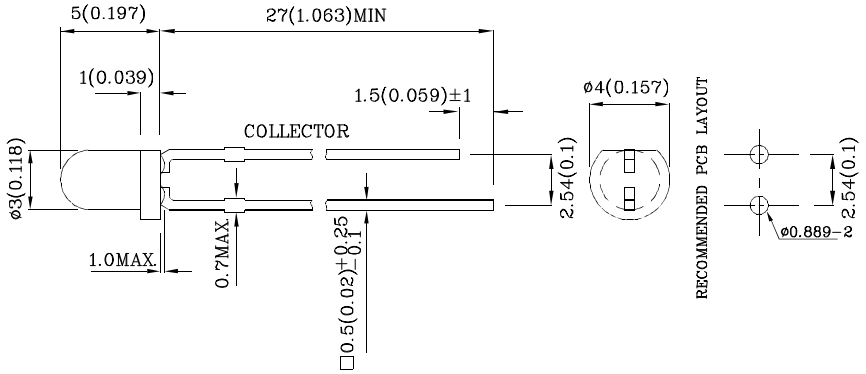
Part Number: RNI30W-1

PHOTOTRANSISTOR

Features

- Radial / Through hole package
- Reliable & robust
- Low power consumption
- RoHS Compliant

Package Schematics



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") 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
$V_{BR\ CEO}$	Collector-to-Emitter Breakdown Voltage	30			V	I_C=100μA Ee=0mW/cm²
$V_{BR\ ECO}$	Emitter-to-Collector Breakdown Voltage	5			V	I_E=100μA Ee=0mW/cm²
$V_{CE(SAT)}$	Collector-to-Emitter Saturation Voltage			0.8	V	IC=2mA Ee=20mW/cm²
I_{CEO}	Collector Dark Current			100	nA	VCE=10V Ee=0mW/cm²
T_R	Rise Time (10% to 90%)		15		μs	V_{CE}=5V I_C=1mA R_L=1KΩ
T_F	Fall Time (90% to 10%)		15		μs	
$I_{(ON)}$	On State Collector Current	0.3	0.8		mA	V_{CE}=5V Ee=1mW/cm² 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
Lead Solder Temperature (>5mm for 5sec)	260°C

Typical Electro-Optical Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

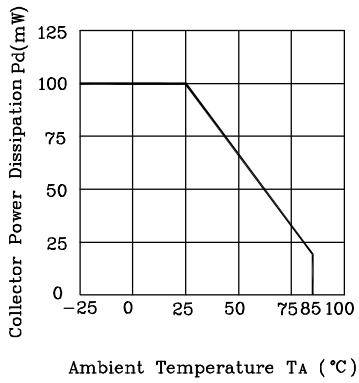


Fig.2 Spectral Sensitivity

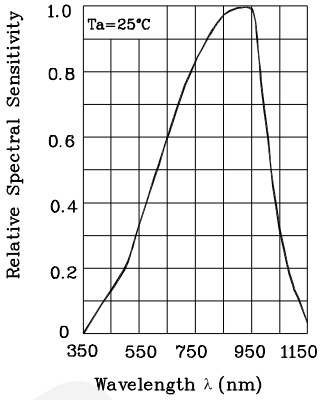


Fig.3 Relative Collector Current vs. Ambient Temperature

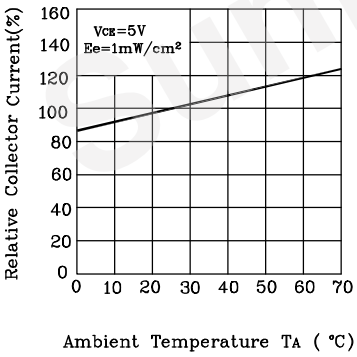


Fig.4 Collector Current vs. Irradiance

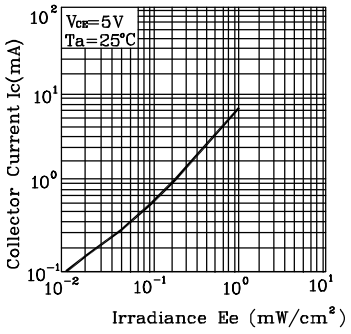


Fig.5 Collector Dark Current vs. Ambient Temperature

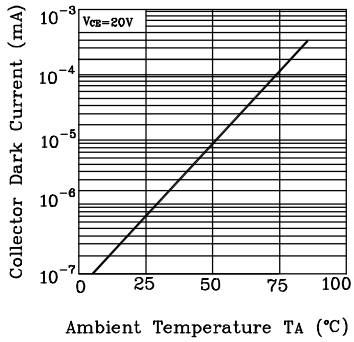


Fig.6 Collector Current vs. Collector-Emitter Voltage

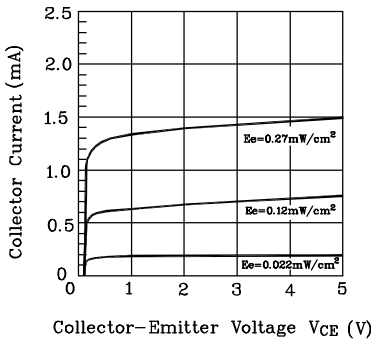
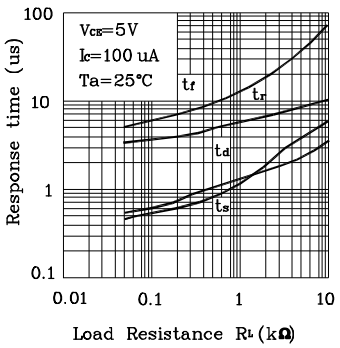
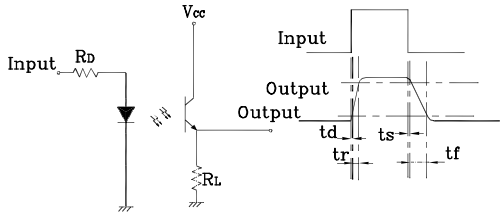


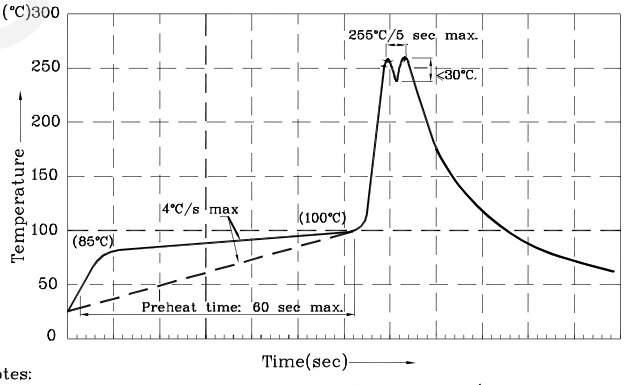
Fig.7 Response Time vs. Load Resistance



Test Circuit for Response Time

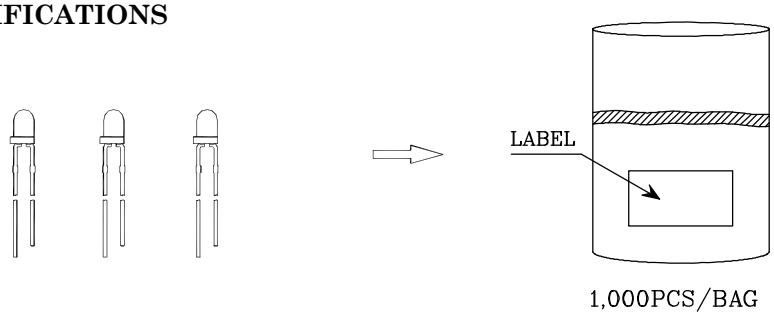


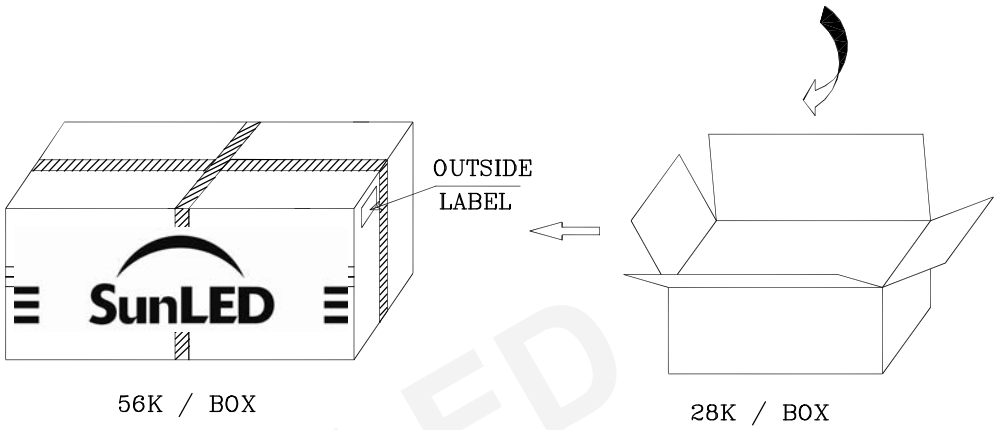
Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)

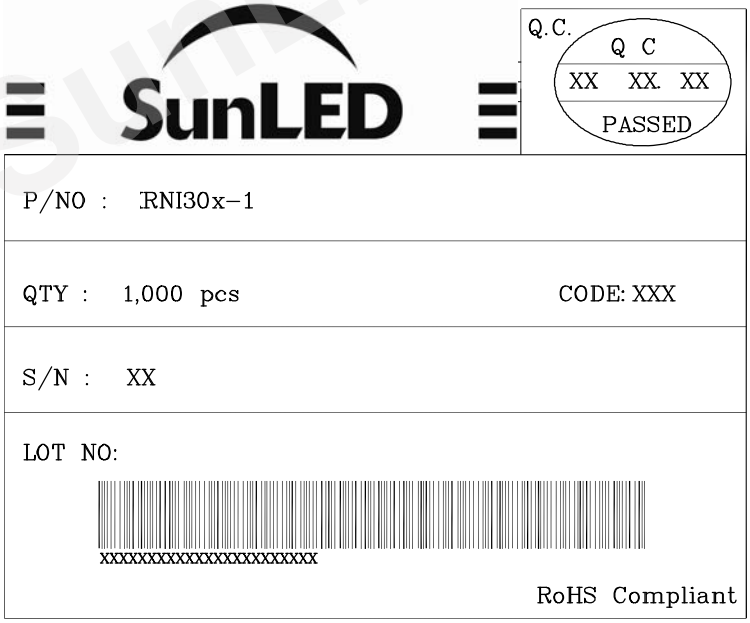


Notes:
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress 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.

PACKING & LABEL SPECIFICATIONS







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