

# 1.8mm Package Discrete LED YELLOW, Low Current

# BIVAR

## 1.8YXL

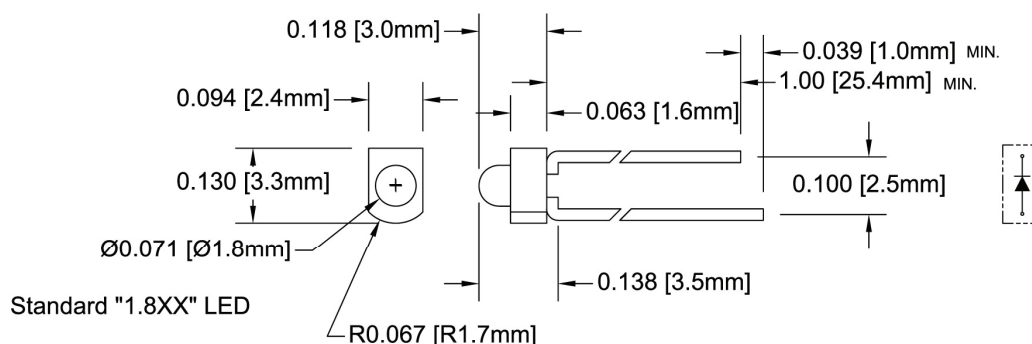
- ◆ 1.8mm Small Footprint Package
- ◆ RoHS Compliant
- ◆ Water Clear (C) and Diffused (D) Lenses
- ◆ Available in a Shouldered Lead Frame style
- ◆ 2 mA Low Operating Current
- ◆ Ideal for Status Indication and Display
- ◆ Recommended for Bivar H-381C and H-485C holder assemblies



Bivar 1.8mm Package 2 mA Low Current LED is special binned at 2 mA and is ideal for those applications where lower power budget and smaller indication lighting are required such as solar panel or battery-powered portable devices. Bivar offers water clear LED lens for maximum light output and diffused LED lens for uniform light output, The Shouldered Lead frame LED 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 $\lambda_p$ (nm) TYP.	Lens Appearance	Viewing Angle
1.8YCL	GaAsP/GaP	YELLOW	590nm	Water Clear	35°
1.8YDL				Yellow Diffused	50°

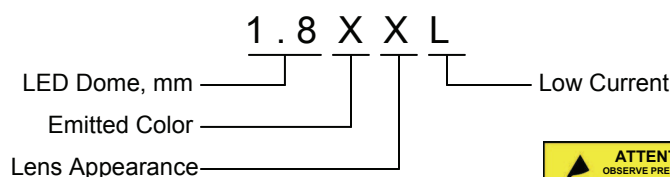
## Outline Dimensions



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

**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.

## Part Number Designation



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

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## Absolute Maximum Ratings

T<sub>A</sub> = 25°C unless otherwise noted

Power Dissipation	10 mW
Forward Current ( DC )	7 mA
Peak Forward Current <sup>1</sup>	/ 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<sub>A</sub> = 25°C & I<sub>F</sub> = 2 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 I <sub>v</sub> (mcd)			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
1.8YCL	/	2.1	2.6	/	2	/	100	/	/	/	/	2.5	/	35
1.8YDL		2.0	2.6					/	/	/	/	1	/	50

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

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## Typical Electrical / Optical Characteristics

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

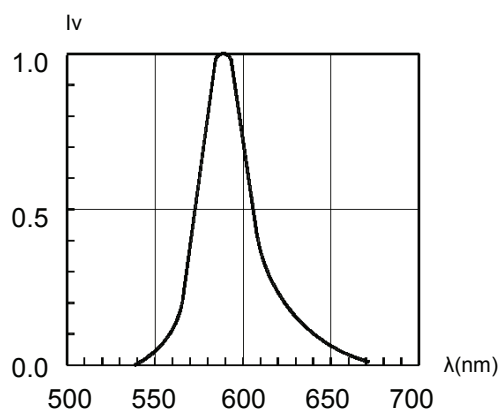


Fig. 1 Relative Luminous Intensity vs. Wavelength

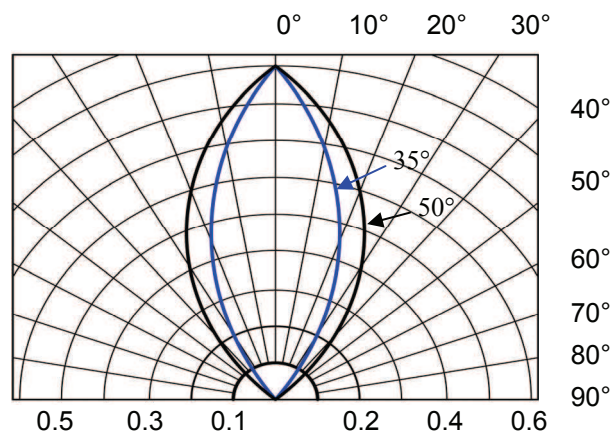


Fig. 2 Directivity Radiation Diagram

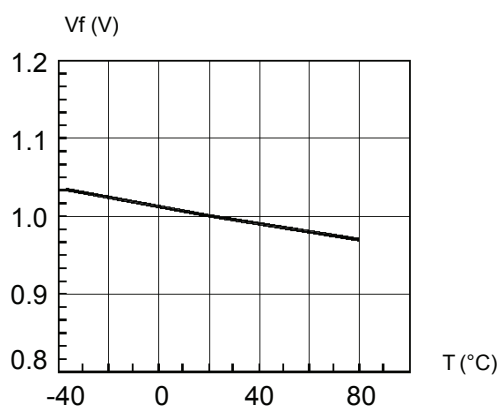


Fig. 3 Forward Voltage vs. Temperature

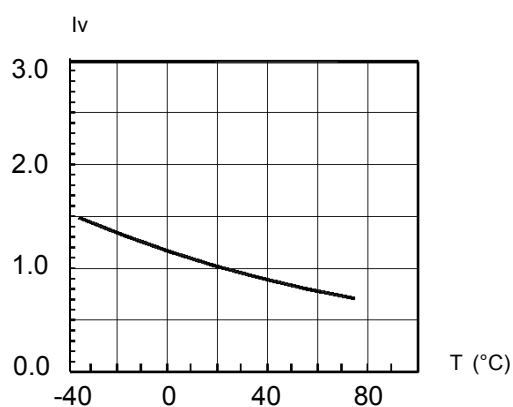


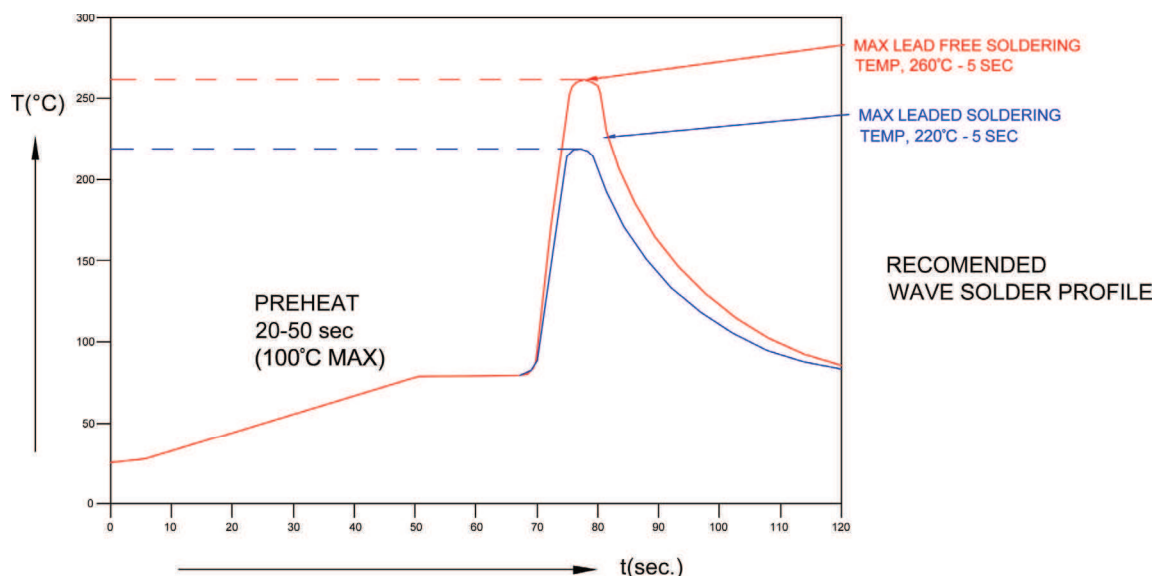
Fig. 4 Relative Luminous Intensity vs. Temperature

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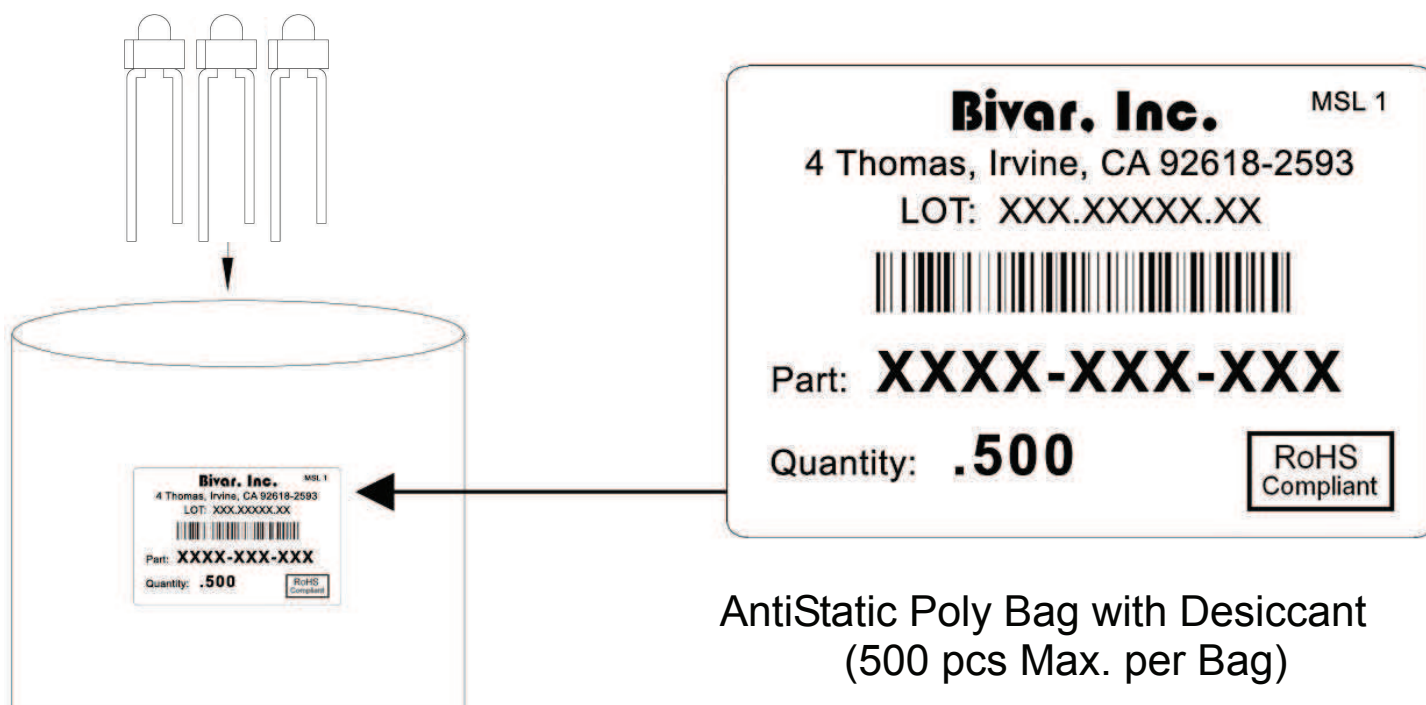


## Recommended Soldering Conditions



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



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