

# 3mm (T1) Package Discrete LED RED/GREEN, Bi-Color



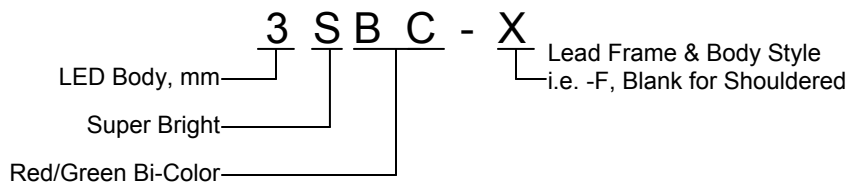
## 3SBC-X

- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ 2-Lead Super Bright Bi-Color LED
- ◆ White Diffused Lens
- ◆ Available in Flange (F) and Shouldered (Blank) Lead Frame styles
- ◆ Ideal for Status Indication and Display

Bivar 3mm T1 Package 2-Lead Bi-Color LED is ideal for those applications where dual signals need to be displayed at the same location such as standby-on indication for server or computer peripherals. Bivar offers white diffused LED lens for uniform light output and the 2-lead package simplifies the circuitry design where a reverse voltage is available. The Flanged LED is ideal for Panel Mount Clip & Ring assemblies and the Shouldered Lead frame LED has a built in strain relief feature which is ideal for Right Angle Holder assemblies that require lead bends. A long lead version is also available with a "-LL" suffix added to the part numbers.

Part Number	Material	Emitted Color	Peak. Wavelength $\lambda_p$ (nm) TYP.	Lens Appearance	Viewing Angle
3SBC-F	GaAIAs/GaAs	RED	645nm	White Diffused	45°
	GaP/GaP	GREEN	568nm		
3SBC	GaAIAs/GaAs	RED	645nm		
	GaP/GaP	GREEN	568nm		

## Part Number Designation

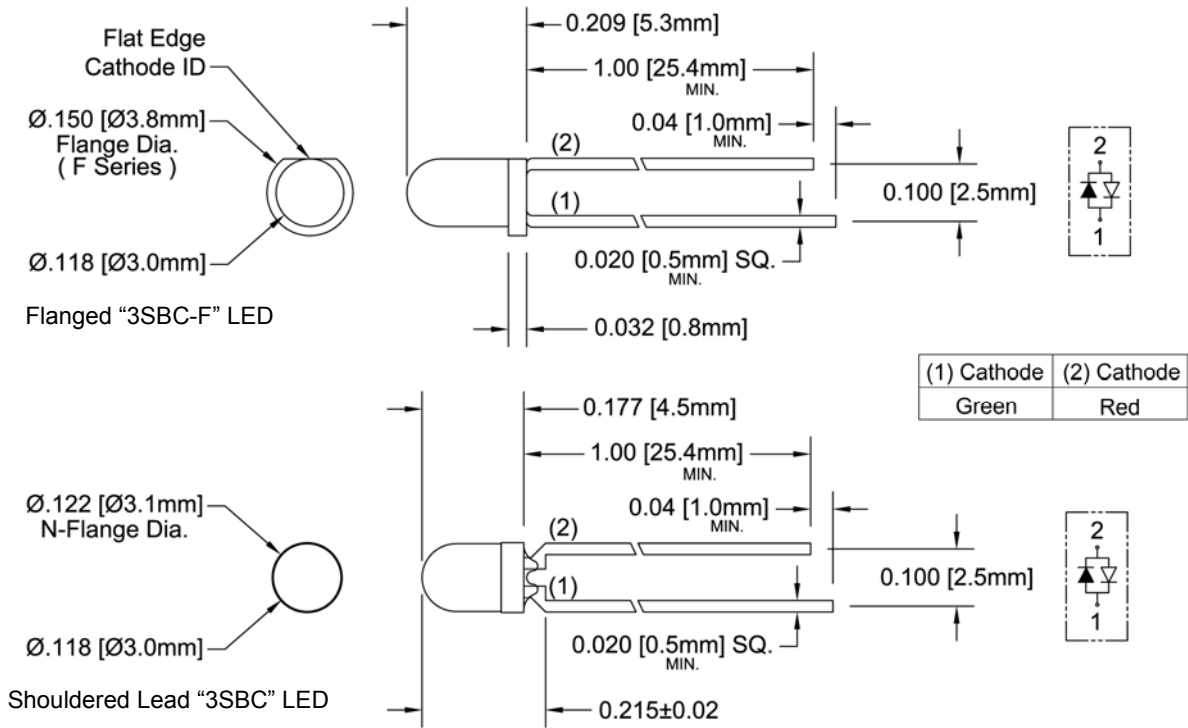


Bivar reserves the right to make changes at any time without notice.

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## Outline Dimensions



Recommended Mounting  
Hole Size =  $\varnothing.032^{+.003}_{-.002}$

NOTE: Add suffix -LL for long lead.  
Changes 1.00 Min. to 1.57 Min.

**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.

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## Absolute Maximum Ratings

T<sub>A</sub> = 25°C unless otherwise noted

Power Dissipation	Red - 70 mW Green - 80 mW
Forward Current ( DC )	30 mA
Peak Forward Current <sup>1</sup>	150 mA
Operating Temperature Range	-25 ~ +85°C
Storage Temperature Range	-30 ~ +100°C
Lead Soldering Temperature ( 3 mm from the base of the epoxy bulb ) <sup>2</sup>	260°C

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 0.1 msec.    2. Solder time less than 5 seconds at temperature extreme.

## Electrical / Optical Characteristics

T<sub>A</sub> = 25°C & I<sub>F</sub> = 20 mA unless otherwise noted

Part Number	Emitted Color	Forward Voltage (V) <sup>1</sup>			Recommend Forward Current (mA)			Reverse Current (µA)	Dominant Wavelength (nm) <sup>2</sup>			Luminous Intensity I <sub>v</sub> (mcd)			Viewing Angle 2θ <sub>1/2</sub> (deg)
		MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
3SBC-F	Red	/	1.7	2.4	/	20	/	/	/	/	/	/	12	/	45
	Green	/	2.1	2.8	/	20	/	/	/	/	/	/	8	/	
3SBC	Red	/	1.7	2.4	/	20	/	/	/	/	/	/	12	/	45
	Green	/	2.1	2.8	/	20	/	/	/	/	/	/	8	/	

Notes: 1. Tolerance of forward voltage : ±0.05V.    2. Tolerance of dominant wavelength : ±1.0nm.

## Typical Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

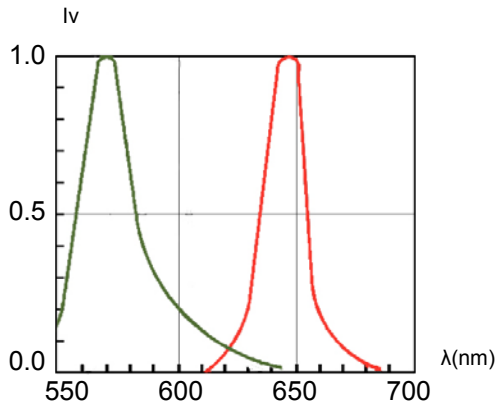


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

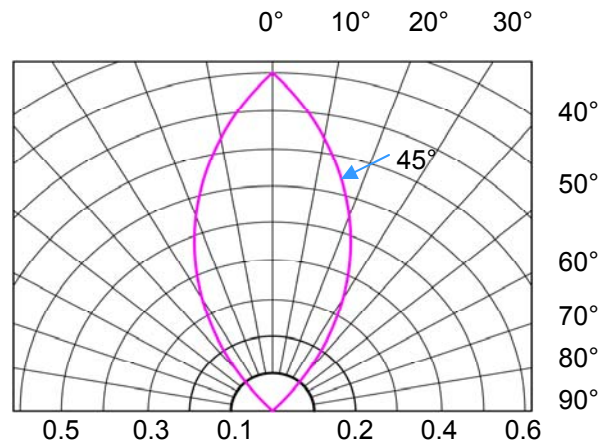


Fig. 2 Directivity Radiation Diagram

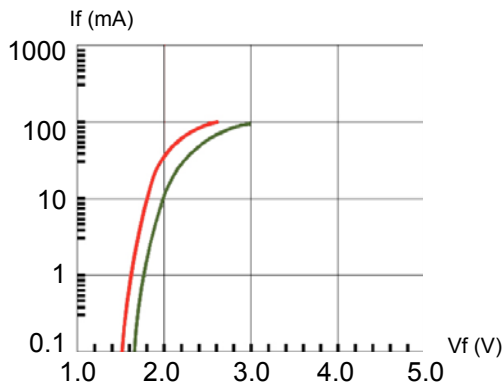


Fig. 3 Forward Current vs. Forward Voltage

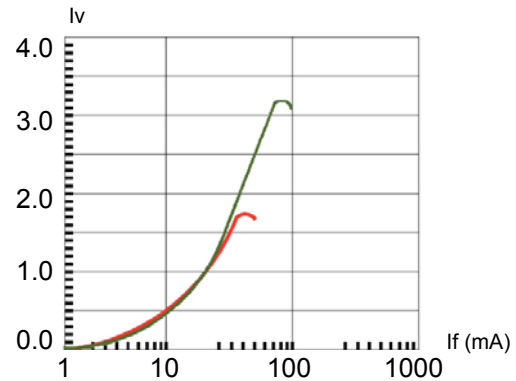


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

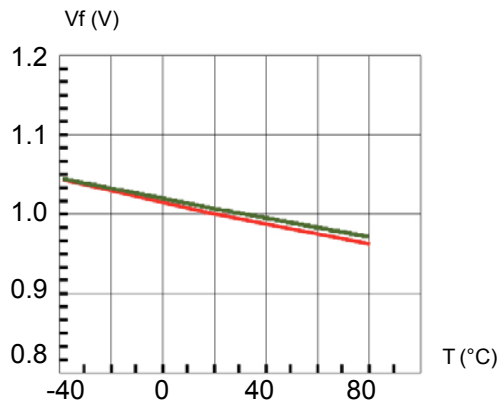


Fig. 5 Forward Voltage vs. Temperature

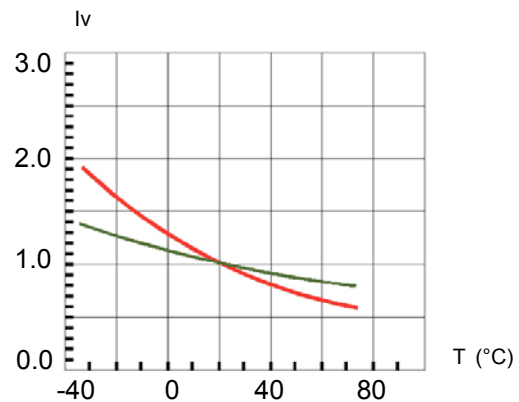


Fig. 6 Relative Luminous Intensity vs. Temperature

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## 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, Inc.** MSL 1

4 Thomas, Irvine, CA 92618-2593  
LOT: XXX.XXXXX.XX



Part: **XXXX-XXX-XXX**

Quantity: **.500**

RoHS Compliant

AntiStatic Poly Bag with Desiccant  
(500 pcs Max. per Bag)

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