75um Plugged InGaAs Photodiode



Description:

InGaAs photodiodes offer superb response from 900nm to 1700nm, perfect for telecom and near IR detection. The 75 and 120 micron photodiodes are offered in isolated TO-46 packages with a lensed cap for single mode and multi-mode fiber coupling. These two sizes are also available with actively aligned FC receptacles. The 70 micron photodiode is perfect for high bandwidth applications while the 120 micron photodiode is perfect for active alignment applications. The 3mm photodiode is isolated in a TO-5 package with a broadband double sided AR-coated window. With the high shunt resistance, the 3mm photodiode is suitable for high sensitivity to weak signal applications.

Features:

- Response Range From 900nm to 1700nm
- Package Supports Single and Multi-Mode Fiber Coupling
- 1.3 micron and 1.55 micron sensitivity
- High Responsivity
- Both Small Area (High Speed) and Large Area

Application:

- CATV
- Optical
- transmission
- Optical fiber communication
- Optical fiber Sensors

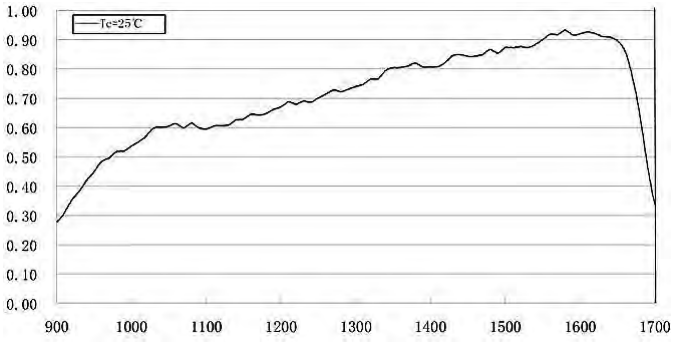
E/O Characteristics:

Tsub=25°C, CW bias unless stated otherwise

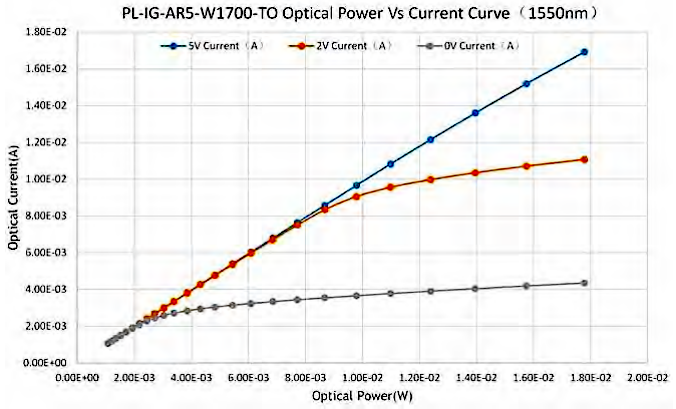
Parameters	Sym.	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	-	900~1700			nm
Active diameter	ϕ	-	75			um
Reponsivity	Re	λ=1.31μm,VR=5V,ϕe =10μw	0.85			A/W
		λ=1.55μm,VR=5V,ϕe =10μw	0.90			
Reverse breakdown voltage	VBR	I R =10μA	45			V
Dark current	ID	V R =5V	0.3	0.5		nA
-3dB bandwidth	BW	VR=5V , RL=50B		1.25		GHZ
Max linear power	Φs	VR =5V, λ=1.55μm	5			mw
Total capacitance	C	VR=5V, f=1MHz		0.7	1.0	pF
Shunt impedance	RSh	V R =10mV	1			MΩ

Typical characteristical curve:

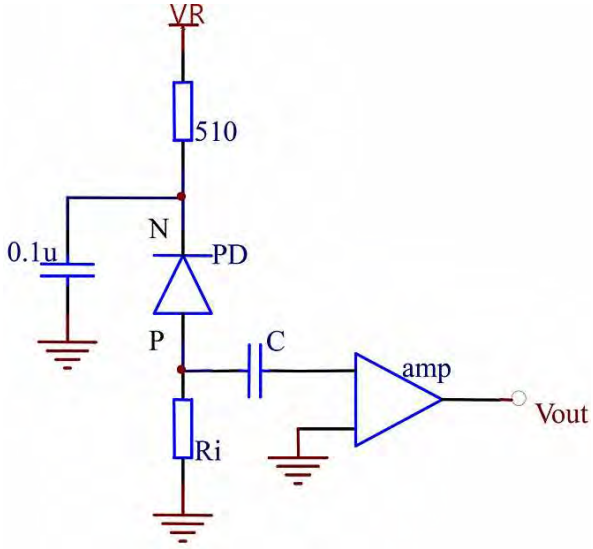
Responsivity, R (A/W)



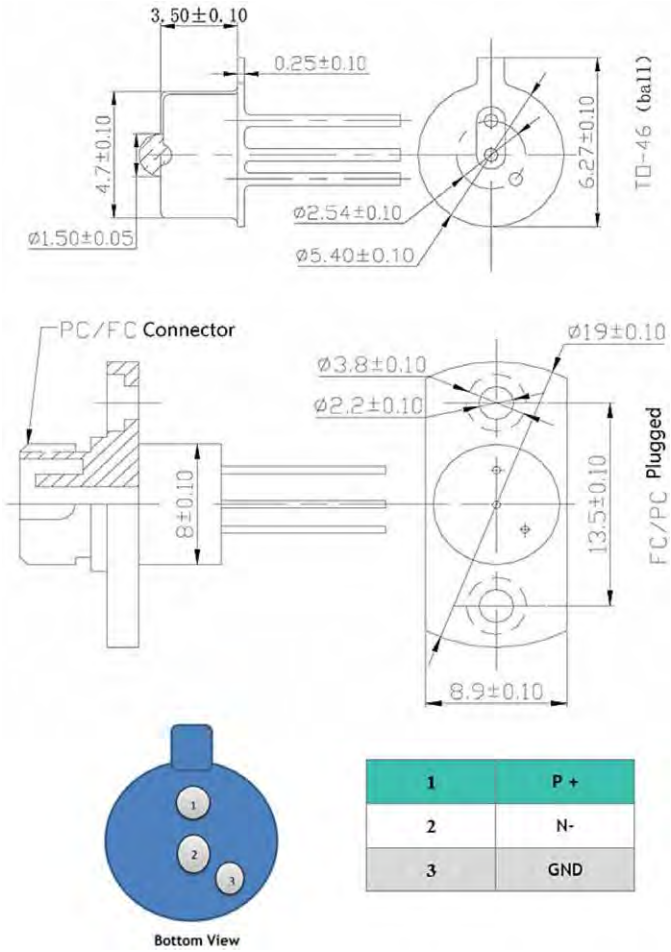
P-I Curve:



Application electric circuit:



Dimensions and Pin definitions:



1	P +
2	N-
3	GND

Absolute Maximem Ratings:

Item	Symbol	Unit	Min	Typ	Max	Testing Condition
Case Temperature	TOP	℃	-5	25	70	
Forward Voltage	VR	V	2	10	15	
Axial Pull Force		N	-	-	5N	3x10s
Side Pull Force		N	-	-	2.5N	3x10s
Fiber Bend Radius			16mm			-
Reverse Voltage(PD)	VPD	V	-	-	10	C=100pF,R=1.5KΩ, HBM
PD electrostatic Discharge	VESD-PD	V		-	500	
PD Forward Current	IPF	mA		-	10	
Power dissipation	P	mw		100		
Lead Soldering time		S		-	10s	260°C
Store Temperature	TSTG	℃	-40	-	+85	2000hr
Operating Temperature	TOP	℃	-55	-	+125	
Relative Humidity	RH		5%	-	95%	Noncondensing

Ordering Info:

PL-□□□□-☆-AR▽-XX

□□□□：Cut off Wavelength

400:400nm

900:900nm

1700:1700nm

2100:2100nm

2400:2400nm

2700:2700nm

☆ ：Material

IG：InGaAs

Si：Si

▽：Active Area

0075:75um

1：1mm

2：2mm

….

5:5mm

XX: Package/Fiber and Connector Type

TO:TO46 Package

FPG:FC/PC Plugged

FSA=SMF-28E Fiber coupled+ FC/APC

FSP=SMF-28E Fiber coupled + FC/PC

FPP=PM Fiber Fiber coupled + FC/PC

FPA=PM Fiber Fiber coupled + FC/APC

User Safety:

Safety and Operating Considerations

This device operates under reverse bias voltage, and the polarity of the device can' t be reversed.

Operating the Photodiode outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with this component cannot exceed maximum peak optical power.

ESD PROTECTION—Electrostatic discharge (ESD) is the primary cause of unexpected laser diode failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces, and rigorous antistatic techniques when handling Photodiodes.