

Features

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

Description

Low dark current quadrant photodiode with 4 x 24.4 mm² active area. Non-hermetic ceramic carrier package with glass window. Silicon potted version available (50127601).

Application

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

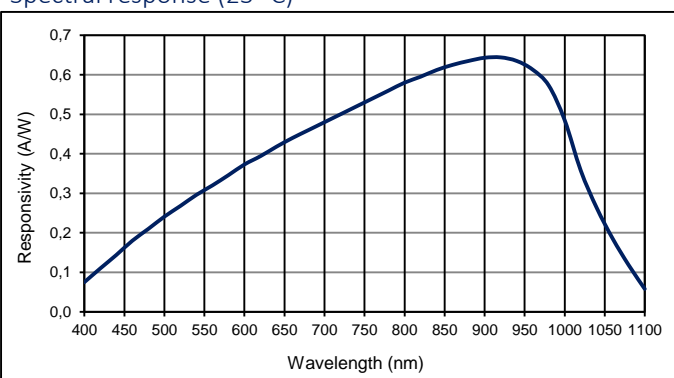
RoHS

2011/65/EU

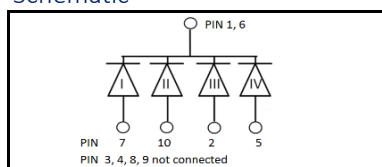
Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T _{STG}	Storage temp	-40	100	°C
T _{OP}	Operating temp	-20	70	°C
V _{max}	Max reverse voltage		20	V
I _{PEAK}	Peak DC current		10	mA

Spectral response (23 °C)



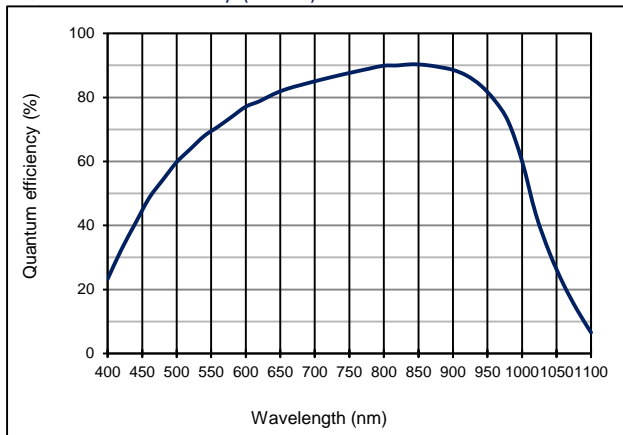
Schematic



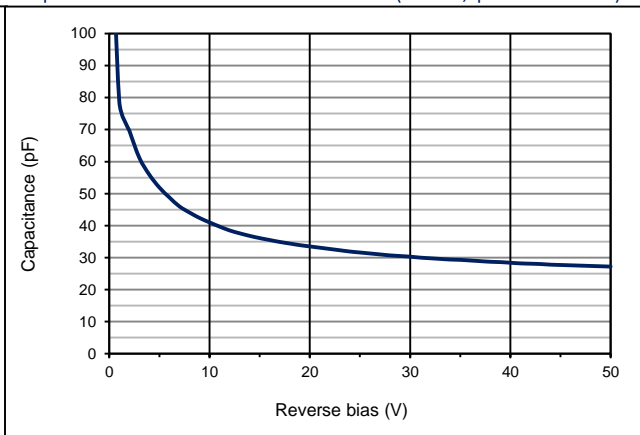
Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Number of elements		4 quadrants			
	Active area		100 x 100			mm
	Active area	per element	24.35			mm ²
	Gap	between elements	50			µm
I _D	Dark current	V _R = 10 V; per element		4.0		nA
C	Capacitance	V _R = 0 V; per element		240		pF
		V _R = 10 V; per element		40		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		40		ns
	Shunt Resistance	V _R = 5 mV; per element		25		MΩ
	N.E.P.	V _R = 5 V; λ = 900 nm; per element		5.6 E-14		W/√Hz
V _{BR}	Breakdown voltage	I _R = 2 µA	20	50		V

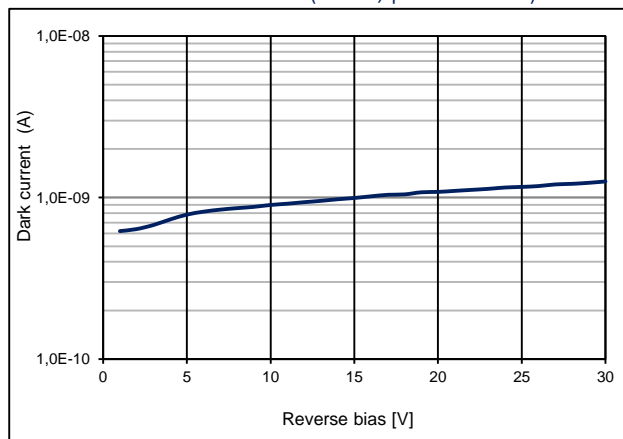
Quantum efficiency (23 °C)



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:

- For ESD protection standard precautionary measures are sufficient.
- For further questions please refer to document "Instructions for handling and processing".
- Package with epoxy potting on special request

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