

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

BIVAR

5BC-X

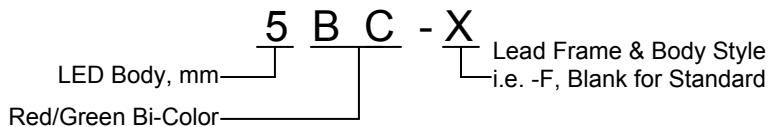
- ◆ Industry Standard 5mm (T1 ¾) Package
- ◆ RoHS Compliant
- ◆ White Diffused Lens
- ◆ Available in Flange (**F**) and Standard (**Blank**) Lead Frame styles
- ◆ 2-Lead Bi-Color LED
- ◆ Ideal for Status Indication and Display



Bivar 5mm T1 ¼ Package 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. Bivar offers white diffused LED lens for uniform light output. The Flange LED is ideal for Panel Mount Clip & Ring assemblies and the Standard Lead frame LED is ideal for vertical spacer assemblies without lead bends.

| Part Number | Material | Emitted Color | Peak. Wavelength λ_p (nm) TYP. | Lens Appearance | Viewing Angle |
|-------------|-----------|---------------|---|-----------------|---------------|
| 5BC-F | GaAsP/GaP | RED | 625nm | White Diffused | 45° |
| | GaP/GaP | GREEN | 568nm | | |
| 5BC | GaAsP/GaP | RED | 625nm | White Diffused | 45° |
| | GaP/GaP | GREEN | 568nm | | |

Part Number Designation

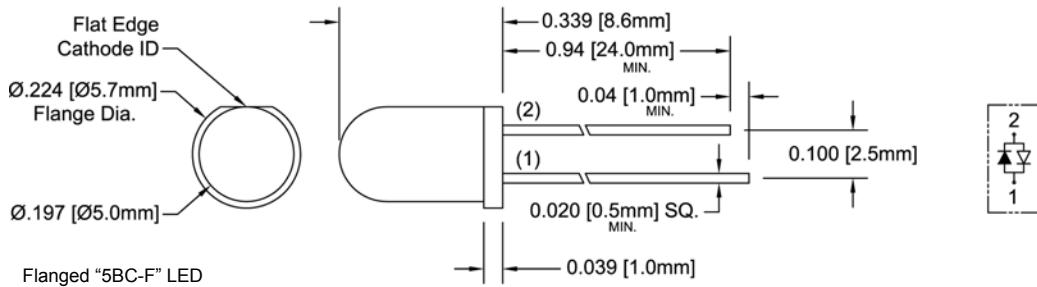


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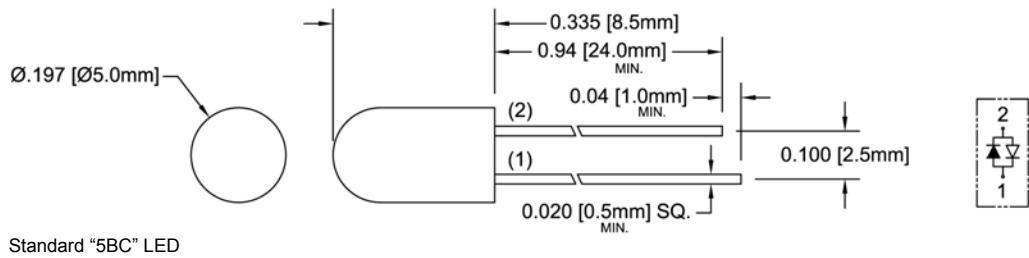
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Outline Dimensions



| | |
|-------------|-------------|
| (1) Cathode | (2) Cathode |
| Green | Red |



Recommended Mounting
Hole Size = Ø.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

$T_A = 25^\circ\text{C}$ 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

$T_A = 25^\circ\text{C}$ & $I_F = 20$ 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 $2\Theta \frac{1}{2}$ (deg) |
|-------------|---------------|----------------------------------|-----|-----|--------------------------------|-----|-----|-----------------------------------|---------------------------------------|-----|-----|--------------------------------|-----|-----|---|
| | | MIN | TYP | MAX | MIN | TYP | MAX | | MIN | TYP | MAX | MIN | TYP | MAX | |
| 5BC-F | Red | / | 2.0 | 2.8 | / | 20 | / | 100 | / | / | / | / | 8 | / | 45 |
| | Green | / | 2.1 | 2.8 | | | | | / | / | / | / | 8 | / | |
| 5BC | Red | / | 2.0 | 2.8 | / | 20 | / | 100 | / | / | / | / | 6 | / | 45 |
| | Green | / | 2.1 | 2.8 | | | | | / | / | / | / | 8 | / | |

Notes: 1. Tolerance of forward voltage : $\pm 0.05\text{V}$. 2. Tolerance of dominant wavelength : $\pm 1.0\text{nm}$.

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Typical Electrical / Optical Characteristics - Red

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

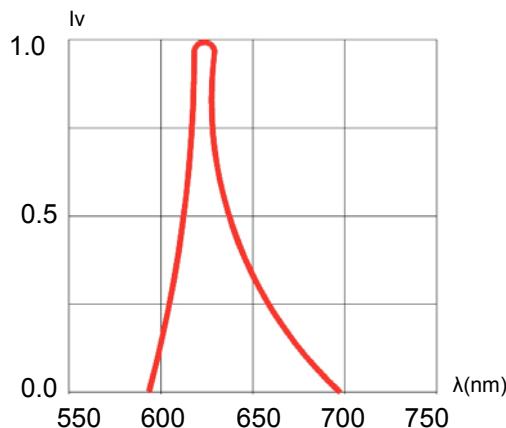


Fig. 1 Relative Luminous Intensity vs. Wavelength
@ 20mA

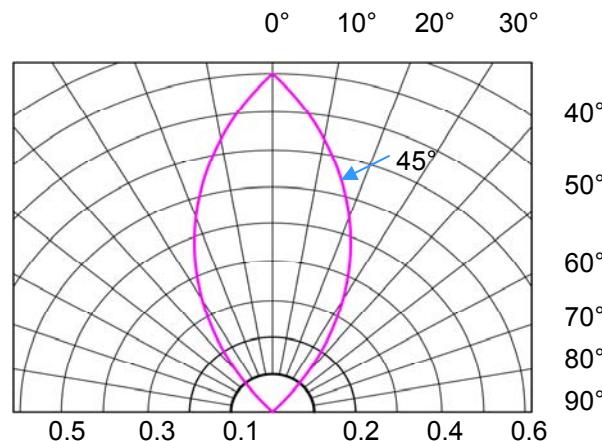


Fig. 2 Directivity Radiation Diagram

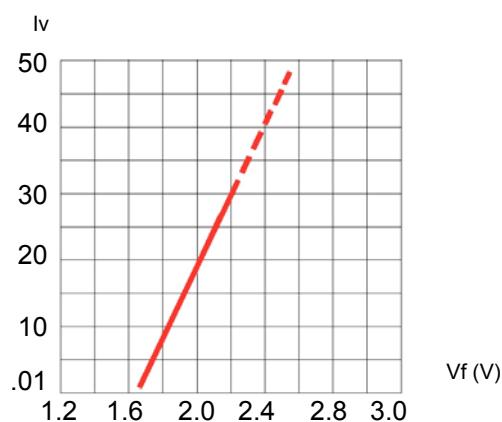


Fig. 3 Relative Intensity (10mA) vs.
Forward Voltage

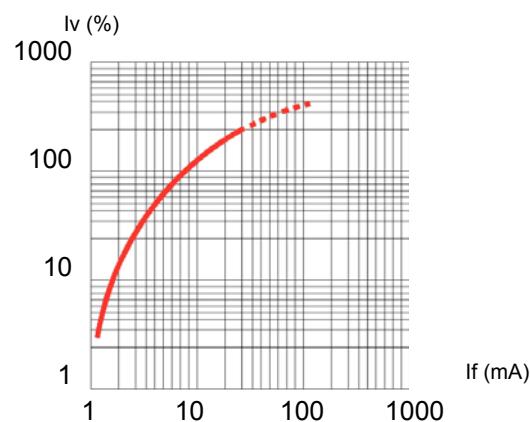


Fig. 4 Relative Luminous Intensity (%) vs.
Forward Current

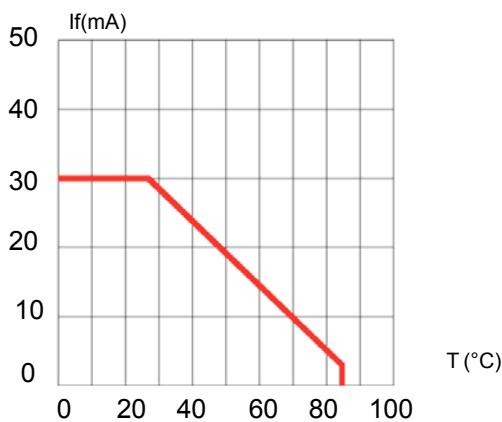


Fig. 5 Forward Current vs. Temperature

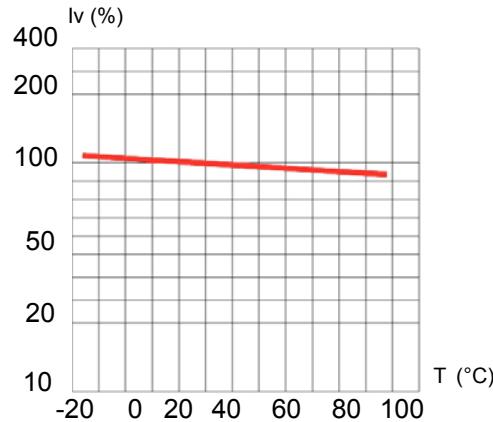


Fig. 6 Relative Intensity (%) vs. Temperature
@ 20 mA

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Typical Electrical / Optical Characteristics - Green

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

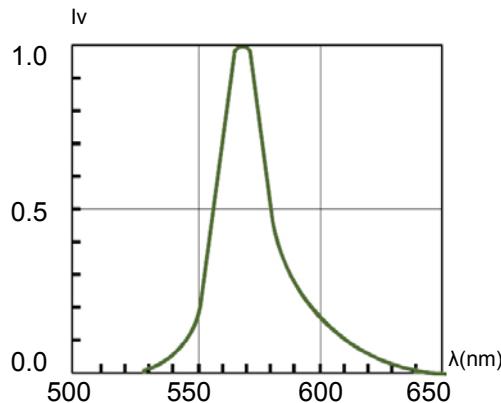


Fig. 1 Relative Luminous Intensity vs. Wavelength
@ 20mA

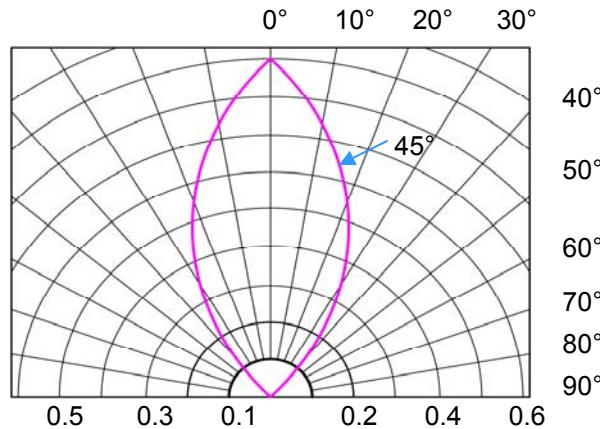


Fig. 2 Directivity Radiation Diagram

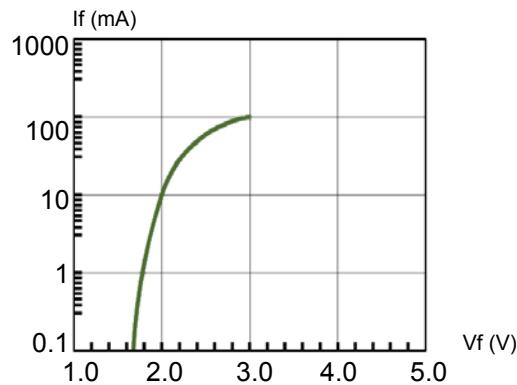


Fig. 3 Forward Current vs. Forward Voltage

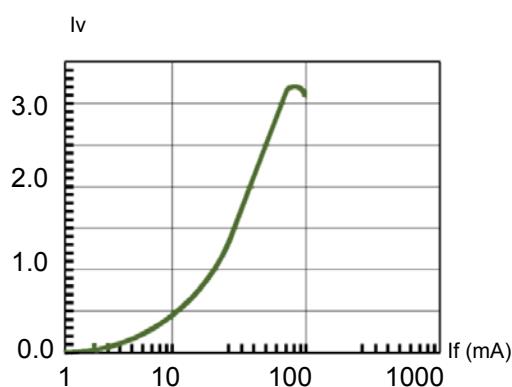


Fig. 4 Relative Luminous Intensity vs. Forward Current
Normalize @ 20 mA

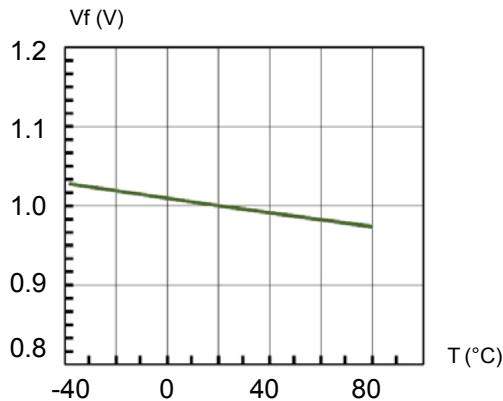


Fig. 5 Forward Voltage vs. Temperature

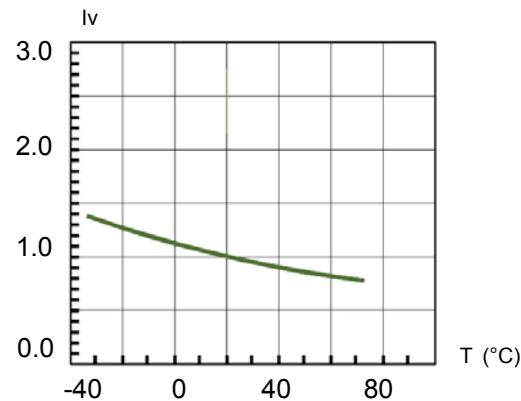


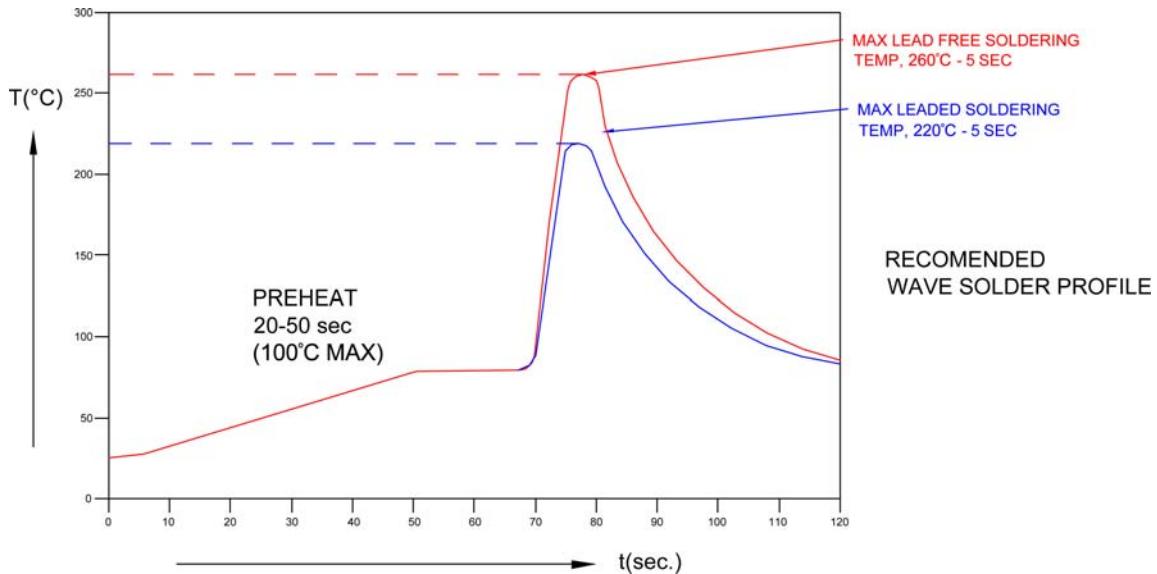
Fig. 6 Relative Luminous Intensity vs. Temperature

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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

