

5mm (T1 3/4) Package Discrete LED RED/GREEN, Bi-Color



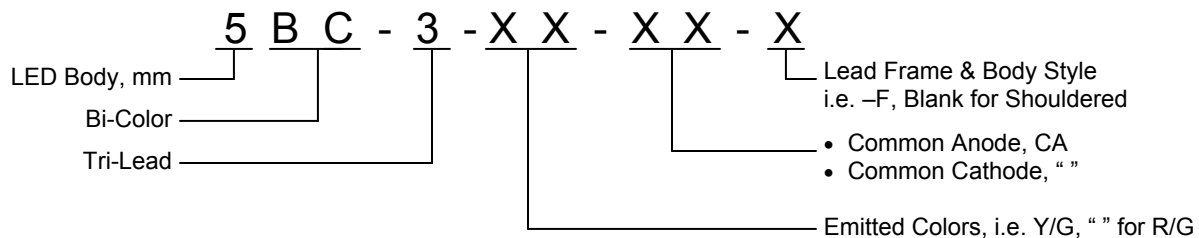
5BC-3-CA-X

- ◆ Industry Standard 5mm (T1 3/4) 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 3/4 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-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 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 anode Lead Frame configuration.

| Part Number | Material | Emitted Color | Peak. Wavelength λ_p (nm) TYP. | Lens Appearance | Viewing Angle |
|-------------|-----------|---------------|---|-----------------|---------------|
| 5BC-3-CA-F | GaAsP/GaP | RED | 625nm | White Diffused | 40° |
| | GaP/GaP | GREEN | 568nm | | |
| 5BC-3-CA | GaAsP/GaP | RED | 625nm | | |
| | GaP/GaP | GREEN | 568nm | | |

Part Number Designation



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

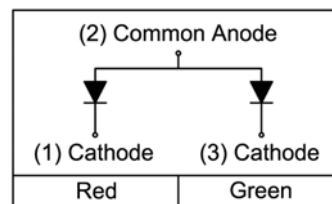
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Outline Dimensions



Recommended Mounting
Hole Size = $\text{Ø}0.032^{+0.003}_{-0.002}$



- 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_A = 25°C unless otherwise noted

| | |
|--|--------------|
| Power Dissipation | 80 mW |
| Forward Current (DC) | 30 mA |
| Peak Forward Current ¹ | 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 Number | Emitted Color | Forward Voltage (V) ¹ | | | Recommend Forward Current (mA) | | | Reverse Current (μA) | Dominant Wavelength (nm) ² | | | Luminous Intensity I _v (mcd) | | | Viewing Angle 2Θ 1/2 (deg) |
|-------------|---------------|----------------------------------|-----|-----|--------------------------------|-----|-----|----------------------|---------------------------------------|-----|-----|---|-----|-----|----------------------------|
| | | MIN | TYP | MAX | MIN | TYP | MAX | MAX | MIN | TYP | MAX | MIN | TYP | MAX | TYP |
| 5BC-3-CA-F | Red | / | 2.0 | 2.8 | / | 20 | / | 100 | / | / | / | / | 4 | / | 40 |
| | Green | / | 2.1 | 2.8 | | | | | | | | | 6 | / | |
| 5BC-3-CA | Red | / | 2.0 | 2.8 | / | 20 | / | 100 | / | / | / | / | 4 | / | 40 |
| | Green | / | 2.1 | 2.8 | | | | | | | | | 6 | / | |

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

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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

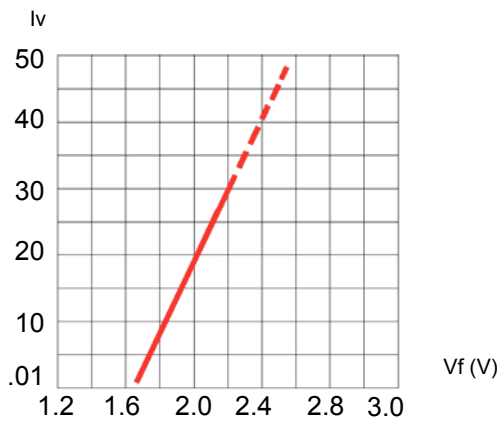


Fig. 3 Relative Intensity (10mA) vs. Forward Voltage

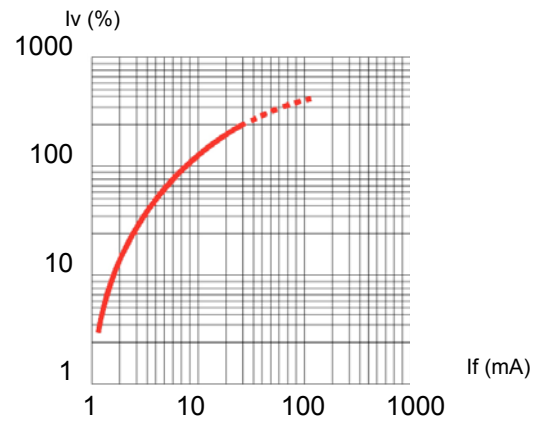


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current



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

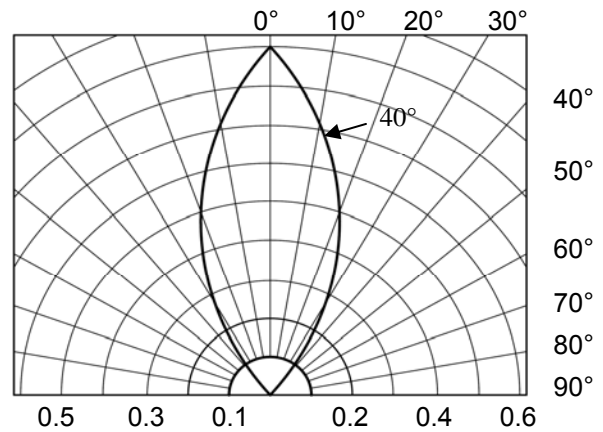


Fig. 2 Directivity Radiation Diagram



Fig. 3 Forward Current vs. Forward Voltage

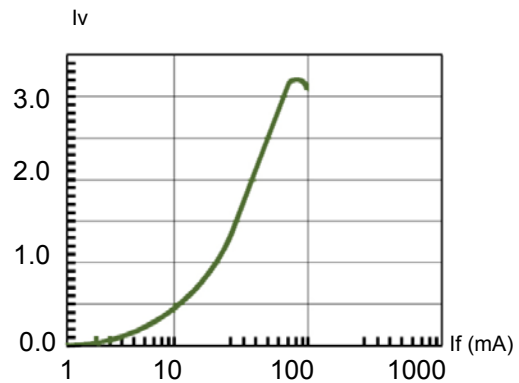


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

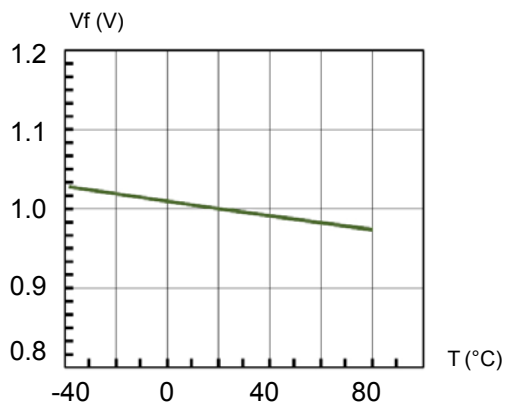


Fig. 5 Forward Voltage vs. Temperature

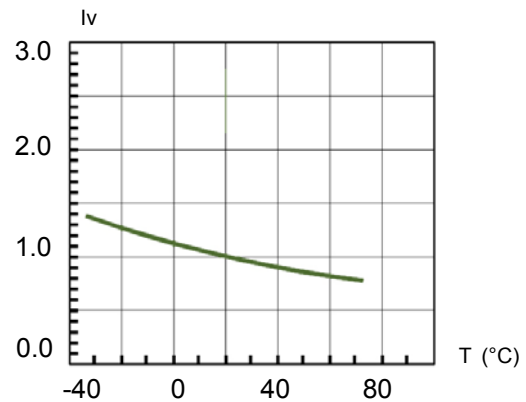


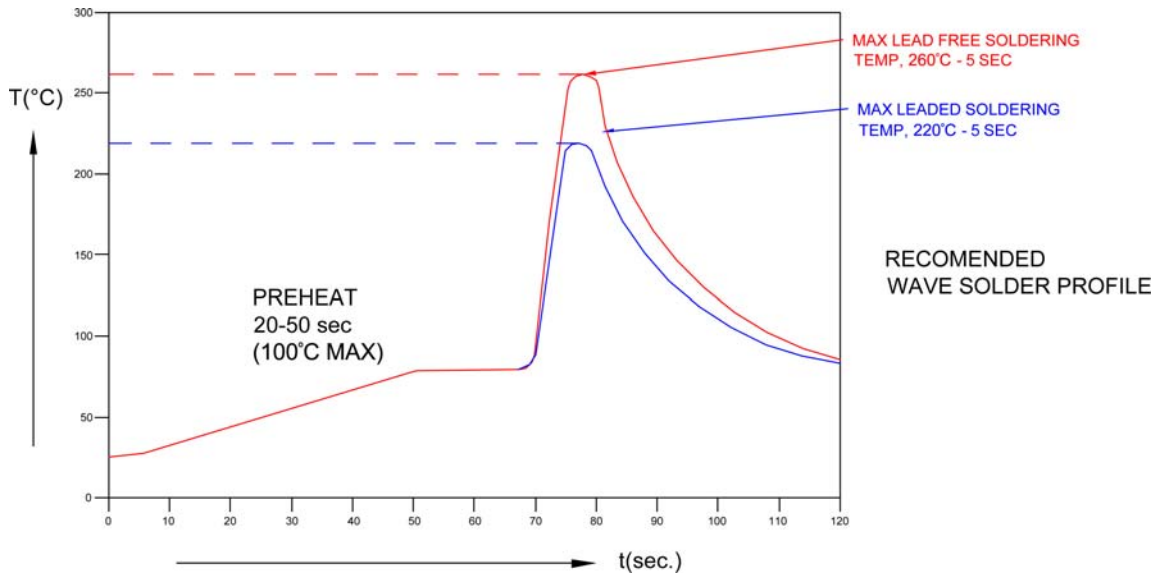
Fig. 6 Relative Luminous Intensity vs. Temperature

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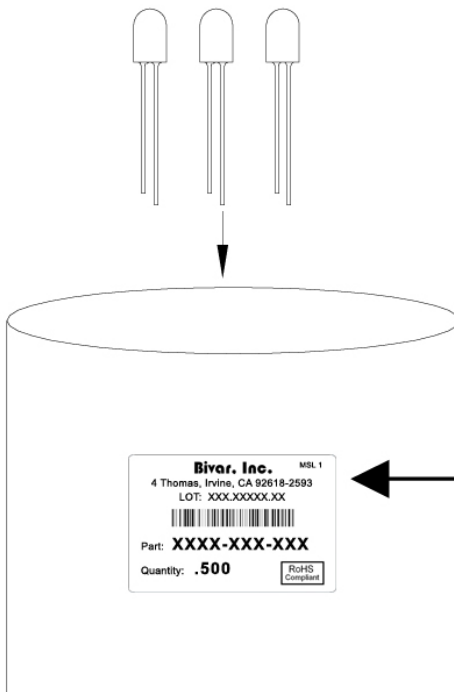


Recommended Soldering Conditions



| 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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