1mm InGaAs Quadrant PIN Detector



Description:

PL-1700-IG-QD1-TO InGaAs Quadrant 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 4x1mm 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

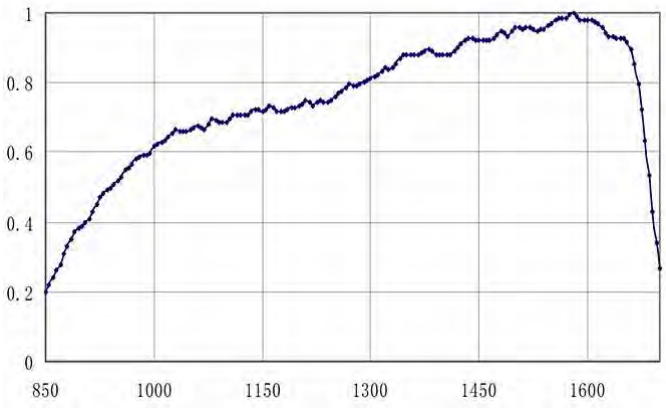
E/O Characteristics:

Tsub=25°C, CW bias unless stated otherwise

Parameters	Sym.	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	VR=5V	850~1700			nm
Active diameter	φ	-	4x1			mm
Element gap	d		40			um
Reponsivity	Re	λ=1.31μm,VR=5V,Pin =10μw	0.80	0.85		A/W
		λ=1.55μm,VR=5V,Pin =10μw	0.90	0.95		
Reverse breakdown voltage	VBR	I R =10μA	35			V
Dark current	ID	V R =5V		0.5	1.0	nA
Total capacitance	C	V R =5V			1.5	nF
Crosstalk	SL	V R =5V			2	%
Max linear power	Φs	VR =5V, λ=1.55μm	5		-	mW
-3dB bandwidth	BW	VR=5V,λ=1.55μm， RL=50Ω	120		-	MHZ

Typical characteristical curve:

Responsivity, R (A/W)

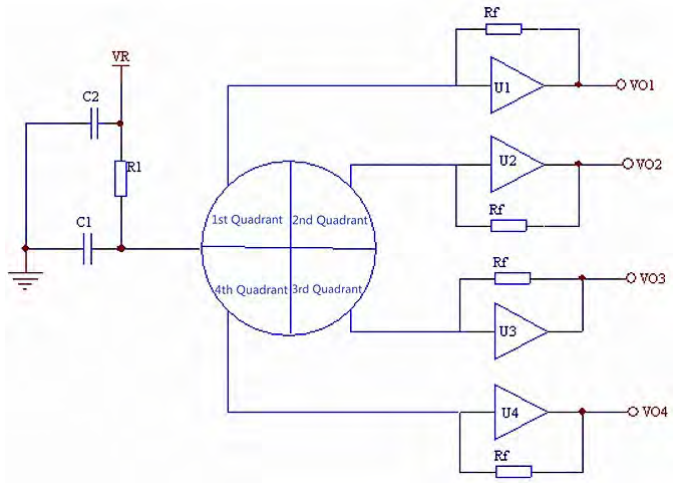


Wavelength, λ (nm)

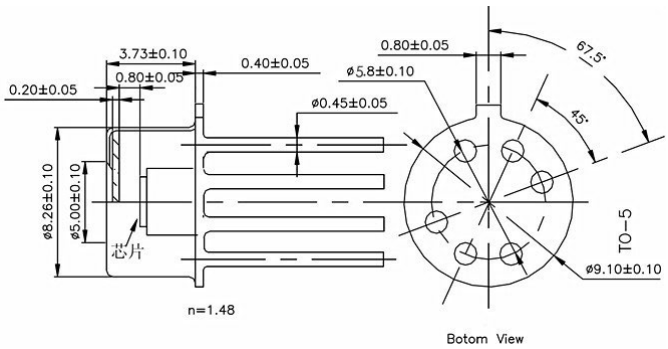
P-I Curve:

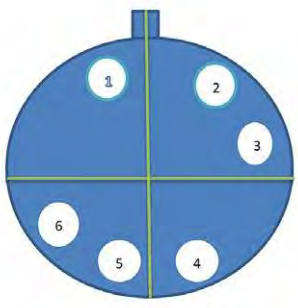


Application electric circuit:



Dimensions and Pin definitions:





Bottom View

1	2nd Quadrant P +	4	4th Quadrant P +
2	1st Quadrant P +	5	3rd Quadrant P +
3	GND	6	Common N- Pole

Absolute Maximem Ratings:

Operating voltage	5V	Operating temperature	-50~+85℃	Power dissipation	100mW
Forward current	10mA	storage temperature	-55~+125℃	Soldering temperature	260℃(10s)

Ordering Info:

PL-□□□□-☆-QD▽-XXX

□□□□: Cut off Wavelength

400: 400nm

900: 900nm

1700: 1700nm

2100: 2100nm

2400: 2400nm

2700: 2700nm

☆: Material

IG: InGaAs

Si: Si

▽: Active Area(Single element)

1: 1mm

2: 2mm

….

3: 3mm

XXX: Package/Fiber and Connector Type

TO: TO46 Package

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.