

T-1 3/4 (5mm) INFRARED EMITTING DIODE

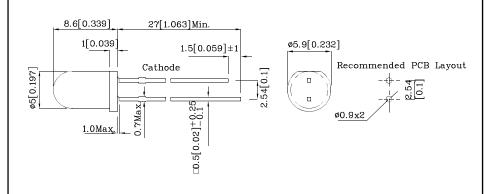
### **Features**

- Radial / Through hole package
- $\bullet$  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  $\pm 0.25(0.01")$  unless otherwise noted.
- 3. Specifications are subject to change without notice.

Absolute Maximum Ratings T <sub>A</sub> =25°C)		THI/850 (GaAlAs)	Unit		
Reverse Voltage	$V_{\mathrm{R}}$	5	V		
Forward Current	$I_{\mathrm{F}}$	50	mA		
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	iFS	1000	mA		
Power Dissipation	$P_{D}$	80	mW		
Operating Temperature	T <sub>A</sub> -40 ~ +85		°C		
Storage Temperature	Tstg	-40 ~ +85	30		
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/850 (GaAlAs)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.4	V	
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.6	V	
Reverse Current (Max.) $(V_R=5V)$	$I_{ m R}$	10	uA	
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λР	850*	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	30	pF	

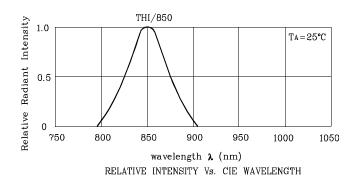
Part Number	Emitting Material	Lens-color	Radiant Intensity CIE127-2007* (Po=mW/sr) @20mA		Radiant Intensity CIE127-2007* (Po=mW/sr) @50mA			Viewing Angle 20 1/2
			min.	typ.	min.	typ.		
XTHI12BF850	GaAlAs	Blue Transparent	12*	29*	40*	89*	850*	20°

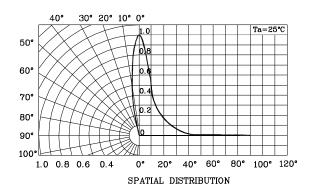
<sup>\*</sup>Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.

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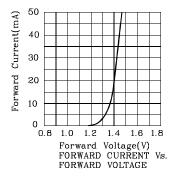


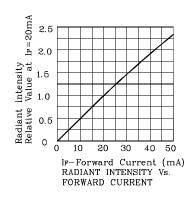


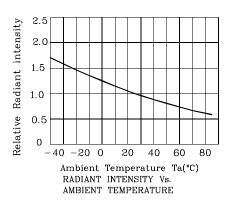




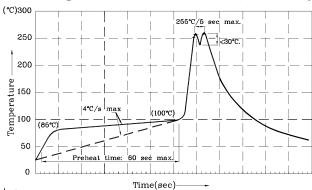
#### **❖** THI/850







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

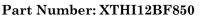
## Remarks:

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.

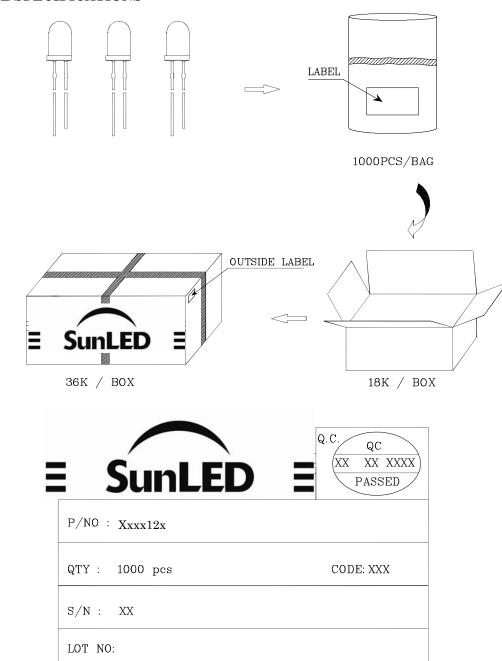


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#### PACKING & LABEL SPECIFICATIONS

www.SunLEDusa.com



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