

Part Number: **ZTNI53W**

1.6x0.8mm INFRARED EMITTING DIODE

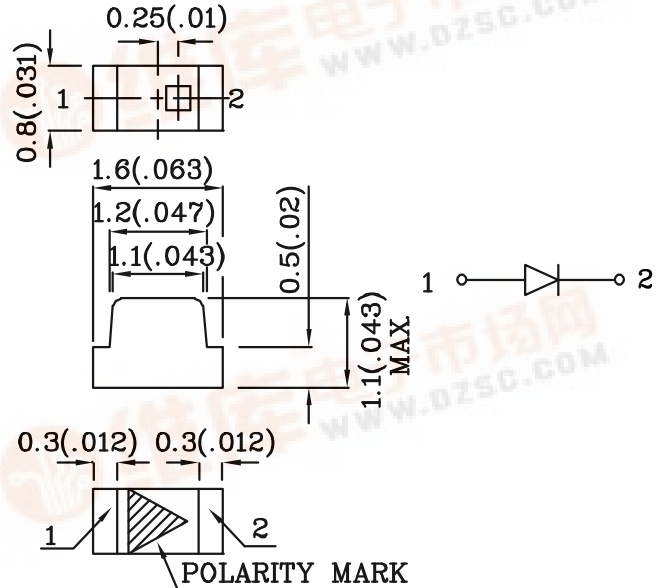
Features

- 1.6mmX0.8mm SMT LED, 1.1mm THICKNESS.
- MECHANICALLY AND SPECTRALLY MATCHED TO THE PHOTOTRANSISTOR.
- WATER CLEAR LENS.
- PACKAGE: 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ " unless otherwise noted.
3. Specifications are subject to change without notice.

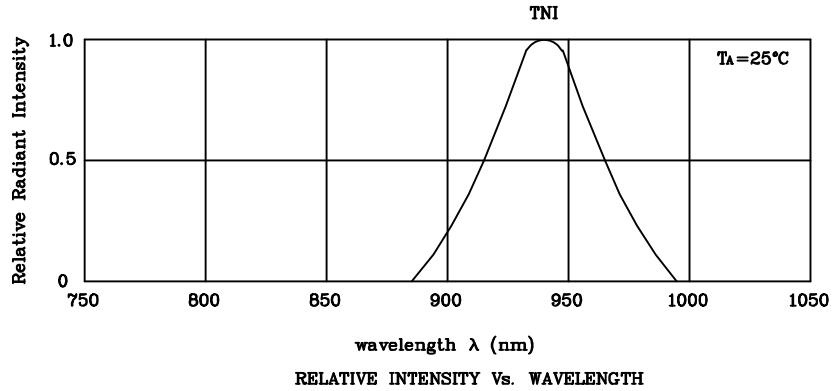


| Absolute Maximum Ratings (TA=25°C) | | TNI (GaAs) | Unit |
|--|------------------|---------------|------|
| Reverse Voltage | V _R | 5 | V |
| Forward Current | I _F | 50 | mA |
| Forward Current (Peak) 1/100 Duty Cycle 10us Pulse Width | i _{FS} | 1.2 | A |
| Power Dissipation | P _T | 80 | mW |
| Operating Temperature | T _A | -40 ~ +85 | °C |
| Storage Temperature | T _{stg} | -40 ~ +85 | |

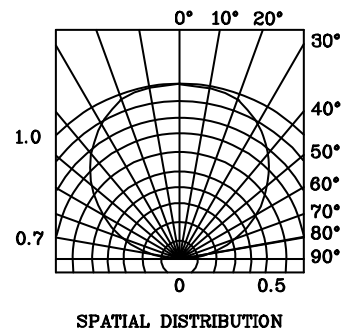
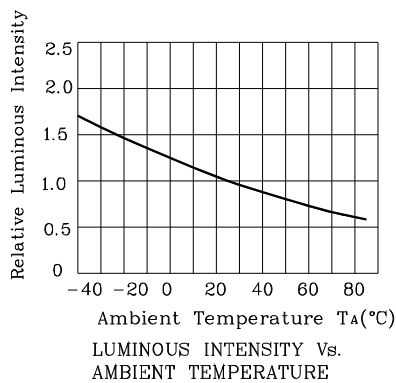
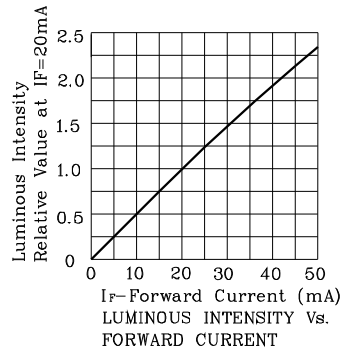
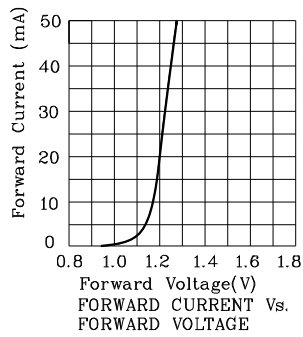
| Operating Characteristics (TA=25°C) | | TNI (GaAs) | Unit |
|--|----------------|---------------|------|
| Forward Voltage (Typ.) (I _F =20mA) | V _F | 1.2 | V |
| Forward Voltage (Max.) (I _F =20mA) | V _F | 1.6 | V |
| Reverse Current (Max.) (V _R =5V) | I _R | 10 | uA |
| Wavelength Of Peak Emission (Typ.) (I _F =20mA) | λ P | 940 | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) (I _F =20mA) | Δλ | 50 | nm |
| Capacitance (Typ.) (V _F =0V, f=1MHz) | C | 90 | pF |

| Part Number | Emitting Color | Emitting Material | Luminous Intensity (P _o =Mw/sr) @20mA | Wavelength nm λ P | Viewing Angle 2 θ 1/2 |
|-------------|----------------|-------------------|--|-------------------------|--------------------------|
| ZTNI53W | GaAs | Water Clear | min. 0.4 typ. 1 | 940 | 120° |

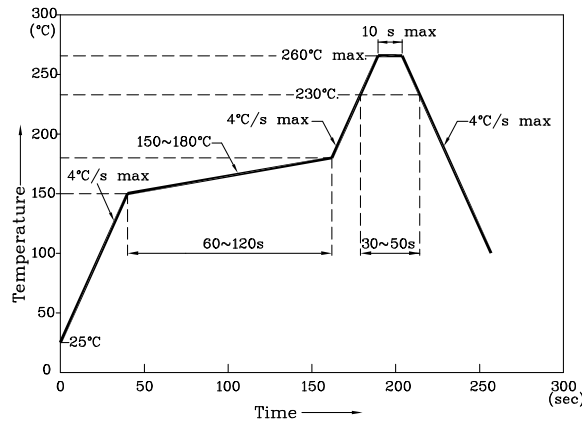




❖ **TNI**



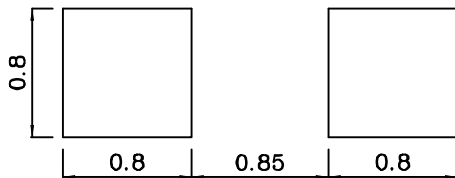
Reflow Soldering Profile For Lead-free SMT Process.



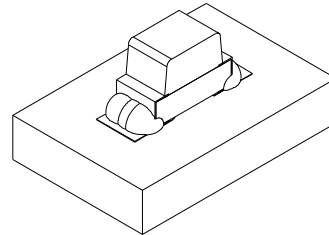
NOTES:

1. Maximum soldering temperature should not exceed 260°C.
2. Recommended reflow temperature: 145°C–260°C.
3. Do not put stress to the epoxy resin during high temperatures conditions.

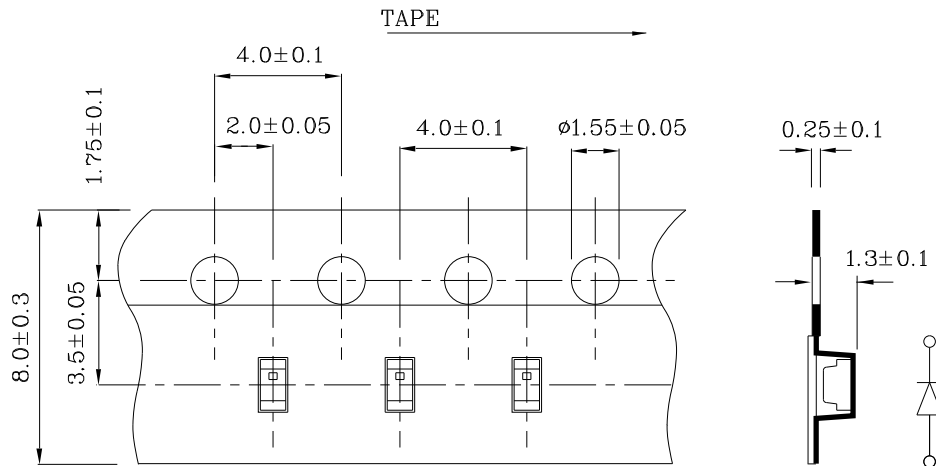
❖ Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



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



❖ Tape Specification (Units : mm)



Remarks:

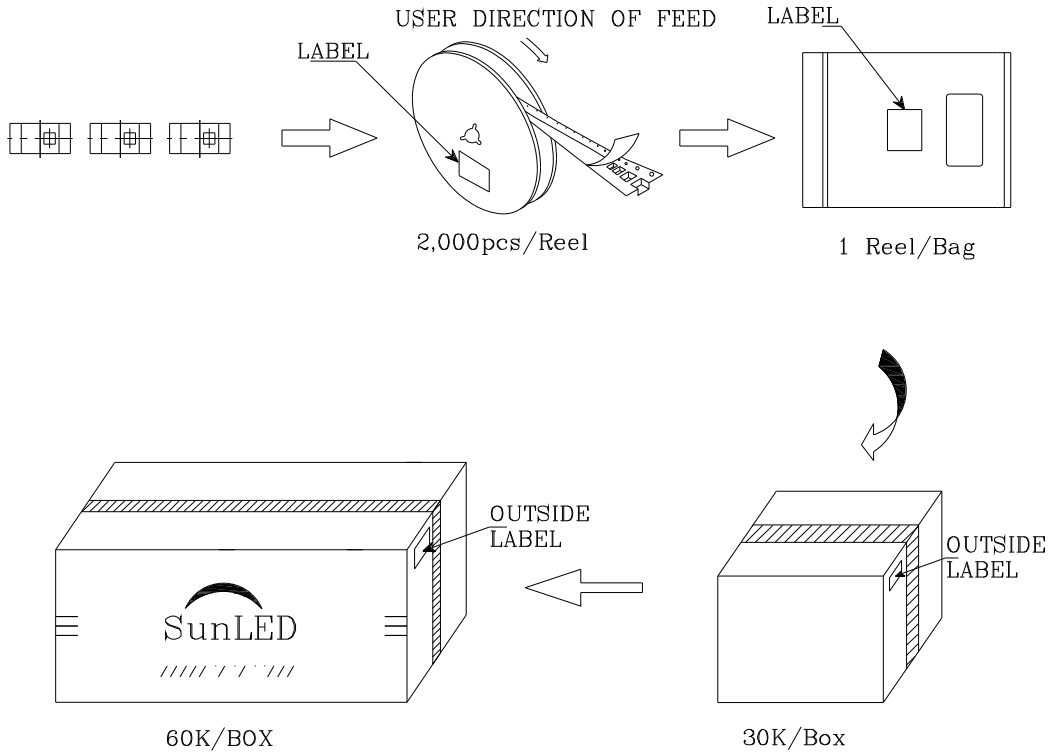

If special sorting is required (e.g. binning based on forward voltage or radiant intensity / luminous flux), the typical accuracy of the sorting process is as follows:

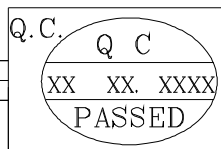

1. Radiant Intensity / Luminous Flux: +/-15%
2. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters

PACKING & LABEL SPECIFICATIONS

ZTNI53W

| | |
|--|-----------|
|  | |
| P/NO : Zxxx53x | |
| QTY : 2,000 pcs | CODE: XXX |
| S/N : XX | |
| LOT NO : | |
|  XXXXXXXXXXXXXXXXXXXXXXXX | |
| RoHS Compliant | |