

# 1.8mm Package Discrete LED YELLOW

# BIVAR

## 1.8YX

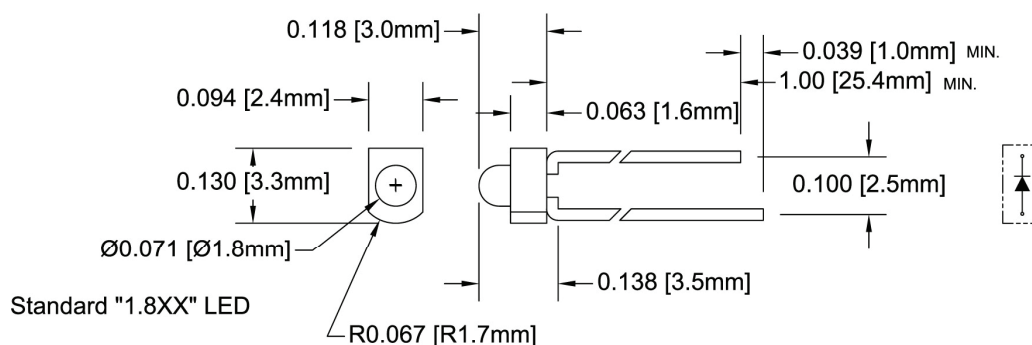
- ◆ 1.8mm Small Footprint Package
- ◆ RoHS Compliant
- ◆ Water Clear (C) and Diffused (D) Lenses
- ◆ Available in a Shouldered Lead Frame style
- ◆ Ideal for Status Indication and Display
- ◆ Recommended for Bivar H-381C and H-485C holder assemblies



Bivar 1.8mm Package LED may be used in almost any Application where smaller indication lights are required. 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<br>$\lambda_p$ (nm) TYP. | Lens Appearance | Viewing Angle |
|-------------|-----------|---------------|-------------------------------------------|-----------------|---------------|
| 1.8YC       | GaAsP/GaP | YELLOW        | 590nm                                     | Water Clear     | 35°           |
| 1.8YD       |           |               |                                           | Yellow Diffused | 50°           |

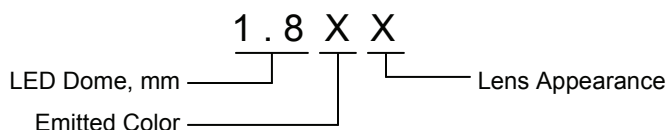
## Outline Dimensions



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

$T_A = 25^{\circ}\text{C}$  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  $\leq 0.1$  msec.      2. Solder time less than 5 seconds at temperature extreme.

## Electrical / Optical Characteristics

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

| Part Number | Forward Voltage (V) <sup>1</sup> |     |     | Recommend Forward Current (mA) |     |     | Reverse Current ( $\mu\text{A}$ ) | Dominant Wavelength (nm) <sup>2</sup> |     |     | 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                                 |
| 1.8YC       | /                                | 2.0 | 2.8 | /                              | 20  | /   | 100                               | /                                     | /   | /   | /                              | 20  | /   | 35                                  |
| 1.8YD       |                                  |     |     |                                |     |     |                                   | /                                     | /   | /   | /                              | 10  | /   | 50                                  |

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

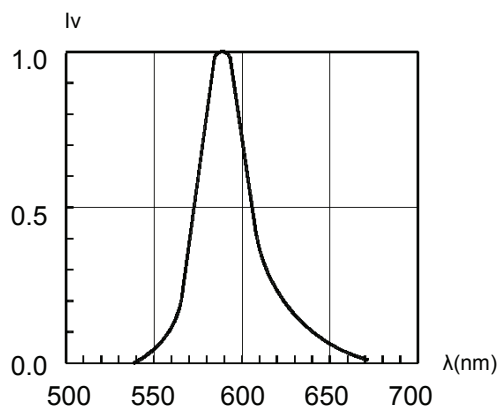


Fig. 1 Relative Luminous Intensity vs. Wavelength  
@ 20mA

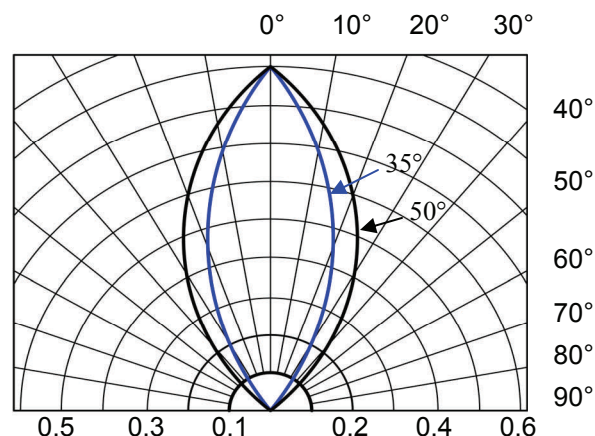


Fig. 2 Directivity Radiation Diagram

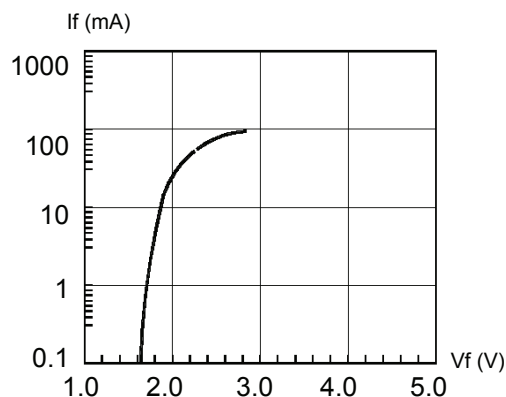


Fig. 3 Forward Current vs. Forward Voltage

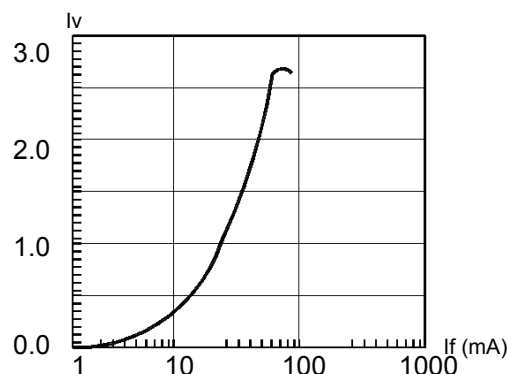


Fig. 4 Relative Luminous Intensity vs. Forward Current  
Normalize @ 20 mA

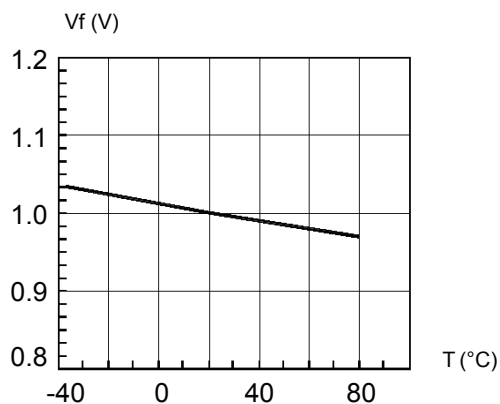


Fig. 5 Forward Voltage vs. Temperature

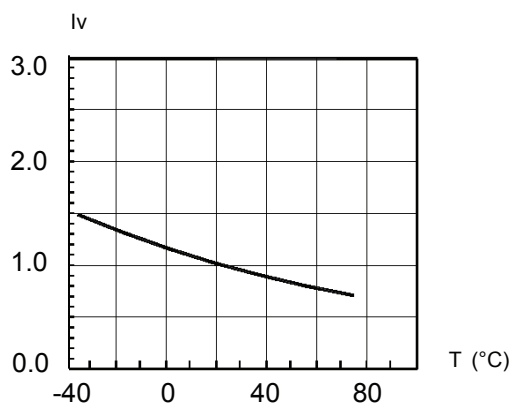


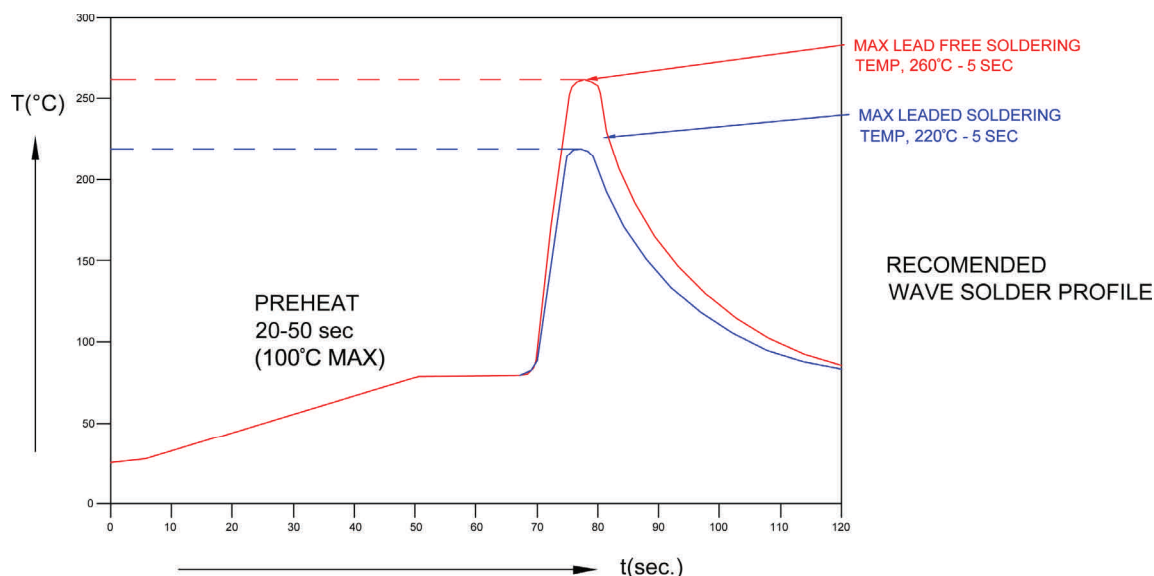
Fig. 6 Relative Luminous Intensity vs. Temperature

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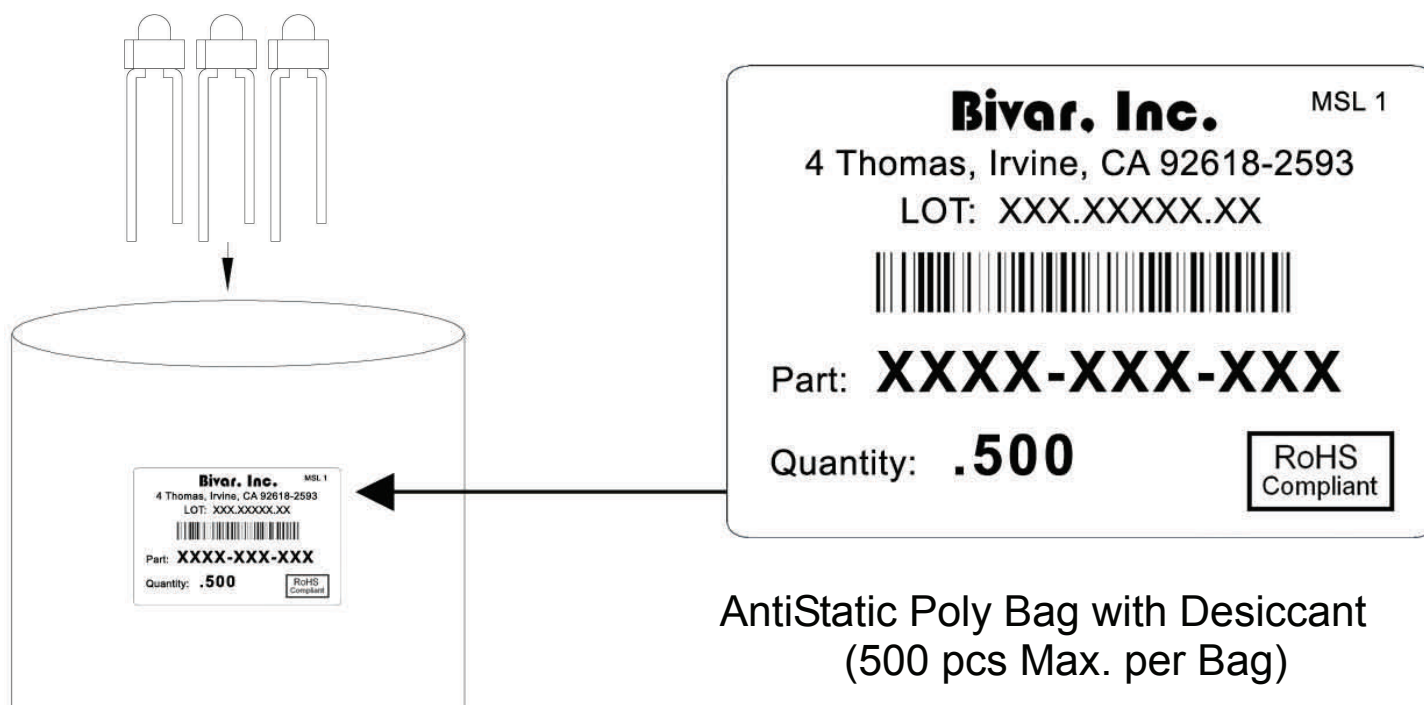
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## Recommended Soldering Conditions



| 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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