

3mm (T1) Package Discrete LED GREEN, Super Bright

BIVAR

3SGX-X

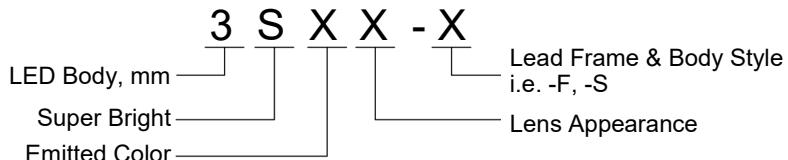
- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ Water Clear (C), Diffused (D)
- ◆ Available in Flange (F) and Shouldered (S) Lead frame styles
- ◆ Up to 50 mcd Luminous Intensity at 20 mA
- ◆ Ideal for Status Indication and Display
- ◆ Recommended for Bivar Flexible Light Pipe assemblies



Bivar 3mm T1 Package Super Bright LED is ideal for those applications where higher ambient lighting exists such as sign boards, security system displays, and medical applications. Bivar offers water clear LED lens for maximum light output and diffused LED lens for uniform 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 λ_p (nm) TYP.	Lens Appearance	Viewing Angle
3SGC-F	GaP/GaP	GREEN	565nm	Water Clear	18°
3SGC-S				Water Clear	35°
3SGD-S				Green Diffused	50°

Part Number Designation

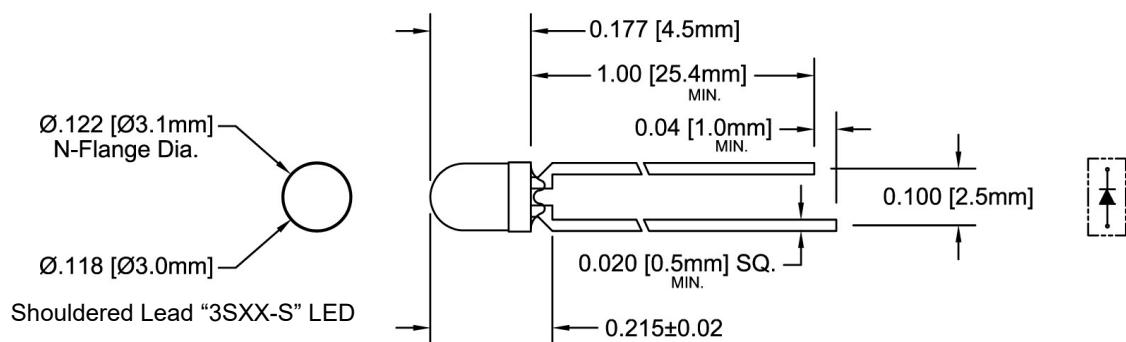
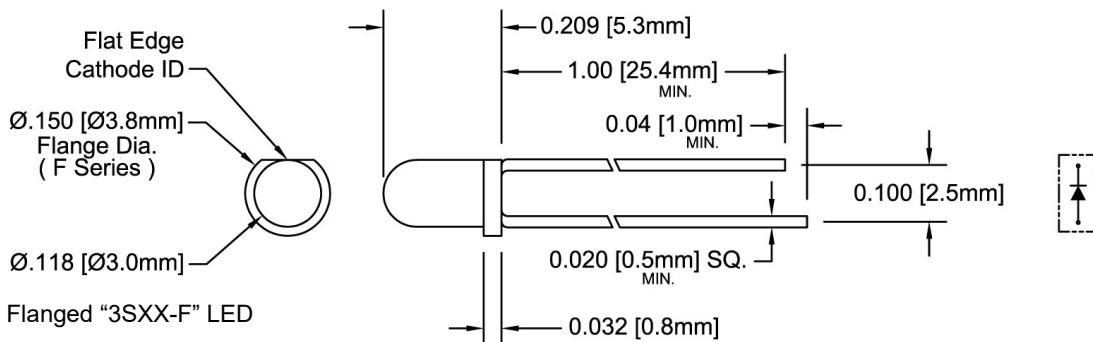


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Outline Dimensions



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

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.

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Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	80 mW
Forward Current (DC)	30 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Operating Temperature Range	-40 ~ +85°C
Storage Temperature Range	-40 ~ +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°C & I_F = 20 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 2θ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX		MIN	TYP	MAX	MIN	TYP	MAX	
3SGC-F	1.7	2.1	2.8	/	20	/	10	565	570	575	60	120	240	18
3SGC-S	1.7	2.1	2.8	/	20	/	10	565	570	575	50	100	200	35
3SGD-S								565	570	575	40	80	160	50

Notes: 1. Tolerance of forward voltage : $\pm 0.05V$. 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

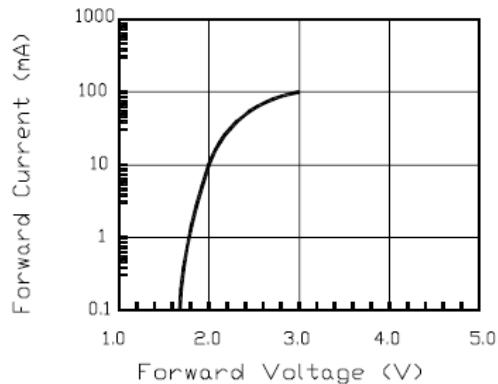


Fig3. Forward Voltage vs. Temperature

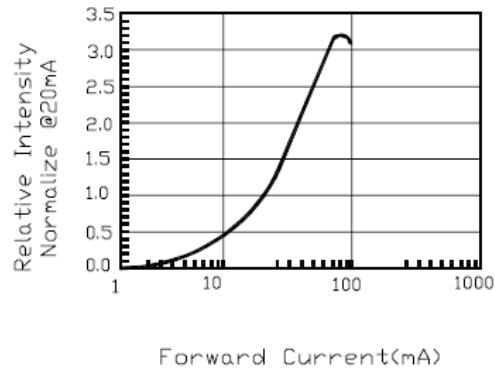


Fig4. Relative Intensity vs. Temperature

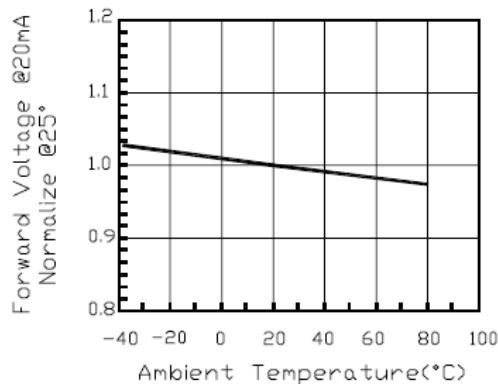
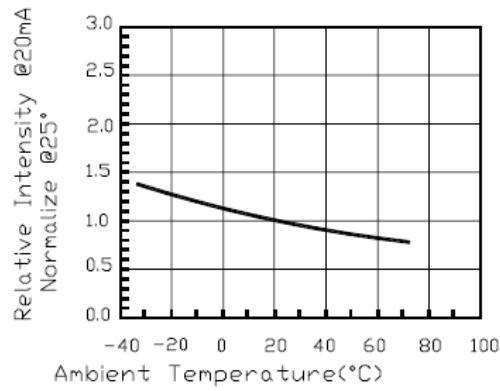
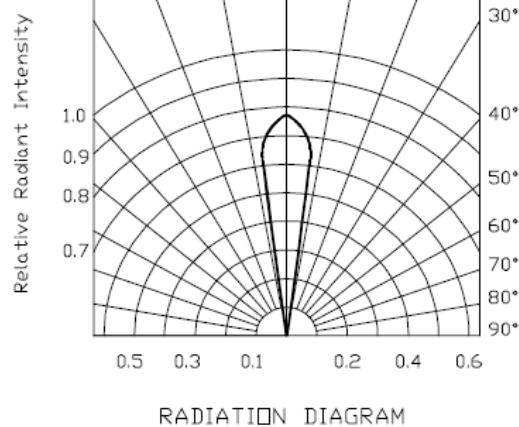
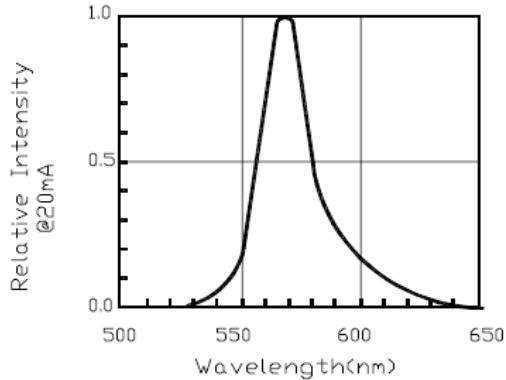


Fig5. Relative Intensity vs. Wavelength



Radiation Diagram $T_A=25^\circ\text{C}$



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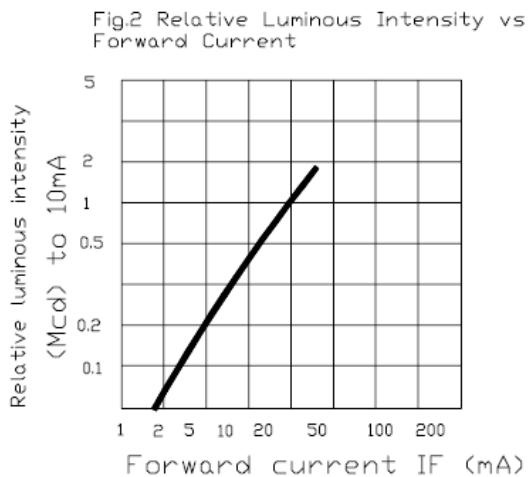
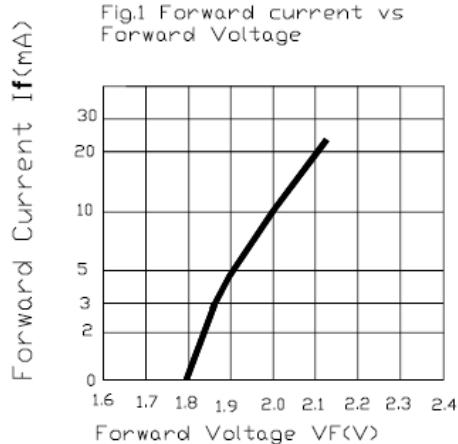


Fig.3 Forward Current Derating Curve

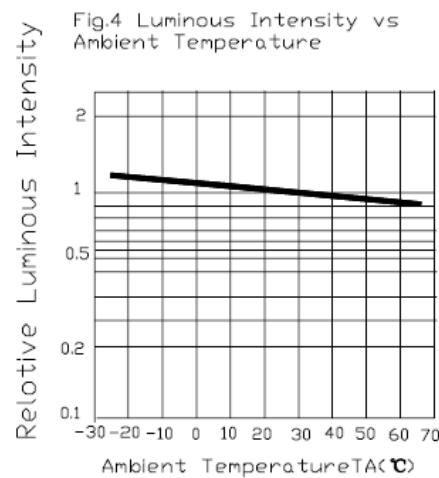
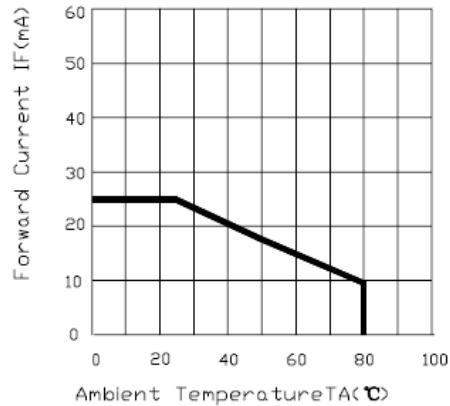


Fig.5. Relative Intensity vs. Wavelength

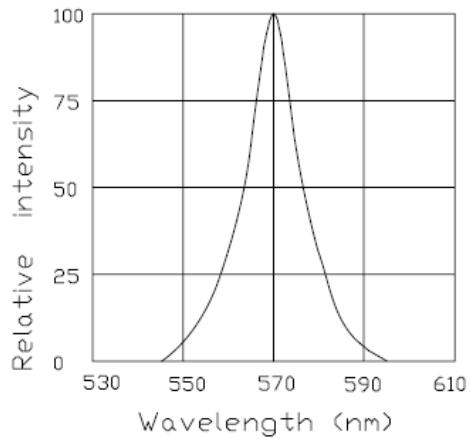
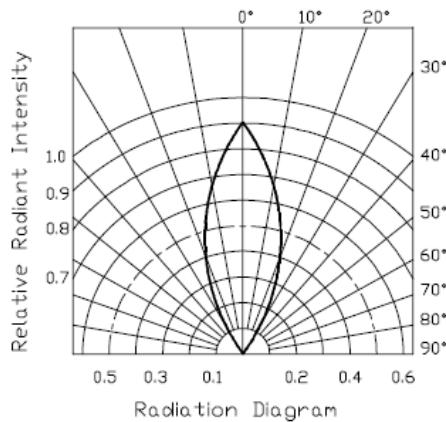


Fig.6 Spatial Distribution



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Fig1. Forward Current vs. Forward Voltage

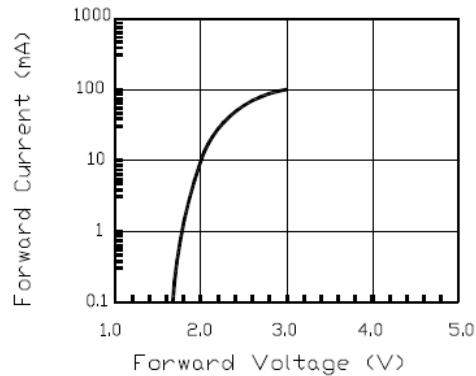


Fig2. Relative Intensity vs. Forward Current

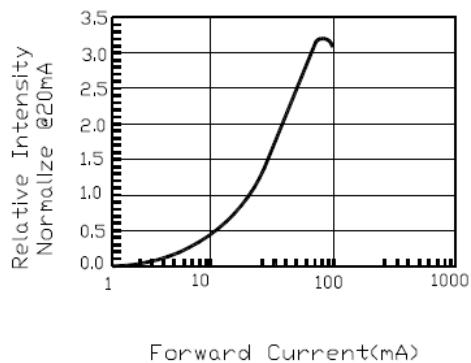


Fig3. Forward Voltage vs. Temperature

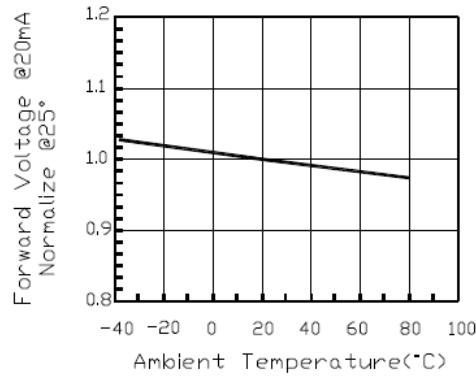


Fig4. Relative Intensity vs. Temperature

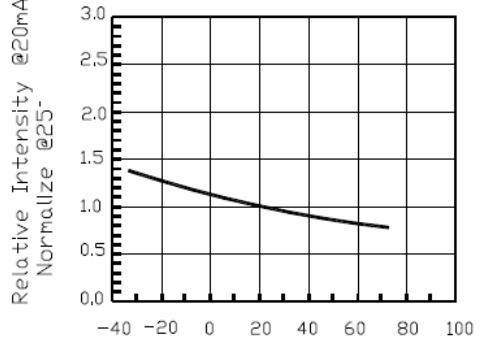
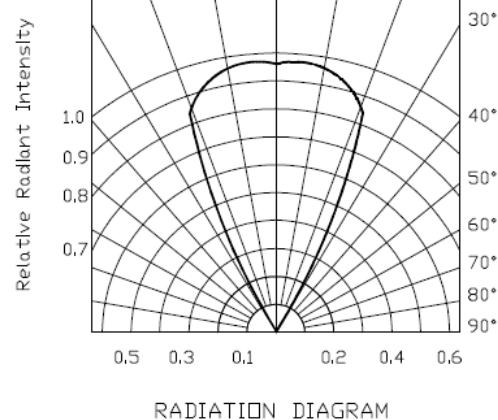
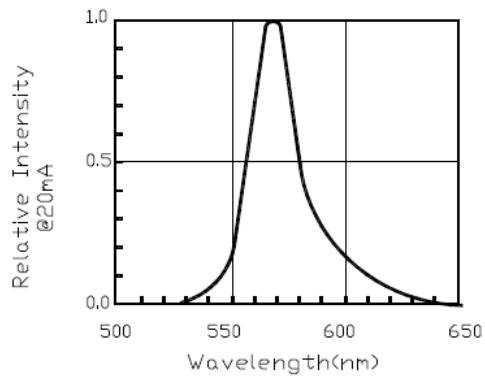


Fig5. Relative Intensity vs. Wavelength

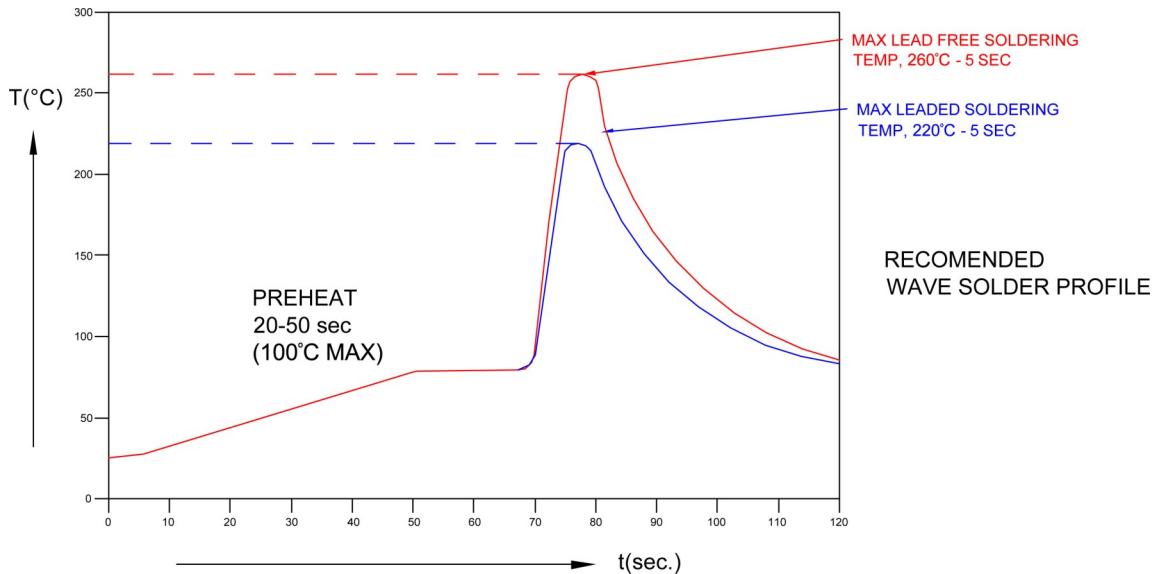


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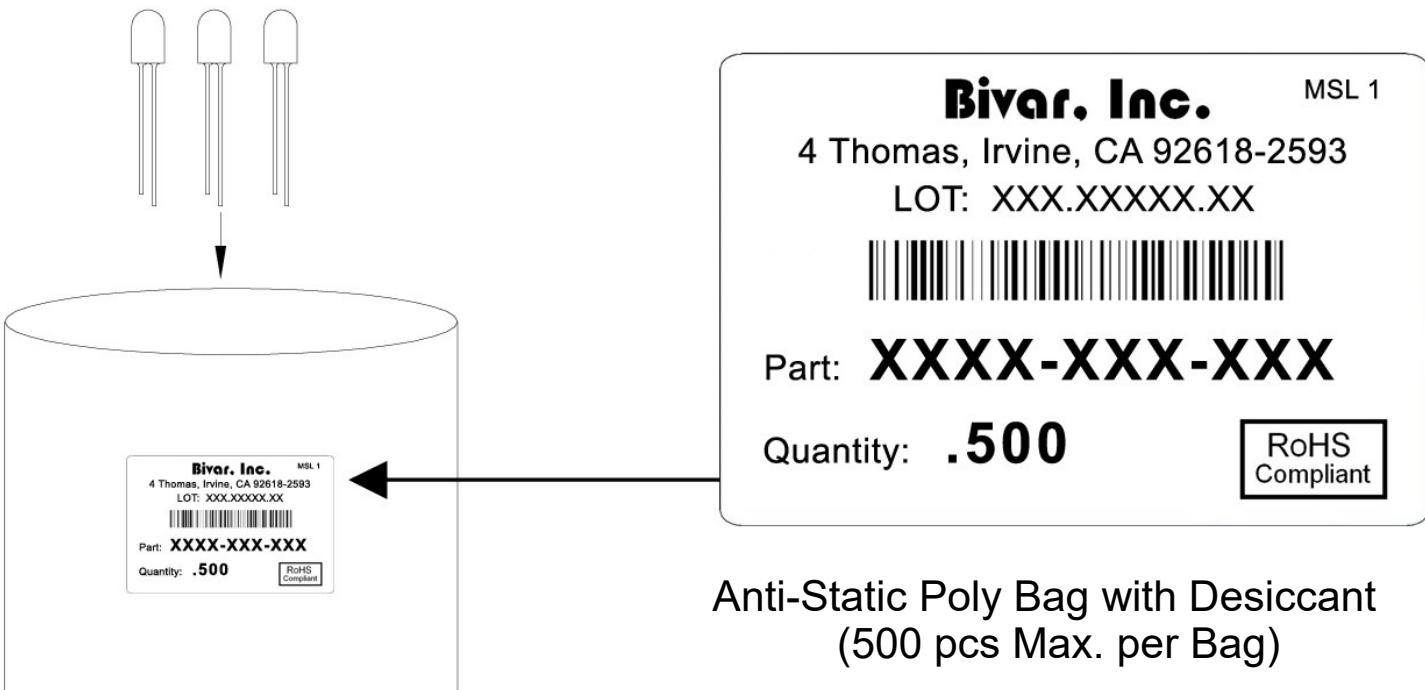
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Recommended Soldering Conditions



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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