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

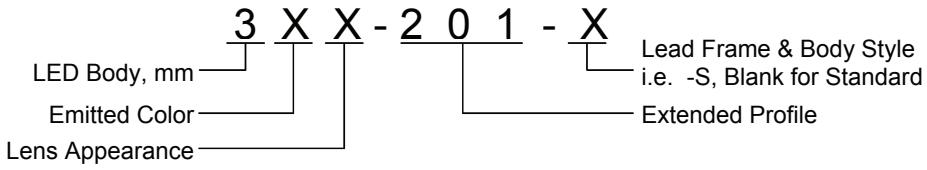
3HX-201-X

- **Industry Standard 3mm (T1) Package**
- **RoHS Compliant**
- **Water Clear (C), Diffused (D), and Tinted (T) Lenses**
- **Available in Standard (Blank) and Shouldered (S) Lead Frame styles**
- **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 Standard Lead frame LED is ideal for vertical spacer assemblies without lead bends 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. A long lead version is also available with a "-LL" suffix added to the part numbers.

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

Part Number Designation

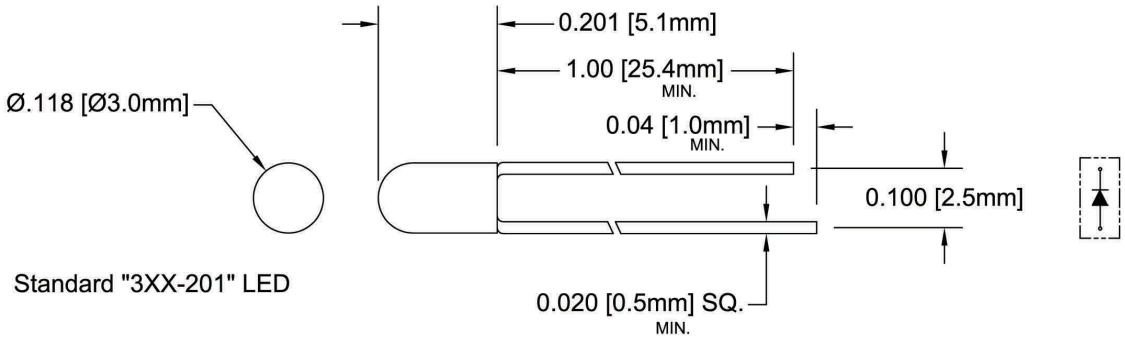


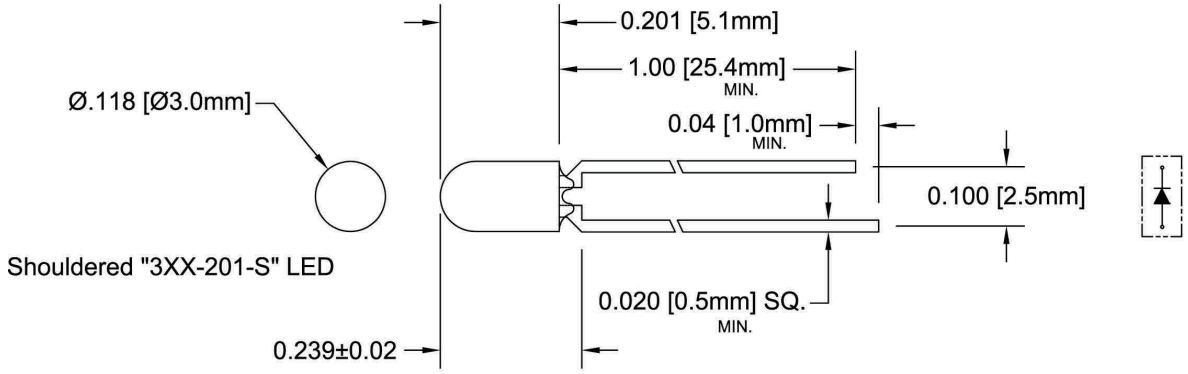
ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

RoHS Compliant

Moisture Sensitivity Levels 1

Outline Dimensions





Recommended Mounting
Hole Size = $Ø.032^{+.003}_{-.002}$

NOTE: Add suffix -LL for long lead.
Changes 1.00 Min. to 1.57 Min.

Standard Lead Only

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.

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
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 Iv (mcd)			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
3HC-201	/	2.0	2.8	/	20	/	100	/	/	/	/	50	/	20
3HD-201								/	/	/	/	30	/	35
3HT-201								/	/	/	/	50	/	20
3HC-201-S	/	2.0	2.8	/	20	/	100	/	/	/	/	50	/	20
3HD-201-S								/	/	/	/	30	/	35
3HT-201-S								/	/	/	/	50	/	20

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

Typical Electrical / Optical Characteristics

T_A = 25°C unless otherwise noted

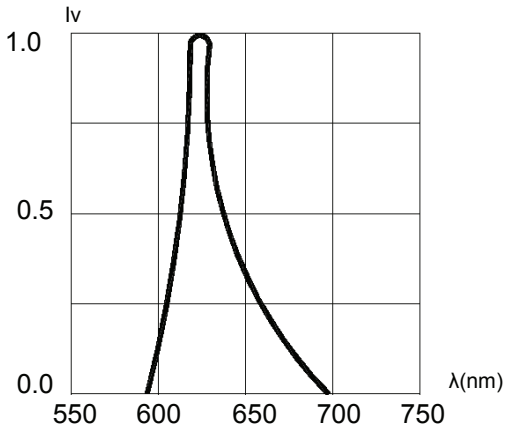


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

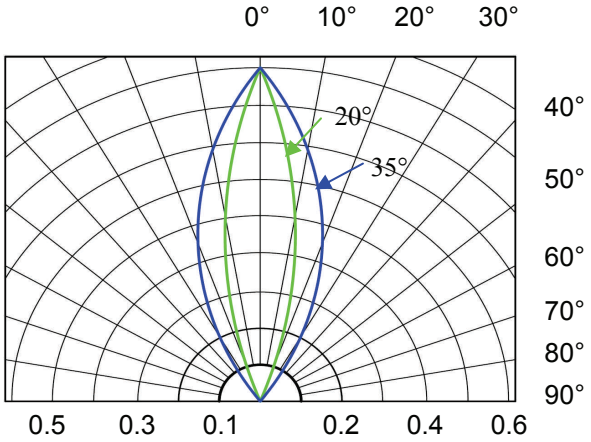


Fig. 2 Directivity Radiation Diagram

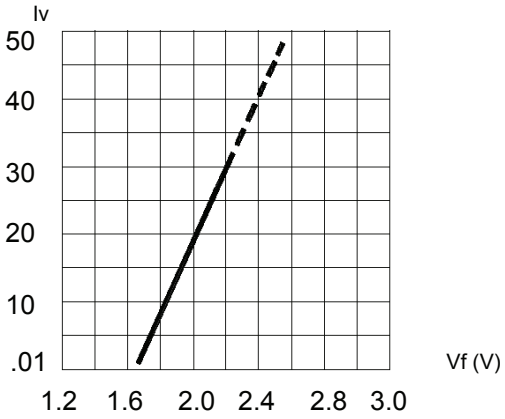


Fig. 3 Relative Intensity (10mA) vs. Forward Voltage

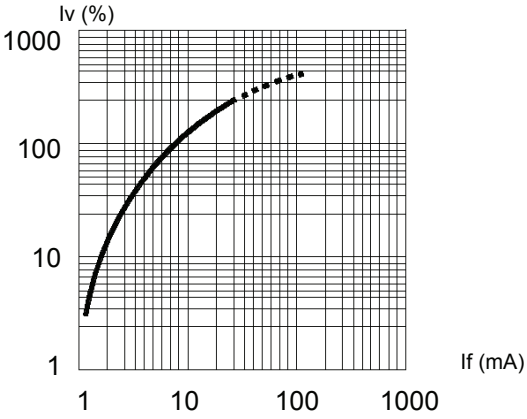


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current

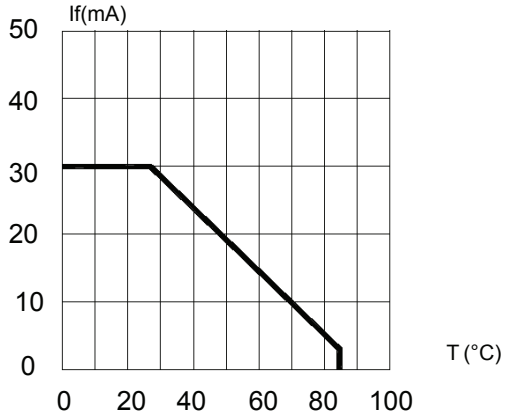


Fig. 5 Forward Current vs. Temperature

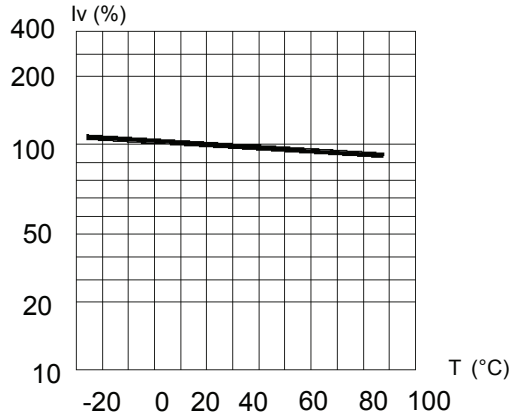
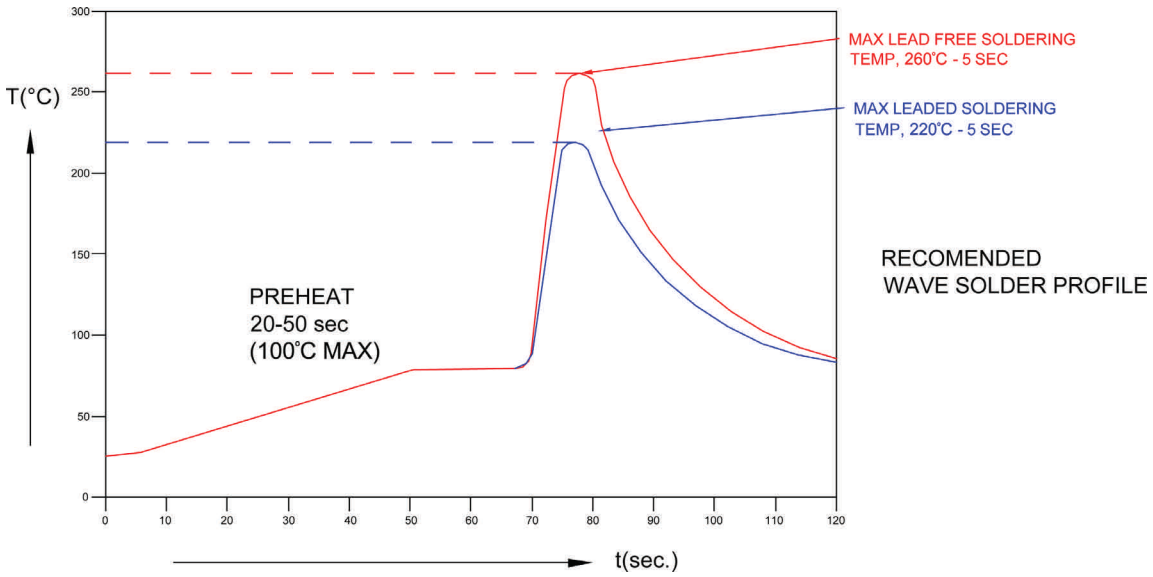


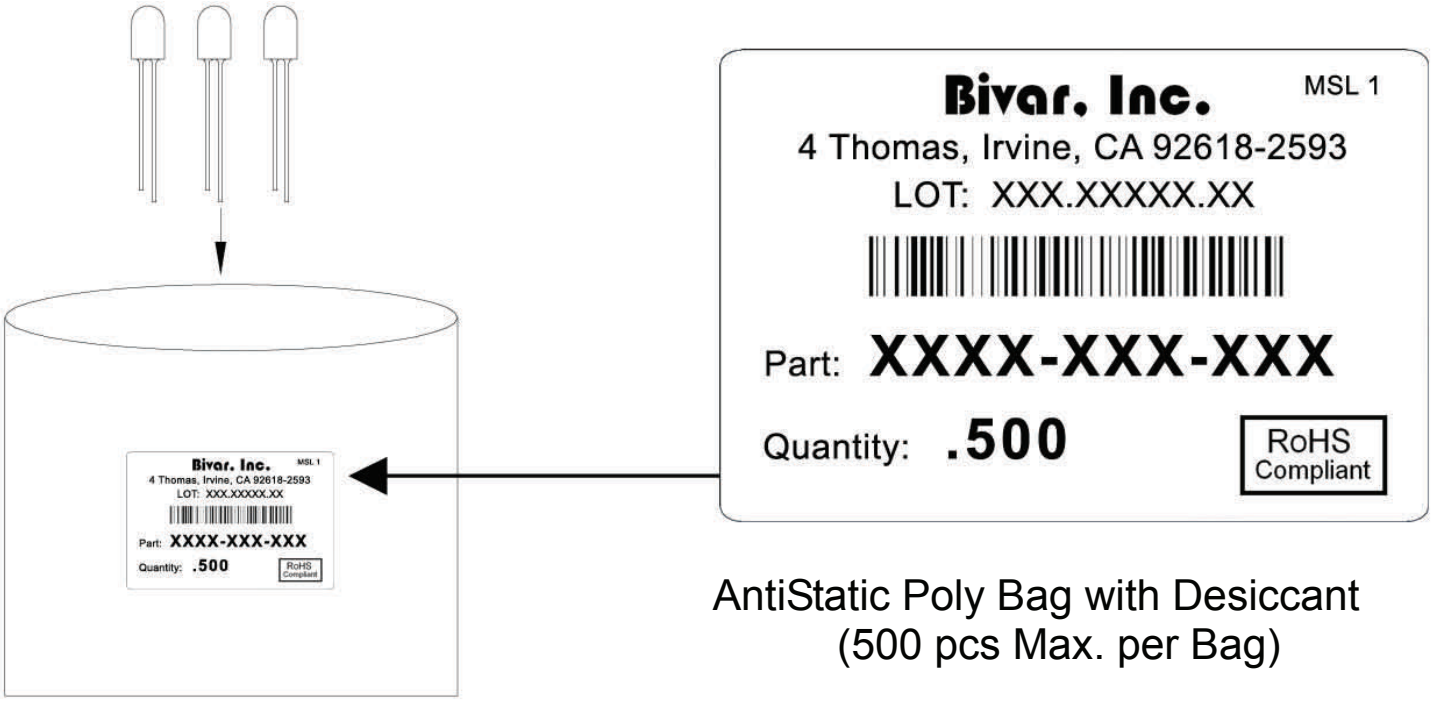
Fig. 6 Relative Intensity (%) vs. Temperature @ 20 mA

Recommended Soldering Conditions



Recommended Lead Free Wave Soldering Profile	
Preheat Temperature: 100ºC Max.	Peak Temperature: 260ºC Max.
Preheat Time: 20 ~ 50 Seconds	Solder Time Above 217ºC: 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



AntiStatic Poly Bag with Desiccant
(500 pcs Max. per Bag)