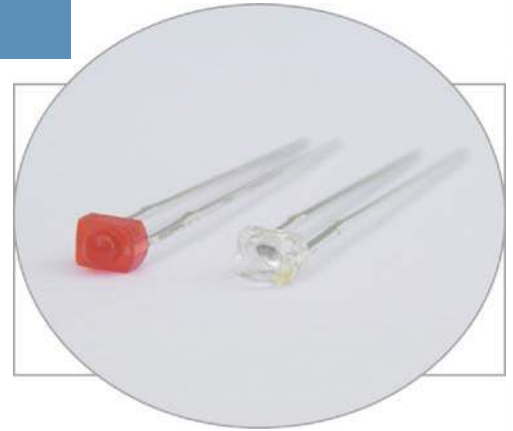


## 1.8mm Package Discrete LED RED



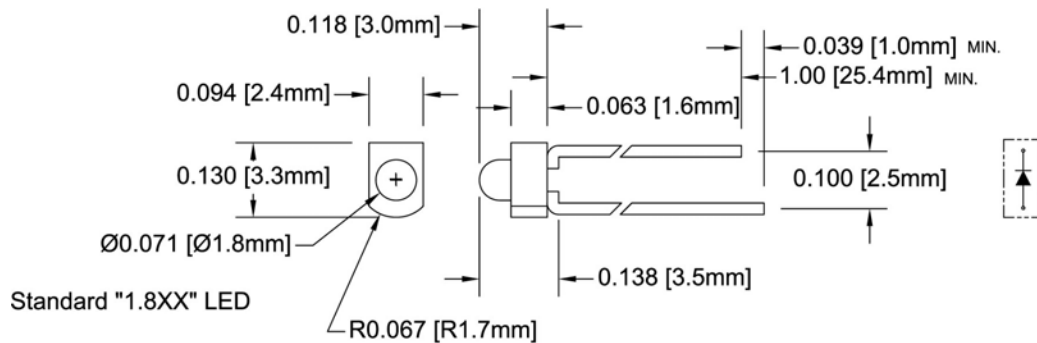
### 1.8RX

- ◆ 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 $\lambda_p$ (nm) TYP.	Lens Appearance	Viewing Angle
1.8RC	GaP/GaP	RED	700nm	Water Clear	35°
1.8RD				Red Diffused	50°

## Outline Dimensions

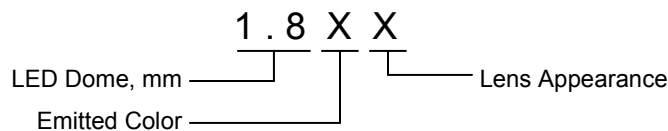


Recommended Mounting  
Hole Size =  $\text{Ø}0.032^{+0.003}_{-0.002}$

#### 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.

## Absolute Maximum Ratings

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

Power Dissipation	45 mW
Forward Current ( DC )	20 mA
Peak Forward Current <sup>1</sup>	80 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

$T_A = 25^\circ\text{C}$  &  $I_F = 20\text{ mA}$  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
1.8RC	/	2.1	2.8	/	20	/	100	/	/	/	/	2.5	/	35
1.8RD								/	/	/	/	2	/	50

Notes: 1. Tolerance of forward voltage :  $\pm 0.05\text{V}$ .    2. Tolerance of dominant wavelength :  $\pm 1.0\text{nm}$ .

# 1.8mm Package Discrete LED RED



## Typical Electrical / Optical Characteristics

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

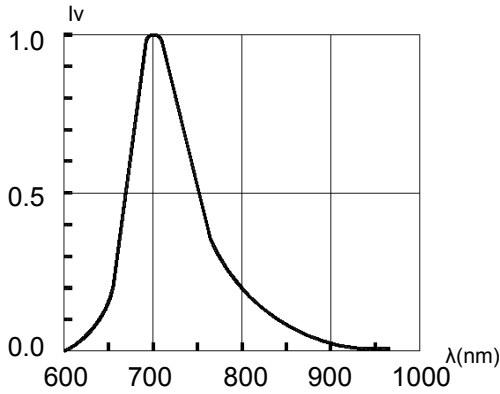


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

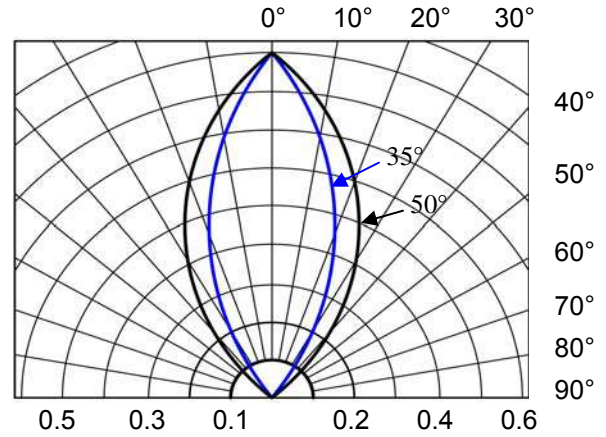


Fig. 2 Directivity Radiation Diagram

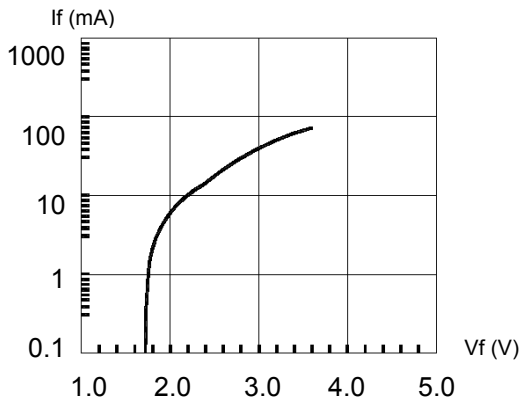


Fig. 3 Forward Current vs. Forward Voltage

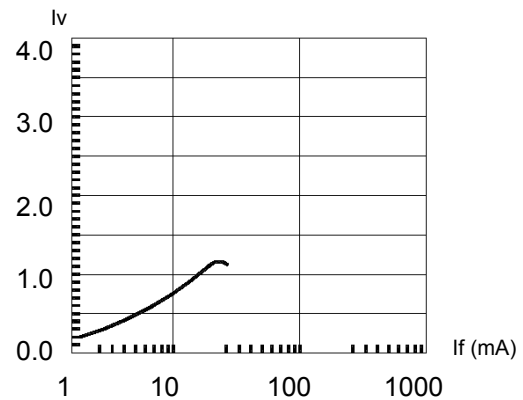


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

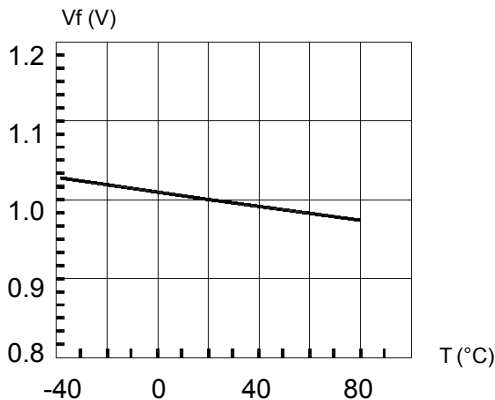


Fig. 5 Forward Voltage vs. Temperature

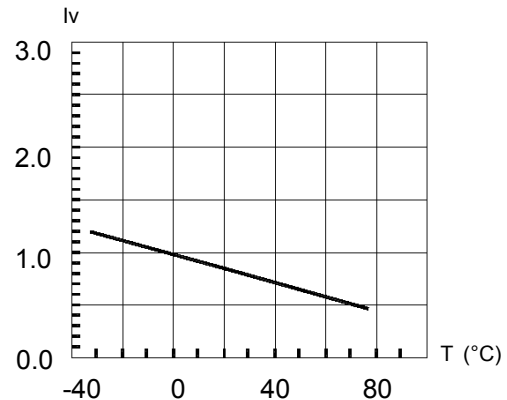


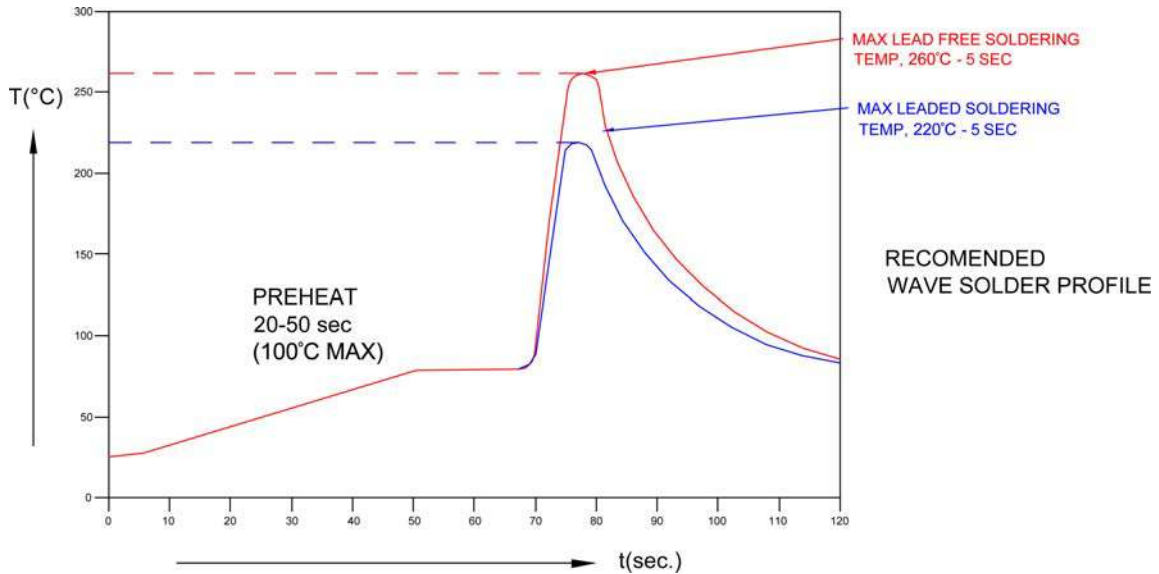
Fig. 6 Relative Luminous Intensity vs. Temperature

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

# 1.8mm Package Discrete LED RED

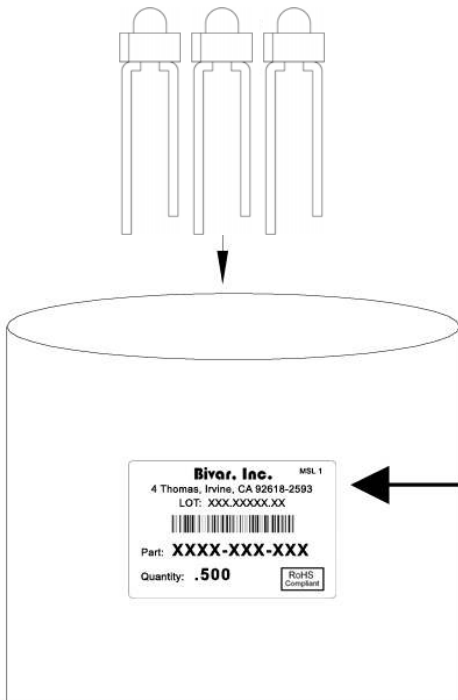


## Recommended Soldering Conditions



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.