

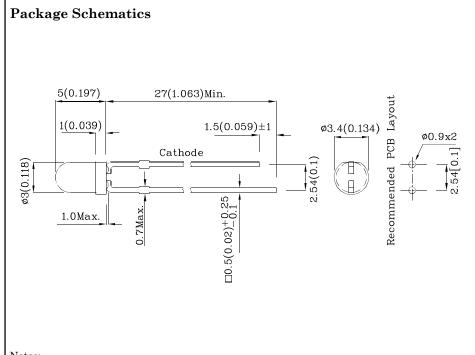
T-1 (3mm) INFRARED EMITTING DIODE

## **Features**

- Radial / Through hole package
- $\bullet$  Reliable & robust
- Low power consumption
- Available on tape and reel
- 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)	THI (GaAlAs)	Unit		
Reverse Voltage	$V_{\rm R}$	5	V	
Forward Current	$I_{\mathrm{F}}$	50	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	iFS	1200	mA mW	
Power Dissipation	$P_{D}$	80		
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°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)

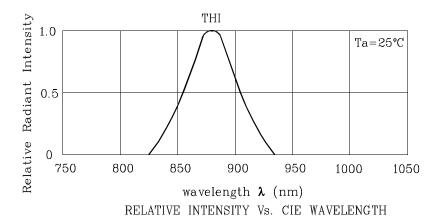
Operating Characteristics (T <sub>A</sub> =25°C)	THI (GaAlAs)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.3	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.6	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	${ m I}_{ m R}$	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λΡ	880*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$\triangle \lambda$	50	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	90	pF

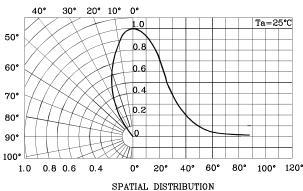
Part Number	Emitting Material	Lens-color	Radiant Intensity CIE127-2007* (Po=mW/sr) @20mA		Radiant Intensity CIE127-2007* (Po=mW/sr) @50mA		Wavelength CIE127-2007* nm $\lambda P$	Viewing Angle 20 1/2
			min.	typ.	min.	typ.		
XTHI30W	GaAlAs	Water Clear	3*	15*	5*	19*	880*	50°

<sup>\*</sup>Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.

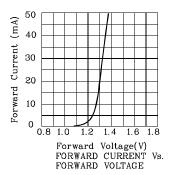


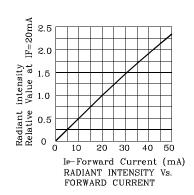


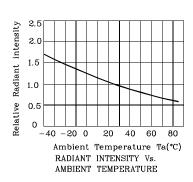




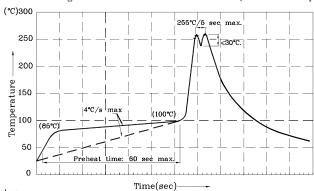
# **♦** THI







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



# Notes: Notes. 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 $260^{\circ}C$ 2. Peak wave soldering temperature between $245^{\circ}C \sim 255^{\circ}C$ for 3 sec

(5 sec max).

 $3.\mathrm{Do}$  not apply stress to the epoxy resin while the temperature is above  $85^{\circ}\mathrm{C}$ .  $4.\mathrm{Fixtures}$  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),

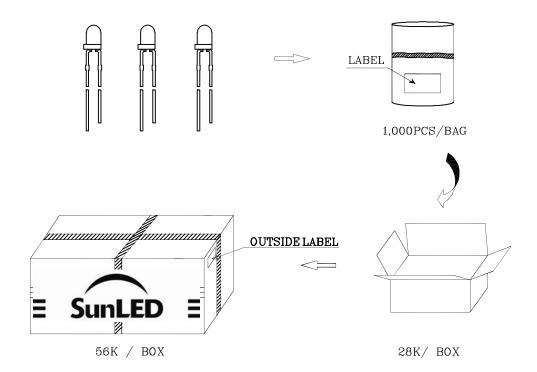
the typical accuracy of the sorting process is as follows:

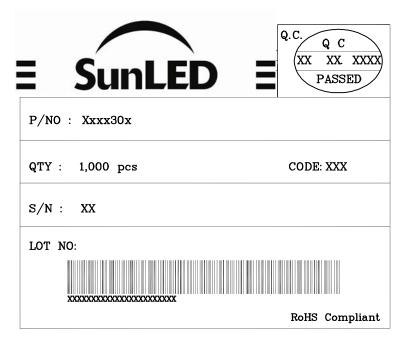
- 1. Radiant Intensity / Luminous Flux: +/-15%
- 2. Forward Voltage: +/-0.1V

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

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