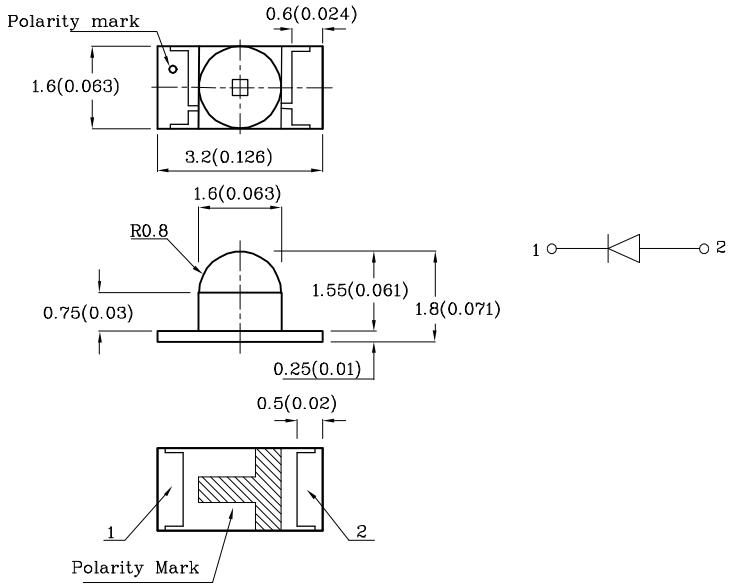
Part Number: XZTNI55W-3

3.2 x 1.6 mm Infrared Emitting Diode

Features

- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- Halogen-free
- RoHS compliant

Package Schematics



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2(0.008") unless otherwise noted.
3. Specifications are subject to change without notice.

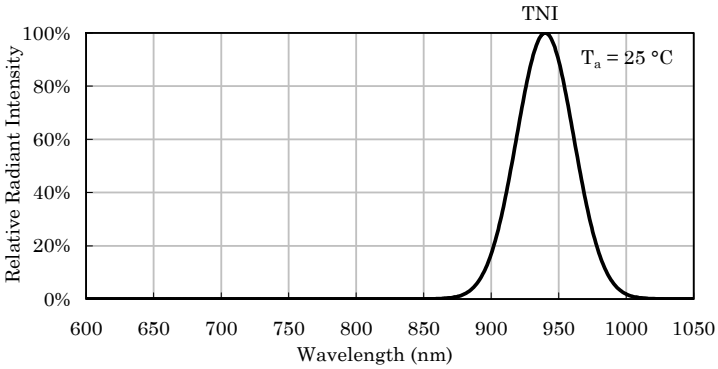
Absolute Maximum Ratings (T_A=25°C)		**TNI (GaAs)**	**Unit**
Reverse Voltage	V_R	5	V
Forward Current	I_F	50	mA
Forward Current (Peak) 1/100 Duty Cycle 10μs Pulse Width	i_{FS}	1200	mA
Power Dissipation	P_D	90	mW
Operating Temperature	T_A	-40 ~ +85	˚C
Storage Temperature	Tstg	-40 ~ +85	

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)

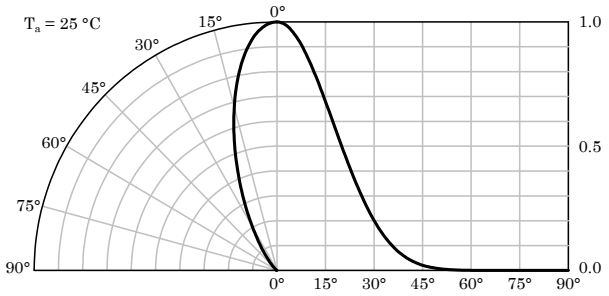
Operating Characteristics (T_A=25°C)		**TNI (GaAs)**	**Unit**
Forward Voltage (Typ.) (I_F=20mA)	V_F	1.2	V
Forward Voltage (Max.) (I_F=20mA)	V_F	1.6	V
Reverse Current (Max.) (V_R=5V)	I_R	10	μA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I_F=20mA)	λP	940*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I_F=20mA)	△λ	50	nm
Capacitance (Typ.) (V_F=0V, f=1MHz)	C	90	pF

Part Number	Emitting Material	Lens-color	Radiant Intensity CIE127-2007* (P_O=mW/sr) @20mA		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
			min.	typ.		
XZTNI55W-3	GaAs	Water Clear	5 2*	9 4.8*	940*	40°

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

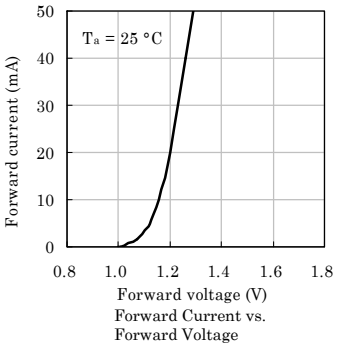


Relative Intensity Vs. CIE Wavelength

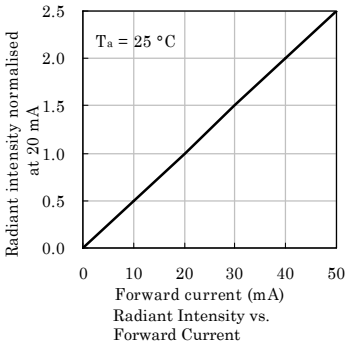


Spatial Distribution

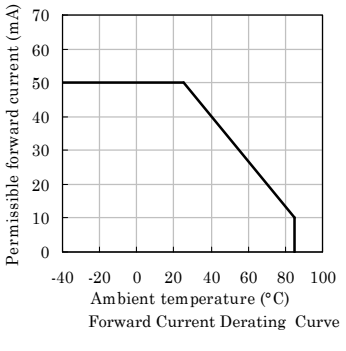
❖ TNI



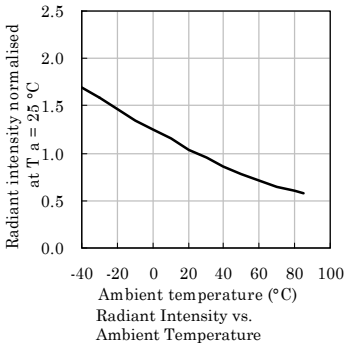
Forward Current vs. Forward Voltage



Radiant Intensity vs. Forward Current

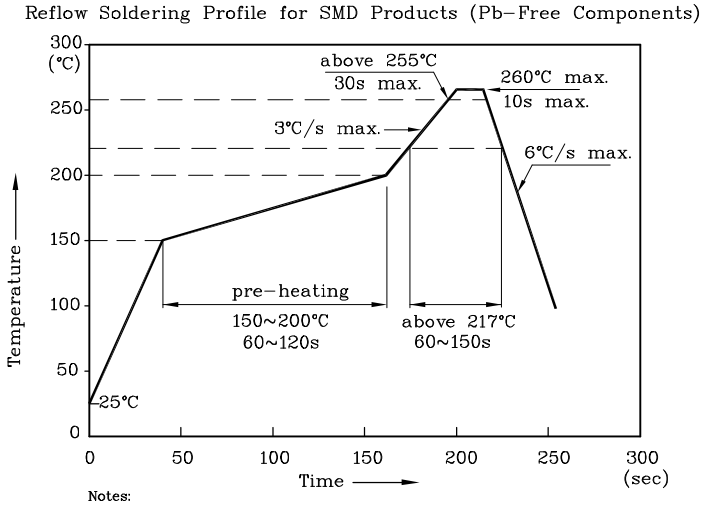


Forward Current Derating Curve



Radiant Intensity vs. Ambient Temperature

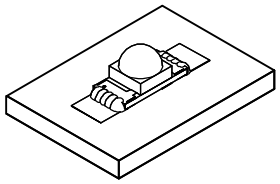
LED is recommended for reflow soldering and soldering profile is shown below.



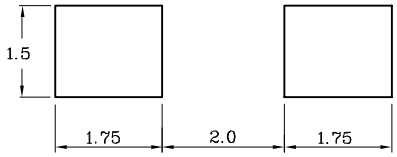
Notes:

1. All temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
2. Do not apply any stress to the LED during high temperature conditions.
3. Maximum number of soldering passes: 2

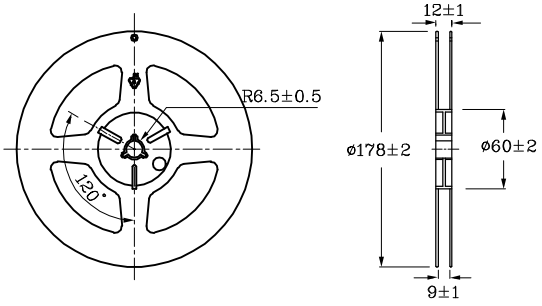
❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



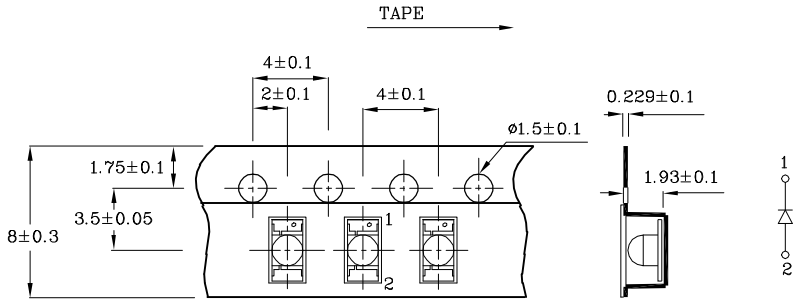
❖ **Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)**



❖ **Reel Dimension (Units : mm)**

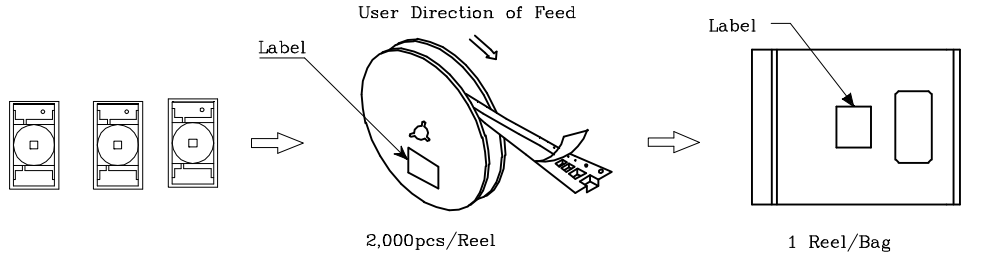


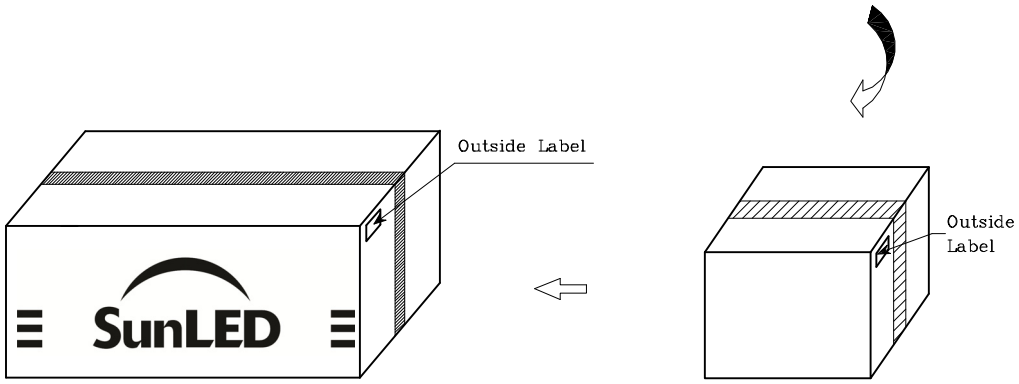
❖ **Tape Specification (Units : mm)**

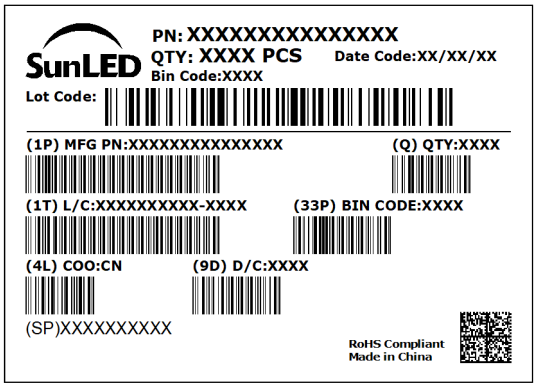


Remarks:
If special sorting is required (e.g. binning based on forward voltage or radiant intensity / luminous flux),
the typical accuracy of the sorting process is as follows:
1. Radiant Intensity / Luminous Flux: +/-15%
2. Forward Voltage: +/-0.1V
Note: Accuracy may depend on the sorting parameters

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 performance of the product(s) should be evaluated and verified by the customer to ensure it can meet the customer's application requirements.
6. The contents within this document may not be altered without prior consent by SunLED.
7. Additional technical notes are available at https://www.SunLEDusa.com/TechnicalNotes.asp