

High Linearity InGaAs PIN Photodiode



ACP's PTD-HL series InGaAs PIN Photodiode is sensitive at 1310nm and 1550nm bands. It has high linearity and very low second-order inter-modulation distortion (IMD2). Our state-of-the-art planar fabrication techniques lead to high quality and reliability. All AC Photonics' products are Telcordia qualification tested.

Key Features

- Planar Semiconductor Design and Dielectric Passivation
- 3-Pin Coaxial Streamline Packaging with Fiber Pigtail
- Superior Noise and Photoelectric Performance (High Linearity)
- Low Cost

Applications

- Optical Communication System
- Optical Power monitor
- Analog CATV Application, Such as High Frequency (860MHz) CATV receiver
- Multi-access Transmitter, etc.

Performance Specifications

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.
Operation Wavelength	λ		1000nm - 1650nm		
Dark Current	ID	VR=5V, Ee=0		0.2nA	0.5nA
Responsivity	Re	VR=5V, λ =1310nm	0.85A/W	0.90A/W	
Responsivity	Re	VR=5V, λ =1550nm	0.90A/W	0.95A/W	
Capacitance	c	f=1MHz, case grounded VR=5V, Ee=0,		0.63pF	0.75pF
Operating Voltage	Vopr			-5V	-15V
Second Order Inter-modulation distortion	IMD2	f1=400MHz, P1=-3dBm f2=450.25MHz, P2=-3dBm MI=40%, Pavg=0dBm, Rload=50W IMD2: f1+f2=850.25MHz, VR=12V			
Back Reflection	RL				-40dB
Frequency Responsibility	BW	VR=5V, 50 Ω Load with lead, length=6mm, case open	3GHz		





Absolute Maximum Ratings(T=25°C):

Parameter	Min.	Max.
Reverse Voltage		25V
Input Optical Power		10dBm
Reverse Current		5mA
Forward Current		10mA
Operating Temperature	-40°C	+85°C
Storage Temperature	-40°C	+85°C
Lead Solder Temperature		260°C
Lead Solder Duration		10s

Others:

Fiber Yield Strength		1kgf
Fiber Bend Radius	10mm	
Length of Pigtail	1.0m	

Ordering Information

PTD					-HL
	Package Style	Pigtail Style	Fiber Length	In/Out Connector	
	1 = With Mount Flange 2 = Without Mount Flange C = Customer Specified	1 = Bare Fiber 2 = 900um Jacket	1 = 1.0m 2 = 2.0m	0 = None 1 = FC/APC 2 = FC/PC 3 = SC/APC 4 = SC/PC 5 = ST 6 = LC/UPC 7 = LC/APC	