

3mm (T1) Package Discrete LED RED, Extended Profile

BIVAR

3HX-201-X

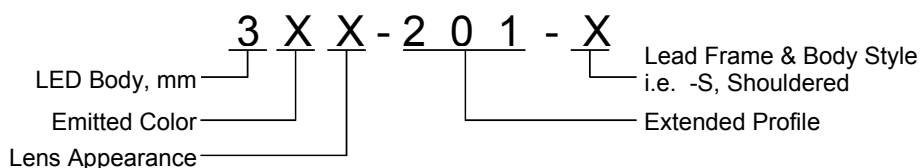
- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ Water Clear (C), Diffused (D), and Tinted (T) Lenses
- ◆ Available in Shouldered (S) Lead Frame Style
- ◆ Ideal for Status Indication and Display



Bivar 3mm T1 Package Extended Profile LED may be used in almost any application and provides additional protrusion for those applications with thicker face plates. 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 Shouldered Lead frame LED is ideal for vertical spacer assemblies without lead bends and also has a built in strain relief feature which is ideal for right angle holder assemblies that require lead bends.

| Part Number | Material | Emitted Color | Peak. Wavelength λ_p (nm) TYP. | Lens Appearance | Viewing Angle |
|-------------|-----------|---------------|---|-----------------|---------------|
| 3HC-201-S | GaAsP/GaP | RED | 625nm | Water Clear | 20° |
| 3HD-201-S | | | | Red Diffused | 35° |
| 3HT-201-S | | | | Red Tinted | 20° |

Part Number Designation

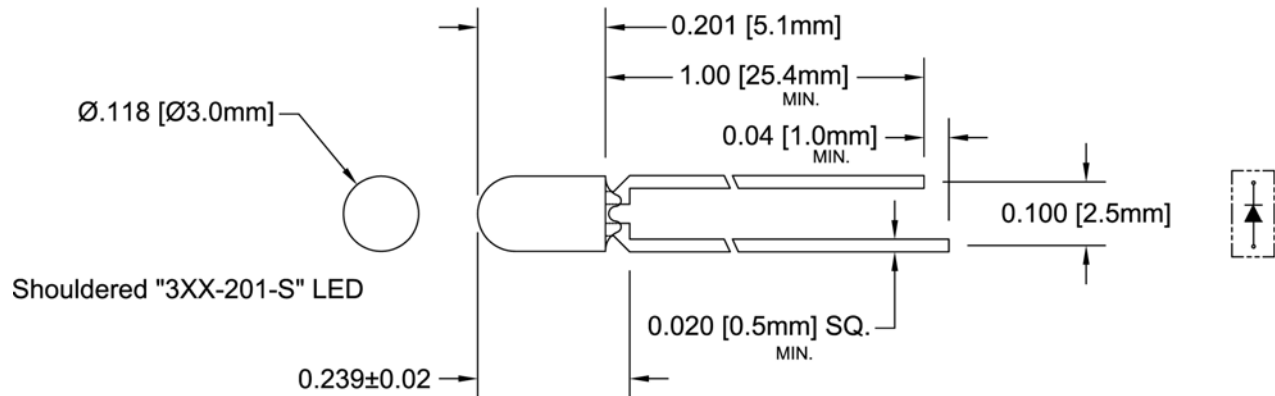


Bivar reserves the right to make changes at any time without notice.

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Outline Dimensions



Recommended Mounting

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

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.

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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 |
| 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 \leq 0.1 msec. 2. Solder time less than 5 seconds at temperature extreme.

Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$ & $I_F = 20\text{ mA}$ 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 $2\theta_{1/2}$ (deg) |
|-------------|----------------------------------|-----|-----|--------------------------------|-----|-----|-----------------------------------|---------------------------------------|-----|-----|--------------------------------|-----|-----|-------------------------------------|
| | MIN | TYP | MAX | MIN | TYP | MAX | MAX | MIN | TYP | MAX | MIN | TYP | MAX | TYP |
| 3HC-201-S | | | | | | | | / | / | / | / | 50 | / | 20 |
| 3HD-201-S | / | 2.0 | 2.8 | / | 20 | / | 100 | / | / | / | / | 30 | / | 35 |
| 3HT-201-S | | | | | | | | / | / | / | / | 50 | / | 20 |

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

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

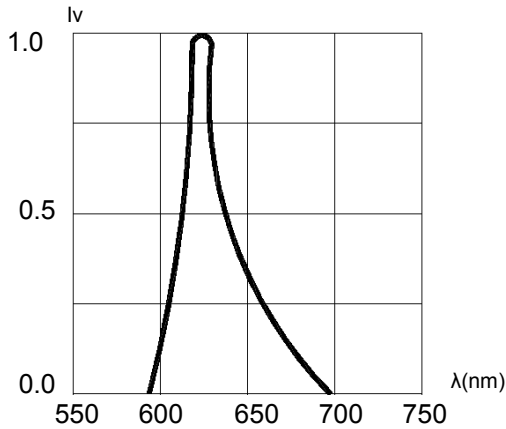


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

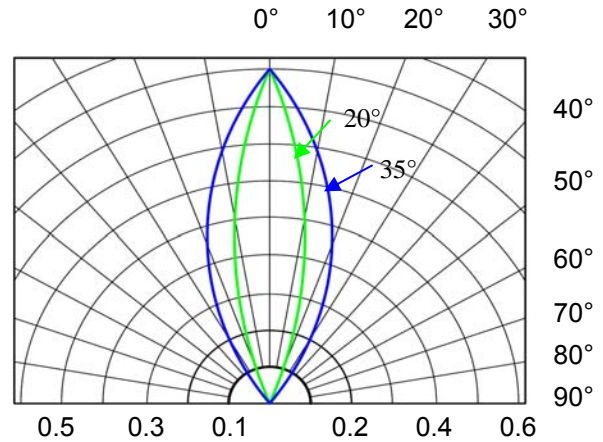


Fig. 2 Directivity Radiation Diagram

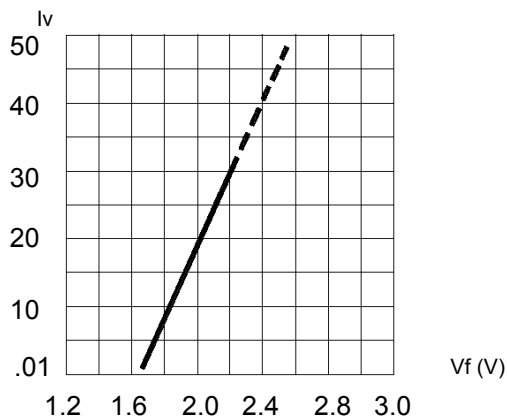


Fig. 3 Relative Intensity (10mA) vs. Forward Voltage

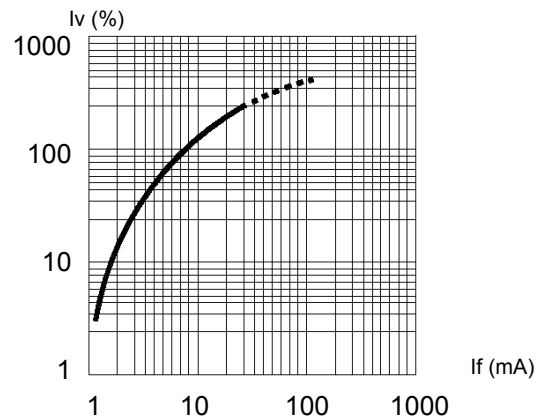


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current

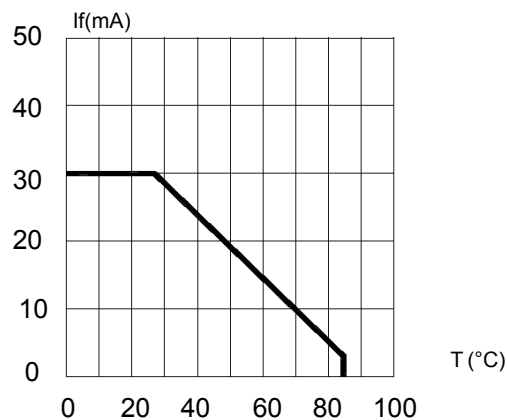


Fig. 5 Forward Current vs. Temperature

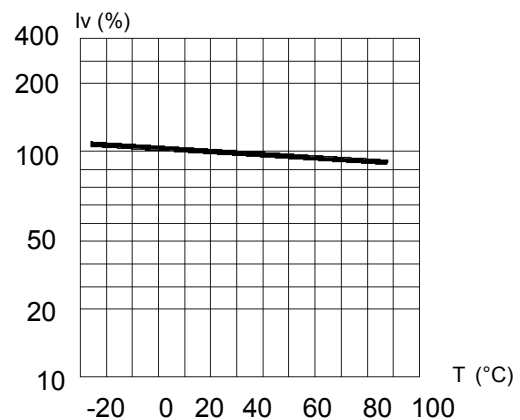


Fig. 6 Relative Intensity (%) vs. Temperature @ 20 mA

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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

Anti-Static Poly Bag with Desiccant
(500 pcs Max. per Bag)

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