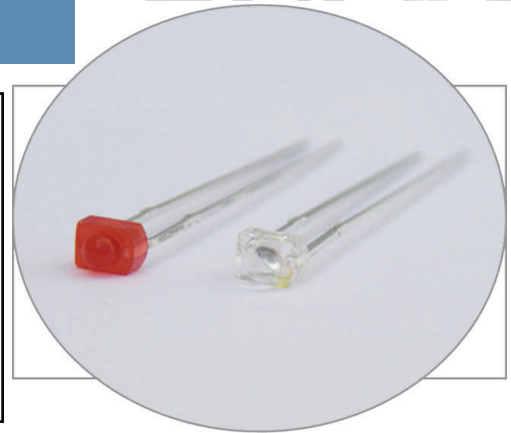


1.8mm Package Discrete LED RED, Low Current



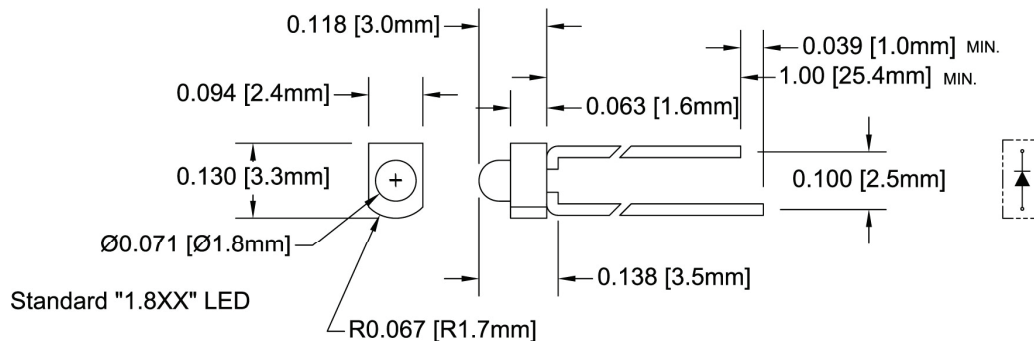
1.8HXL

- ◆ 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 λ_p (nm) TYP. | Lens Appearance | Viewing Angle |
|-------------|-----------|---------------|---|-----------------|---------------|
| 1.8HCL | GaAsP/GaP | RED | 625nm | Water Clear | 35° |
| 1.8HDL | | | | Red Diffused | 50° |

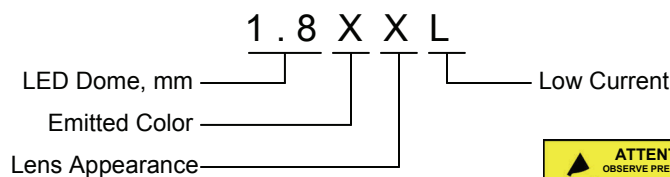
Outline Dimensions



Recommended Mounting
Hole Size = $\varnothing 0.032^{+0.003}_{-0.002}$

- 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.

Part Number Designation



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

1.8mm Package Discrete LED RED, Low Current



Absolute Maximum Ratings

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

Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$ & $I_F = 2\text{ mA}$ 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 $2\theta_{1/2}$ (deg) |
|-------------|----------------------------------|-----|-----|--------------------------------|-----|-----|-----------------------------------|---------------------------------------|-----|-----|--------------------------------|-----|-----|-------------------------------------|
| | MIN | TYP | MAX | MIN | TYP | MAX | MAX | MIN | TYP | MAX | MIN | TYP | MAX | TYP |
| 1.8HCL | / | 2.0 | 2.6 | / | 2 | / | 100 | / | / | / | / | 4.5 | / | 35 |
| 1.8HDL | / | 2.0 | 2.6 | / | 2 | / | 100 | / | / | / | / | 2 | / | 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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1.8mm Package Discrete LED RED, Low Current



Typical Electrical / Optical Characteristics

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

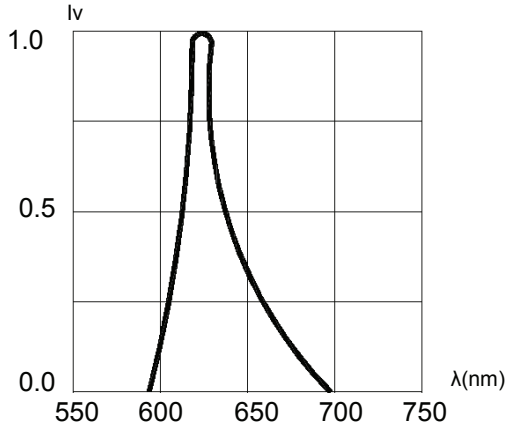


Fig. 1 Relative Luminous Intensity vs. Wavelength

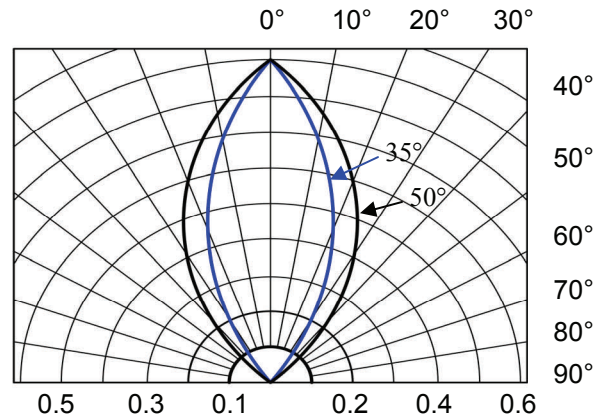


Fig. 2 Directivity Radiation Diagram

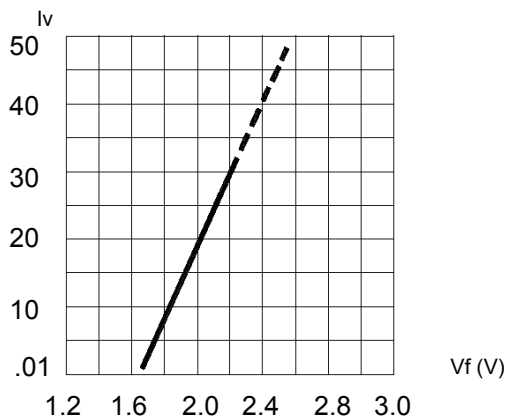


Fig. 3 Relative Intensity vs. Forward Voltage

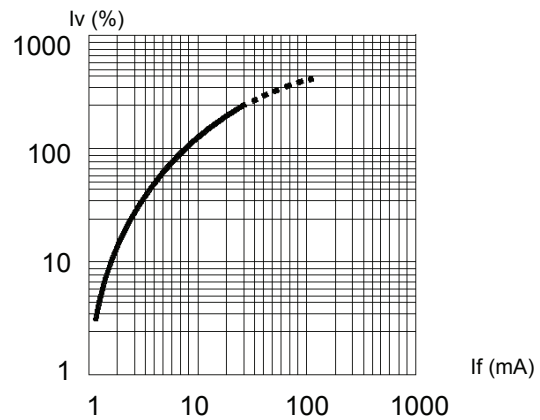


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current

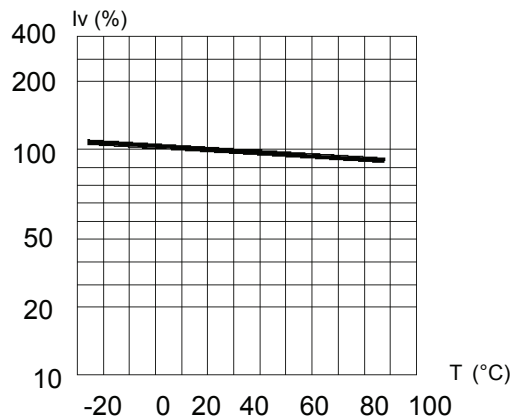


Fig. 5 Relative Intensity (%) vs. Temperature

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1.8mm Package Discrete LED RED, Low Current

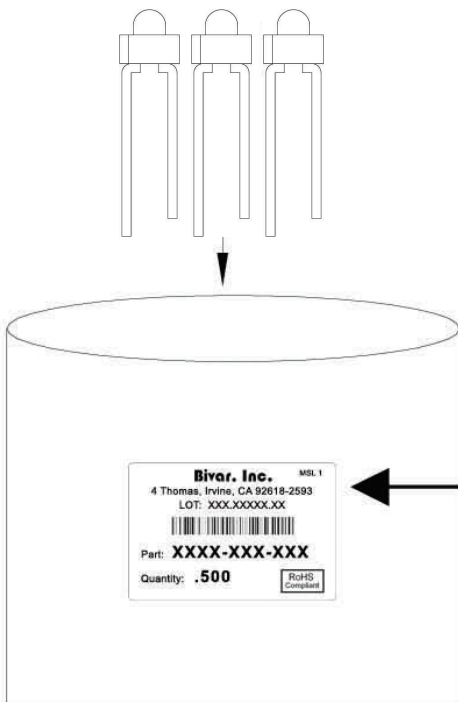


Recommended Soldering Conditions



| 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



Bivar, Inc. MSL 1

4 Thomas, Irvine, CA 92618-2593
LOT: XXX.XXXXX.XX



Part: **XXXX-XXX-XXX**

Quantity: **.500**

RoHS Compliant

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

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

Mouser Electronics

Authorized Distributor

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[1.8HCL](#) [1.8HDL](#)