 base incandescent replacement LED cluster for incandescent lamps. All models are dual polarity, which accommodate positive center, negative center and AC applications. This unit uses a cluster of high bright LEDs for maximum lumination at low power consumption.



159 197

#### FEATURES

- Long Life LED
- Available in all colors and voltages
- Ultra Bright Green, Blue and White come with single 5mm LED
- Direct replacement for: 24MB, 28MB, 44, 47, 313, 356, 756, 1813, 1818, 1819, 1820, 1821, 1829, 1862, 1864, 1866, 1891

### HOW TO ORDER

Voltage	Model No.
5V	197-DP5X
12V	197-DP12X
24V	197-DP24X
28V	197-DP28X
48V	197-DP48X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

NOTE:

\*for voltage/current specs, see page 7-9

# Brilliance by design

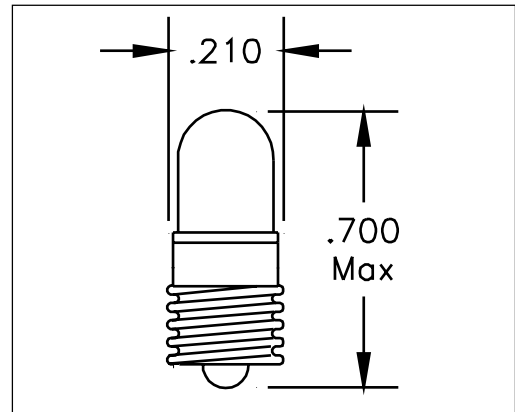
## LED Replacement for T1 3/4 Midget Screw Base Incandescent Lamps www.SloanLED.com

### MODEL 532

T1 3/4 midget screw base incandescent replacement LED utilizes the brightest LEDs.

#### FEATURES

- Available in all colors and voltages
- Long life LED
- Low voltage
- Direct replacement for: 335, 342, 369, 373, 378, 383, 399, 1768, 1775, 8362, 8369, 8384



532

### HOW TO ORDER

*External resistor required	<u>Voltage</u>	<u>Model No.</u>	Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White
	2vdc*	532-2X	
	5vdc	532-5X	
	6vdc	532-6X	
	14vdc	532-14X	
	28vdc	532-28X	

NOTE:  
\*\*for voltage/current specs, see page 7-9

# Brilliance by design

## LED Direct Replacement for Flange Base Incandescent Lamp Models 311 & 510

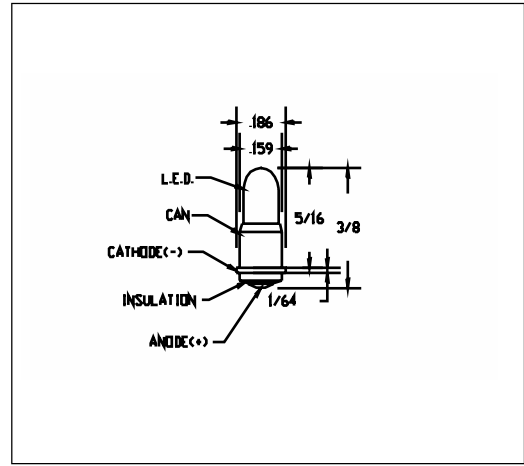
www.SloanLED.com

### MODEL 311

This T-1 based LED is designed to offer diode reliability as a replacement unit in T-1 hardware.

#### FEATURES

- Low power consumption
- Low heat generated
- Available in all colors and voltages
- Long life
- Direct replacement for: 32, 22, 679, 682, 685, 714, 718, 6180, 6839, 7229, 7230, 7231, 7233, 7236, 7238, 7250, 8022, 8605, 8112



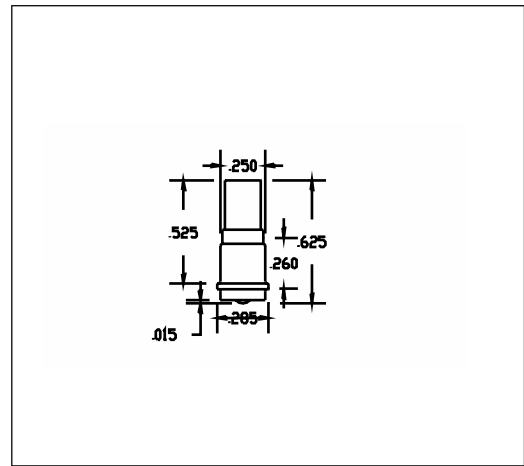
### HOW TO ORDER

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White	<u>Voltage</u>	<u>Model No.</u>	
	2vdc	311-2X	Red, Green, Yellow and Amber Only
	3vdc	311-3X	Ultra Green, Ultra Blue and White Only
	5vdc	311-5X	Red, Green, Yellow and Amber Only
	12vdc	311-12X	Red, Green, Yellow and Amber Only

NOTE:  
\*for voltage/current specs, see page 7-9

### MODEL 510

The 510 Model is an LED replacement for incandescent lamps in a variety of colors and voltages. Direct replacement for T-1 3/4 flange base incandescent lamps. Uses 6 chip LEDs. Nickel plated base. Can be supplied with or without built in current limiting resistor.



**311 510**

#### FEATURES

- For use in switches and indicators using T-1 3/4 flange base lamps
- Direct replacement for: 327, 328, 330, 332, 345, 349, 350, 356, 377, 380, 381, 382, 387, 394, 8918

### HOW TO ORDER

<u>Voltage</u>	<u>Model No.</u>	Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White
5vdc	510-5X	
6vdc	510-6X	
6.3vdc	510-6.03X	
12vdc	510-12X	
14vdc	510-14X	
24vdc	510-24X	
28vdc	510-28X	

NOTE:  
\*For voltage/current specs, see page 7-9

***Brilliance by design***

**S8 Model 460 Machine  
Signal Stack Light**

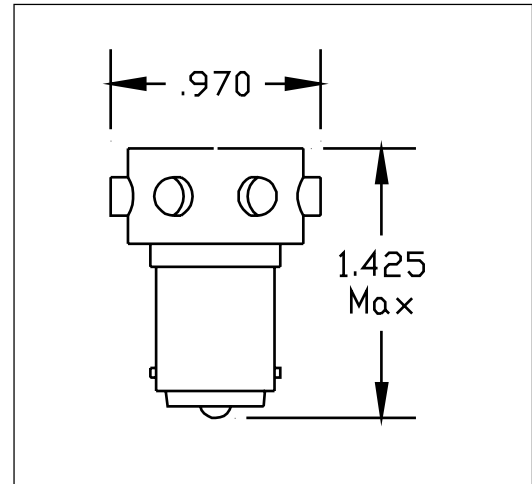
[www.SloanLED.com](http://www.SloanLED.com)

**MODEL 460**

Bayonet base LED stack light. 360 degree viewing angle. All models are dual polarity which accomodates positive center, negative center and AC applications.

**FEATURES**

- Low power consumption
- Long life
- Double contact bayonet base
- Versitile applications



460

**HOW TO ORDER**

<u>Voltage</u>	<u>Model No.</u>
24V	460-24X
28V	460-28X
60V	460-60X
120V	460-120X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

NOTE:  
\*for voltage/current specs, see page 7-9

7-5

# Brilliance by design

## T-1 3/4 Groove & Bi-Pin Based LED Lamps

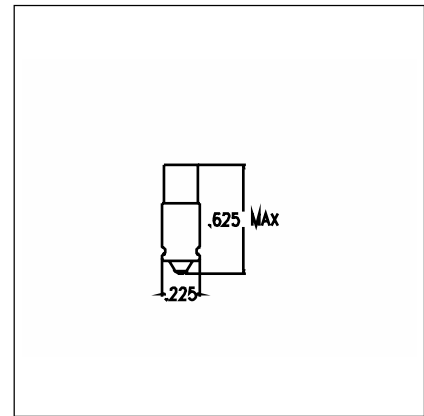
www.SloanLED.com

### MODEL 522

T-1 3/4 Midget groove based LED is available in all colors. Direct replacement for T-1 groove based incandescent lamps. The model uses ultra-bright LEDs and has a nickel plated base. Can be supplied with or without built in current limiting resistor.

#### FEATURES

- Available in a variety of colors and voltages
- Long life LEDs
- Low power consumption
- Direct replacement for T-1 flange base incandescents: 334, 336, 337, 379, 386, 388, 398, 6039, 6041, 6043
- For use in switches and indicators using T-1 3/4 flange base lamps



### HOW TO ORDER

Voltage	Model No.
5vdc	522-5X
6.3vdc	522-603X
12vdc	522-12X
14vdc	522-14X
28vdc	522-28X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

**NOTE:**

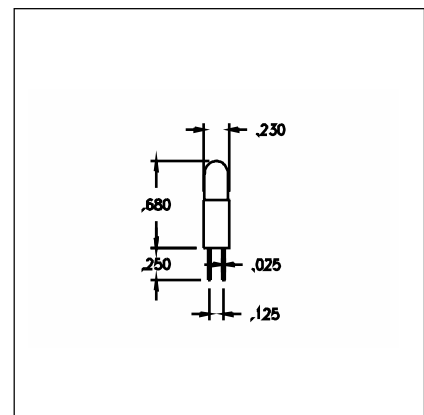
\* For voltage/current specs, see page 7-9

### MODEL 541

T-1 3/4 Bi-Pin LED is available in Red, Green, Yellow, Amber, Ultra Bright Green, Ultra Bright Blue and Pure White. Voltages available range from 5 - 28 VCD. Please specify color when ordering.

#### FEATURES

- Available in a variety of colors and voltages
- Long life LED
- Low power consumption
- Direct replacement for incandescent lamps: 2341, 2342, 3149, 7001, 7003, 7327, 7328, 7330, 7349, 7361, 7371, 7373, 7374, 7376, 7377, 7380, 7381, 7382, 7387, 7376 & 7945.



522 541

### HOW TO ORDER

Voltage	Model No.
5vdc	541-5X
6.3vdc	541-603X
12vdc	541-12X
14vdc	541-14X
28vdc	541-28X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

**NOTE:**

\* For voltage/current specs, see page 7-9

# Brilliance by design

## LED Replacement for Incandescent Lamps

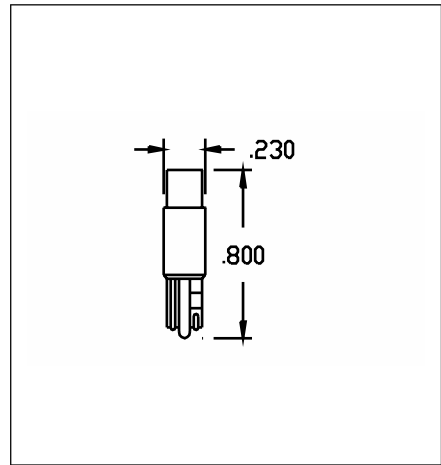
www.SloanLED.com

### MODEL 513

T-1 3/4 Wedge base LED is available in all colors. Direct replacement for T-1 3/4 wedge base incandescent lamps.

**FEATURES**

- Available in all colors and voltages
- Long life LEDs
- Low power consumption
- Direct replacement for: 11\*, 17, 18, 37, 56, 73, 74, 79, 84, 85 & 86



### HOW TO ORDER

NOTE:

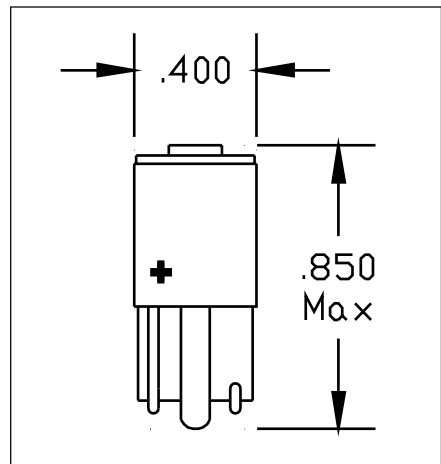
- \* External resistor required
- \*\*For voltage/current specs, see page 7-9

Voltage	Model No.
2.5vdc	513-205X*
5vdc	513-5X
6.3vdc	513-603X
14vdc	513-14X
28vdc	513-28X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

### MODEL 516

T-3 1/4 Bi-pin LED is available in all colors. Direct replacement for the T-3 1/4 wedge base bi-pin incandescent lamps. Unit available in both standard 160 degree viewing angle for switches and wide viewing applications and 30 degree for narrow viewing surfaces that require extra brightness. Please specify when ordering. For example: 516-127D for 12vdc white LED for narrow ultra bright illumination or 516-127 for 12vdc white LED for wide bright illumination.



513 516

**FEATURES**

- Available in all colors and voltages
- Long life LEDs
- Low power consumption
- Direct replacement for: 124, 147, 152, 158, 159, 161, 168, 184, 190, 192-194, 259, 280, 285, 400, 444, 447, 464, 555, 585, 655, 656, 657, 658, 740, 758, 947, 3-501, 3-504, 3-505, 3-507

### HOW TO ORDER

Voltage	Model No.
5vdc	516-5X
6vdc	516-6X
7vdc	516-7X
12vdc	516-12X
14vdc	516-14X
24vdc	516-24X
28vdc	516-28X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

NOTE:

- \*For voltage/current specs, see page 7-9

# Brilliance by design

## LED Replacement for Incandescent Lamps

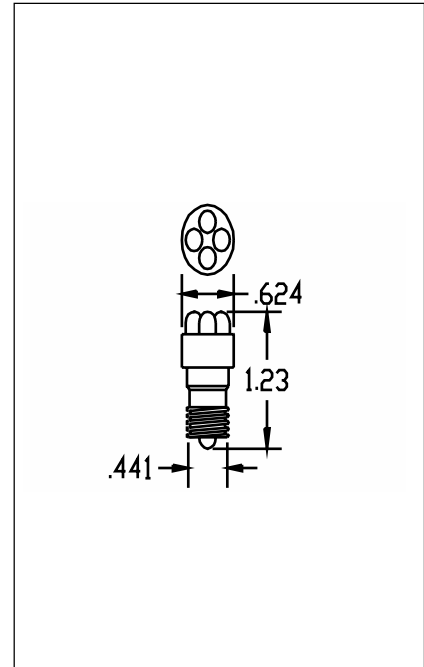
www.SloanLED.com

### MODEL 160

Model 160 screw base, 162 double contact bayonet base, and 164 single contact bayonet LED clusters. Candelabra incandescent replacement 4 LED cluster. All models are dual polarity which accommodates positive center, negative center and AC applications.

#### FEATURES

- Available in all colors and voltages
- Long life LEDs
- Low power consumption
- Direct replacement for: 3S3 and 6S6 incandescent lamps



160

### HOW TO ORDER

160 S6 Screw Base		162 Double Contact Bayonet		164 Single Contact Bayonet	
Voltage	Model No.	Voltage	Model No.	Voltage	Model No.
12V	160-12X	12V	162-12X	12V	164-12X
24V	160-24X	24V	162-24X	24V	164-24X
28V	160-28X	28V	162-28X	28V	164-28X
48V	160-48X	48V	162-48X	48V	164-48X
60V	160-60X	60V	162-60X	60V	164-60X
120V	160-120X	120V	162-120X	120V	164-120X

Where the 'X' appears insert: 1-Red, 2-Green, 3-Yellow, 4-Amber, 5-Ultra Green, 6-Ultra Blue, 7-Pure White

NOTE:

\*For voltage/current specs, see page 7-9

7-8

## *Brilliance by design*

### LED Replacements for Incandescent Lamps

www.SloanLED.com

## LED Specifications and Technical Data

LED data for models 160, 162, 164, 460, 510, 516, 522, 532, 513, 541

Color Choice	LED Size	Raw Chip Material	Emitted Color	Wave Length	Viewing Angle (Deg.)	Iv (mcd) Typical	If (mA) Typical	Vf (V) Typical
1	T 1-3/4	GaAlAs	Red	660	22	3000-4000	20	2.1
2	T 1-3/4	Gap	Green	565	20	750	20	1.8
3	T 1-3/4	AllnGap	Yellow	595	22	2000-3000	25	2.1
4	T 1-3/4	AllnGap	Amber	611	22	2000-3000	25	2.1
5	T 1-3/4	InGaN	Ultra Green	575	30	2200	25	3.5
6	T 1-3/4	InGaN	Blue	470	30	500	25	3.5
7	T 1-3/4	InGaN/ YAG	Pure White		45	1200	25	3.5

LED data for models 159, 197, 311

Color Choice	LED Size	Raw Chip Material	Emitted Color	Wave Length	Viewing Angle (Deg.)	Iv (mcd) Typical	If (mA) Typical	Vf (V) Typical
1	T-1	GaAlAs	Red	660	30	1250	20	1.8
2	T-1	Gap	Green	568	20	500	20	1.8
3	T-1	AllnGap	Yellow	595	30	500	25	2.1
4	T-1	AllnGap	Amber	611	30	500	25	2.1
5	T-1	InGaN	Ultra Green	575	30	1700	25	3.5
6	T-1	InGaN	Blue	470	30	650	25	3.5
7	T-1	InGaN/ YAG	Pure White		45	630	25	3.5

**Section 7**

Note: The specifications listed above are subject to change. For special LED requirements and color please contact SloanLED.

## Brilliance by design

www.SloanLED.com

### LED Voltage & Current Options

VOLTS	CURRENT IN MILLIAMPS
5 VDC	10, 15, 20, 25 (MA)
12 VDC	10, 20 (MA)
24 VDC	10, 20 (MA)
28 VDC	10, 20 (MA)

### Neon Lamp Electrical Specifications

(Used in 502, 857, 858, 859 and 862 Models)

LAMP with RESISTOR	VOLTS A.C. or D.C.	AMPS NOMINAL	WATTS NOMINAL	LIFE	RESISTOR
A1B	105-125	.03	1/25	25,000	220K
A1C	105-125	1.2	1/7	25,000	47K
A9A (NE-2E)	105-125	0.7	1/12	25,000	100K
C2A (NE-2H)	105-125	1.9	1/4	25,000	30K

NOTE: A1C and NE-2H are high brightness. Other lamps available. Life figures for A.C. - Life at D.C. 1/2 A.C. (Approx.). 862 Series cannot be supplied with resistor.

**IMPORTANT:** The lamps shown represent the most popular types normally requested. MANY OTHER LAMPS ARE AVAILABLE - PLEASE CONTACT FACTORY.

### Hot Stamping Information

The chart below designates type sizes available for hot stamping. Size of lens determines size of type that can be used.

TYPE	ACTUAL SIZE	
	WIDTH	HEIGHT
2 pt	.050	.060
6 pt	.060	.080
8 pt	.080	.110
10 pt	.090	.120
12 pt	.110	.160

NOTE: For other size type, contact factory.

# Brilliance by design

www.SloanLED.com

## LED SPECIFICATIONS

THE INFORMATION ON THIS PAGE IS FURNISHED TO ENABLE THE CUSTOMER TO ACCURATELY DETERMINE THE ELECTRICAL PARAMETERS OF A SPECIFIC APPLICATION.

The following formula should be used to determine the total wattage needed to be dissipated by the voltage dropping resistor(s). It applies to any resistance (internal or external) used in series with SloanLED indicator lights utilizing LEDs for light source:

$$W_{rt} = (V_s - V_d) \cdot I \text{ where:}$$

$W_{rt}$  = Total dissipation of all series resistors (in watts)

$V_s$  = Voltage (DC) supplied to indicator circuit. (Circuit includes all dropping resistors).

$V_d$  = Voltage drop across LED only. (Select appropriate value from electrical parameters below.)

$I$  = Current (in amps).

Use the following formula to determine current:

$$\text{Given } W_{rt} \text{ and } V_s: I = \frac{W_{rt}}{V_s - V_d}$$

Use the following formula to determine current:

$$\text{Given } W_{rt} \text{ and } I: V_s = \frac{W_{rt}}{I} + V_d$$

### EXAMPLE 1

You want to operate a Model 207 with 24 VDC and a 20 mA current:

$$V_s = 24 \text{ VDC}$$

$$V_d = 1.86 \text{ (from electrical parameters below)}$$

$$I = .020 \text{ A (20 mA)}$$

$$W_{rt} = \text{Current (in amps)}$$

This combination would exceed the maximum wattage rating for one (1) 1/4W resistor ( $W_{rt} = .25 \text{ W Max.}$ ), but not for two (2) 1/4W resistors ( $W_{rt} = .50 \text{ W Max.}$ ). Therefore, this unit would be supplied by SloanLED with two (2) internal resistors.

### EXAMPLE 2

You want to operate a Model 205 with 10 VDC and a 25 mA current:

$$V_s = 10 \text{ VDC}$$

$$V_d = 1.80 \text{ (from electrical parameters below)}$$

$$I = .025 \text{ A (25 mA)}$$

$$W_{rt} = (10 - 1.80) \cdot (0.025) = .205 \text{ watts}$$

This combination would exceed the maximum wattage rating for the resistor supplied with this unit. Therefore, if the supply voltage ( $V_s$ ) and/or current ( $I$ ) cannot be reduced (to reduce  $W_{rt}$  to no more than the max. value of .125 W) the customer should either: (1) Use an external resistor with a rating of at least .205 W or (2) Select a unit which can house a resistor(s) with a rating greater than .205 W (e.g. 207, 103)

## ELECTRICAL PARAMETERS FOR SPECIFIC APPLICATIONS

### Model 103, 206, 207, 511 & 502 (Cartridge)

with resistors use  $V_d = 1.86$   $I$  should not exceed 35 mA.

with (2) 1/4W resistors (207 & 502 only)  $W_{rt}$  should not exceed .50 W

with (1) 1/4W resistors (103, 207, 511, 502 only)  $W_{rt}$  should not exceed .25 W

with (1) 1/8 W resistors (206 & 511)  $W_{rt}$  should not exceed .125 W

with no resistor (all Models)

Red -  $V_d = 2.0 @ 20 \text{ mA}$ , Green -  $V_d = 2.2 @ 20 \text{ mA}$ ,

Amber -  $V_d = 2.1 @ 20 \text{ mA}$

### Model 205, 109

Red use  $V_d = 1.85$ , Green & Amber use  $V_d = 1.9$ ,

$I$  = should no exceed 40 mA

with (2) 1/4W resistors (109 only) should not exceed .5 W

with (1) 1/4W resistors (109 only) should not exceed .25 W

with (1) 1/8 W resistors (both models) should not exceed .125 W

with no resistor

Red -  $V_d = 1.7 @ 20 \text{ mA}$ , Green & Amber -  $V_d = 2.1 @ 20 \text{ mA}$

### Model 106 Use $V_d = 1.77$ $I$ should not exceed 35 mA.

with (1) 1/8W resistor  $W_{rt}$  should not exceed .125 W

with no resistor

Red -  $V_d = 1.7 @ 20 \text{ mA}$ , Green & Amber -  $V_d = 2.1 @ 20 \text{ mA}$

### Model 503

Use  $V_d = 1.85$ ,  $I$  = should no exceed 40 mA

with (2) 1/8W resistors  $W_{rt}$  should not exceed .25 W

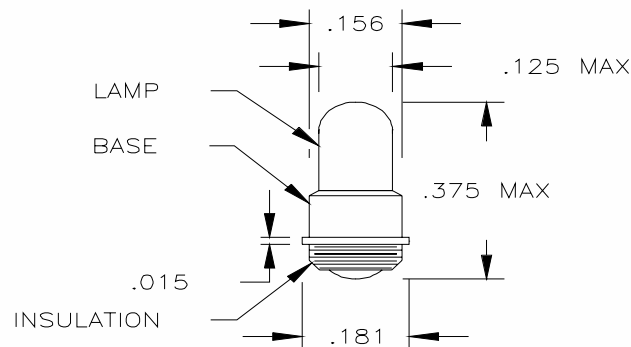
with (1) 1/8W resistors  $W_{rt}$  should not exceed .125 W

with no resistor

Red -  $V_d = 1.7 @ 20 \text{ mA}$ , Green & Amber -  $V_d = 2.1 @ 20 \text{ mA}$

# Brilliance by design

## INCANDESCENT LAMP SPECIFICATIONS



### T-1 Flange Base Lamps

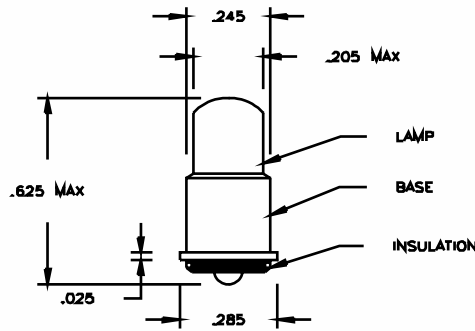
SloanLED Part No.	Design Voltage	Design Current (Amperes)	Light Output (M.S.C.P)	Life Hours
FB12	5.0	.060	.050	100,000
FB35	28.0	.029	.190	25,000
FB38	28.0	.030	.200	10,000
FB44	18.0	.026	.150	10,000
FB45	12.0	.060	.150	16,000
FB47	14.0	.065	.150	12,000
FB59	28.0	.024	.150	16,000
FB60	5.0	.060	.050	100,000
FB63	5.0	.060	.030	200,000

### T-1 Unbased Lamps

SloanLED Part No.	Design Voltage	Design Current (Amperes)	Light Output (M.S.C.P)	Life Hours
F12	5.0	.060	.050	100,000
F35	28.0	.029	.190	25,000
F38	28.0	.030	.200	10,000
F44	18.0	.026	.150	10,000
F45	12.0	.060	.150	16,000
F47	14.0	.065	.150	12,000
F59	28.0	.024	.150	16,000
F60	5.0	.060	.050	100,000
F63	5.0	.060	.030	200,000

# Brilliance by design

## INCANDESCENT T-1 3/4



### MIDGET FLANGE BASE LAMPS

SloanLED Part No.	Design Voltage	Design Current (Amperes)	Light Output (M.S.C.P)	Life Hours
783	5.0	.06	.05	100,000
328	6.0	.20	.34@5V	1,000
6038	12.0	.06	.15	16,000
382	14.0	.08	.30	50,000
330	14.0	.08	.50	1,500
387	28.0	.04	.30	7,000
327	28.0	.04	.34	4,000

### T-1 3/4 Unbased Lamps

SloanLED Part No.	Design Voltage	Design Current (Amperes)	Light Output (M.S.C.P)	Life Hours
806	5.0	.06	.05	100,000
1784	6.0	.20	.34@5V	1,000
6037	12.0	.06	.15	16,000
2182	14.0	.08	.30	50,000
1705	14.0	.08	.50	1,500
2187	28.0	.04	.30	7,000
1764	28.0	.04	.34	4,000
1869				