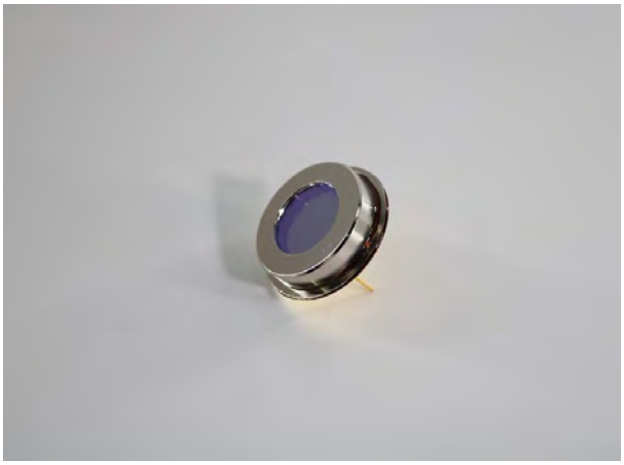
10mm InGaAs Ultra Large Active Area PIN Detector



Description:

PL-1700-IG-AR10-TO20 InGaAS PIN Detector, high sensitivity photo-diode for use in infrared instrumentation and sensing applications. High spectral response in the region 800 nm to 1700 nm. The photosensitive area is 10mm in diameter. Planar-passivated device structure.

Features:

- Top illumination planar PD
- Narrow Element gap
- Low Crosstalk,High reliability
- Good Reponsivity homogeneity of each Quadrant

Application:

- Laser guidance
- Laser positioning
- Laser navigation
- Laser range finder

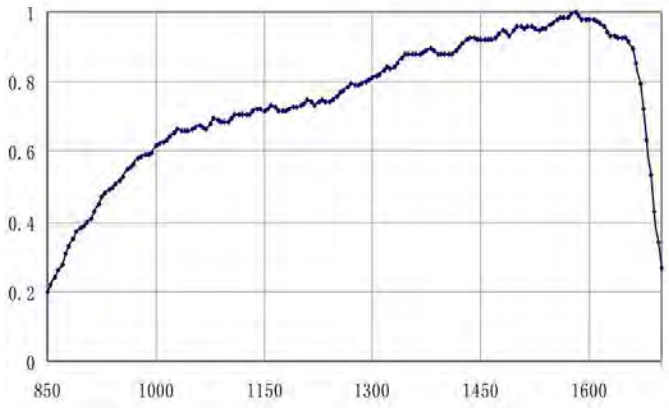
Electrical/Optical Characteristics:

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	-	10			mm
Reponsivity	Re	λ=1.31μm,VR=5V,φe =10μw	0.85			A/W
		λ=1.55μm,VR=5V,φe =10μw	0.95			
Reverse breakdown voltage	VBR	I R =10μA	25			V
Dark current	ID	V R =5V			100	nA
Total capacitance	C	V R =5V			10	nF
Shunt impedance	RSh	V R =10mV	10			MΩ
Response time	tS	VR=5V,RL=50Ω,f=2KHz	—	8	20	μs
Reponsivity Nouniformity	PRNU	VR=5V,λ=1.55μm,φe=100μw			±2	%

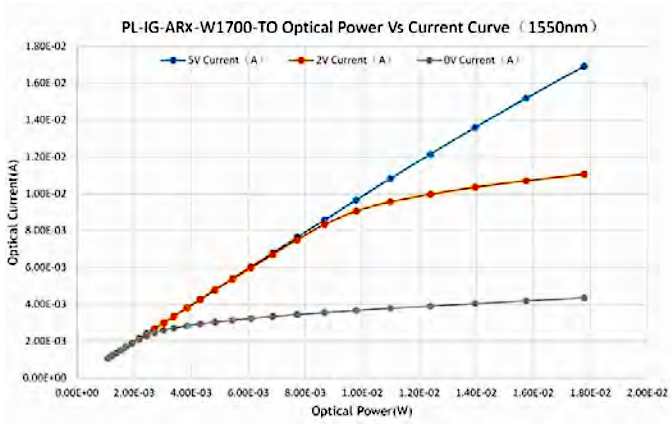
Typical characteristical curve:

Responsivity, R (A/W)

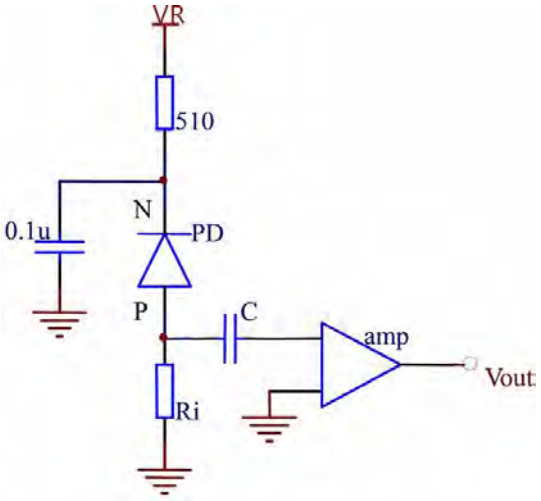


Wavelength, λ (nm)

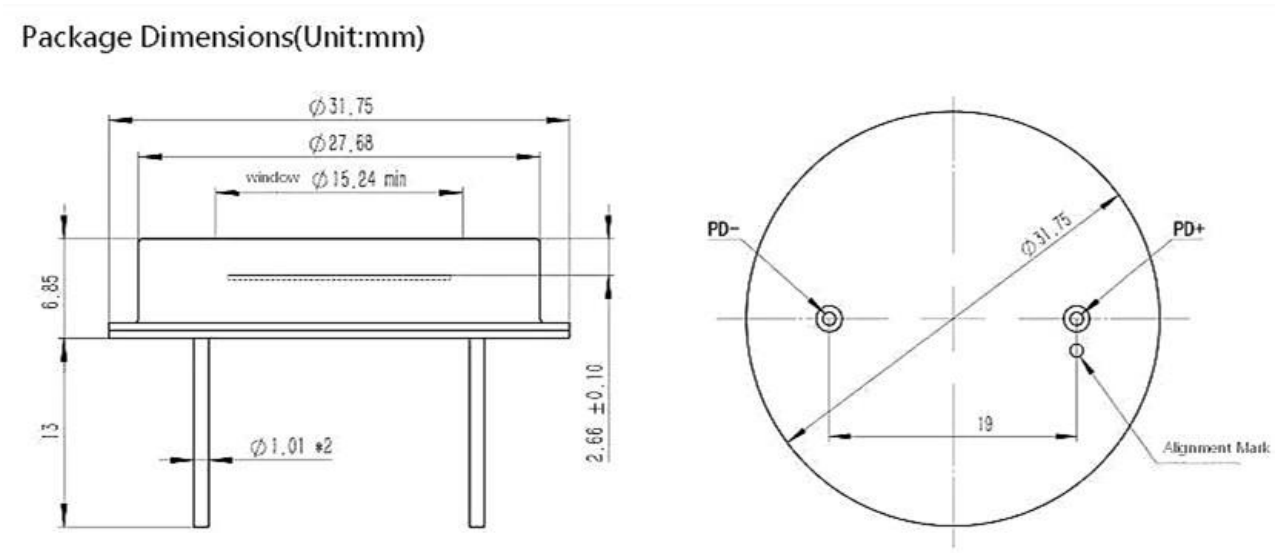
P-I Curve:



Application electric circuit:



Dimensions and Pin definitions:



Absolute Maximem Ratings:

Item	Symbol	Unit	Min	Typ	Max	Testing Condition
PD Forward Current	IF	mA		-	10	
PD Reverse current	IR	mA		-	5	
Lead Soldering time		S		-	10s	260℃
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

1: 1mm

2: 2mm

….

5: 5mm

10: 10mm

XX: Package/Fiber and Connector Type

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

TO: TO46 Package

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.