

T-1 (3mm) Solid State Lamp

Features

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

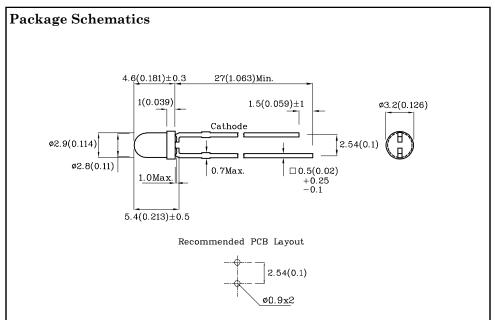






Dec 28,2020

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is $\pm 0.25 (0.01")$ unless otherwise noted.
- 3. Specifications are subject to change without notice.

| Absolute Maximum Ratings (T _A =25°C) | | Green (AlGaInP) | Unit | |
|--|--------------------------|--------------------|----------------------|--|
| Reverse Voltage | $V_{\rm R}$ | 5 | V | |
| Forward Current | I_{F} | 30 | mA | |
| Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width | i_{FS} | 150 | mA | |
| Power Dissipation | P_{D} | 75 | mW | |
| Operating Temperature | T _A -40 ~ +85 | | $^{\circ}\mathrm{C}$ | |
| Storage Temperature | Tstg | -40 ~ +85 | C | |
| 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 (AlGaInP) | Unit |
|---|------------------|--------------------|------|
| Forward Voltage (Typ.) (I _F =2mA) | V_{F} | 1.9 | V |
| Forward Voltage (Max.) (I _F =2mA) | V_{F} | 2.3 | V |
| Reverse Current (Max.) (V _R =5V) | I_R | 10 | μА |
| Wavelength of Peak Emission CIE127-2007* (Typ.) (I _F =2mA) | λP | 574* | nm |
| Wavelength of Dominant Emission CIE127-2007* (Typ.) (I _F =2mA) | λD | 570* | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) (I _F =2mA) | Δλ | 20 | nm |
| Capacitance (Typ.) (V _F =0V, f=1MHz) | С | 15 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | $\begin{array}{c} \text{Luminous Intensity} \\ \text{CIE127-2007*} \\ \text{(I_F=2mA)} \\ \text{mcd} \end{array}$ | | Wavelength CIE127-2007* nm λP | Viewing Angle 20 1/2 |
|----------------|-------------------|----------------------|----------------|---|------|-------------------------------------|----------------------------|
| | | | | min. | typ. | | |
| XCVG11D | Green | AlGaInP | Green Diffused | 4* | 7* | 574* | 50° |

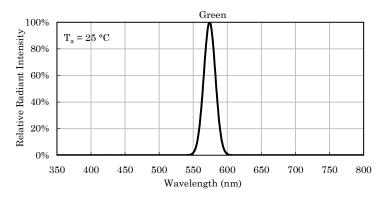
^{*}Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

XDSB9403 V1-Z Layout: Maggie L.

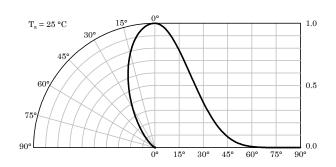


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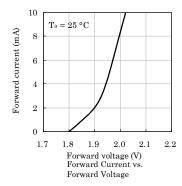


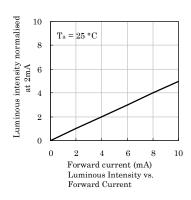
Relative Intensity Vs. CIE Wavelength

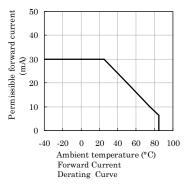


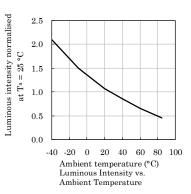
Spatial Distribution

❖ Green

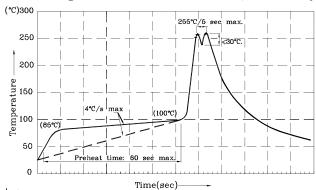








Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)



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 $85\,^\circ\text{C}.$ 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:

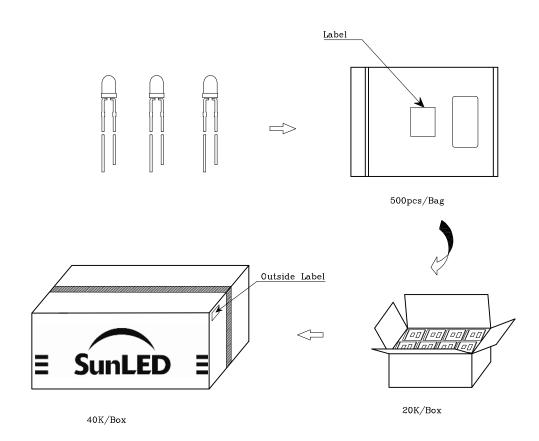
- 1. Wavelength: +/-1nm
- 2. Luminous Intensity / Luminous Flux: +/-15%
- 3. Forward Voltage: +/-0.1V

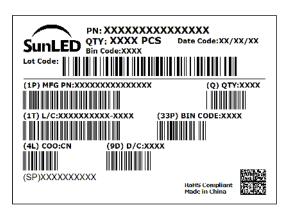
Note: Accuracy may depend on the sorting parameters.



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PACKING & LABEL SPECIFICATIONS





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- 6. Additional technical notes are available at https://www.SunLEDusa.com/TechnicalNotes.asp

Dec 28,2020 XDSB9403 V1-Z Layout: Maggie L.