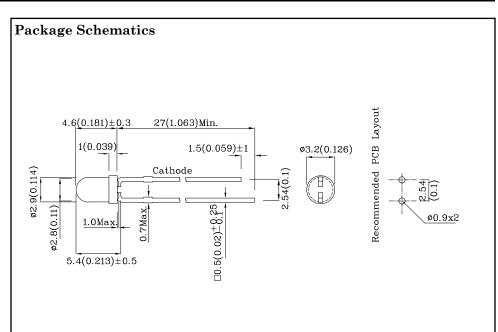


# Part Number: XCUG32D

## T-1 (3mm) SOLID STATE LAMP

- •Radial / Through hole package
- $\bullet$  Reliable & robust
- Low power consumption
- Available on tape and reel
- •Low current IF=2mA operating.
- RoHS Compliant





### 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 <sub>A</sub> =25°C)		Green (GaP)	Unit		
Reverse Voltage	$V_{\mathrm{R}}$	5	V		
Forward Current	$\mathrm{I}_\mathrm{F}$	25	mA		
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	140	mA		
Power Dissipation	$\mathbf{P}_{\mathrm{D}}$	62.5	mW		
Operating Temperature	$T_{\rm A}$	$T_A$ -40 ~ +85			
Storage Temperature	Tstg	$-40 \sim +85$	°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				

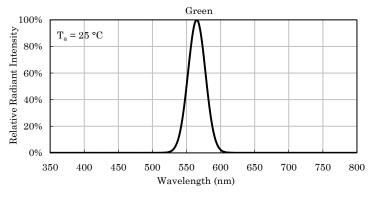
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

Operating Characteristics (T <sub>A</sub> =25°C)		Green (GaP)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =2mA)	$V_{\rm F}$	1.9	v
Forward Voltage (Max.) (I <sub>F</sub> =2mA)	$V_{\rm F}$	2.25	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_R$	10	μΑ
Wavelength of Peak Emission CIE127-2007*(Typ.) (I <sub>F</sub> =2mA)	λP	565*	nm
Wavelength of Dominant Emission CIE127-2007*(Typ.) (I <sub>F</sub> =2mA)	λD	568*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =2mA)	$ riangle \lambda$	30	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	15	pF

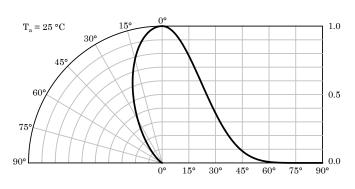
Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I <sub>F</sub> =2mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
				min.	typ.		
XCUG32D	Green	GaP	Green Diffused	1*	2.8*	565*	50°

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



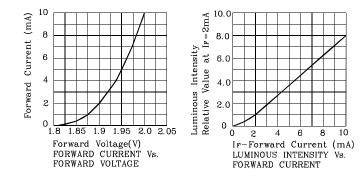


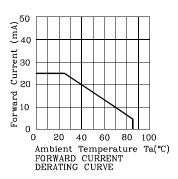
Relative Intensity Vs. CIE Wavelength

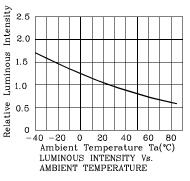


Spatial Distribution

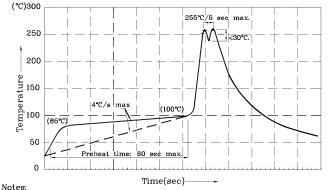
## Green







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



I.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

2.Peak wave soldering temperature between  $245^{\circ}$ C ~  $255^{\circ}$ 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 process.

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),

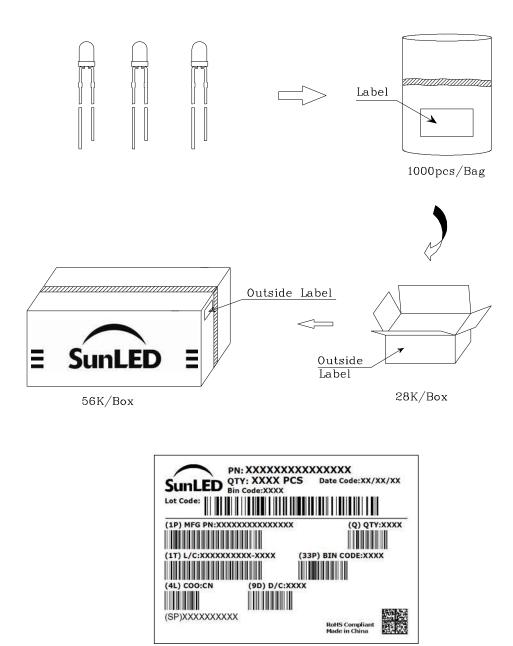
the typical accuracy of the sorting process is as follows:

- 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**



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- 2. Contents within this document are subject to improvement and enhancement changes without notice.
- 3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet.
- User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
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