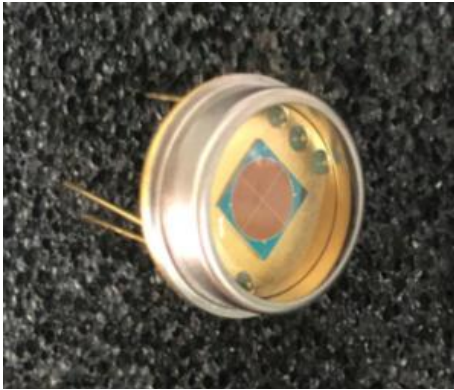


InGaAs QUADRANT PHOTODIODE



Description

5mm diameter Low Dark Current InGaAs Quadrant Photodiode with P on N construction and 30um gaps. Packaged in a TO-8 with a hermetic ultra flat fused silicon glass window cap.

Features

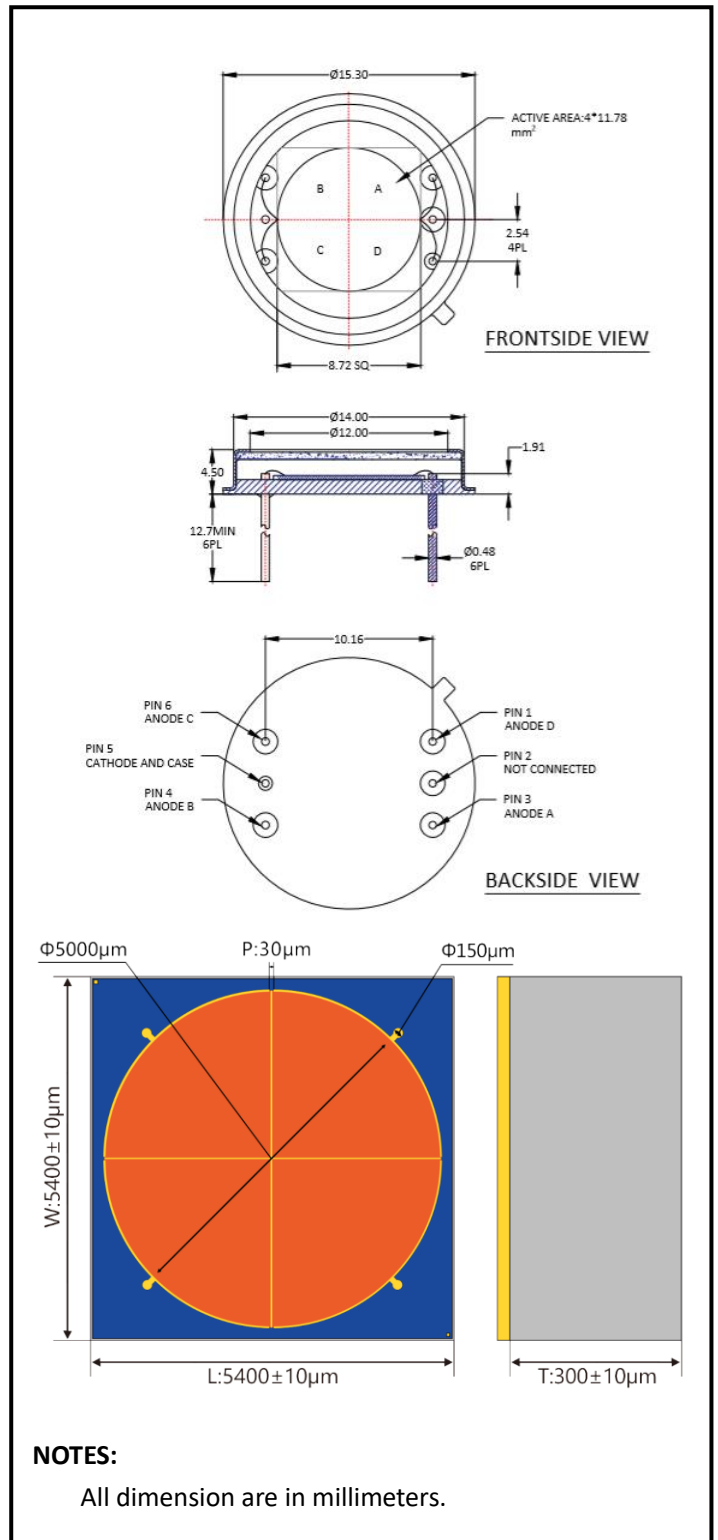
- * 5mm diameter active area
- * Small gap
- * Low dark current
- * Low crosstalk

General Ratings

- * High linearity
- * High reliability

Applications

- * Laser beam position sensor
- * Laser guidance
- * Optical tweezers



Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

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IGQ5000-IT



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	Dia.			Φ5		mm
Gap	d	element to element		30		um
Dark current	I _D	V _R =1V		0.30		nA
Rise time	t _R	f=1MHz; λ=1550nm; V _R =5V, R _i =50Ω		10		ns
Temp coefficient of I _D	T _{CID}			1.2		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =10μA E _v =0lx	20			V
Junction Capacitance	C _J	V _R =0V f=1MHz		1.9		nF
		V _R =5V f=1MHz		226		pF
Cross talk Channel- to -Channel		850-1700nm, Adjacent Channels, V _R =5V			2	%
Uniformity of each Element	δ _{Re}	V _R =5V, λ =1500nm, φ e=10μW			2	%
Saturation power	L	V _R =5V,	10			mw
Photo sensitivity	S _R	1310nm		0.9		A/W
		1550nm		0.95		
Spectral Application Range	λ _{range}		800		1700	nm
Spectral Response-Peak	λ _p			1300		nm
Shunt resistance	R _{sh}	V _R =10mV		20		MΩ
Rsh Temperature Coefficient	TC R _{sh}	V _R =10mV		0.18		%/°C
Noise equivalent power	NEP	λ =λ _p		1.58*10 ⁻¹³		W/Hz ^{1/2}
Detectivity	D*	λ =λ _p		1.26*10 ¹⁴		cm*Hz ^{1/2} /W
Angular Resp 50% Resp Pt	θ _{1/2}			±35		Degrees

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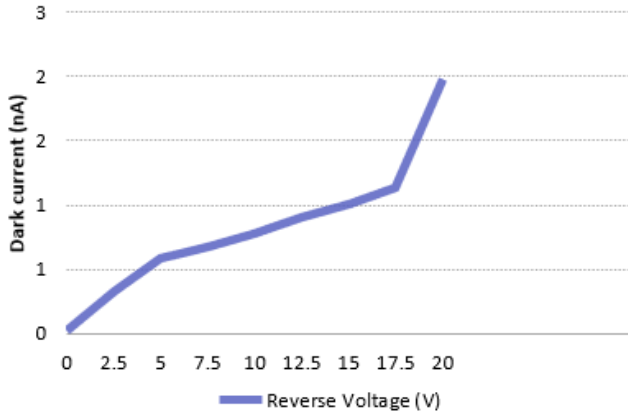
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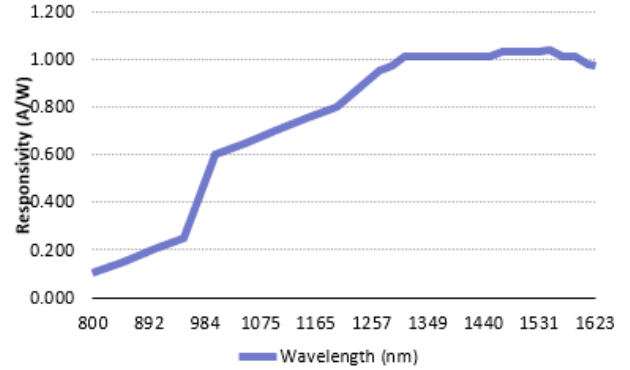
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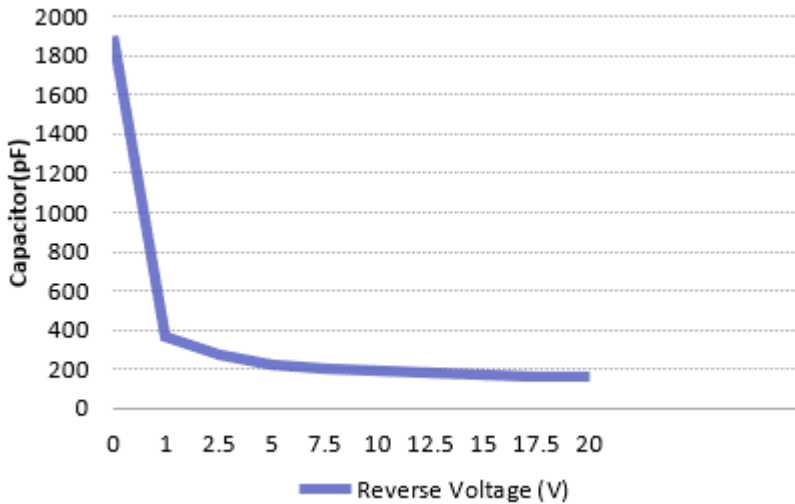
■ Dark current vs. reverse voltage



■ Spectral response



■ Relative Junction Capacitance VS. Voltage



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