5mm (T1 ³⁄₄) Package Discrete LED GREEN, Ultra Bright



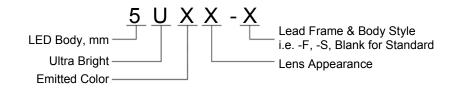
5SUGC-<mark>X</mark>

- Industry Standard 5mm (T1 ³/₄) Package
- RoHS Compliant
- Water Clear Lens
- Available in Flange (F) and Standard (Blank) Lead Frame styles
- Up to 400 mcd Luminous Intensity at 20 mA
- Ideal for Back Lighting, Status Indication, and Display

Bivar 5mm T1 ³/₄ 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 and the Standard Lead frame LED is ideal for vertical spacer assemblies without lead bends.

Part Number	Material	Emitted Color	Peak. Wavelength λp(nm) TYP.	Lens Appearance	Viewing Angle		
5SUGC-F	AlGaInP	GREEN	570nm	Water Clear	35°		
5SUGC	AlGainF	GREEN	5701111	Water Clear	35°		

Part Number Designation





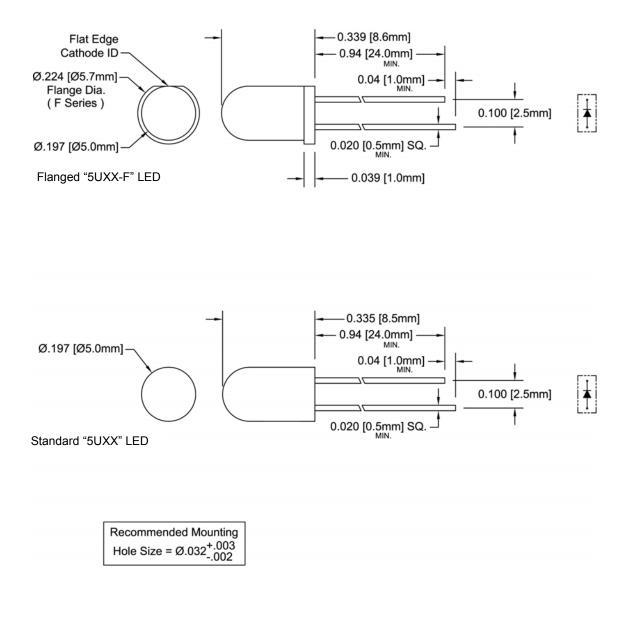
Bivar reserves the right to make changes at any time without notice.

5mm (T1 ³/₄) Package Discrete LED **GREEN**, Ultra Bright



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Outline Dimensions



 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**

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

| Power Dissipation                                                                | 100 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**

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

| Part Number | Forward<br>Voltage (V) <sup>1</sup> |         | Recommend<br>Forward<br>Current (mA) |     | Reverse<br>Current<br>(µA) | Dominant<br>Wavelength (nm) <sup>2</sup> |     | Luminous<br>Intensity Iv (mcd) |     |     | Viewing<br>Angle<br>2 O ½<br>(deg) |     |     |     |
|-------------|-------------------------------------|---------|--------------------------------------|-----|----------------------------|------------------------------------------|-----|--------------------------------|-----|-----|------------------------------------|-----|-----|-----|
|             | MIN                                 | TYP     | MAX                                  | MIN | TYP                        | MAX                                      | MAX | MIN                            | ТҮР | MAX | MIN                                | TYP | MAX | TYP |
| 5SUGC-F     | /                                   | 2.1 2.4 | 2.4                                  | 1 / | 20                         | /                                        | 100 | /                              | /   | /   | /                                  | 300 | /   | 35  |
| 5SUGC       |                                     |         | 2.4                                  |     |                            |                                          |     | /                              | /   | /   | /                                  | 400 | /   | 35  |

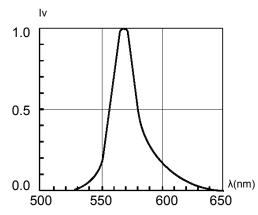
Notes: 1. Tolerance of forward voltage : ±0.05V. 2. Tolerance of dominant wavelength : ±1.0nm.

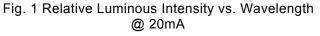
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# **Typical Electrical / Optical Characteristics**

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





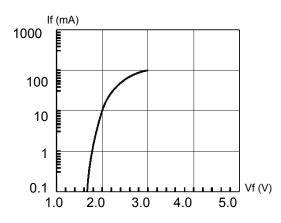
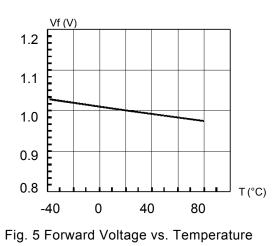


Fig. 3 Forward Current vs. Forward Voltage



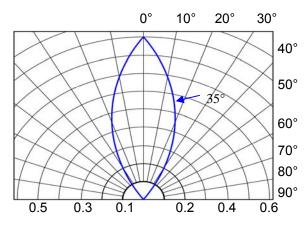


Fig. 2 Directivity Radiation Diagram

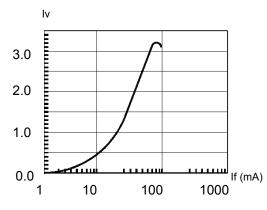


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

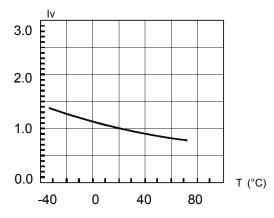
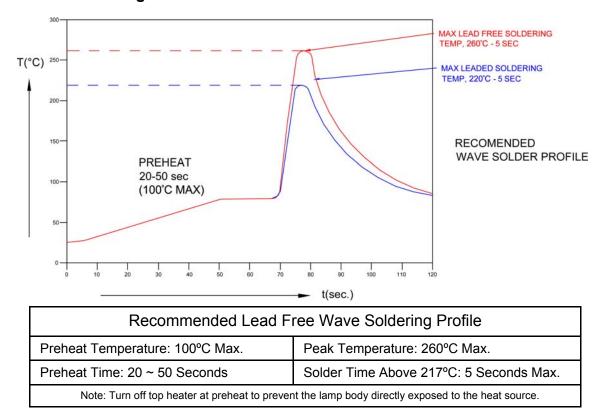


Fig. 6 Relative Luminous Intensity vs. Temperature

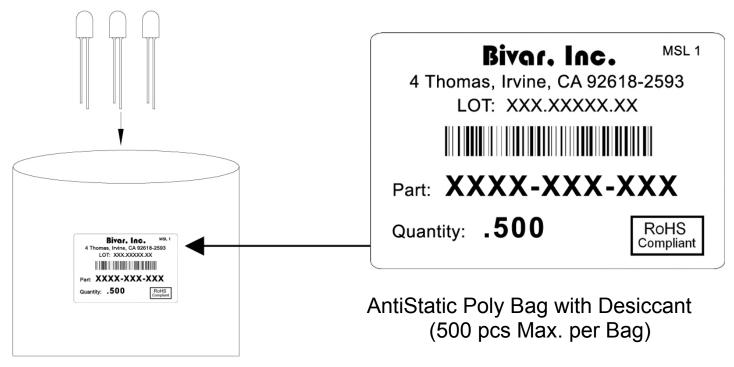
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#### **Recommended Soldering Conditions**



#### Packaging and Labeling Plan



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



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