

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



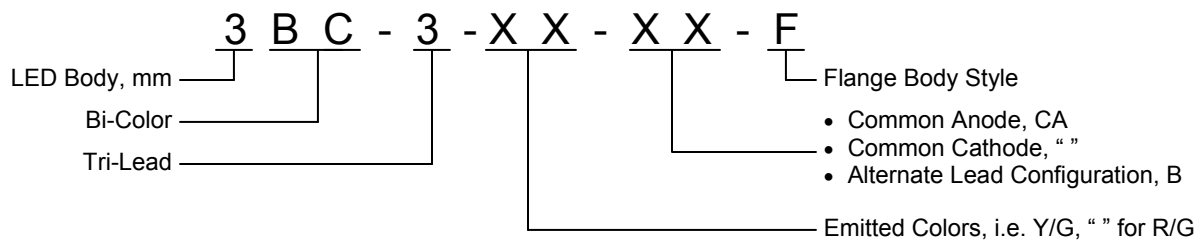
## 3BC-3-CA-F

- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ White Diffused Lens
- ◆ Available in Flange (F) Style
- ◆ 3-Lead Bi-Color LED
- ◆ Ideal for Status Indication and Display

Bivar 3mm T1 Package 3-Lead Bi-Color 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-standby 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. This 3-Lead Bi-Color LED package comes in a common anode Lead Frame configuration.

| Part Number | Material  | Emitted Color | Peak. Wavelength<br>$\lambda_p$ (nm) TYP. | Lens Appearance | Viewing Angle |
|-------------|-----------|---------------|---|-----------------|---------------|
| 3BC-3-CA-F  | GaAsP/Gap | RED           | 625nm                                     | White Diffused  | 45°           |
|             | Gap/Gap   | GREEN         | 568nm                                     |                 |               |

## Part Number Designation

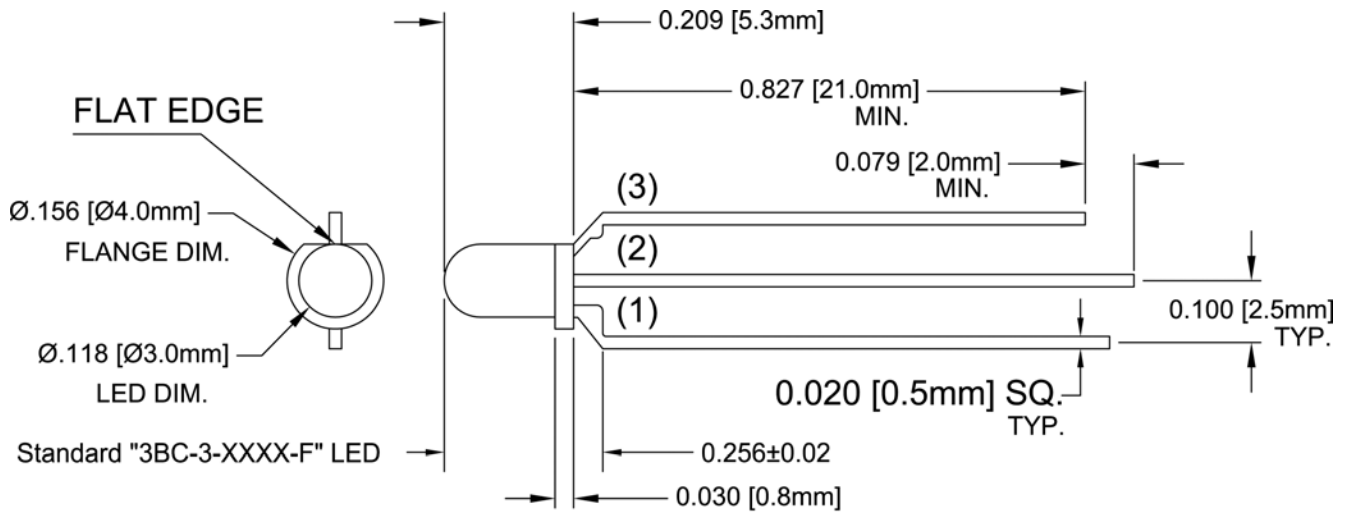


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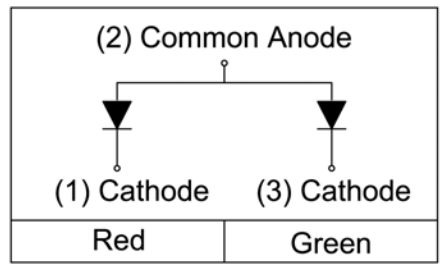
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## Outline Dimensions



Recommended Mounting  
Hole Size =  $\text{Ø}0.032^{+.003}_{-.002}$



- Outline Drawings Notes:**
1. All dimensions are in inches [millimeters].
  2. Standard tolerance:  $\pm 0.010''$  unless otherwise noted.
  3. Tolerance of overall epoxy outline:  $\pm 0.020''$  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  | 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 ½ (deg) |
|-------------|---------------|----------------------------------|-----|-----|--------------------------------|-----|-----|----------------------|---------------------------------------|-----|-----|---|-----|-----|--------------------------|
|             |               | MIN                              | TYP | MAX | MIN                            | TYP | MAX | MAX                  | MIN                                   | TYP | MAX | MIN                                     | TYP | MAX | TYP                      |
| 3BC-3-CA-F  | Red           | /                                | 2.0 | 2.8 | /                              | 20  | /   | 100                  | /                                     | /   | /   | /                                       | 6   | /   | 45                       |
|             | Green         | /                                | 2.1 | 2.8 |                                |     |     |                      | /                                     | /   | /   | /                                       | 6   | /   |                          |

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

## Typical Electrical / Optical Characteristics - Red

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



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

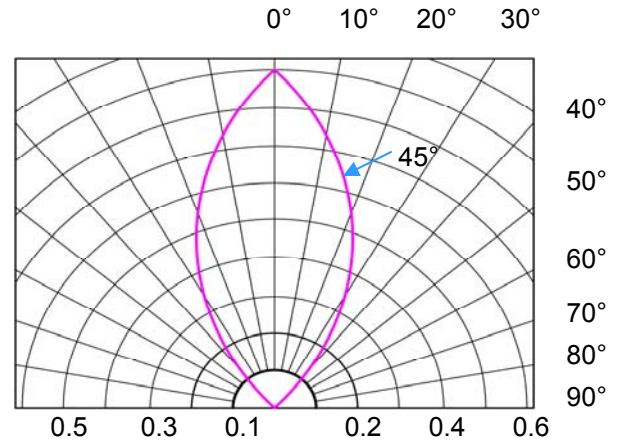


Fig. 2 Directivity Radiation Diagram

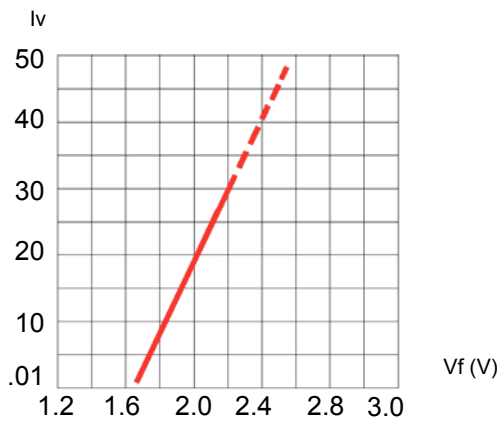


Fig. 3 Relative Intensity (10mA) vs. Forward Voltage

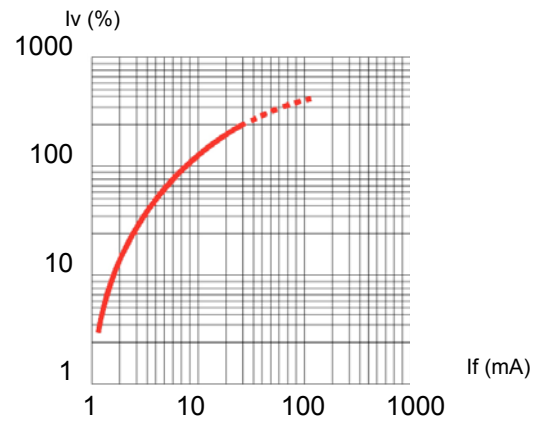


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current



Fig. 5 Forward Current vs. Temperature



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

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## Typical Electrical / Optical Characteristics - Green

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

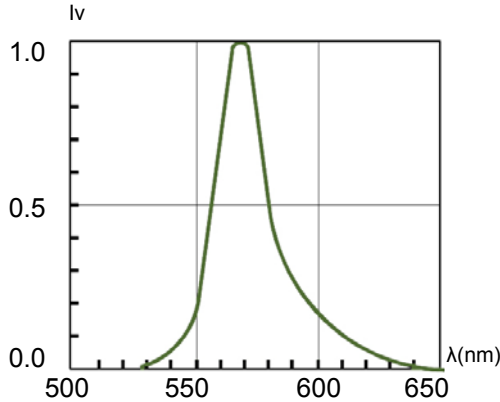


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

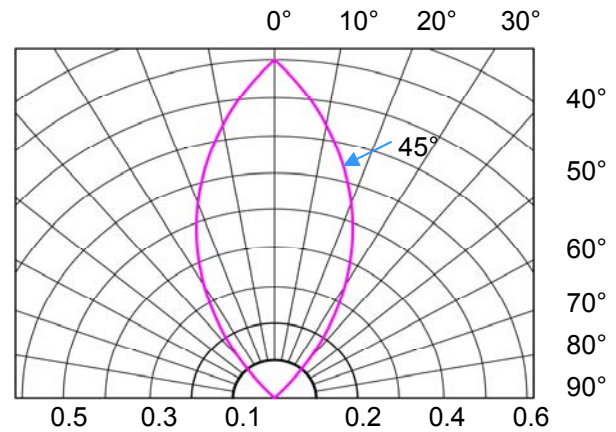


Fig. 2 Directivity Radiation Diagram

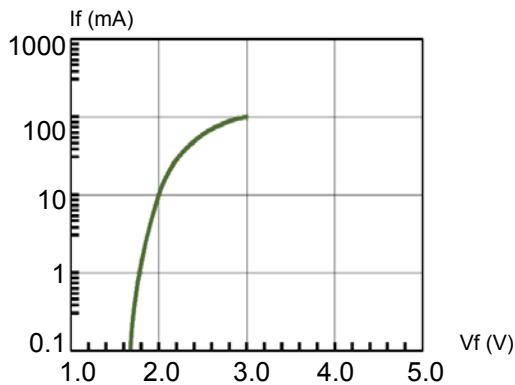


Fig. 3 Forward Current vs. Forward Voltage



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

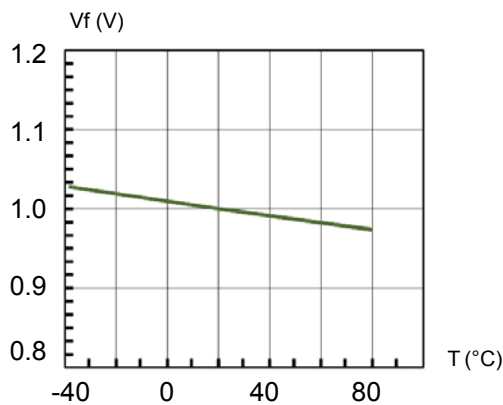


Fig. 5 Forward Voltage vs. Temperature

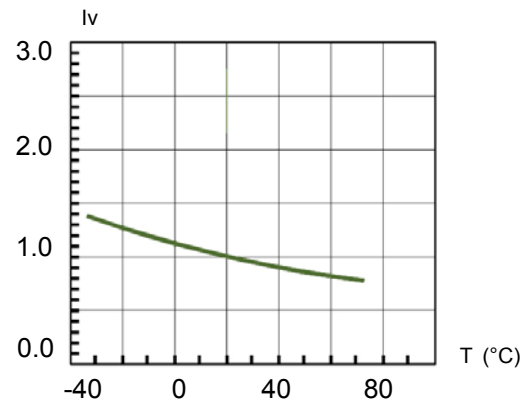


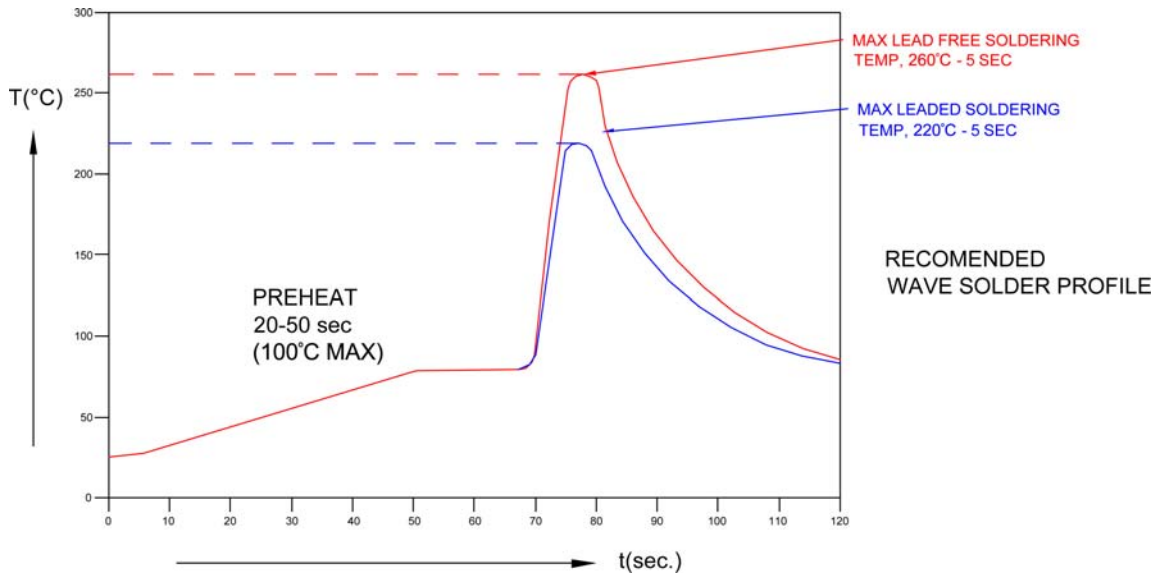
Fig. 6 Relative Luminous Intensity vs. Temperature

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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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