

### 5BC-3-R/Y-X

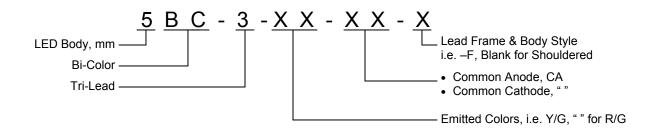
- ♦ Industry Standard 5mm (T1 ¾) Package
- **♦** RoHS Compliant
- White Diffused Lens
- Available in Flange (F) and Shouldered (Blank) Lead Frame styles
- ♦ 3-Lead Bi-Color LED
- ♦ Ideal for Status Indication and Display



Bivar 5mm T1 ¾ Package Tri-Color LED is ideal for those applications where multiple signals need to be displayed at the same location such as standby-on indication for server or computer peripherals. When needed, the 3rd color signal could be created by powering up both chips together for on-off-standy applications that require three distinct signals. Bivar offers white diffused LED lens for uniform light output. The Flange 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. This 3-Lead Bi-Color LED package comes in a common cathode Lead Frame configuration.

Part Number	Material	Emitted Color	Peak. Wavelength λp(nm) TYP.	Lens Appearance	Viewing Angle		
5BC-3-R/Y-F	GaAsP/GaP		625nm				
GaAsP/GaP		YELLOW	590nm	White Diffused	40°		
FDC 2 DW	GaAsP/GaP	RED	625nm	White Diffused	40°		
5BC-3-R/Y	GaAsP/GaP	YELLOW	590nm				

### **Part Number Designation**



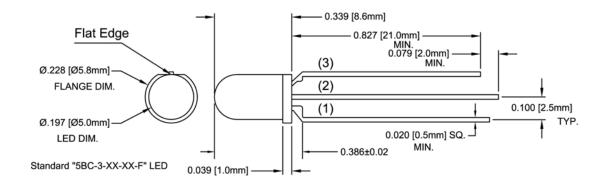


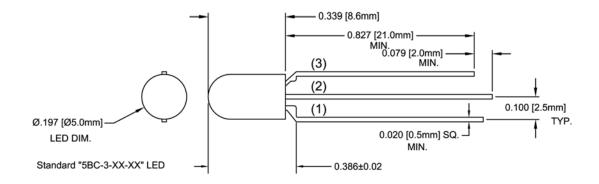




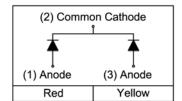


#### **Outline Dimensions**





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



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**

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

Power Dissipation	85 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 ) 2	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**

 $T_A = 25^{\circ}C \& I_F = 20 \text{ mA}$  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 Iv (mcd)			Viewing Angle 2 O ½ (deg)			
		MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
5BC-3-	Red	/	2.0	2.8	/	20	/	100	/	1	/	/	35	1	40
R/Y-F	Yellow	/	2.0	2.8					/	1	/	/	30	1	
5BC-3-	Red	/	2.0	2.8	/ 20	20	,	100	/	1	/	/	35	/	40
R/Y	Yellow	/	2.0	2.8		20 7	100	/	/	/	/	30	/	40	

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

2. Tolerance of dominant wavelength: ±1.0nm.



### Typical Electrical / Optical Characteristics - Red

 $T_A = 25$ °C unless otherwise noted

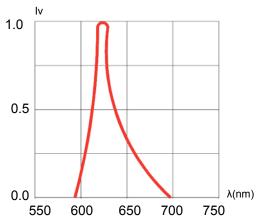


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

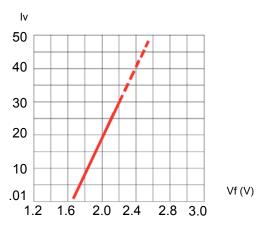


Fig. 3 Relative Intensity (10mA) vs. Forward Voltage

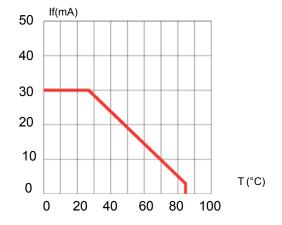


Fig. 5 Forward Current vs. Temperature

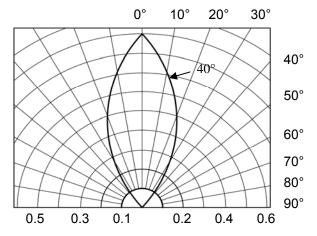


Fig. 2 Directivity Radiation Diagram

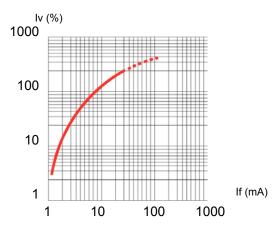


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current

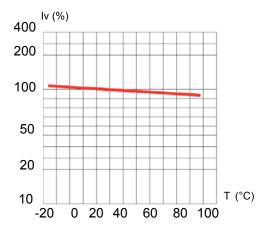


Fig. 6 Relative Intensity (%) vs. Temperature @ 20 mA



### Typical Electrical / Optical Characteristics - Yellow

 $T_A = 25$ °C unless otherwise noted

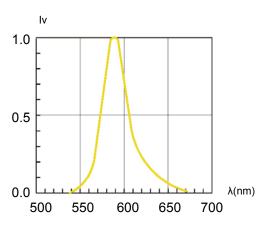


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

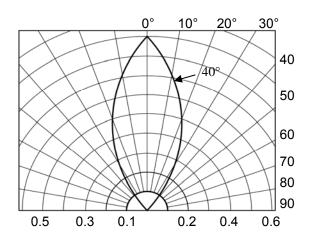


Fig. 2 Directivity Radiation Diagram

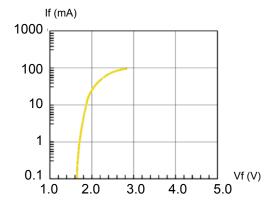


Fig. 3 Forward Current vs. Forward Voltage

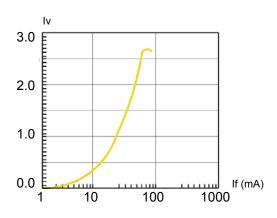


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

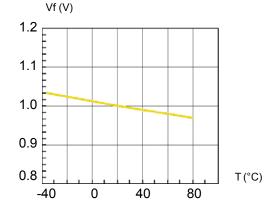


Fig. 5 Forward Voltage vs. Temperature

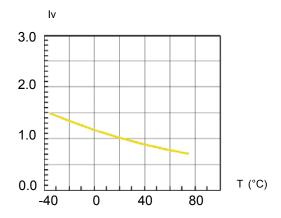
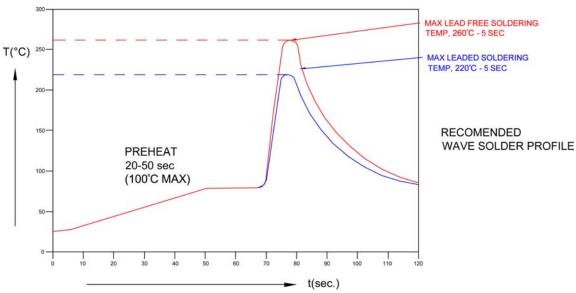


Fig. 6 Relative Luminous Intensity vs. Temperature

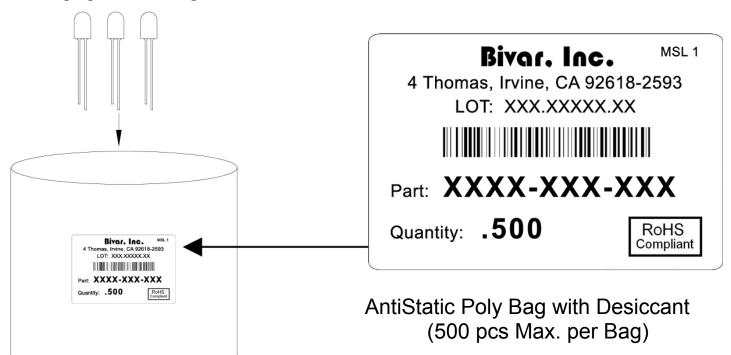


#### **Recommended Soldering Conditions**



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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