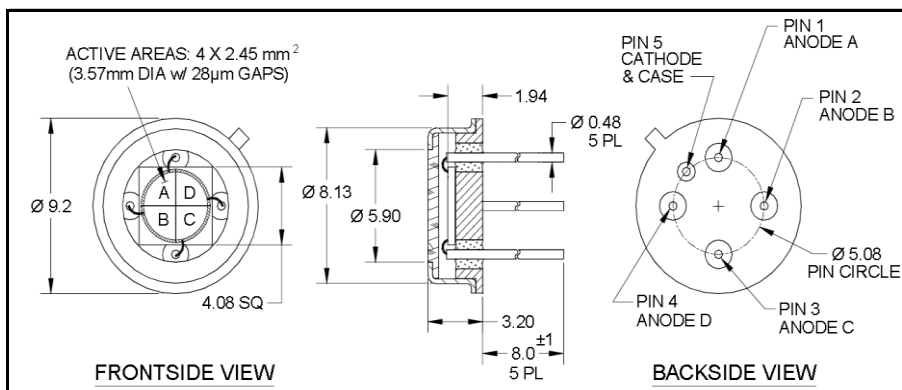
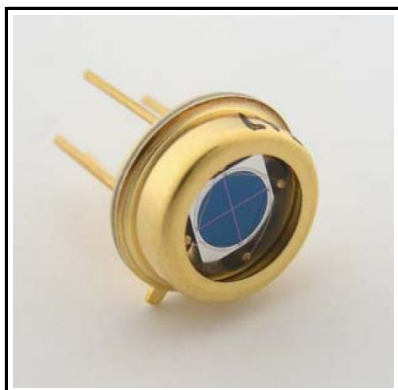




Features

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

Description

Low dark current circular active area quadrant PIN photodiode with 4 x 2.45 mm² active area. Metal can type hermetic TO5 package with clear glass window.

Application

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

RoHS

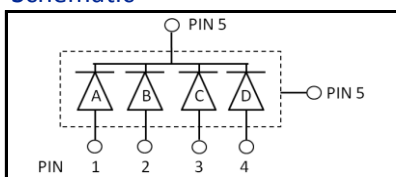
2002/95/EC



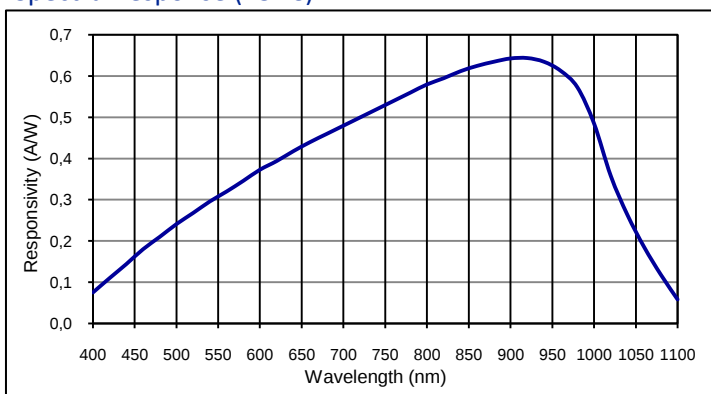
Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T _{STG}	Storage temp	-55	125	°C
T _{OP}	Operating temp	-40	100	°C
V _{max}	Max reverse voltage		20	V
I _{PEAK}	Peak DC current		10	mA

Schematic



Spectral response (23 °C)



Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Number of elements		4 quadrants			
	Active area		diameter 3570 (total)			μm
	Active area	per element	2.45			mm ²
	Gap	between elements	28			μm
I _D	Dark current	V _R = 10 V; per element		0.4		nA
C	Capacitance	V _R = 0 V; per element		30		pF
		V _R = 10 V; per element		5		pF
	Responsivity	λ = 632 nm		0.4		A/W
		λ = 900 nm		0.64		A/W
t _R	Rise time	V _R = 0 V; λ = 850 nm; R _L = 50 Ω		2000		ns
		V _R = 10 V; λ = 850 nm; R _L = 50 Ω		20		ns
		V _R = 80 V; λ = 850 nm; R _L = 50 Ω		10		ns
	Shunt Resistance	V _R = 5 mV; per element		250		MΩ
	N.E.P.	V _R = 5 V; λ = 900 nm; per element		1.8 E-14		W/√Hz
V _{BR}	Breakdown voltage	I _R = 2 μA	20	50		V

European, International Sales:



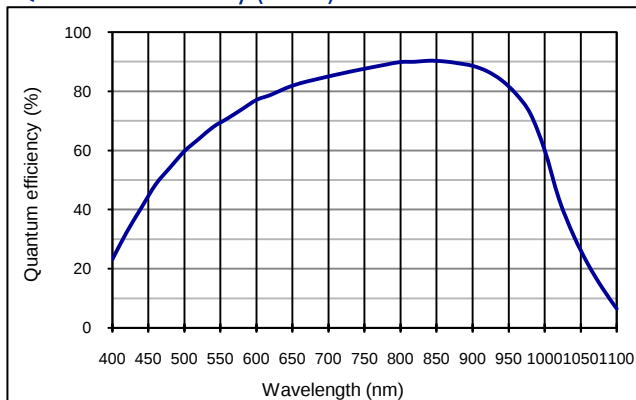
First Sensor AG
Peter-Behrens-Strasse 15
12459 Berlin
Germany
T +49 30 6399 2399
F +49 30 639923-752
sales.opto@first-sensor.com

USA:

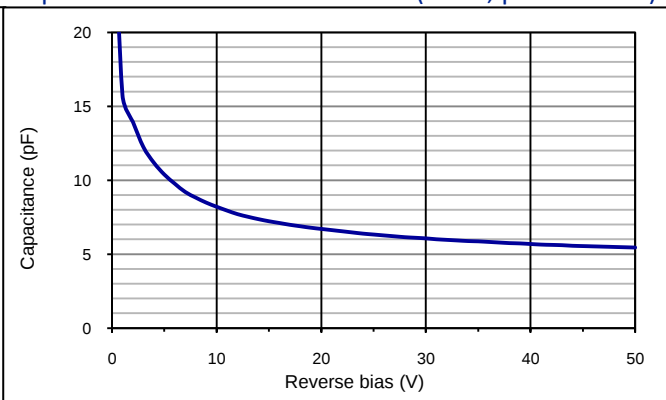


First Sensor Inc.
5700 Corsa Avenue #105
Westlake Village
CA 91362 USA
T +1 818 706 3400
F +1 818 889 7053
sales.us@first-sensor.com

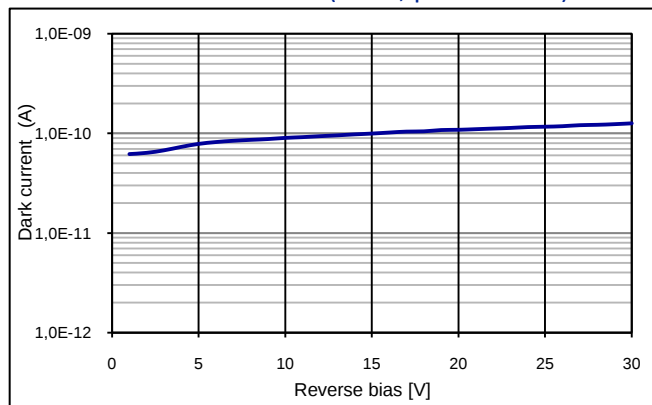
Quantum efficiency (23 °C)



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.

European, International Sales:



First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

USA:



First Sensor Inc.
 5700 Corsa Avenue #105
 Westlake Village
 CA 91362 USA
 T +1 818 706 3400
 F +1 818 889 7053
 sales.us@first-sensor.com

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

First Sensor:

[QP10-6-TO5](#)