

5mm (T1 3/4) Package Discrete LED RED



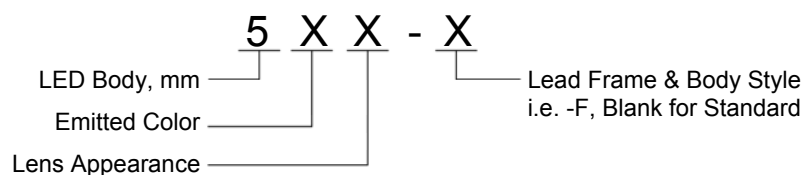
5R-X-X

- ◆ Industry Standard 5mm (T1 3/4) Package
- ◆ RoHS Compliant
- ◆ Water Clear (C), Diffused (D), and Tinted (T) Lenses
- ◆ Available in Flange (F) and Standard (Blank) Lead Frame styles
- ◆ Ideal for Status Indication and Display

Bivar 5mm T1 3/4 Package LED may be used in almost any application. Bivar offers water clear LED lens for maximum light output, diffused LED lens for uniform light output, and tinted lens to identify the color of the LED. 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 |
|-------------|----------|---------------|---|-----------------|---------------|
| 5RC-F | GaP/GaP | RED | 700nm | Water Clear | 35° |
| 5RD-F | | | | Red Diffused | 40° |
| 5RT-F | | | | Red Tinted | 35° |
| 5RC | | | | Water Clear | 35° |
| 5RD | | | | Red Diffused | 45° |
| 5RT | | | | Red Tinted | 35° |

Part Number Designation

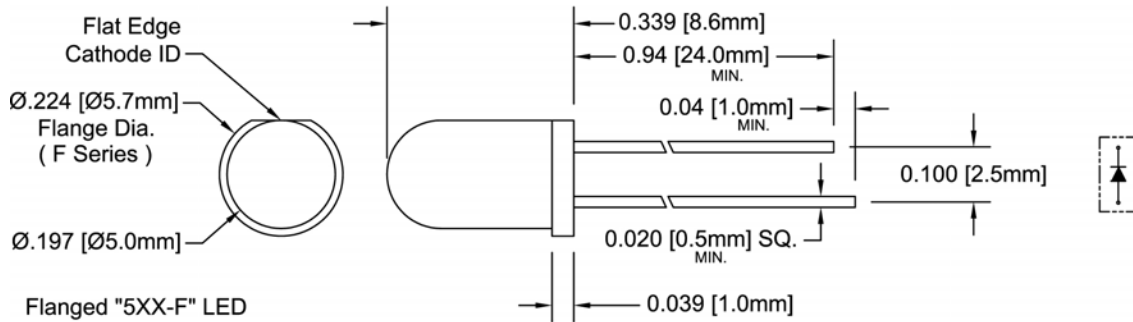


Bivar reserves the right to make changes at any time without notice.

5mm (T1 3/4) Package Discrete LED RED



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.

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

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

| | |
|--|--------------|
| Power Dissipation | 45 mW |
| Forward Current (DC) | 20 mA |
| Peak Forward Current ¹ | 80 mA |
| Reverse Voltage | 5 V |
| 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 | Forward Voltage (V) ¹ | | | Recommend Forward Current (mA) | | | Reverse Current (μA) | Dominant Wavelength (nm) ² | | | Luminous Intensity I _v (mcd) | | | Viewing Angle 2 Θ ½ (deg) |
|-------------|----------------------------------|-----|-----|--------------------------------|-----|-----|----------------------|---------------------------------------|-----|-----|---|-----|-----|---------------------------|
| | MIN | TYP | MAX | MIN | TYP | MAX | | MAX | MIN | TYP | MAX | MIN | TYP | |
| 5RC-F | / | 2.1 | 2.8 | / | 20 | / | 100 | / | / | / | / | 2 | / | 35 |
| 5RD-F | | | | | | | | / | / | / | / | 1.5 | / | 40 |
| 5RT-F | | | | | | | | / | / | / | / | 2 | / | 35 |
| 5RC | / | 2.1 | 2.8 | / | 20 | / | 100 | / | / | / | / | 2 | / | 35 |
| 5RD | | | | | | | | / | / | / | / | 2 | / | 45 |
| 5RT | | | | | | | | / | / | / | / | 2 | / | 35 |

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

Typical Electrical / Optical Characteristics

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

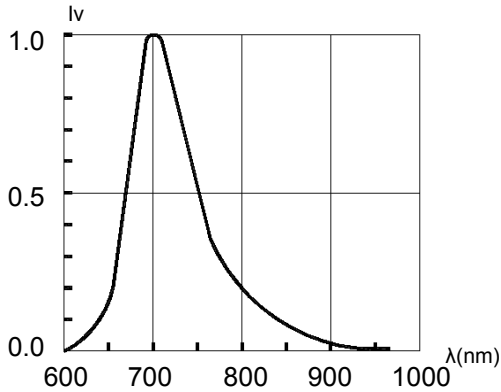


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

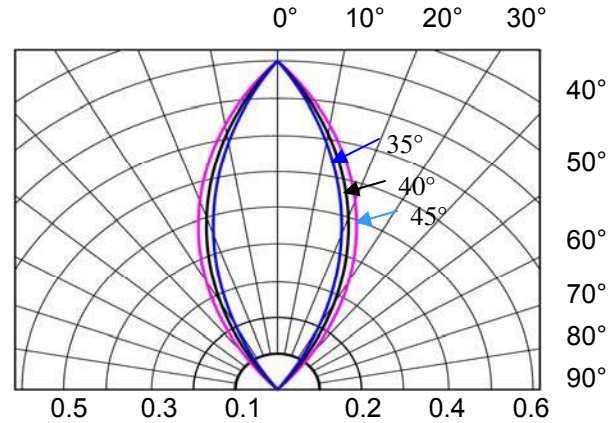


Fig. 2 Directivity Radiation Diagram

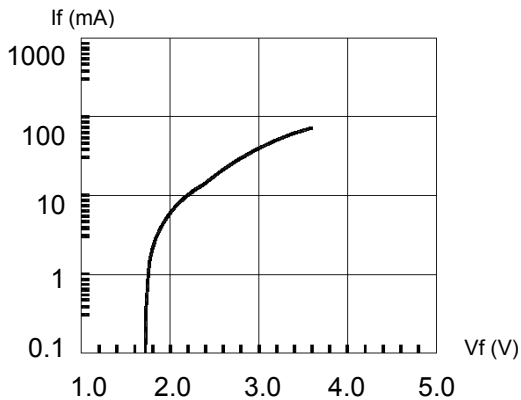


Fig. 3 Forward Current vs. Forward Voltage

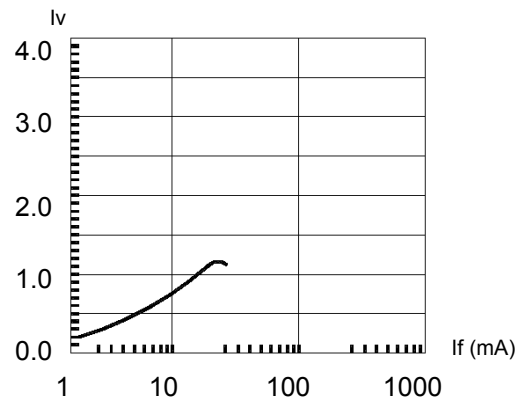


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

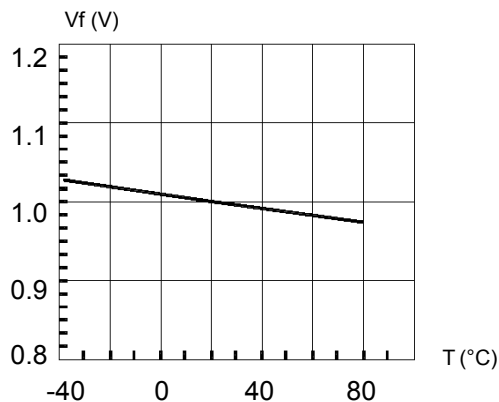


Fig. 5 Forward Voltage vs. Temperature

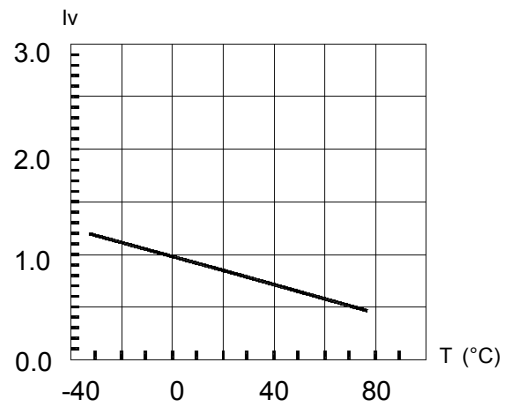


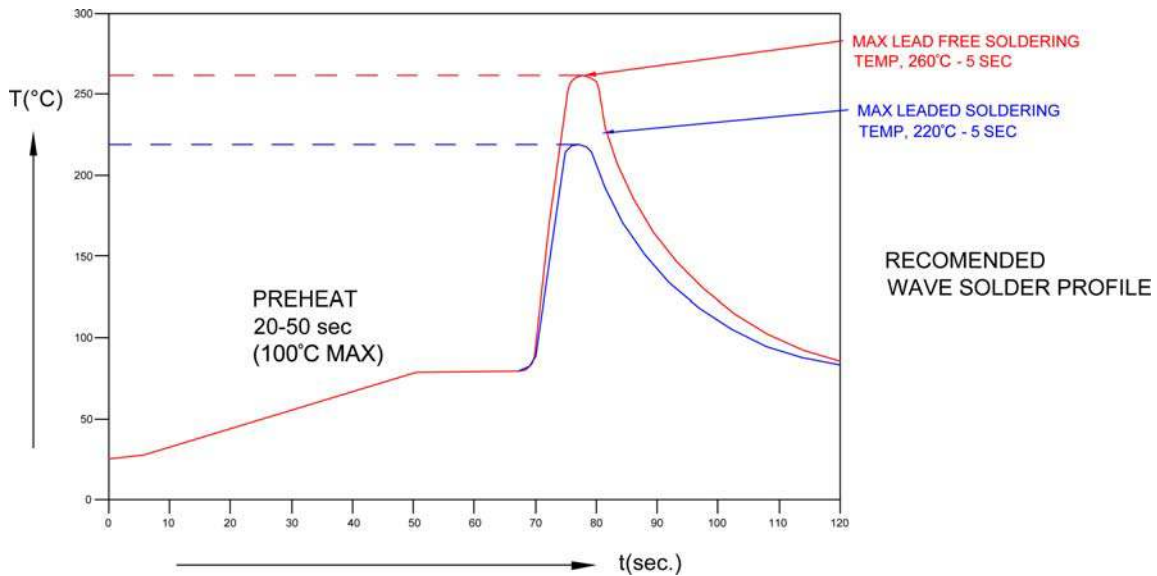
Fig. 6 Relative Luminous Intensity vs. Temperature

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

5mm (T1 3/4) Package Discrete LED RED

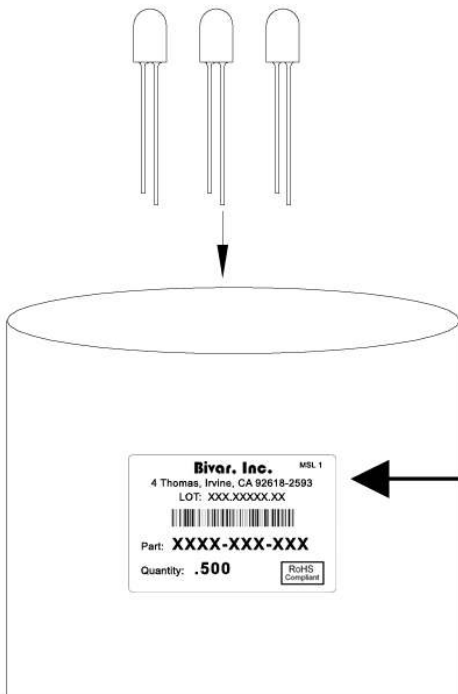


Recommended Soldering Conditions



| 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)

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