

# Photodiode Si PIN

260µm with response up to 100MHz, On/Off 30ns



DATASHEET

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## Features

- Low Noise
- High Sensitivity
- TO-46 package size

## Applications

- OEM
- Lab user
- Instruments

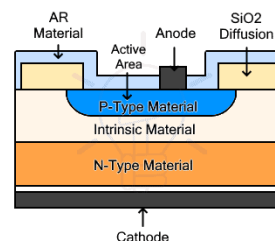


A PIN photodetector is a semiconductor photodiode with a P-type / Intrinsic / N-type layer structure that converts incident light into electrical current with high speed and excellent linearity. When light is absorbed in the undoped intrinsic (I) region, photons generate electron-hole pairs, and an applied reverse bias rapidly sweeps the carriers out, producing an output current proportional to the optical power. PIN photodiodes are widely used due to their high bandwidth (up to 100 GHz for small-area devices), excellent linearity (critical for analog and RF-over-fiber applications), low noise compared to APDs, stable operation, and high reliability. We offer cost-effective PIN photodiodes with flat-window and ball-lens window options to support a wide range of coupling and system requirements. A 5–10 V reverse bias is recommended for power monitoring, sensing, and low-noise operation, while 10–15 V is used when maximum bandwidth is required. A matching high-gain, high-linearity amplifier with DC–500 MHz bandwidth is also available.

Due to their high sensitivity to electrostatic discharge, warranty coverage applies only to fully metal covered modules. Photodetectors are not covered by warranty. Please use them with great caution.

## Specifications

Parameter	Min	Typical	Max	Unit
Peak Sensing Wavelength		940		nm
Operation Wavelength	400		1100	nm
Detector Area		260		µm
Bandwidth	DC		100	MHz
Rise/Fall Time	30		300	ns
Forward Voltage	0.5		1.3	V
Reverse Voltage		10	35	V
Reverse Dark Current		2	10	nA
Light Current		3		µA



**Note:** The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

**CAUTION:** Device is highly sensitive to electrostatic discharge. Solder temperature <350°C <10 seconds

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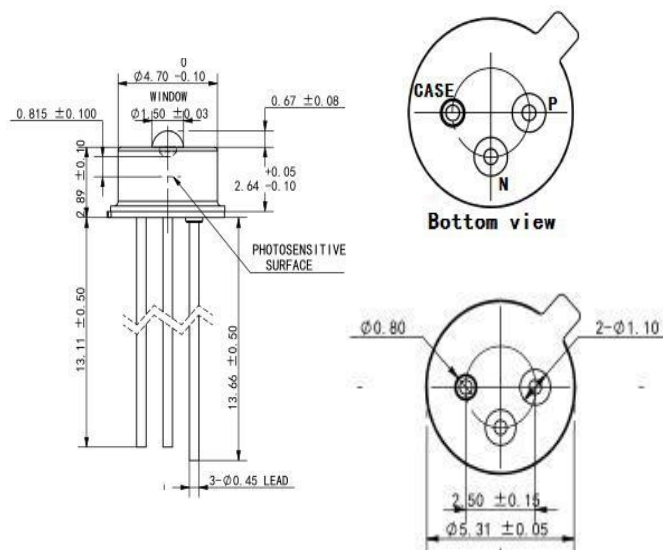
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### Mechanical Dimensions



\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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### Ordering Information

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Prefix	Type	Sensor Area	Window	Driver	Package	
PIND-	GaAs = 1 Silicon = 2 Special = 0	0.1GHz (~260µm) = 260 Special = 0	Ball Lens = 1 Flat = 2	Non = 1 5MHz = 2 500MHz = 3	Standard = 1 Special = 0	

### Caution Electrostatic Sensitivity



- Never touch laser diode and the module using hands
- Always use protections when handle a laser diode
- Recommend mounting the laser diode using an ionic gun and ESD finger cots

