



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.

FEATURES

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

APPLICATION

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, 50Ω Load with lead, length=6mm, case open	3GHz		

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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		