

# 3mm (T1) Package Discrete LED RED, Ultra Bright



## 3URC-X

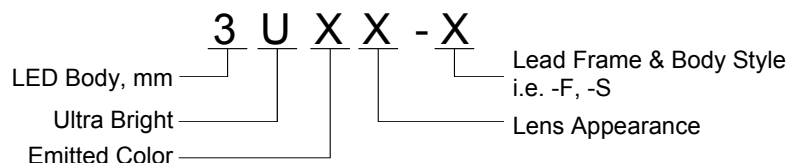
- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ Water Clear Lens
- ◆ Available in Flange (F) and Shouldered (S) Lead Frame styles
- ◆ Up to 200 mcd Luminous Intensity at 20 mA
- ◆ Ideal for Back Lighting, Status Indication, and Display
- ◆ Recommended for Bivar Flexible Light Pipe assemblies



Bivar 3mm T1 Package Ultra Bright LED is ideal for those applications where intensive ambient lighting exists such as Back Lighting, Signage, and Sunlight Readable applications. Bivar offers water clear LED lens for maximum light output. The Flanged LED is ideal for Panel Mount Clip & Ring assemblies. The Shouldered Lead frame LED is ideal for vertical spacer assemblies without lead bends and also 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
3URC-F	GaAlAs/GaAs	RED	645nm	Water Clear	20°
3URC-S				Water Clear	30°

## Part Number Designation

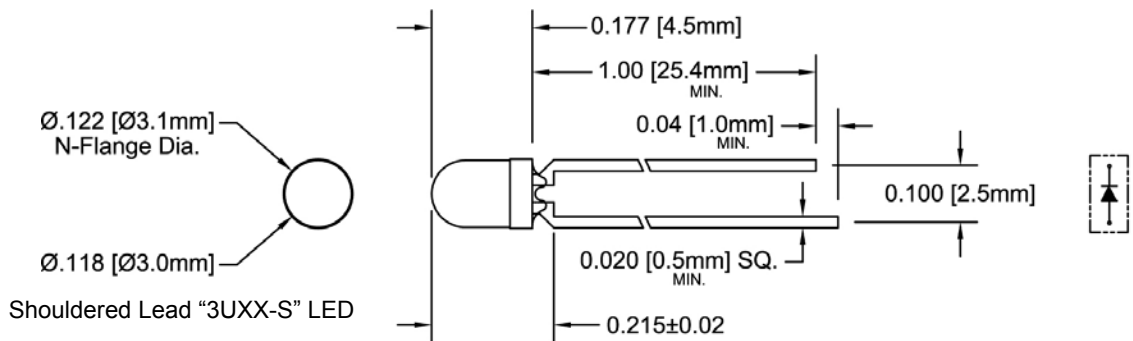
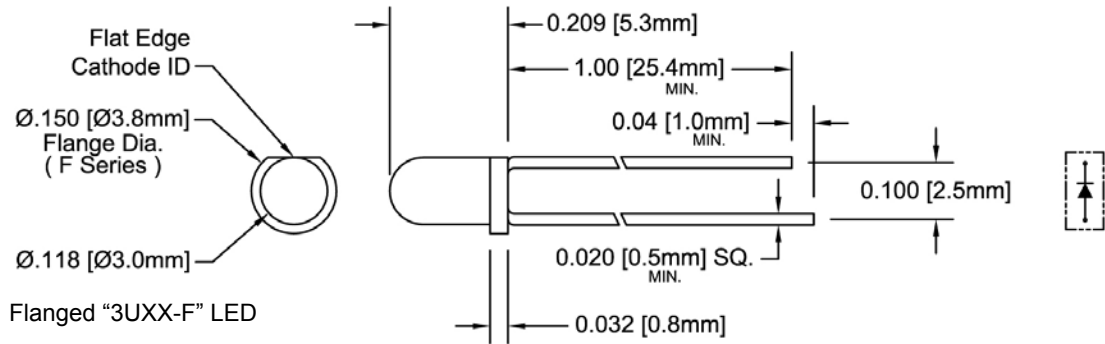


Bivar reserves the right to make changes at any time without notice.

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## Outline Dimensions



### Recommended Mounting

Hole Size =  $\text{Ø}.032^{+.003}_{-.002}$

#### 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.

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## Absolute Maximum Ratings

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

Power Dissipation	60 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<sub>A</sub> = 25°C & I<sub>F</sub> = 20 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 2Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
3URC-F	/	1.7	2.4	/	20	/	100	/	/	/	/	200	/	20
3URC-S	/	1.7	2.4	/	20	/	100	/	/	/	/	200	/	30

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

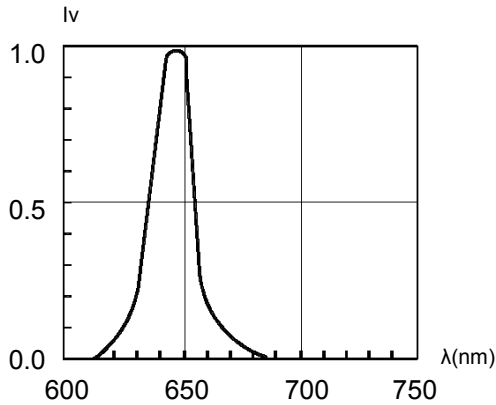


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

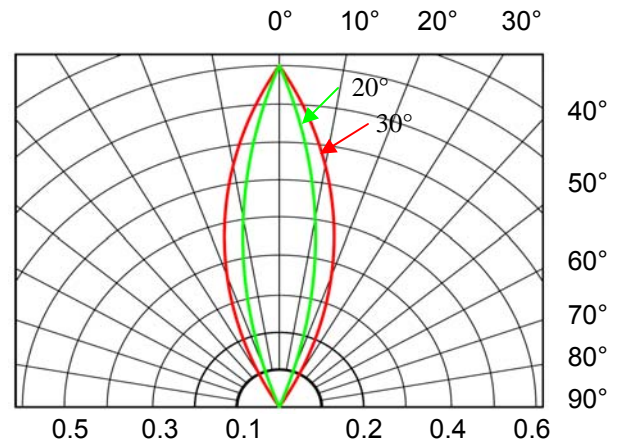


Fig. 2 Directivity Radiation Diagram

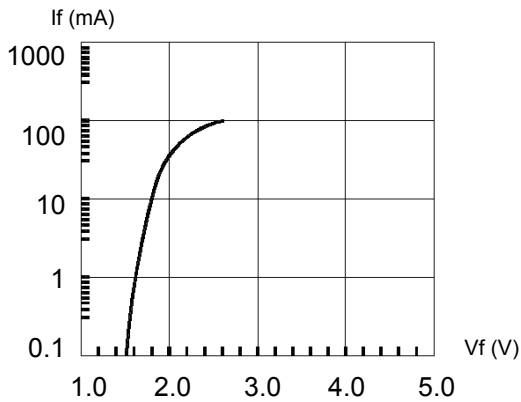


Fig. 3 Forward Current vs. Forward Voltage

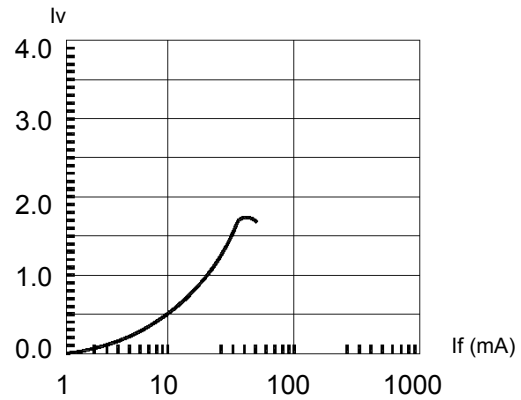


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

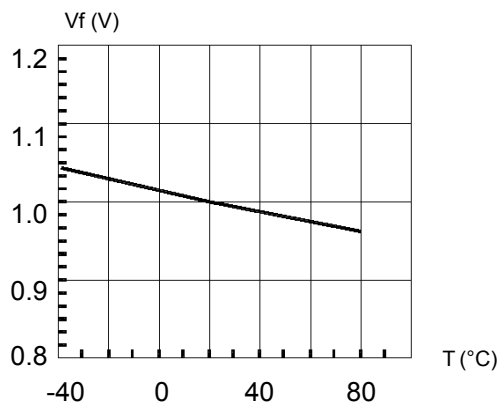


Fig. 5 Forward Voltage vs. Temperature

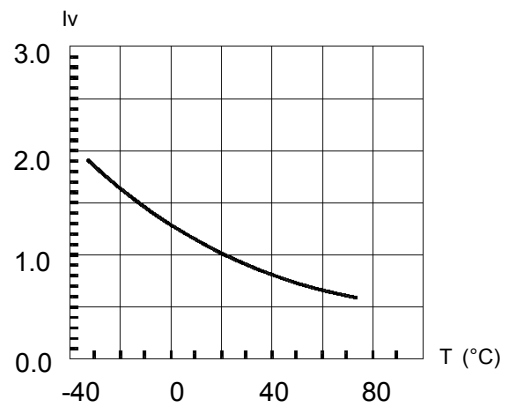


Fig. 6 Relative Luminous Intensity vs. Temperature

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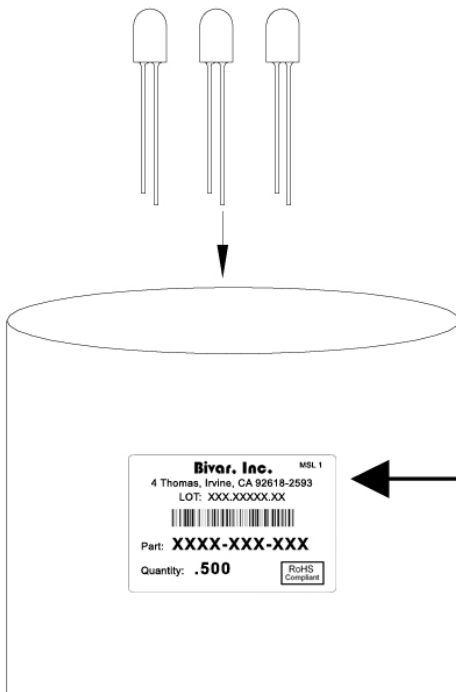


## Recommended Soldering Conditions



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

Anti-Static Poly Bag with Desiccant  
(500 pcs Max. per Bag)

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