

25GHz PIN-TIA InGaAs TO-CAN Photodiode



900-1600 nm, built-in linear amplifier, 25G



The PTIC 25 Gbps PIN-TIA TO-CAN Series Photodiode is a high-speed optical receiver designed for telecom and datacom applications. It integrates an InGaAs PIN photodetector with a transimpedance amplifier (TIA) in a compact, industry-standard TO-CAN package. The device supports analog bandwidths up to 20 GHz and digital data rates of up to 25 Gbps, making it suitable for high-speed optical communication systems. It operates at a nominal wavelength of 1310 nm, with a broad spectral range from 1260 nm to 1600 nm, and delivers a typical responsivity of 0.7 A/W. An evaluation driver is also available, offering up to 8 GHz 3 dB analog bandwidth and SMA RF input for convenient testing and integration.

Features

- Data rates up to 25 Gbps
- Analog up to 20 GHz
- Single +3.3V Power Supply
- -40°C to 85°C Operation
- Differential Output
- Received signal strength indicator(RSSI)
- InGaAs PIN Detector and TIA inside
- With 1KΩ resistance

Specifications

Parameter	Min	Typical	Max	Unit
Supply Voltage	2.97	3.3	3.63	V
Supply Current		26	33	mA
Operating Wavelength	1260		1600	nm
RSSI Offset Current			100	nA
Bandwidth		21		GHz
Overload	2.2			dBm
Sensitivity			-14	dBm
Responsivity	0.7			A/W
Optical Return Loss			-27	dB
Optical Input Power				dBm
Operating Temperature	-20		+70	°C
Storage Temperature	-40		+85	°C
Lead Solder Temperature/Time			260/10	°C/s

Applications

- High speed Telecom and Datacom



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](#):

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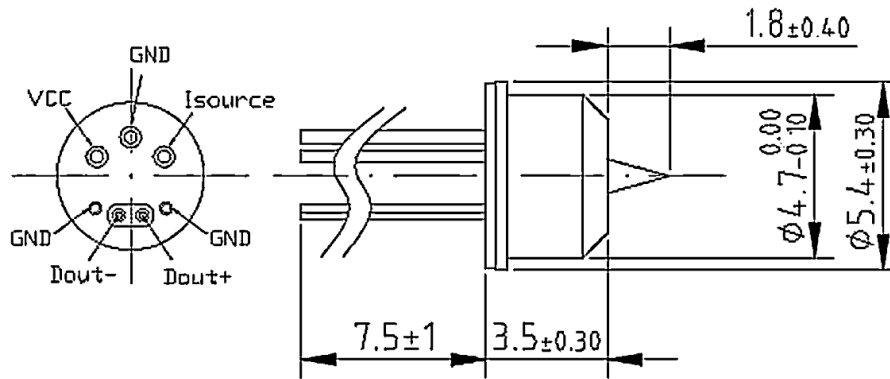
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Mechanical Dimension (mm) and PIN Assignment



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

Ordering Information (Part Number)

Prefix	Wavelength	Frequency	TIA	TPCAN Type	Configuration	Driver
PTIC-	InGaAs = 2 Silicon = 1	25GHz = 25 10GHz = 10 5GHz = 05	None = 1 Yes = 2	Standard = 1 Special = 0	Standard = 1 Special = 0	Non = 1 Yes = 2

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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



Laser Safety

This product meets the appropriate standard in Title 21 of the Code of Federal Regulations (CFR). FDA/CDRH Class 1M laser product. This device has been classified with the FDA/CDRH under accession number 0220191. All versions of this laser are Class 1M laser products, tested according to IEC 60825-1:2007 / EN 60825-1:2007. An additional warning for Class 1M laser products. For diverging beams, this warning shall state that viewing the laser output with certain optical instruments (for example eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. For collimated beams, this warning shall state that viewing the laser output with certain instruments designed for use at a distance (for example telescopes and binoculars) may pose an eye hazard.

Wavelength = 1.3/1.5 μm .

Maximum power = 30 mW.



*Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

*IEC is a registered trademark of the International Electrotechnical Commission.