

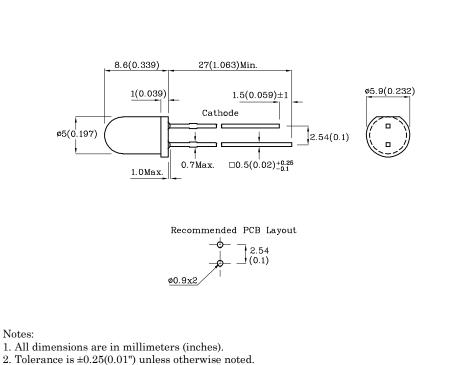
Part Number: XTHI12W850

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





3. Specifications are subject to change without notice.

Package Schematics

Absolute Maximum Ratings (T _A =25°C)		THI/850 (GaAlAs)	Unit		
Reverse Voltage	V_{R}	5	V		
Forward Current	$\mathbf{I}_{\mathbf{F}}$	50	mA		
Forward Current (Peak) 1/100 Duty Cycle 10us Pulse Width	iFS	1000	mA		
Power Dissipation	\mathbf{P}_{D}	95	mW		
Operating Temperature	$T_{\rm A}$	$-40 \sim +85$	°C		
Storage Temperature	Tstg	$-40 \sim +85$			
Lead Solder Temperature [2mm Below Package Base]	260°C For 3 Seconds				
Lead Solder Temperature [5mm Below Package Base]	260°C For 5 Seconds				

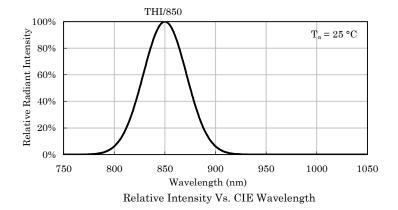
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

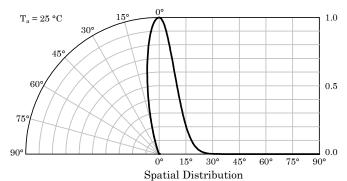
Operating Characteristics (T _A =25°C)	THI/850 (GaAlAs)	Unit	
Forward Voltage (Typ.) (I _F =20mA)	V_{F}	1.4	V
Forward Voltage (Max.) (I _F =20mA)	V_{F}	1.6	V
Reverse Current (Max.) (V _R =5V)	I_R	10	μΑ
Wavelength of Peak Emission CIE127-2007* (Typ.) (I _F =20mA)	λP	850*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA)	$ riangle\lambda$	50	nm
Capacitance (Typ.) (V _F =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		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
			min.	typ.	min.	typ.		
XTHI12W850	GaAlAs	Water Clear	12*	29*	40*	89*	850*	20°

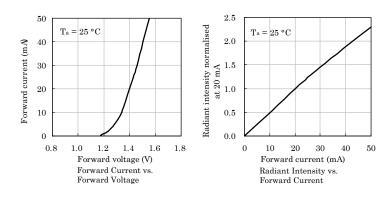
*Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.

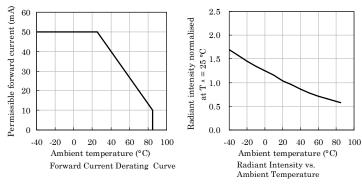




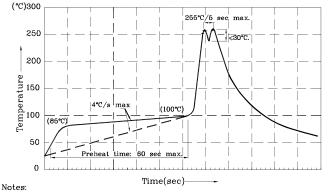


***** THI/850





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

(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),

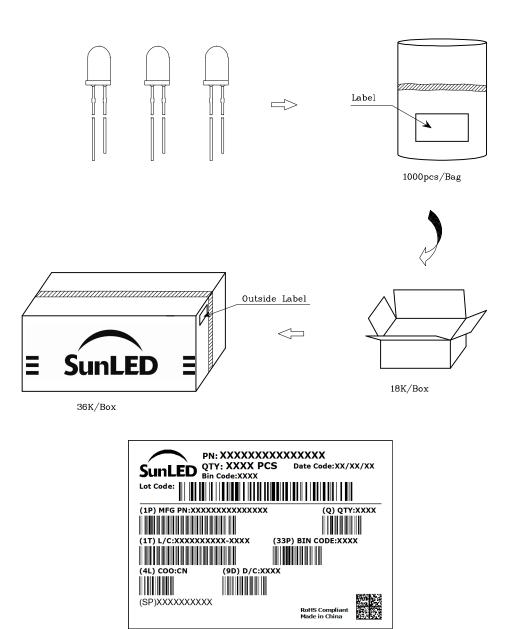
the typical accuracy of the sorting process is as follows:

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

Note: Accuracy may depend on the sorting parameters.



PACKING & LABEL SPECIFICATIONS



TERMS OF USE

- 1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
- 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.
- 4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
- 5. The contents within this document may not be altered without prior consent by SunLED.
- 6. Additional technical notes are available at <u>https://www.SunLEDusa.com/TechnicalNotes.asp</u>

Dec 07,2020