

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

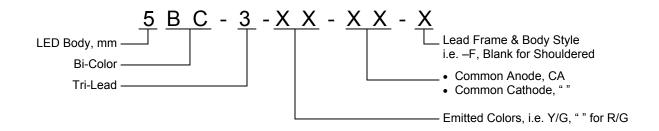
- ♦ Industry Standard 5mm (T1 ¾) Package
- **♦** RoHS Compliant
- **♦** White Diffused Lens
- ◆ Available in Flange (F) and Shouldered (Blank) Lead Frame styles
- ♦ 3-Lead Bi-Color LED
- ♦ Ideal for Status Indication and Display



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 λρ(nm) TYP. | Lens Appearance | Viewing Angle |  |  |
|-------------|---------------------|---------------|------------------------------|-----------------|---------------|--|--|
| 5BC-3-Y/G-F | GaAsP/GaP           | YELLOW        | 590nm                        |                 |               |  |  |
| 3BC-3-1/G-F | GaP/GaP GREEN 568nm |               |                              | White Diffused  | 40°           |  |  |
| EDC 2 V/C   | GaAsP/GaP           | YELLOW        | 590nm                        | White Diffused  | 40            |  |  |
| 5BC-3-Y/G   | GaP/GaP             | GREEN         | 568nm                        |                 |               |  |  |

#### **Part Number Designation**



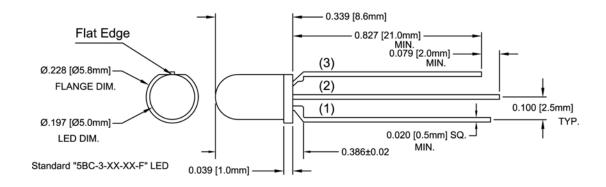


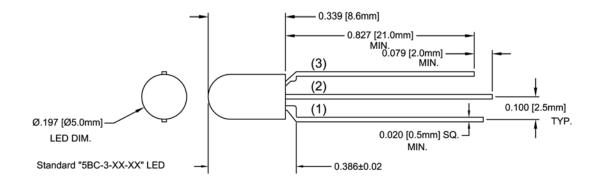




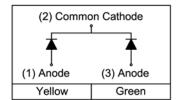


#### **Outline Dimensions**





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   | 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 ) 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**

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

| Part<br>Number | Emitted<br>Color | Voitage (V) |     | Recommend<br>Forward<br>Current (mA) |     | Reverse<br>Current<br>(µA) | Dominant<br>Wavelength (nm) <sup>2</sup> |     | Luminous<br>Intensity Iv<br>(mcd) |     |     | Viewing<br>Angle<br>2 O ½<br>(deg) |     |     |     |
|----------------|------------------|-------------|-----|--------------------------------------|-----|----------------------------|--|-----|-----------------------------------|-----|-----|------------------------------------|-----|-----|-----|
|                |                  | MIN         | TYP | MAX                                  | MIN | TYP                        | MAX                                      | MAX | MIN                               | TYP | MAX | MIN                                | TYP | MAX | TYP |
| 5BC-3-         | Yellow           | /           | 2.0 | 2.8                                  | /   | 20                         | /  | 100 | /                                 | 1   | /   | /                                  | 30  | /   | 40  |
| Y/G-F          | Green            | /           | 2.1 | 2.8                                  |     |                            |  |     | /                                 | 1   | /   | /                                  | 35  | /   |     |
| 5BC-3-         | Yellow           | 1           | 2.0 | 2.8                                  | /   | 20                         | 1  | 100 | /                                 | /   | /   | /                                  | 30  | /   | 40  |
| Y/G            | Green            | /           | 2.1 | 2.8                                  |     |                            |  |     | /                                 | 1   | /   | /                                  | 35  | /   |     |

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

2. Tolerance of dominant wavelength: ±1.0nm.



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

 $T_A = 25$ °C unless otherwise noted

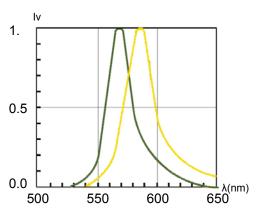


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

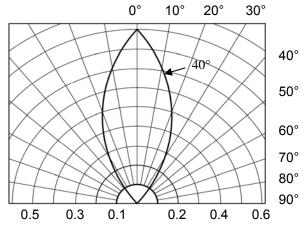


Fig. 2 Directivity Radiation Diagram

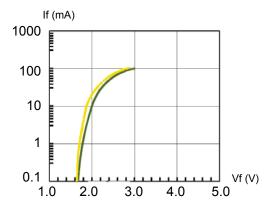


Fig. 3 Forward Current vs. Forward Voltage

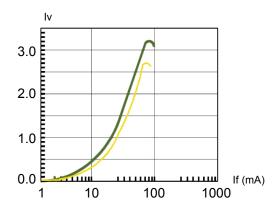


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

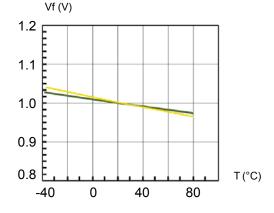


Fig. 5 Forward Voltage vs. Temperature

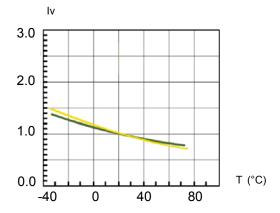
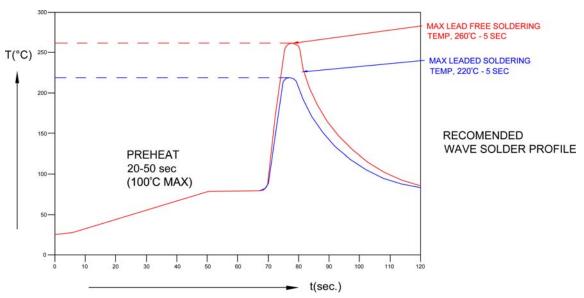


Fig. 6 Relative Luminous Intensity vs. Temperature

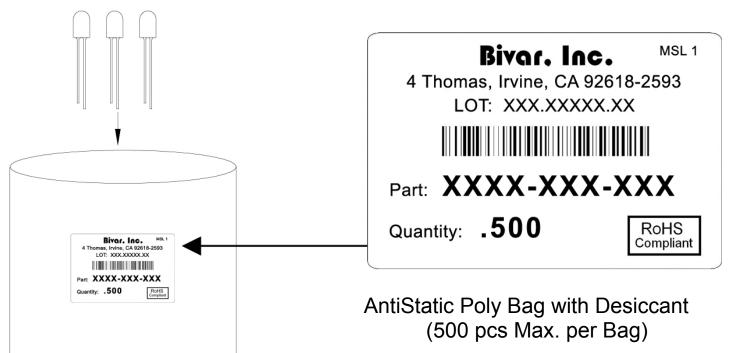


#### **Recommended Soldering Conditions**



| 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 M                                 |                              |  |  |  |  |
| 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