

- ♦ Industry Standard 5mm (T1 ¾) Package
- **♦** RoHS Compliant
- Water Clear (C), Diffused (D), and Tinted (T) Lenses
- ◆ Available in Flange (F) and Standard (Blank) Lead Frame styles
- Up to 60 mcd Luminous Intensity at 20 mA
- Ideal for Status Indication and Display

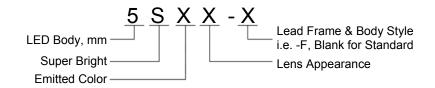


BIVAR

Bivar 5mm T1 ¾ Package Super Bright LED is ideal for those applications where higher ambient lighting exists such as sign boards, security system displays, and medical applications. Bivar offers water clear LED lens for maximum light output, diffused LED lens for uniform light output, and tinted lens to identify the color of the LED. The Flanged LED is ideal for Panel Mount Clip & Ring assemblies and the Standard Lead frame LED is ideal for vertical spacer assemblies without lead bends.

Part Number	Material	Emitted Color	Peak. Wavelength λρ(nm) TYP.	Lens Appearance	Viewing Angle	
5SRC-F	- GaAlAs/GaAs	RED	645nm	Water Clear	35°	
5SRD-F				Red Diffused	40°	
5SRT-F				Red Tinted	35°	
5SRC			0451111	Water Clear	35°	
5SRD				Red Diffused	45°	
5SRT				Red Tinted	35°	

#### **Part Number Designation**



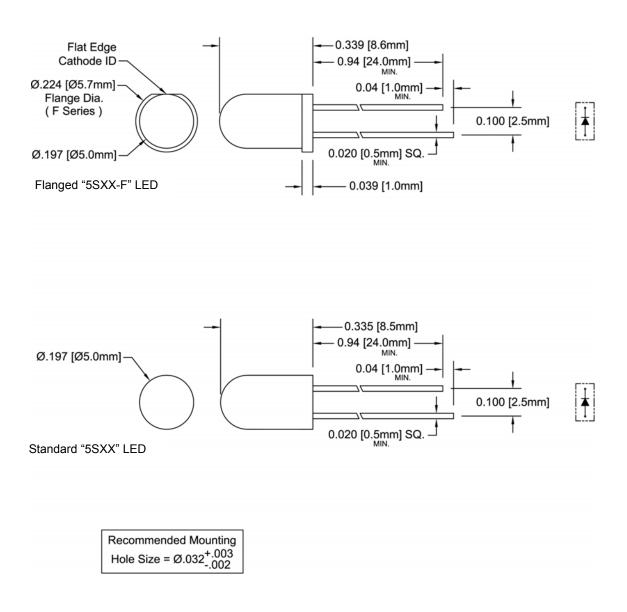








#### **Outline Dimensions**



Outline Drawings Notes:

1. All dimensions are in inches [millimeters].

2. Standard tolerance: ±0.010" unless otherwise noted.

3. Tolerance of overall epoxy outline: ±0.020" unless otherwise noted.

4. Epoxy meniscus may extend to 0.060" max.



### **Absolute Maximum Ratings**

 $T_A$  = 25°C unless otherwise noted

Power Dissipation	70 mW
Forward Current ( DC )	30 mA
Peak Forward Current <sup>1</sup>	150 mA
Reverse Voltage	5 V
Operating Temperature Range	-25 ~ +85°C
Storage Temperature Range	-30 ~ +100°C
Lead Soldering Temperature ( 3 mm from the base of the epoxy bulb ) 2	260°C

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 0.1 msec.

#### **Electrical / Optical Characteristics**

 $T_A = 25$ °C &  $I_F = 20$  mA unless otherwise noted

Part Number	Forward Voltage (V) <sup>1</sup>		Recommend Forward Current (mA)		Reverse Current (µA)	Dominant Wavelength (nm) <sup>2</sup>			Luminous Intensity Iv (mcd)			Viewing Angle 2 Θ ½ (deg)		
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
5SRC-F								1	1	1	1	60	/	35
5SRD-F	/	1.7	2.4	1	20	/	100	1	1	/	1	40	/	40
5SRT-F								1	1	1	1	60	/	35
5SRC								1	1	1	/	60	/	35
5SRD	/	1.7	2.4	/	20	/	100	1	1	1	1	40	/	45
5SRT								1	1	1	1	60	1	35

Notes: 1. Tolerance of forward voltage: ±0.05V.

<sup>2.</sup> Solder time less than 5 seconds at temperature extreme.

<sup>2.</sup> Tolerance of dominant wavelength: ±1.0nm.



### **Typical Electrical / Optical Characteristics**

 $T_A = 25$ °C unless otherwise noted

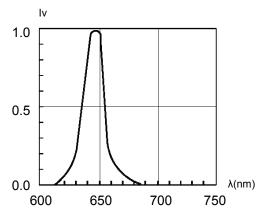


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

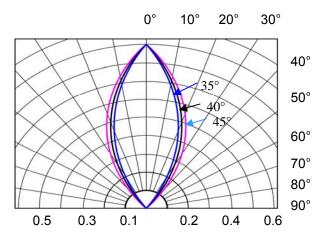


Fig. 2 Directivity Radiation Diagram

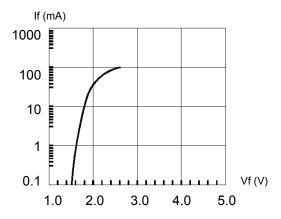


Fig. 3 Forward Current vs. Forward Voltage

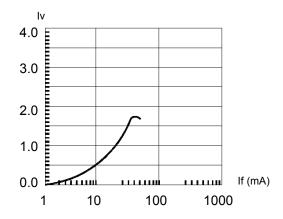


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

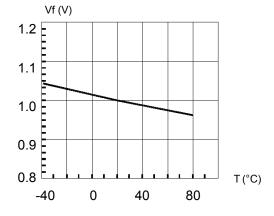


Fig. 5 Forward Voltage vs. Temperature

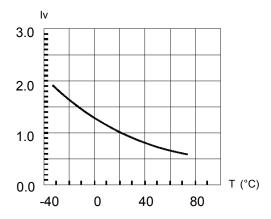
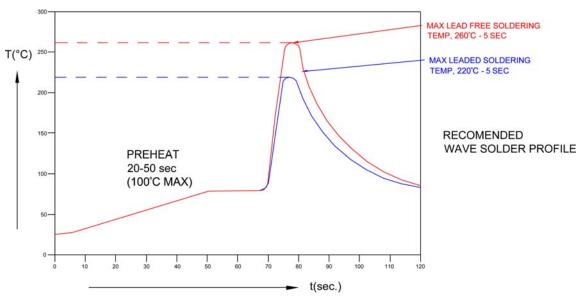


Fig. 6 Relative Luminous Intensity vs. Temperature

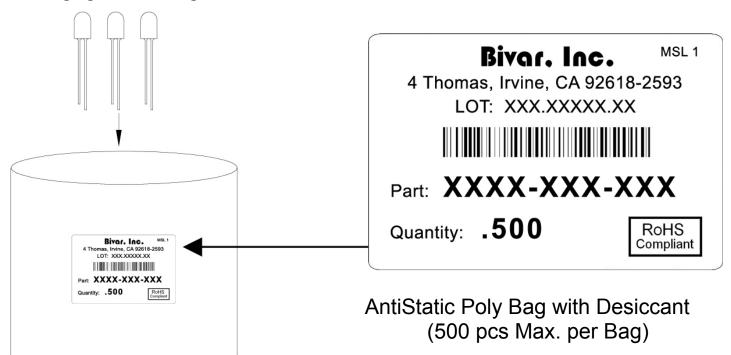


#### **Recommended Soldering Conditions**



Recommended Lead Free Wave Soldering Profile					
Preheat Temperature: 100°C Max.	Peak Temperature: 260°C Max.				
Preheat Time: 20 ~ 50 Seconds	Solder Time Above 217°C: 5 Seconds Max.				
Note: Turn off top heater at preheat to prevent the lamp body directly exposed to the heat source.					

#### **Packaging and Labeling Plan**



Bivar reserves the right to make changes at any time without notice.

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