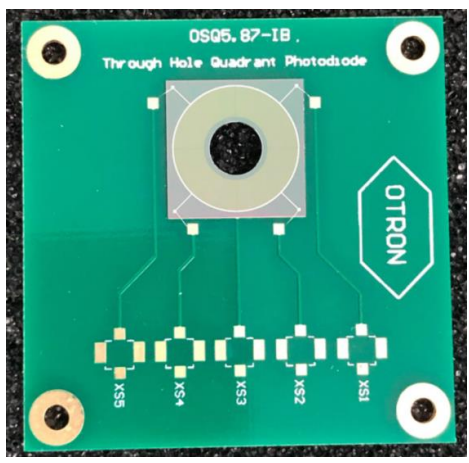


SILICON QUADRANT PHOTODIODE



Description

5.87mm² active area, low dark current through hole Quadrant photodiode features an annular package Design and includes a $\Phi 5$ mm laser cut hole on the chip That enables a fiber to be coupled from the back of the Detector.

Features

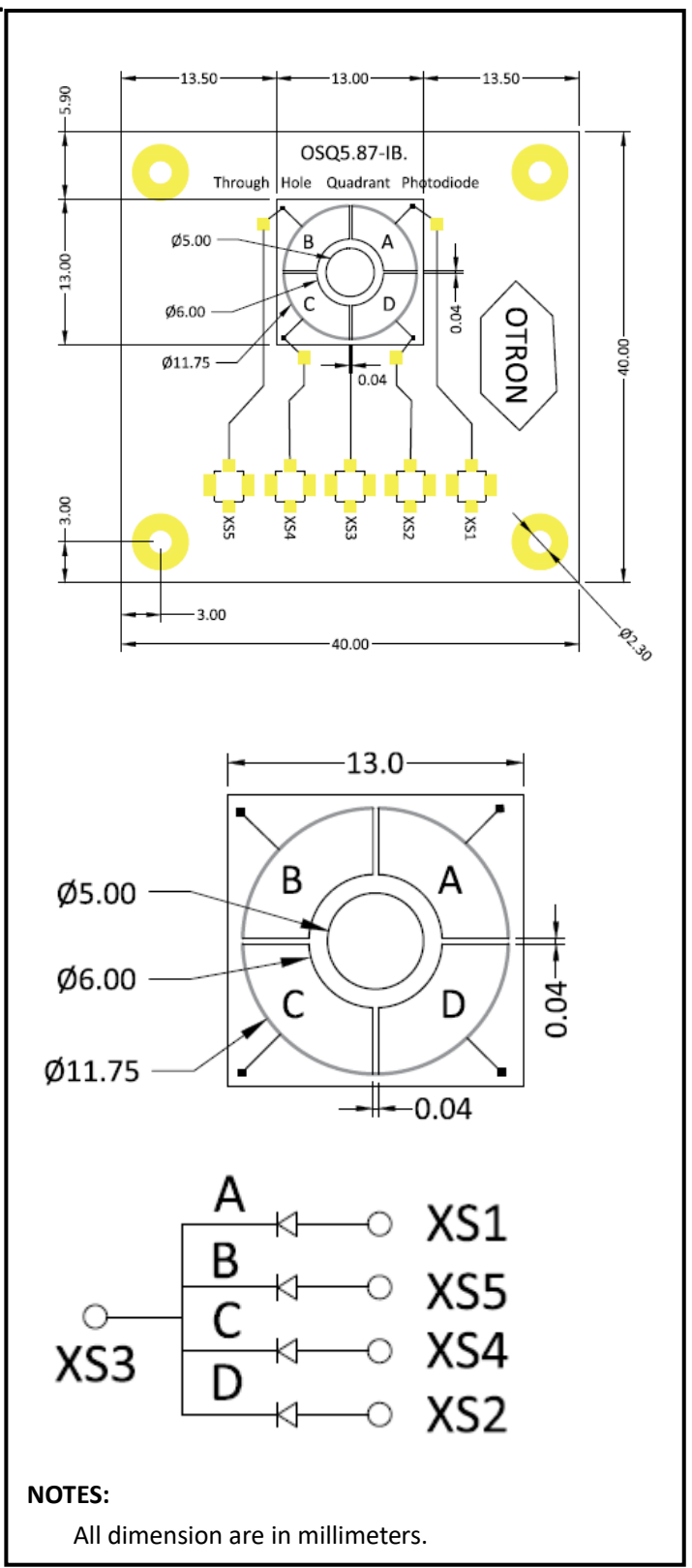
- * Small gap (40um)
- * Low dark current
- * Operating temperature is from -40 to +100°C
- * Storage temperature is from -40 to +100°C

General Ratings

- * Type Silicon Photodiode
- * High linearity
- * Low dark current

Applications

- * Laser beam position sensor
- * Autocollimators
- * Optical tweezers
- * Ellipsometers



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



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size			13.0*13.0			mm
Number of elements			4			
Active area (diamater)		Outer	Φ 11.75			mm
		Inside	Φ 6.0			
Gap		Between elements	40			um
Via area			Φ 5.0			mm
Spectral range			400		1100	nm
Photo sensitivity	S _R	900nm		0.64		A/W
		632nm		0.40		
Dark current	I _D	V _R =10mV		0.01		nA
		V _R =10V		2	10	
Rise time	t _R	V _R =10V; λ =850nm; R _L =50Ω		30		ns
Tempcoeffi-cient of I _D	T _{CID}			0.18		times/°C
Operating voltage	V _{OP}		0		50	V
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA Ev=0lx	20	50		V
Junction Capacitance	C _J	V _R =0V f=1MHz		102		pF
		V _R =10V f=1MHz		24		
		V _R =50V, R _L =50Ω		10		
CrossTalk Channel-to-Channel		400-850nm, Adjacent Channel		0.1	0.5	%
		850-1100nm, Adjacent Channels		1	5	
Uniformity of each Element	%		0.8		2	%
Shunt resistance	R _{sh}	V _R =10mV		500		MΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/°C
Angular Resp 50% Resp Pt	θ _{1/2}			±60		Degrees

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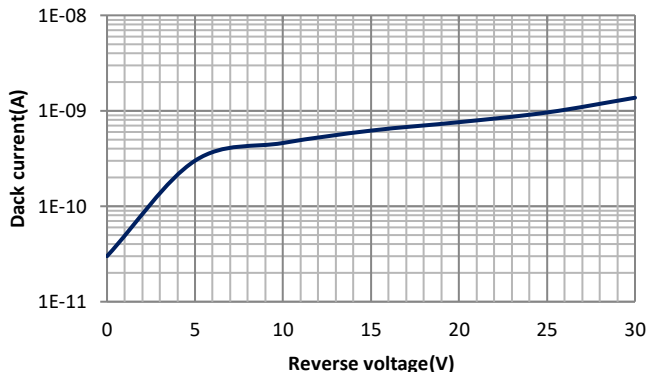
EMAIL: otron.sensor@gmail.com

[Http://www.e-otron.com](http://www.e-otron.com)

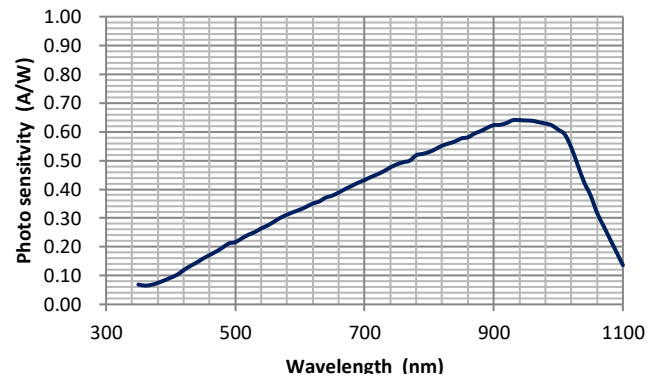


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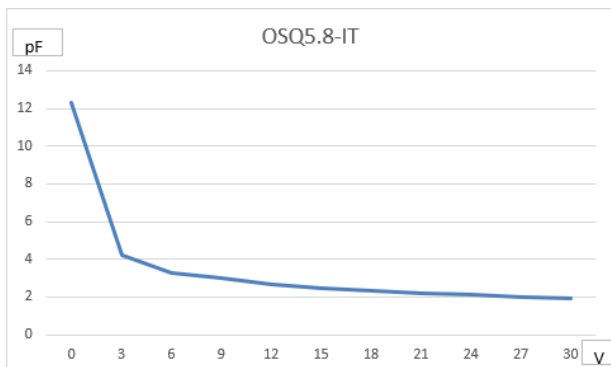
■ Dark current vs. reverse voltage



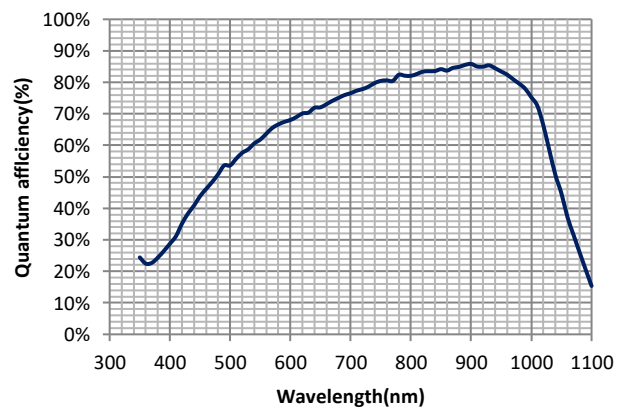
■ Spectral response



■ Relative Junction Capacitance VS. Voltage



■ Quantum efficiency



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