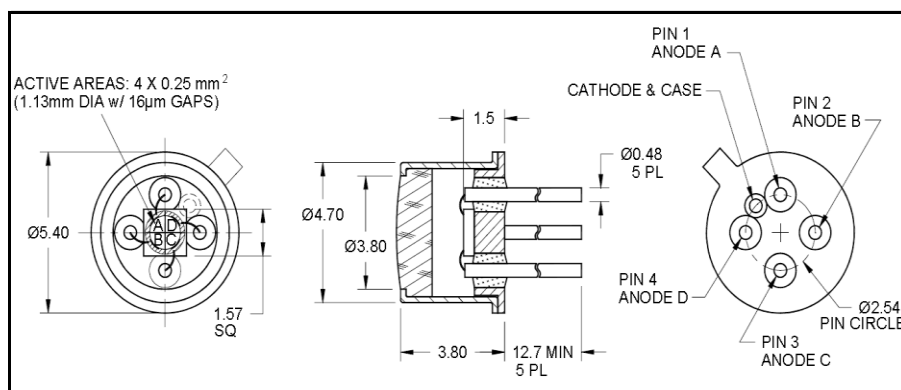
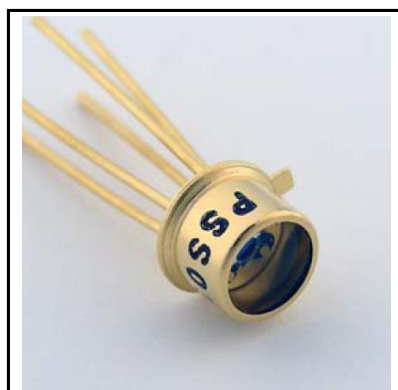




Features

- 1 mm² Quadrant PIN detector
- High sensitivity
- Small gap
- Low dark current

Description

Low dark current circular active area quadrant PIN photodiode with 4 x 0.25 mm² active area. Metal can type hermetic TO52 package with clear glass window.

Application

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

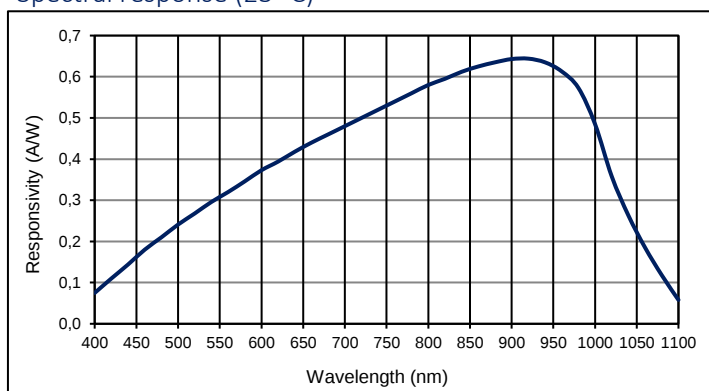
RoHS

2011/65/EU

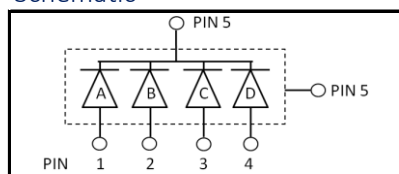
Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-55	125	°C
T_{OP}	Operating temp	-40	100	°C
V_{max}	Max reverse voltage		50	V
I_{PEAK}	Peak DC current		10	mA

Spectral response (23 °C)



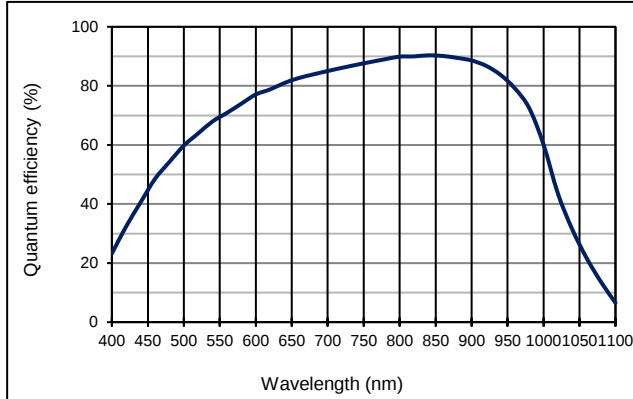
Schematic



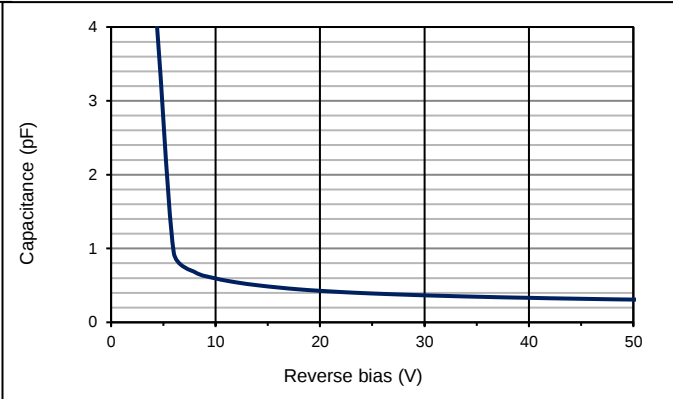
Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Number of elements		4 quadrants			
	Active area		diameter 1130 (total)			µm
	Active area	per element	0.25			mm²
	Gap	between elements	16			µm
I_D	Dark current	$V_R = 10$ V; per element		0.1	0.5	nA
C	Capacitance	$V_R = 0$ V; per element		5		pF
		$V_R = 10$ V; per element		0.75		pF
	Responsivity	$\lambda = 632$ nm		0.4		A/W
		$\lambda = 900$ nm		0.64		A/W
t_R	Rise time	$V_R = 0$ V; $\lambda = 850$ nm; $R_L = 50$ Ω		2000		ns
		$V_R = 10$ V; $\lambda = 850$ nm; $R_L = 50$ Ω		20		ns
		$V_R = 80$ V; $\lambda = 850$ nm; $R_L = 50$ Ω		10		ns
	Shunt Resistance	$V_R = 5$ mV; per element	500	1000		MΩ
	N.E.P.	$V_R = 5$ V; $\lambda = 900$ nm; per element		9 E-15		W/√Hz
V_{BR}	Breakdown voltage	$I_R = 2$ µA	50	100		V

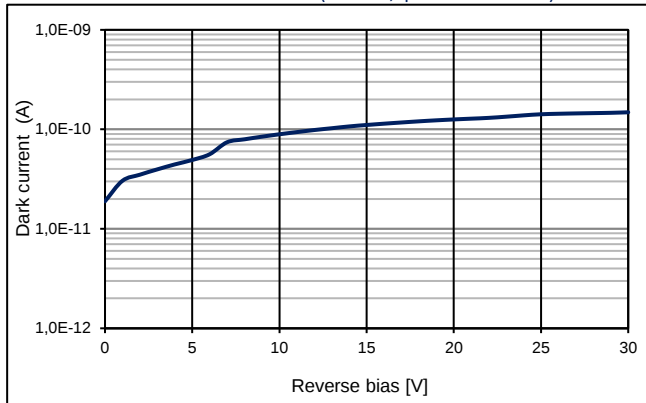
Quantum efficiency (23 °C)



Capacitance as fct of reverse bias (23 °C; per element)



Dark current as fct of bias (23 °C; per element)



Package dimension:

Small quantities: Foam pad, boxed (12 cm x 16.5 cm)

Handling precautions:

- Soldering temperature max. 260 °C for 10 s. The device must be protected against solder flux vapour.
- Minimum pin length is 2 mm.
- For ESD protection standard precautionary measures are sufficient.
- For further questions please refer to document "Instructions for handling and processing".

Disclaimer: Due to our strive for continuous improvement, specifications are subject to change within our PCN policy according to JESD46C.

Mouser Electronics

Authorized Distributor

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First Sensor:

5000029