BRIGHTEK

BRIGHTEK (EUROPE) LIMITED

Brighten Up The World With LED !

ISO/TS 16949:2009 BS EN ISO 14001:2004 QC 080000 IECQ HSPM

PRODUCT DATASHEET

- ► Ceramic High Power
- ► 2016 0.78t Series
- ► SWIR Photo Diode

Release Date: 27 September 2022 Version: A1.1

N0P62S44

2016 0.78t Series

RoHS Compliant

FEATURES:

- **Package:** Ceramic IR CHIP SMT Package
- **Dark Current (max.):** 0.8nA
- **Breakdown Voltage (min.):** 30V
- **Forward Voltage (max.):** 0.7V
- **Capacitance (max.):** 5.5pF
- **Responsivity (min.):** 0.9A/W@1310nm
- **Materials:**
  - L/F: Ceramic
- **Operating Temperature:** -20~+65°C
- **Storage Temperature:** -20~+65°C
- **Soldering methods:** IR Reflow soldering
- **MSL:** Level 3 according to J-STD020
- **Packing:** 8mm tape with max.1000pcs/reel, ø178mm (7'')

APPLICATIONS:

- Security Camera
- Light Meters
- Automatic Shutter Control
- Medical Device
- CAT Scanners - X ray Detection
- Pulse Oximeters
- Safety Equipment
- Smoke Detectors

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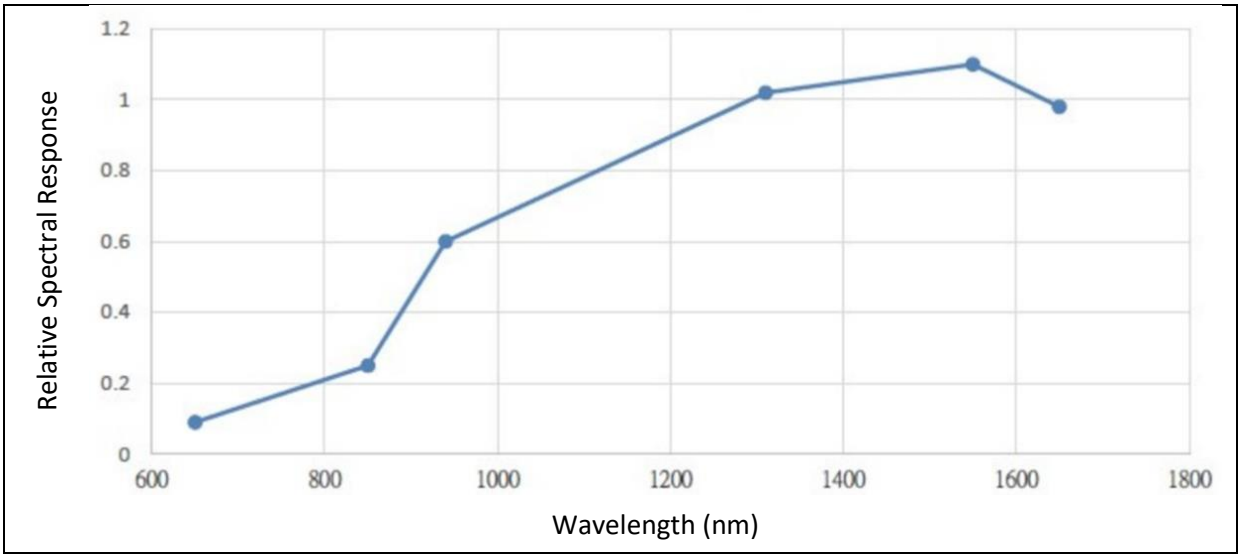
CHARACTERISTICS:

Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Responsivity	R	0.9	---	---	A/W	V_r=5V λ=1310nm
Dark Current	I_d	---	---	0.8	nA	V_r=5V
Breakdown Voltage	V_b	30	---	---	V	I_r=10μA
Forward Voltage	V_f	---	---	0.7	V	I_r=3mA
Capacitance	C	---	---	5.5	pF	V_R=5V F=1MHz

1. Radiant Power (P_O) ±10%, Forward Voltage (V_F) ±0.05V, Wavelength (nm) ±2nm

Spectral Response (Ta=25°C)



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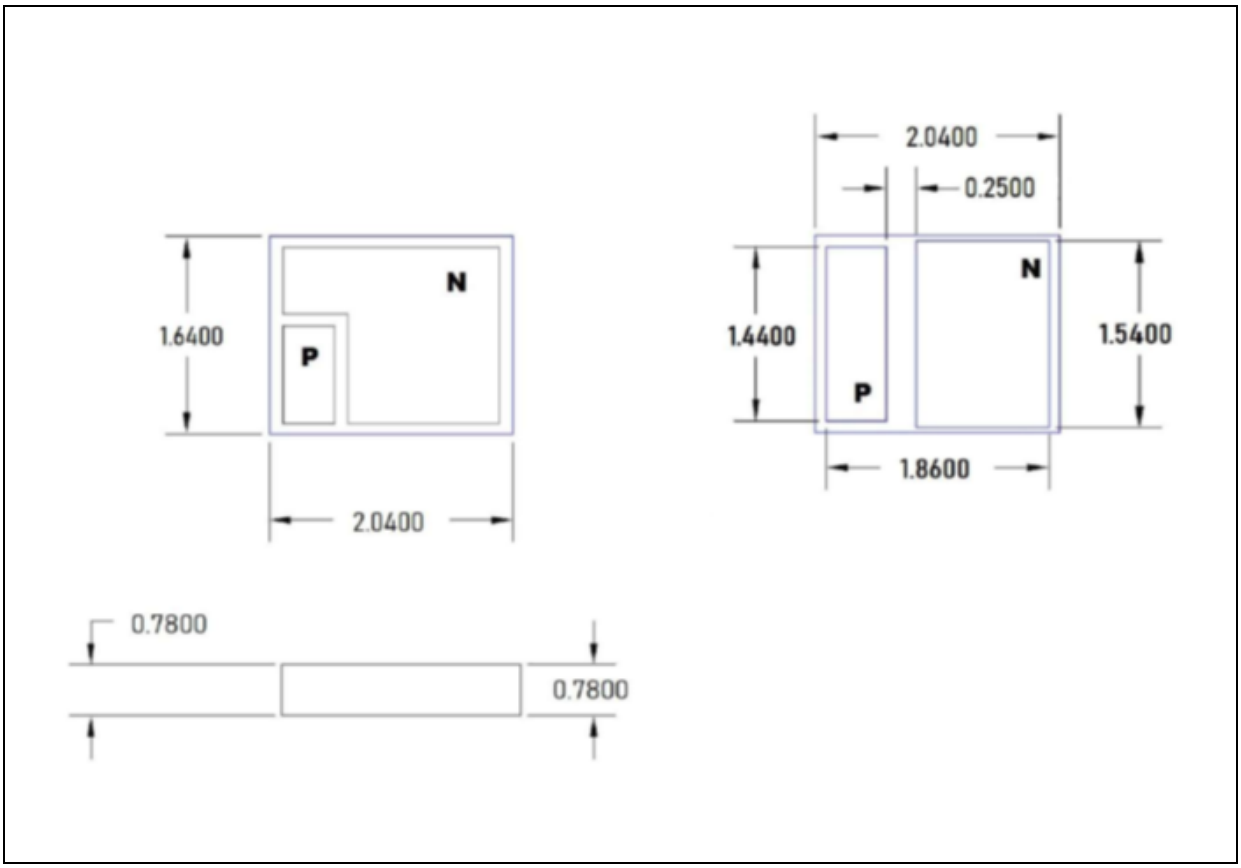
OUTLINE DIMENSION:

Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance ±0.13mm, unless otherwise noted.

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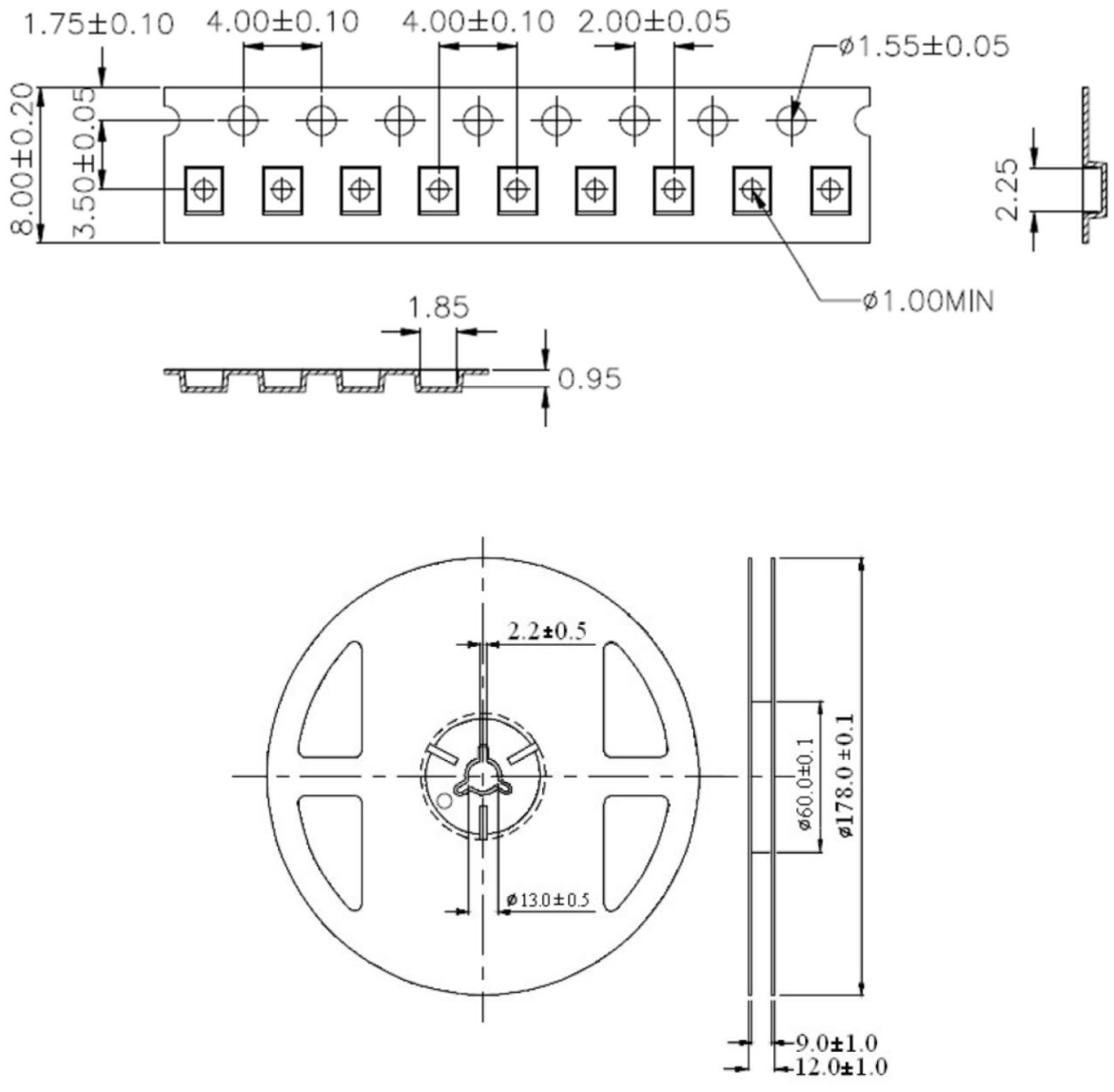
PACKING SPECIFICATION:

Reel Dimension:

Max.1000pcs/reel



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PRECAUTIONS OF USE:

Storage:

It is recommended to store the products in the following conditions:

- Humidity: 60% R.H. Max.
- Temperature: 5°C~30°C (41°F ~86°F).

Shelf life in sealed bag: 12 months at 5°C~30°C and <60% R.H.

Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with descanting agent <10% R.H. and apply baking before use.

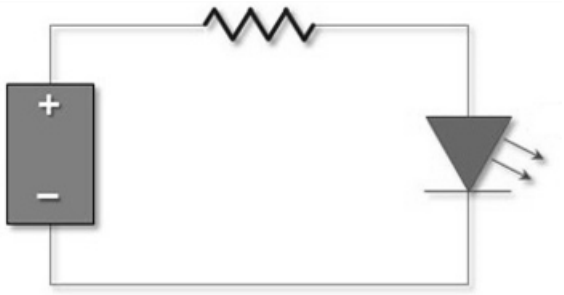
Baking:

It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs. The suggested baking conditions are as followings:

- 65±3°C x 24hrs and <5%RH, taped / reel package.

It's normal to see slight color fading of carrier (light yellow) after baking in process.

Testing Circuit:



Must apply resistor(s) for protection (over current proof).

Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED carrier / package. Avoid putting any stress force directly on to the LED lens.

ESD (Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handing the LED all time. All devices, equipment, machinery, work tables, and storage racks must be properly grounded.

In the events of manual working in process, make sure the devices are well protected from ESD at any time.

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REVISION RECORD:

Version	Date	Summary of Revision
A1.0	08/09/2022	Datasheet set-up.
A1.1	27/09/2022	Add spectral response chart.

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