

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

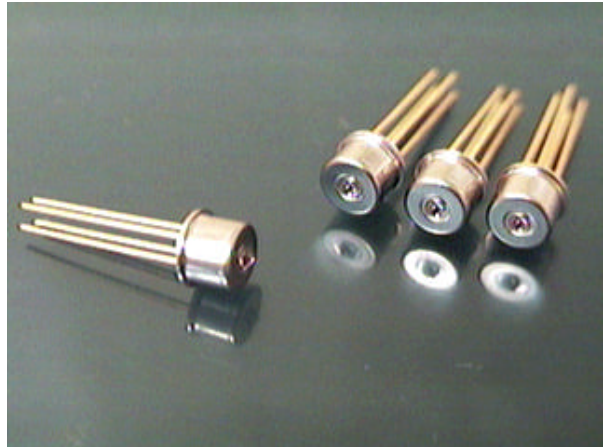
Features

- 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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~ Absolute Maximum Ratings (Tc = 25 °C)

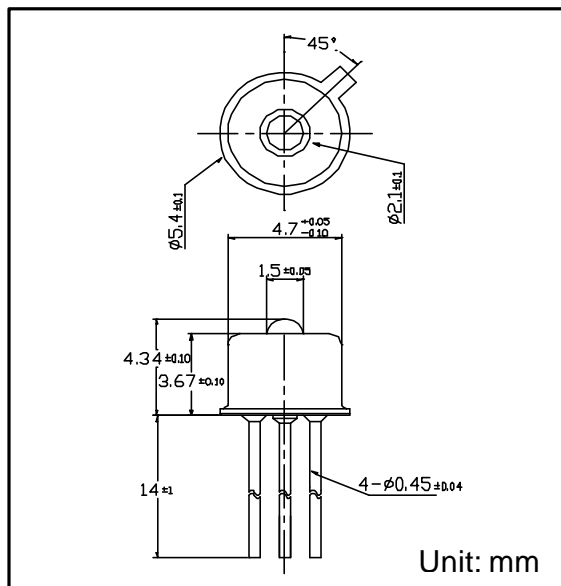
| Parameter | Symbol | Rated Value | Unit |
|----------------------------|------------------|-------------|------|
| Voltage | V | 6 | V |
| Operating case temperature | Top | - 40 to +85 | °C |
| Storage temperature | T _{STG} | - 40 to +85 | °C |

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

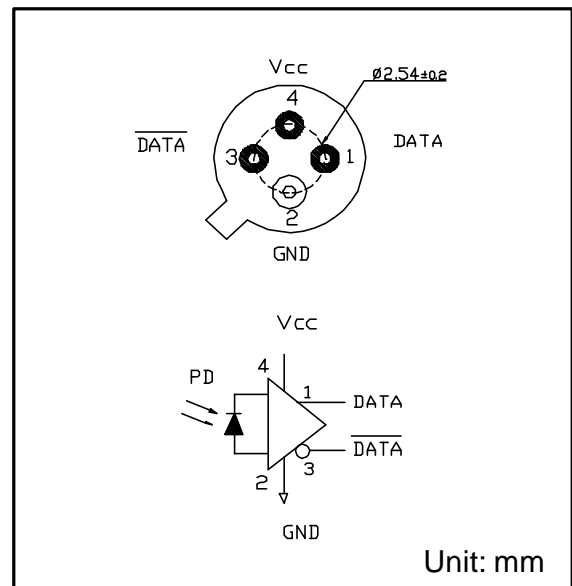
| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|-----------------------------|--------|------|------|------|------|
| Supply power | Vcc | 3.0 | - | 5 | V |
| Differential Output Voltage | Vd | - | - | 0.33 | V |
| Supply current (no load) | Icc | - | - | 45 | mA |

~ 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 | Rout | | - | 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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