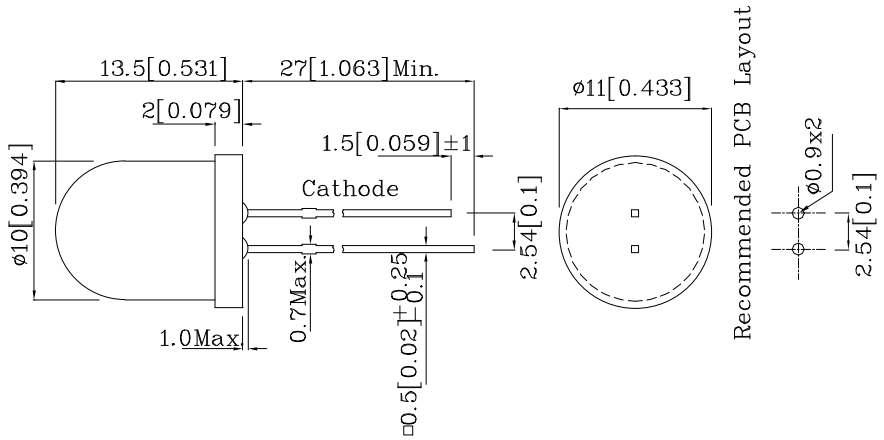
**Part Number: XLUG01D**

10mm SOLID STATE LAMP

## Features

- Radial / Through hole package
- Reliable & robust
- Low power consumption
- Available on tape and reel
- RoHS Compliant

## Package Schematics




Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

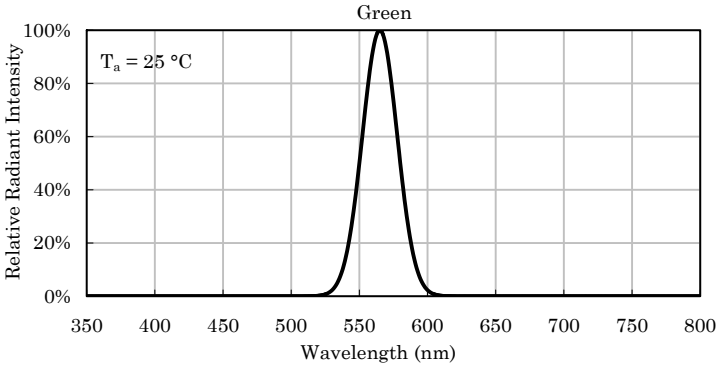
| **Absolute Maximum Ratings ($T_A$=25°C)** | | **Green (GaP)** | **Unit** |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 5 | V |
| Forward Current | $I_F$ | 25 | mA |
| Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width | $i_{FS}$ | 140 | mA |
| Power Dissipation | $P_D$ | 62.5 | mW |
| Operating Temperature | $T_A$ | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | |
| Lead Solder Temperature [2mm Below Package Base] | 260°C For 3 Seconds | | |
| Lead Solder Temperature [5mm Below Package Base] | 260°C For 5 Seconds | | |

A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

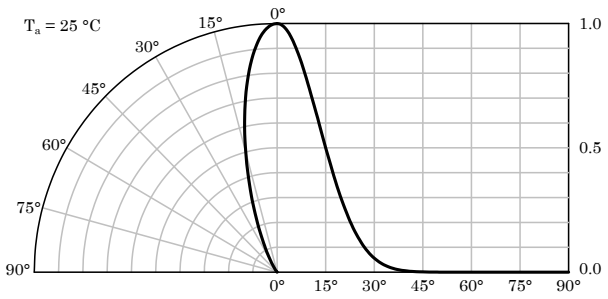
| **Operating Characteristics ($T_A$=25°C)** | | **Green (GaP)** | **Unit** |
|---|---|---|---|
| Forward Voltage (Typ.) ($I_F$=20mA) | $V_F$ | 2.2 | V |
| Forward Voltage (Max.) ($I_F$=20mA) | $V_F$ | 2.5 | V |
| Reverse Current (Max.) ($V_R$=5V) | $I_R$ | 10 | uA |
| Wavelength of Peak Emission CIE127-2007*(Typ.) ($I_F$=20mA) | λP | 565* | nm |
| Wavelength of Dominant Emission CIE127-2007*(Typ.) ($I_F$=20mA) | λD | 568* | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) ($I_F$=20mA) | △λ | 30 | nm |
| Capacitance (Typ.) ($V_F$=0V, f=1MHz) | C | 15 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity CIE127-2007* ($I_F$=20mA) mcd | | Wavelength CIE127-2007* nm λP | Viewing Angle 2θ 1/2 |
|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | | |
| XLUG01D | Green | GaP | Green Diffused | 20* | 59* | 565* | 30° |

*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

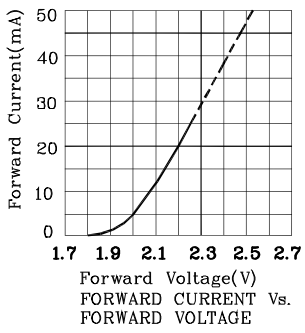


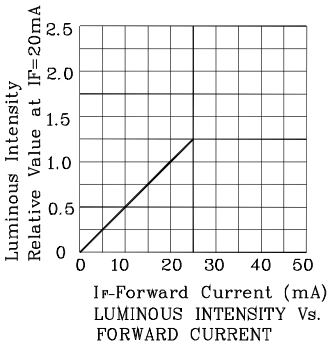

Relative Intensity Vs. CIE Wavelength

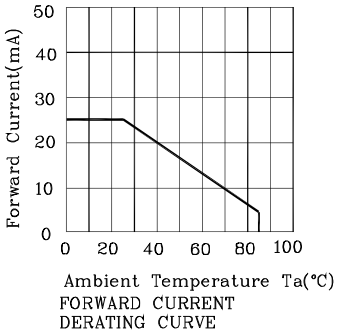


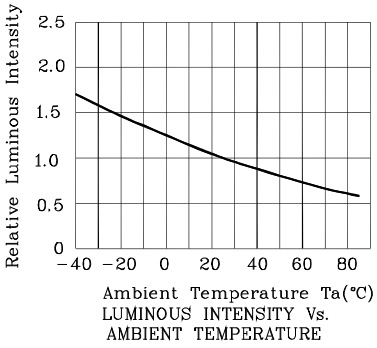

Spatial Distribution

## ❖ Green

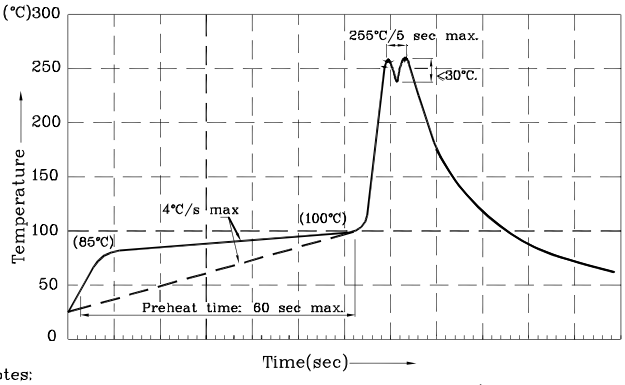



Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)




Notes:
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.

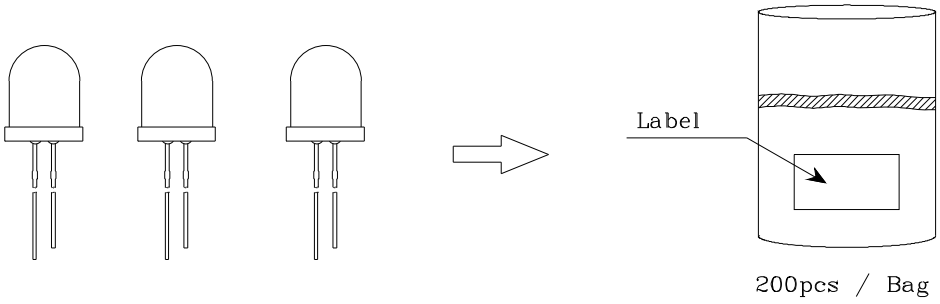
Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

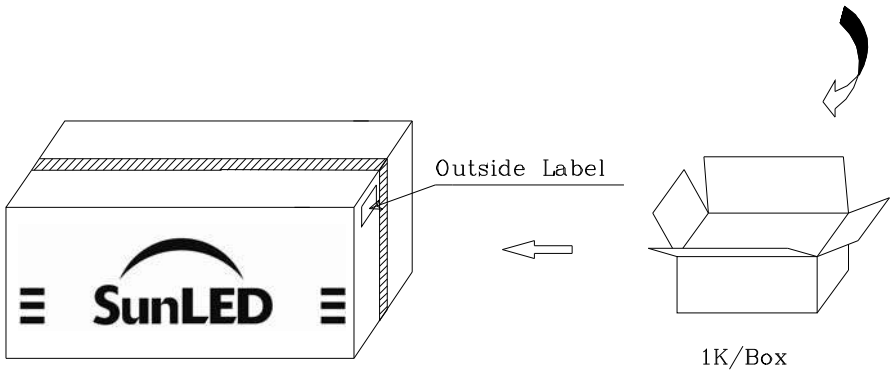
1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

## PACKING & LABEL SPECIFICATIONS

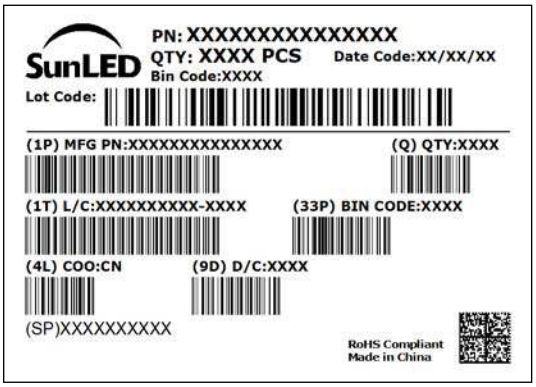



200pcs / Bag




8K/Box

1K/Box

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