

QPD-1000I InGaAs Quadrant PIN Detector**DESCRIPTION**

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 1mmX4 in diameter. Planar-passivated device structure.

FEATURES

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

Application

Laser guidance、
Laser positioning、
Laser navigation、
Laser range finder.

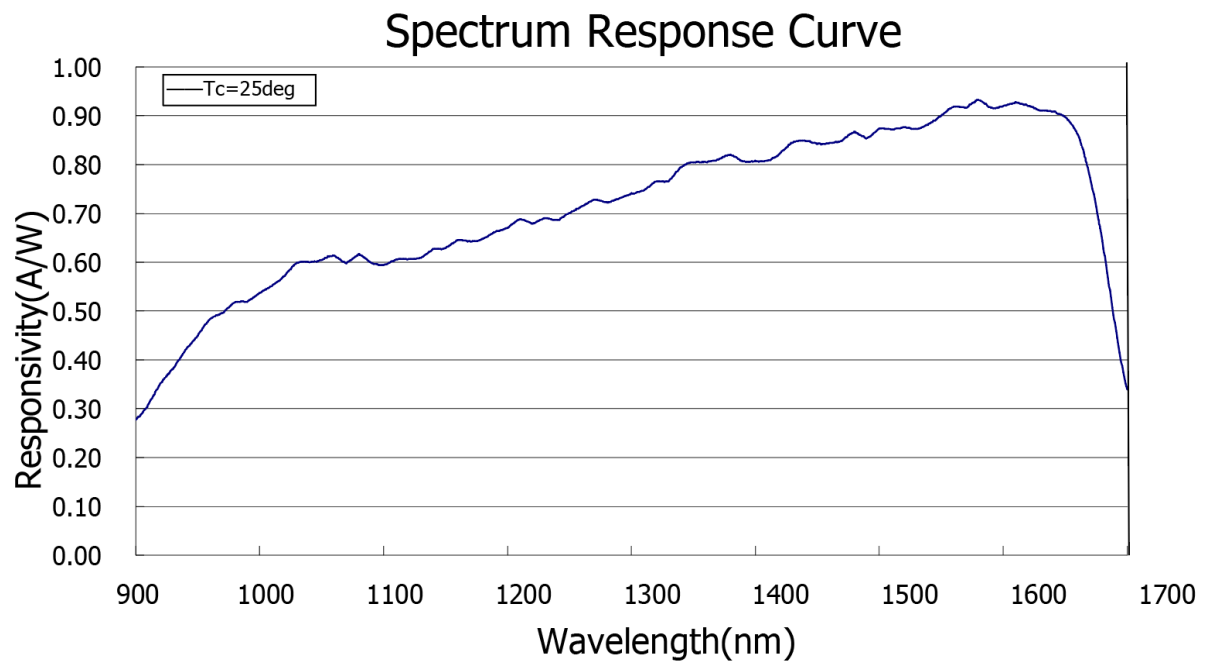
ABSOLUTE MAXIMUM RATINGS (T=25°C)

Operating voltage	15V	Operating temperature	-50~+100°C	Power dissipation	100mW
Forward current	10mA	storage temperature	-55~+125°C	Soldering temperature(time)	260°C (10s)

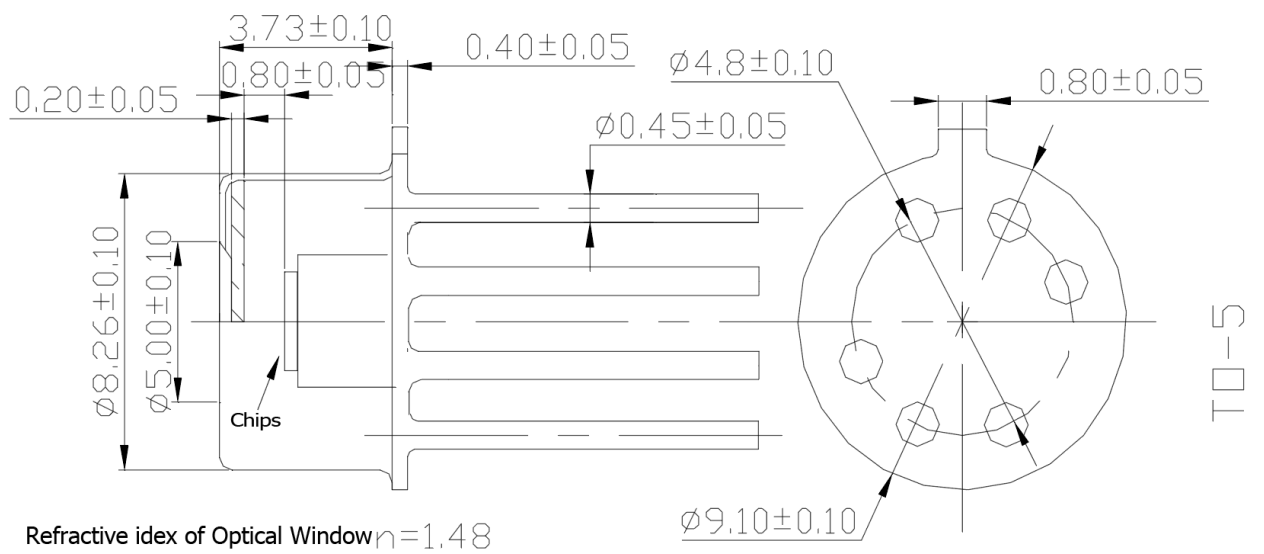
OPTICAL AND ELECTRICAL CHARACTERISTICS (T=25°C)

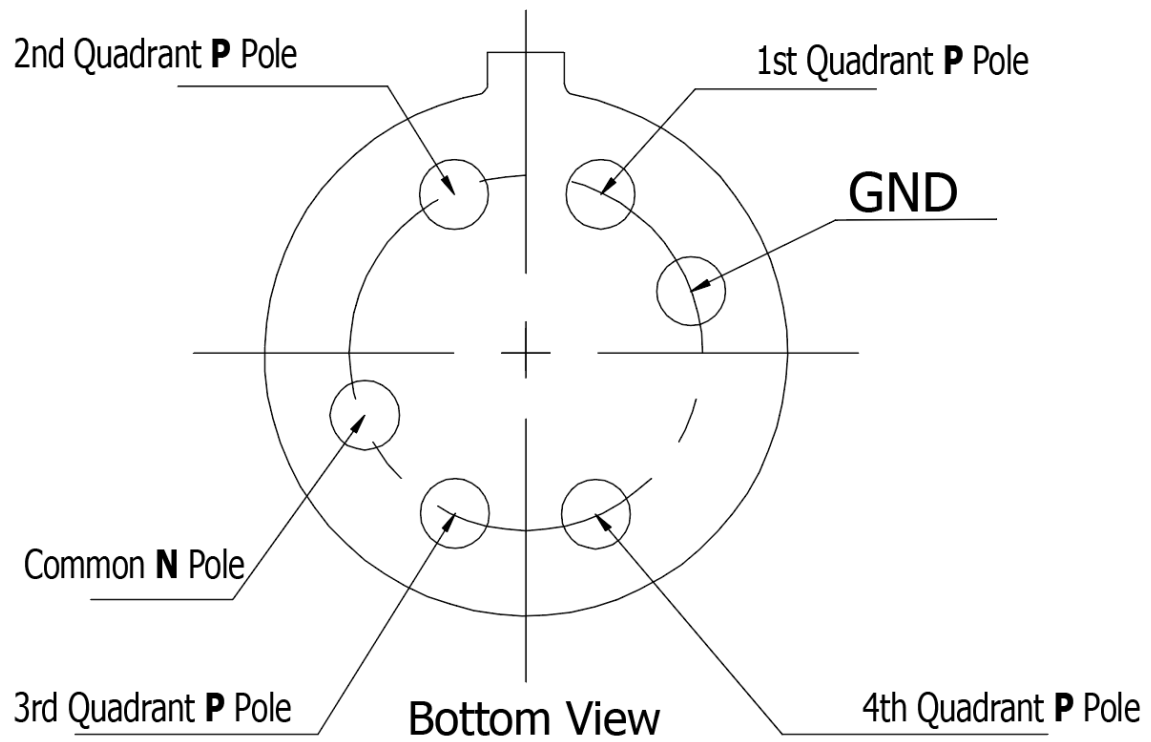
Parameters	Sym	Test conditions	Min	Typ	Max	Unit
Response Spectrum	λ	—	1000~1700			nm
Active diameter	ϕ	—	1000X4			μm
Element Gap		—	20			μm
Reponsivity	Re	VR=5V, λ =1.55 μm , ϕ_e =10 μW	0.85	0.9		A/W
Max linear power	Φ_s	VR =5V, RL=50C	10			mW
Crosstalk	SL	VR =5V			2%	
Response time	ts	VR=5V, RL=50C		1.0	2.0	ns
Dark current	ID	VR=5V	1.0		3.0	nA
Reverse breakdown voltage	VBR	IR=10 μA	40			V
Capacitance				12	15	pF
Operating voltage temperature coefficient	δ	Tc=-40~+85°C		0.10	0.15	V/°C
Shunt impedance	Rsh	VR=10mV	75			M Ω
Ununiformity among quadrants	$\delta\text{Re}'$	VR=9V, λ =1.55 μm , ϕ_e =10 μW			2%	
Ununiformity in quadrant	δRe	VR=9V, λ =1.55 μm , ϕ_e =10 μW			2%	

TYPICAL CHARACTERISTICS

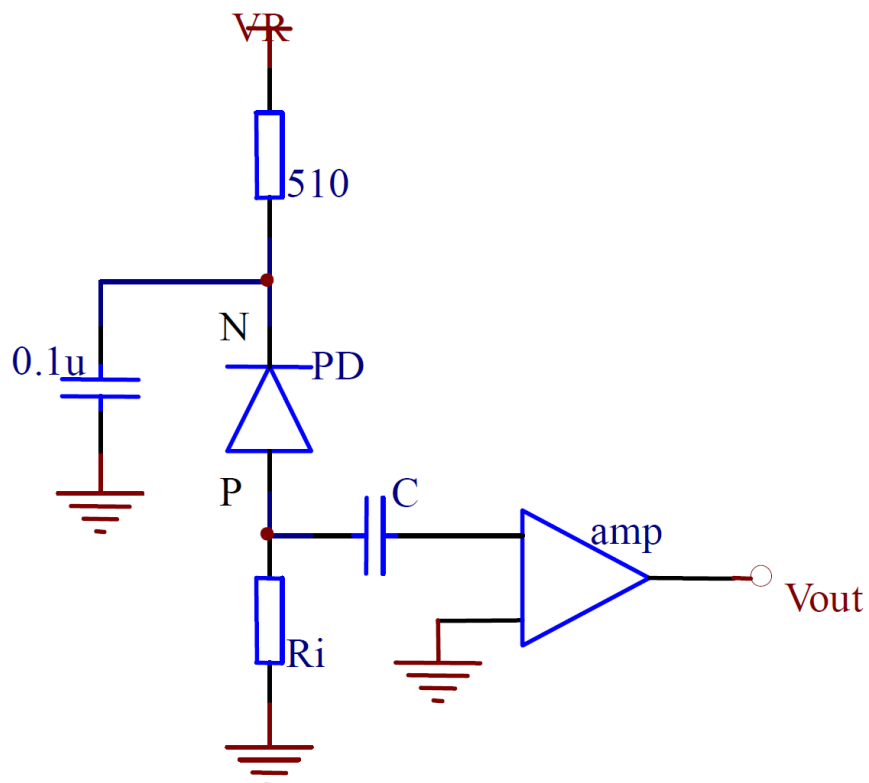


DIMENSIONAL OUTLINE





Electric circuit



The package and lead

— This detector need feedback of voltage temperature when operating.

—The suitable ESD protecting mersures are recommend in storage,transporting and using.



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