

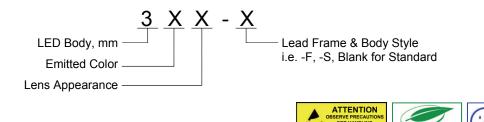
#### 3Y<u>X</u>-<u>X</u>

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

Bivar 3mm T1 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 Flanged LED is ideal for Panel Mount Clip & Ring assemblies, 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	
3YC-F				Water Clear	20°	
3YD-F				Yellow Diffused	35°	
3YT-F				Yellow Tinted	20°	
3YC				Water Clear	30°	
3YD	GaAsP/Gap	YELLOW	590nm	Yellow Diffused	40°	
3YT				Yellow Tinted	30°	
3YC-S				Water Clear	30°	
3YD-S	1			Yellow Diffused	40°	
3YT-S	1			Yellow Tinted	30°	

#### **Part Number Designation**

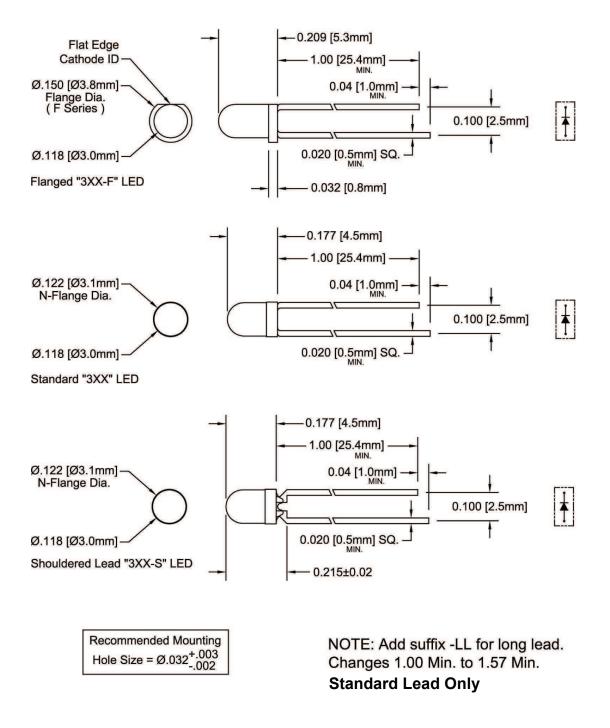


livar reserves the right to make changes at any time without notice.

Moisture Sensitivity Levels 1



## **Outline Dimensions**



- Outline Drawings Notes: 1. All dimensions are in inches [millimeters].
- Standard tolerance: ±0.010° unless otherwise noted.
  Tolerance of overall epoxy outline: ±0.020° unless otherwise noted.
  Epoxy meniscus may extend to 0.060° max.



### Absolute Maximum Ratings

 $T_A$  = 25°C unless otherwise noted

Power Dissipation	85 mW
Forward Current ( DC )	30 mA
Peak Forward Current <sup>1</sup>	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 ) <sup>2</sup>	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**

 $T_A = 25^{\circ}C \& I_F = 20 \text{ mA}$  unless otherwise noted

Part Number	Forward Voltage (V) <sup>1</sup>		Recommend Forward Current (mA)		Reverse Current (µA)	Dominant Wavelength (nm) <sup>2</sup>		Luminous Intensity Iv (mcd)			Viewing Angle 2 O ½ (deg)			
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	ТҮР
3YC-F				/	20	/	100	/	/	/	25	40	80	20
3YD-F	/	2.0	2.8					/	/	/	10	20	40	35
3YT-F								/	/	/	25	40	80	20
3YC					20	/	100	/	/	/	25	40	80	30
3YD	/	2.0	0 2.8	/				/	/	/	10	20	40	40
3YT								/	/	/	25	40	80	30
3YC-S			2.0 2.8	/	20	20 /	100	/	/	/	25	40	80	30
3YD-S	/ 2.0	2.0						/	/	/	10	20	40	40
3YT-S								/	/	/	25	40	80	30

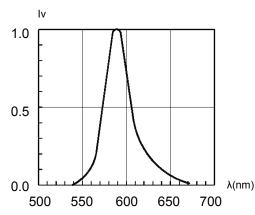
Notes: 1. Tolerance of forward voltage : ±0.05V.

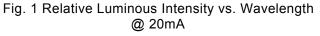
2. Tolerance of dominant wavelength : ±1.0nm.



# Typical Electrical / Optical Characteristics

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





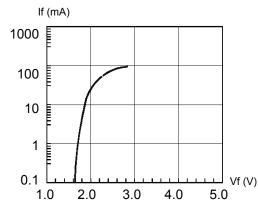
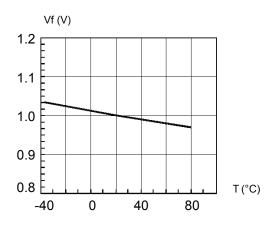


Fig. 3 Forward Current vs. Forward Voltage





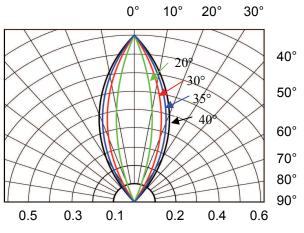


Fig. 2 Directivity Radiation Diagram

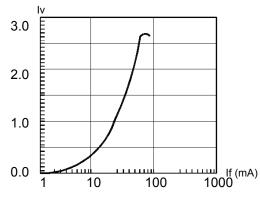
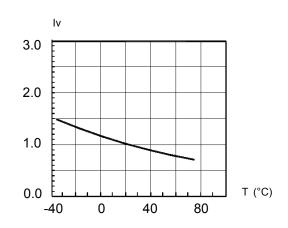
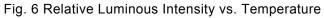


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

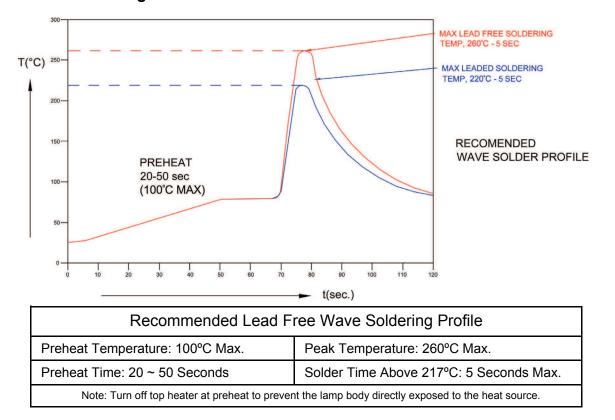




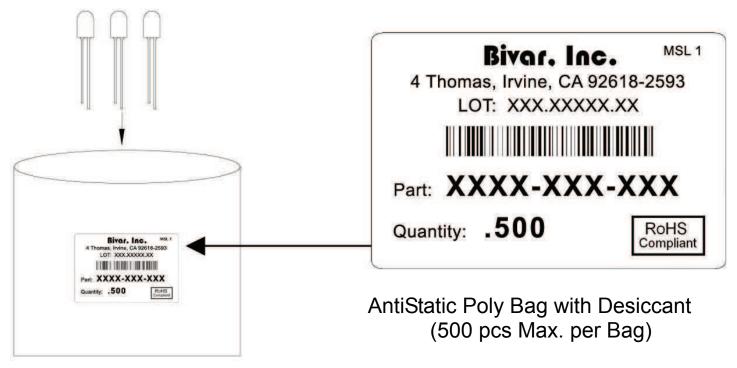
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#### **Recommended Soldering Conditions**



#### Packaging and Labeling Plan



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