

## InGaAs PIN PHOTODIODES

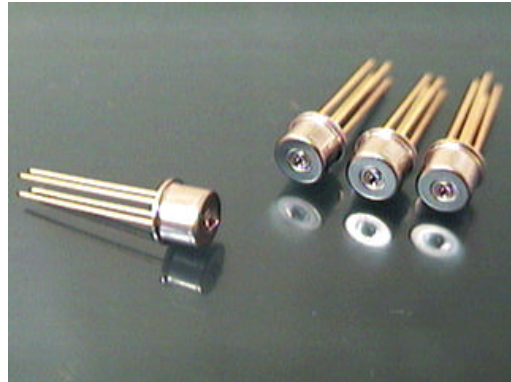
*Preliminary*

### Features

- $\varnothing 75\mu\text{m}$  active diameter.
- High speed response.
- Wide bandwidth from 1000~1600 nm.
- High responsivity at 1310 nm.
- Low dark current.
- TO-46 hermetic packaging with a lens cap.

### Applications

- Optical communication system
  - Optical data links
  - Optical LANs
  - Subscriber loops



### Handling and Safety Precautions

Anti-static protection, such as ionized air blowers or grounded wrist straps with a 1 mega series resistor, should be used at all times when handling laser diodes. In addition, soldering irons should be well grounded.

Overheating caused by soldering of the leads of a laser diode must be prevented. Recommend soldering iron temperature and maximum exposure time are below 260 °C and 10 seconds.

### Description

The MCD-3P4C-332 is InGaAs PIN photodiode which has a sensitive area of  $\varnothing 75\mu\text{m}$ . The small photosensitive region will enable operation at low dark current and low capacitance, and yet large enough to allow efficient coupling to multi-mode fiber.

This product is designed for high speed and low noise applications and is suited to receive the light source from 1000~1600 nm.

The MCD-3P4C-332 is compatible with industry standard wave or hand solder processes.

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**For prototype and Production call**  
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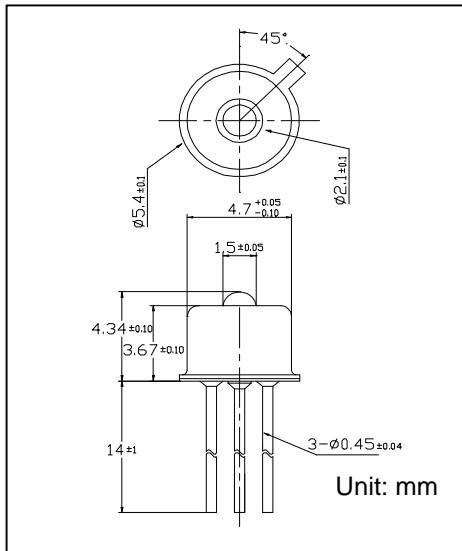
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· Absolute Maximum Ratings (Tc = 25 °C)

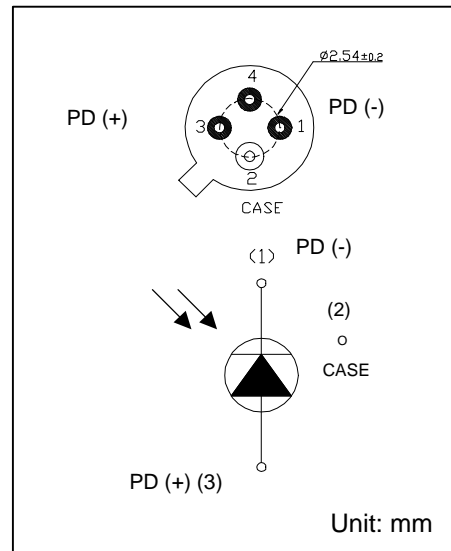
Parameter	Symbol	Rated Value	Unit
Reverse Voltage	V	20	V
Forward Current	I <sub>F</sub>	2	mA
Reverse Current	I <sub>R</sub>	1	mA
Operating case temperature	T <sub>op</sub>	- 40 to +85	°C
Storage temperature	T <sub>STG</sub>	- 40 to +85	°C

· Optical & Electrical Characteristics (Tc = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Active Area			-	75	-	um
Detection Range			1000	1310	1600	nm
Responsivity	R	V <sub>R</sub> =5V, λ=1300nm	0.85	-	-	AW
Dark Current	I <sub>d</sub>	V <sub>R</sub> =5V	-	-	1.0	nA
Capacitance	C	V <sub>R</sub> =5V, f=1MHz	-	0.75	0.9	pF
Bandwidth	BW	V <sub>R</sub> =5V, P=1mW	1.5	-	-	GHz



**Package Dimensions**



**Pin Connections ( Bottom View )**

NOTE: Specifications are subjected to change without notice.

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