

1.25 Gbps PIN-TIA (1310nm) 3.3V & 5V

Features

- 1.25 Gbps typical bandwidth.
- InGaAs/InP PIN Detector with transimpedance amplifier in a TO-46 hermetic package.
- High sensitivity with AGC.
- Differential ended output
- +3.3V & +5V operation.

Applications

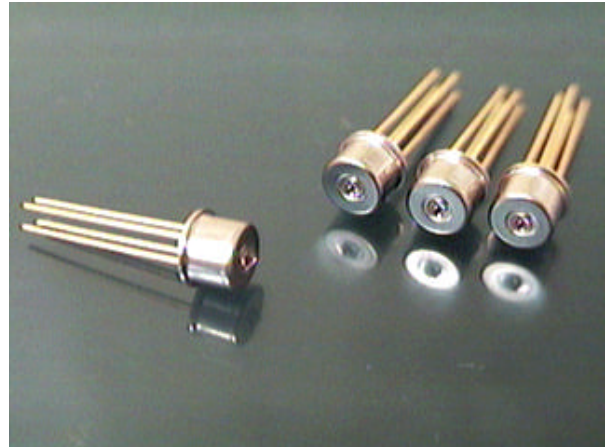
◆ Optical Communication Receiver / Transceiver

- SONET OC-24/SDH STM-8
- Gigabit Ethernet
- Fiber Channel

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-3T4C-313 is a high performance 1310 nm InGaAs/InP PIN detector with transimpedance-amplifier. This product is designed for short and medium distance optical fiber communication.

The MCD-3T4C-313 is compatible with industry standard wave or hand solder processes.

Unity Opto Technology Co., Ltd.

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For prototype and Production call

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REV.:A1 7/17/2002

– Absolute Maximum Ratings (Tc = 25 °C)

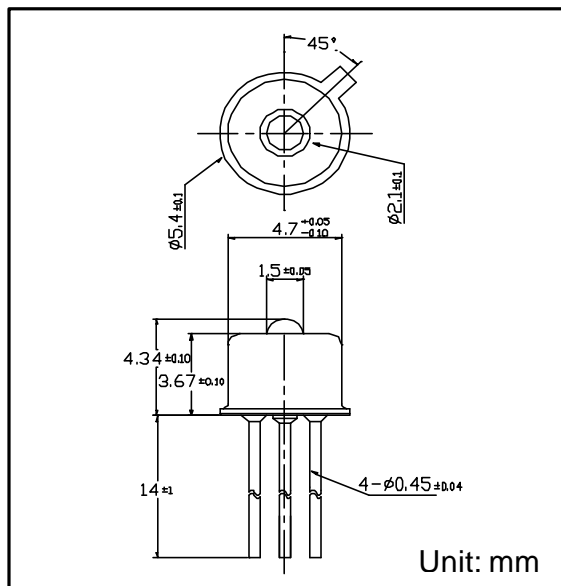
Parameter	Symbol	Rated Value	Unit
Voltage	V	6	V
Operating case temperature	Top	- 40 to +85	°C
Storage temperature	T _{STG}	- 40 to +85	°C

– DC/ Electrical Characteristics (Tc = 25 °C)

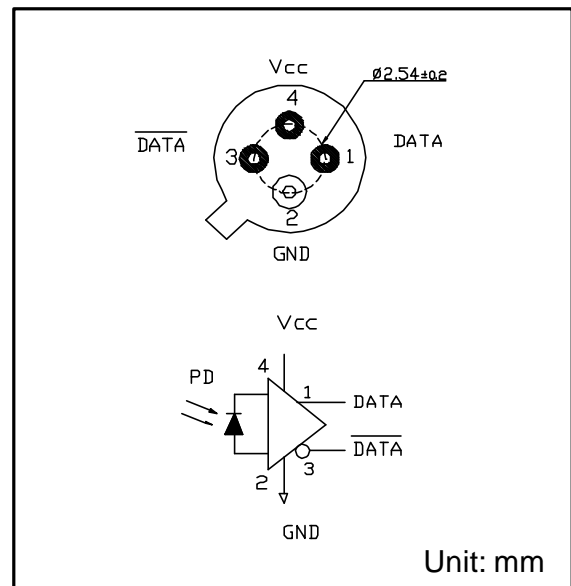
Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply power	V _{cc}	3.0	-	5	V
Differential Output Voltage	V _d	-	-	0.33	V
Supply current (no load)	I _{cc}	-	-	45	mA

– AC/ Optical & Electrical Characteristics (Tc = 25 °C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Detection Range			1100	1310	1650	nm
Active Area			-	75	-	µm
Gain@10Mbps Differential	G	λ=1300nm	-	8.3	-	V/mW
Bandwidth	BW		850	-	-	MHz
Saturation Power	Psat	λ=1300nm	-3	0	-	dBm
Sensitivity	Sens	BER=10 ⁻¹⁰ @1.25Gbps	-	-24	-21	dBm
Output Resistance	R _{out}		-	50	-	ohm
Operation Speed			-	1.25	-	Gbps



Package Dimensions



Pin Connections (Bottom View)

NOTE: Specifications are subjected to change without notice.

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