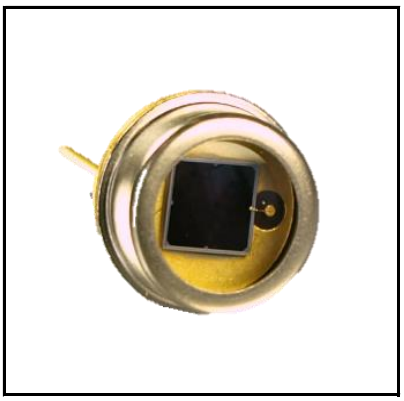
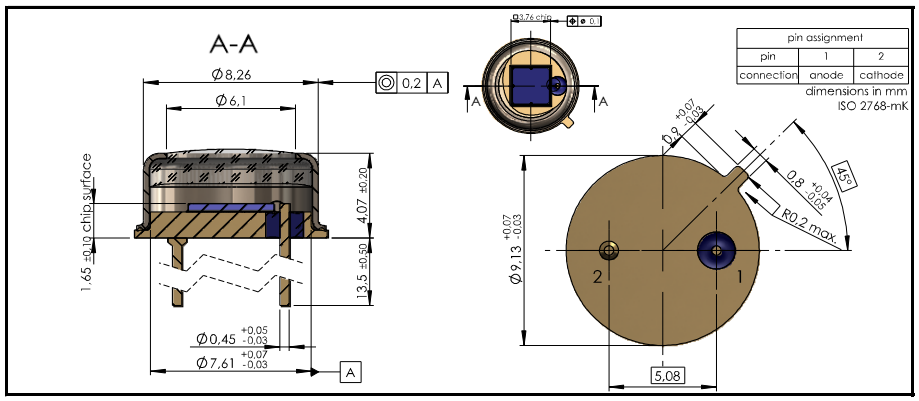
First Sensor





Features

- 13 mm² PIN detector
- High sensitivity
- High shunt resistance
- Blue-green enhanced

Description

Blue-green enhanced square active area PIN photodiode with 13 mm² active area. Metal can type hermetic TO5 package with UV clear glass window.

Application

- Precision photometry
- Analytical instruments
- Medical equipment
- Fluorescence detector

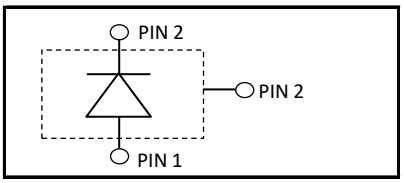
RoHS

2011/65/EU

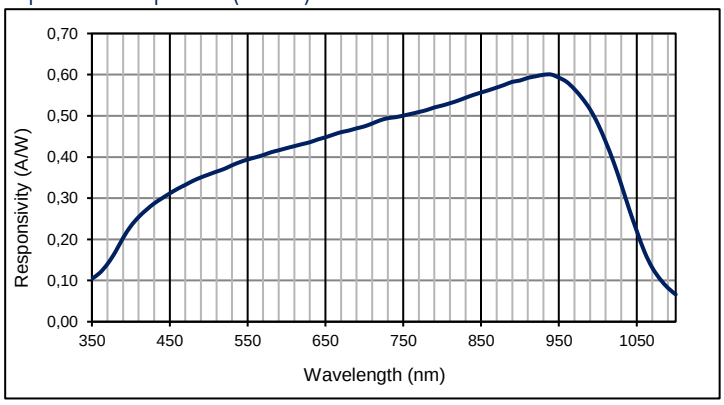
Absolute maximum ratings

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

Schematic



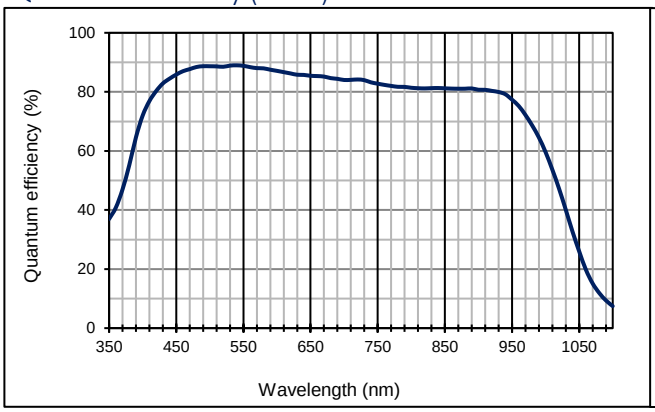
Spectral response (23 °C)



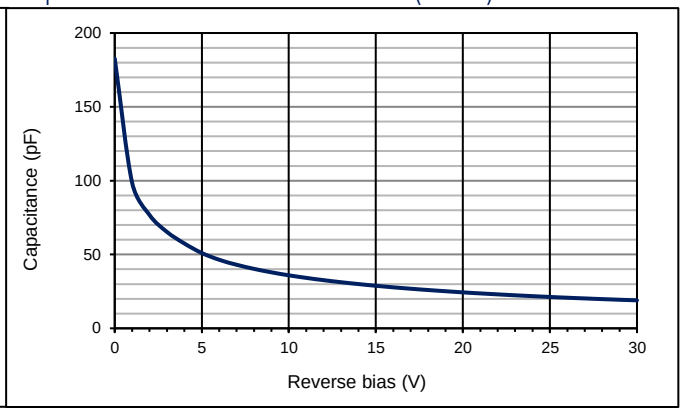
Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area			3504 x 3504		µm
	Active area			13		mm²
I_D	Dark current	V_R = 5 V		0.25	10	nA
C	Capacitance	V_R = 0 V		180		pF
		V_R = 5 V		50		pF
	Responsivity	λ = 410 nm		0.22		A/W
		λ = 550 nm		0.37		A/W
t_R	Rise time	V_R = 0 V; λ = 410 nm; R_L = 50 Ω		140		ns
		V_R = 5 V; λ = 410 nm; R_L = 50 Ω		70		ns
	Shunt Resistance	V_R = 5 mV		200		MΩ
	N.E.P.	V_R = 5 V; λ = 410 nm		4 E-14		W/√Hz
V_{BR}	Breakdown voltage	I_R = 2 µA	20	30		V

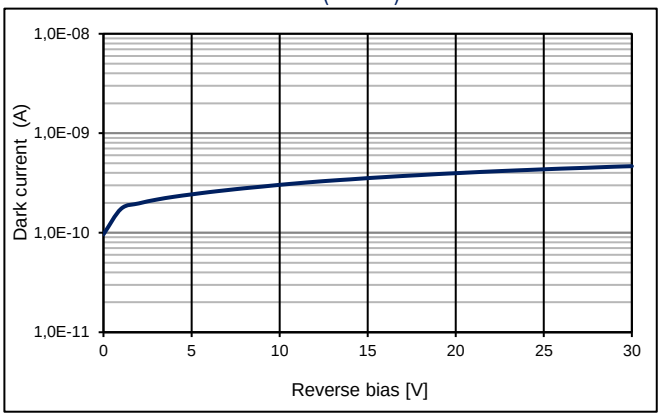
Quantum efficiency (23 °C)



Capacitance as fct of reverse bias (23 °C)



Dark current as fct of bias (23 °C)



Package dimension:

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

Handling:

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.