

Part Number: XZRNI56W-1

Phototransistor

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





Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is $\pm 0.15(0.006")$ unless otherwise noted.
- 3. Specifications are subject to change without notice.
- 4. The solder stencil thickness for right angle SMD LEDs should be at least 5mil in order to prevent poor solder wetting.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Min.	Тур.	Max.	Unit	Test Condiction
VBR CEO	Collector-to-Emitter Breakdown Voltage	30	-	-	V	$I_c = 100 \mu A \\ E_e = 0 m W/cm^2$
VBR ECO	Emitter-to-Collector Breakdown Voltage	5	-	-	V	$\begin{array}{c} I_{\rm E} = 100 \mu A \\ E_{\rm e} = 0 m W/cm^2 \end{array}$
VCE(SAT)	Collector-to-Emitter Saturation Voltage	-	-	0.8	V	$I_{c}=2mA \\ E_{e}=20mW/cm^{2}$
Iceo	Collector Dark Current	-	-	100	nA	$\begin{array}{c} V_{\rm CE}{=}10V\\ E_{e}{=}0mW/cm^2 \end{array}$
TR	Rise Time (10% to 90%)	-	15	-	μs	V_{ce} =5V I_c =1mA R_L =1K Ω
$\mathrm{T}\mathrm{F}$	Fall Time (90% to 10%)	-	15	-	μs	
I(ON)	On State Collector Current	0.2	0.5	-	mA	$V_{CE}=5V$ $E_e=1mW/cm^2$ $\lambda=940nm$
$\lambda_{0.1}$	Range of Spectral Bandwidth	420	-	1120	nm	-
λ_{p}	Wavelength of Peak Sensitivity	-	940	-	nm	-

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 ~ +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)

Oct 16,2024

XDSB0058 V10 Layout: Maggie L.



















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

Reflow Soldering Profile for SMD Products (Pb-Free Components)



✤ 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)





PACKING & LABEL SPECIFICATIONS



(9D) D/C:XXXX

RoHS Complia Made in China

TERMS OF USE

1. Data presented in this document reflect statistical figures and should be treated as technical reference only.

COO:CN

(SP)XXXXXXXXXX

- 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