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Part Number: XZRNI56W-1

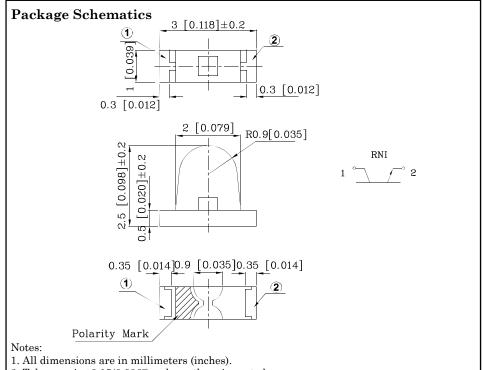
PHOTOTRANSISTOR

Features

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







- 2. Tolerance is $\pm 0.15 (0.006")$ unless otherwise noted.
- 3. Specifications are subject to change without notice.

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Min. | Typ. | Max. | Unit | Test Condiction |
|---------------------------|---|------|------|------|------|---|
| VBR CEO | Collector-to-Emitter Breakdown Voltage | 30 | | | V | Ic=100μA Ee=0mW/cm² |
| VBR ECO | Emitter-to-Collector Breakdown Voltage | 5 | | | V | I _E =100μA Ee=0mW/cm ² |
| VCE(SAT) | Collector-to-Emitter Saturation Voltage | | | 0.8 | V | IC=2mA Ee=20mW/cm ² |
| ICEO | Collector Dark Current | | | 100 | nA | VCE=10V Ee=0mW/cm ² |
| TR | Rise Time (10% to 90%) | | 15 | | μs | VCE=5V IC=1mA RL=1KΩ |
| T_{F} | Fall Time (90% to 10%) | | 15 | | μs | |
| I(ON) | On State Collector Current | 0.2 | 0.5 | | mA | V _{CE} =5V Ee=1 mW/cm ² λ=940nm |

Absolute Maximum Ratings at TA=25°C

| Parameter | Maximum Ratings | | |
|---|-----------------|--|--|
| Collector-to-Emitter Voltage | 30V | | |
| Emitter-to-Collector Voltage | 5V | | |
| Power Dissipation at (or below) 25°C Free Air Temperature | 100mW | | |
| Operating / Storage Temperature Range | -40°C To +85°C | | |

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)





Typical Electro-Optical Characteristics Curves

 $\begin{array}{ccc} Fig.1 & Collector & Power & Dissipation & vs. \\ & & Ambient Temperature \end{array}$

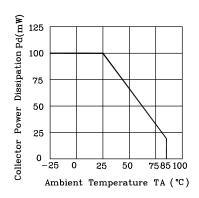


Fig.2 Spectral Sensitivity

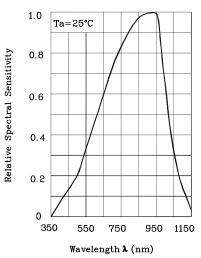


Fig.3 Relative Collector Current vs.
Ambient Temperature

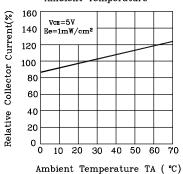
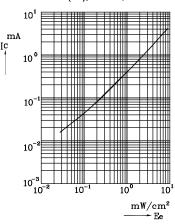


Fig. 4 Collector Current Ic=f(Ec),Vce=5V, Ta=25°C



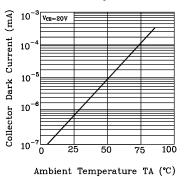
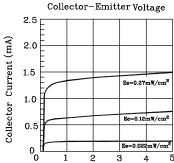


Fig. 6 CollectorCurrent vs.

Collector-Emitter Voltage



Collector-Emitter Voltage VCE (V)

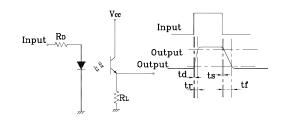


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Fig.7 Response Time vs. Load Resistance 100 Vce=5V (sn) k=100 uA Ta=25°C Response time 0.010.1 10 Load Resistance R. (ka)

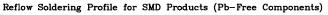
Test Circuit for Response Time

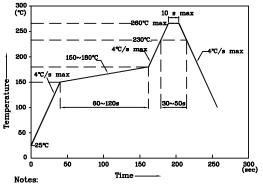


❖ LED is recommended for reflow soldering and soldering profile is shown below.

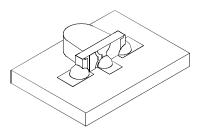
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❖ The device has a single mounting surface. The device must be mounted according to the specifications.

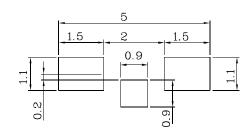




- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions



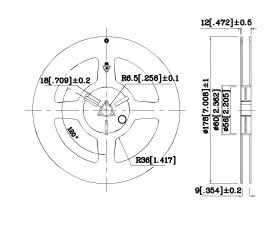
❖ Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



❖ Tape Specification (Units: mm)

TAPE 4.0 ± 0.1 1.75 ± 0.1 $\phi 1.5 \pm 0.1$ 4.0±0.1 1.15±0.1 2.0 ± 0.1 0.23 ± 0.1 5±0.05 8.0 ± 0.3

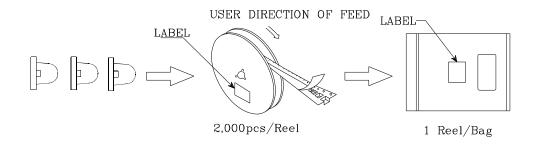
❖ Reel Dimension

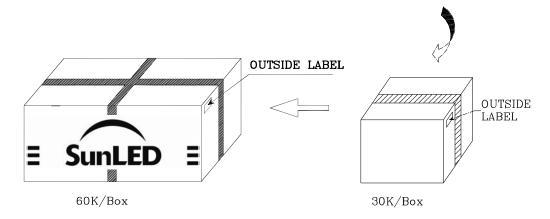


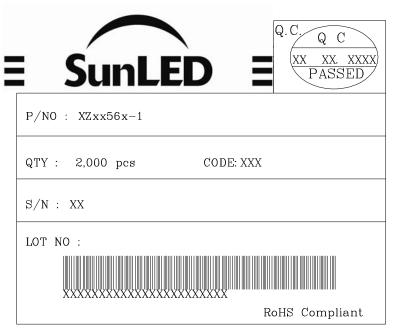




PACKING & LABEL SPECIFICATIONS







TERMS OF USE

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- $2. \ Contents \ within \ this \ document \ are \ subject \ to \ improvement \ and \ enhancement \ changes \ without \ notice.$
- 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.
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