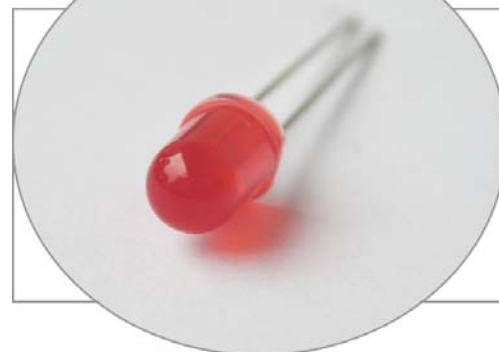


5mm (T1 ¾) Package Discrete LED RED, Low Current

BIVAR

5HDL-X

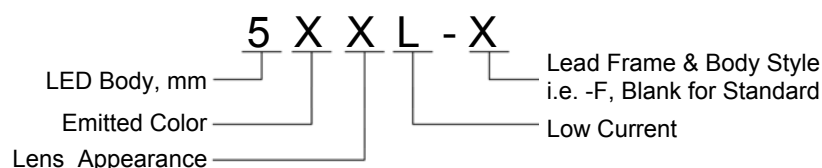
- ◆ Industry Standard 5mm (T1 ¾) Package
- ◆ RoHS Compliant
- ◆ Diffused Lens
- ◆ Available in Flange (F) and Standard (Blank) Lead Frame styles
- ◆ 2 mA Low Operating Current
- ◆ Ideal for Status Indication and Display



Bivar 5mm T1 ¾ Package 2 mA Low Current LED is special binned at 2 mA and is ideal for those applications where lower power budget is required such as solar panel or battery-powered portable devices. Bivar offers diffused LED lens for uniform light output. The Flanged 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
5HDL-F	GaAsP/GaP	RED	625nm	Red Diffused	40°
5HDL				Red Diffused	45°

Part Number Designation

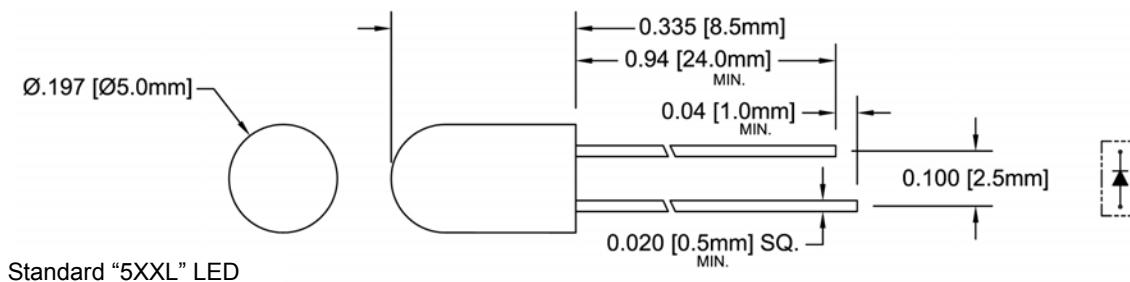
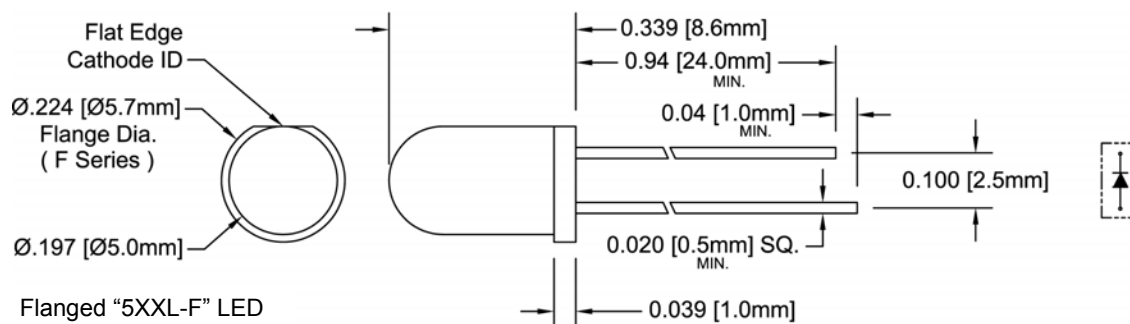


Bivar reserves the right to make changes at any time without notice.

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



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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5mm (T1 ¾) Package Discrete LED RED, Low Current



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	10 mW
Forward Current (DC)	7 mA
Peak Forward Current ¹	/ 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 = 2 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	MAX	TYP
5HDL-F	/	2.0	2.6	/	2	/	100	/	/	/	/	5	/	40
5HDL								/	/	/	/	5	/	45

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

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5mm (T1 ¾) Package Discrete LED RED, Low Current



Typical Electrical / Optical Characteristics

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

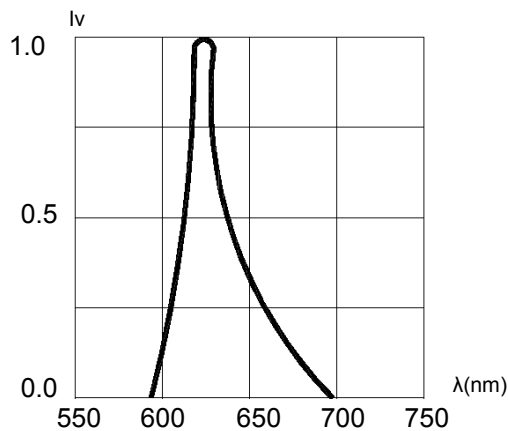


Fig. 1 Relative Luminous Intensity vs. Wavelength

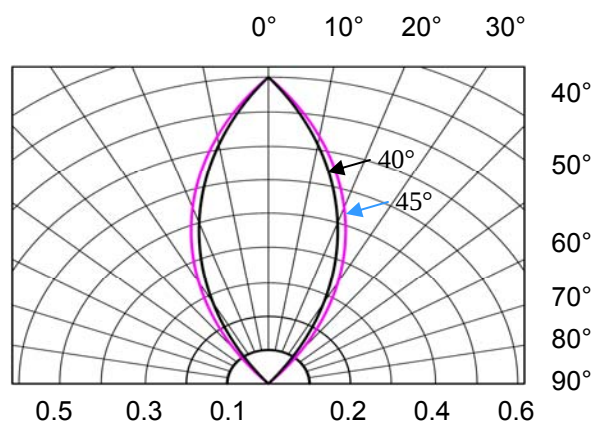


Fig. 2 Directivity Radiation Diagram

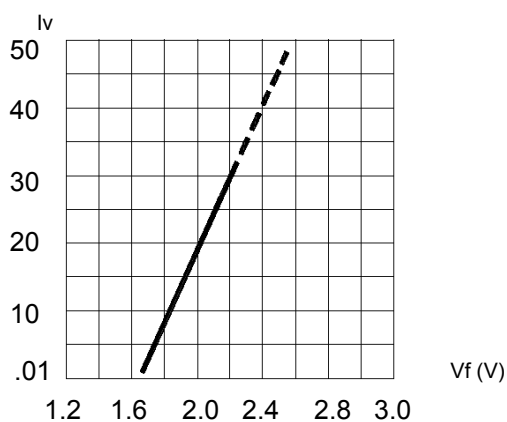


Fig. 3 Relative Intensity vs. Forward Voltage

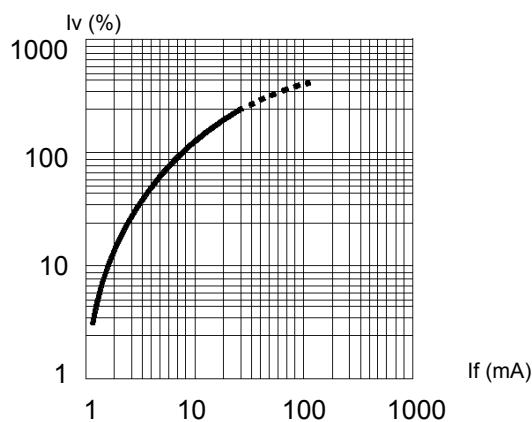


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current

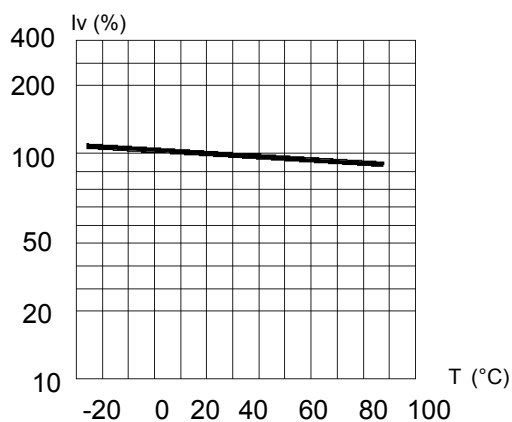


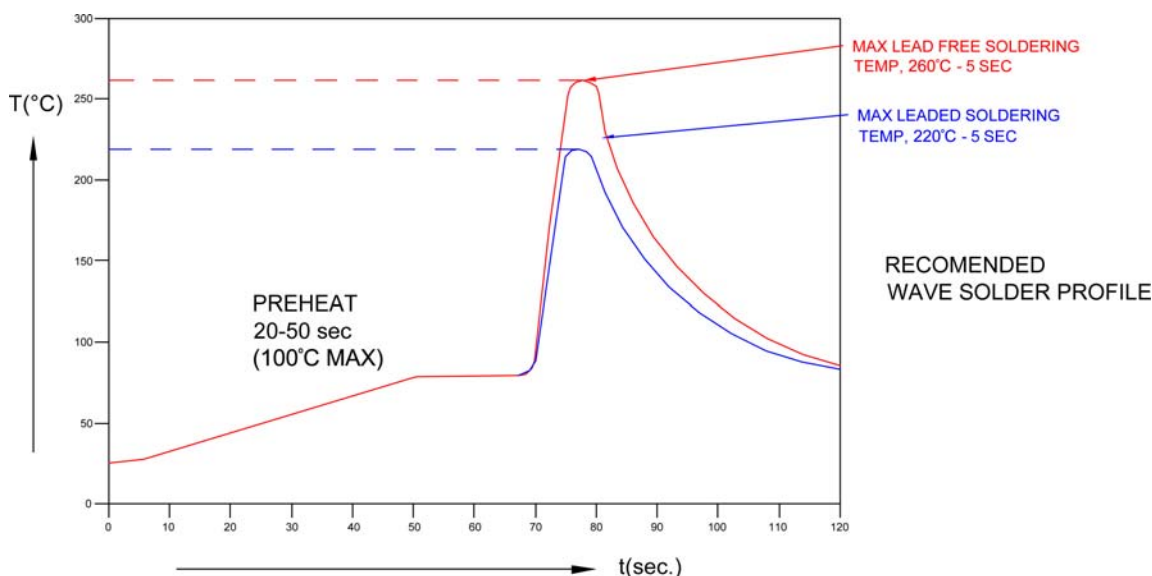
Fig. 5 Relative Intensity (%) vs. Temperature

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5mm (T1 ¾) Package Discrete LED RED, Low Current

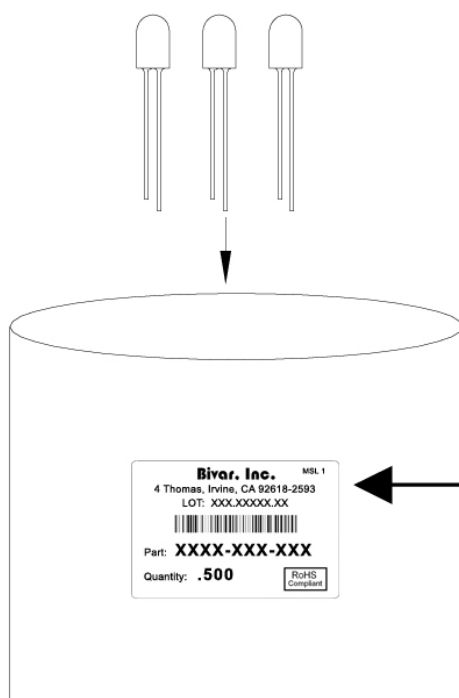


Recommended Soldering Conditions



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



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

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