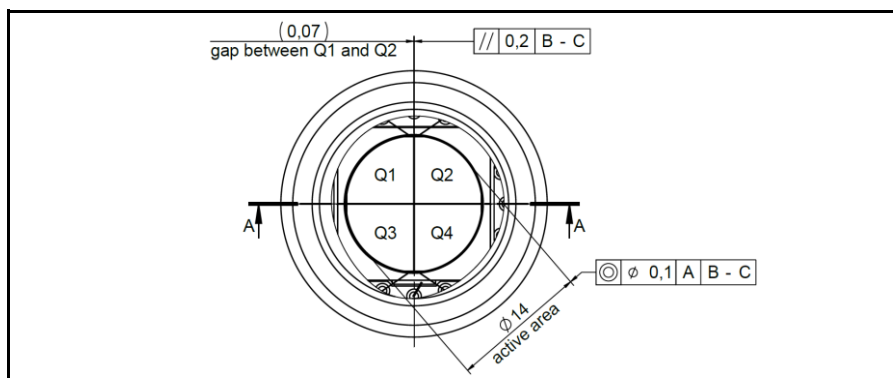
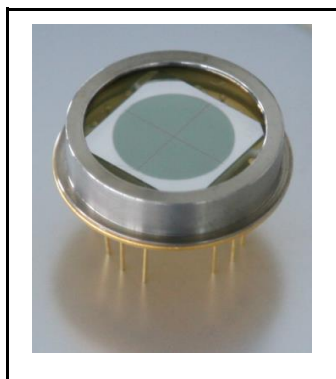




Features

- Quadrant detector
- Low dark current
- Fast rise time, low capacitance
- High QE at 1064 nm
- Including heater and temperature sensor

Description

Circular active area quadrant PIN detector with 14 mm diameter and 70 μ m gaps, optimized for 1064 nm. Metal can type hermetic, isolated TO package with ceramic heater and flat clear glass window.

Application

- 1064 nm laser detection
- High speed photometry
- NIR pulsed light sensor
- Laser guidance

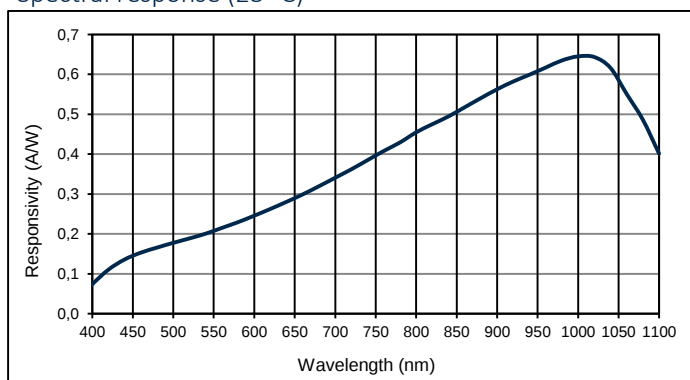
RoHS

2011/65/EU
2015/863

Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-55	125	°C
T_{OP}	Operating temp	-40	85	°C
V_{OP}	Operating voltage		250	V
I_{PEAK}	Peak DC current		10	mA
p	Outside pressure		2	bar

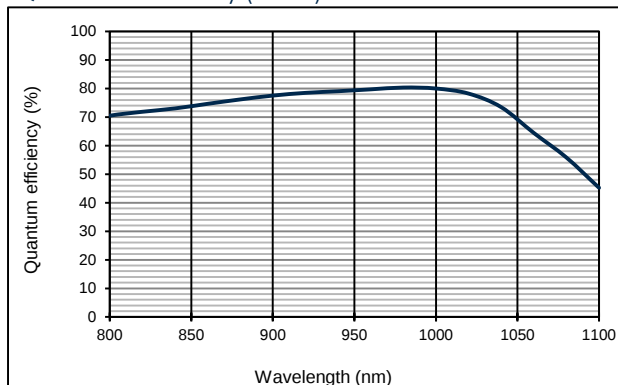
Spectral response (23 °C)



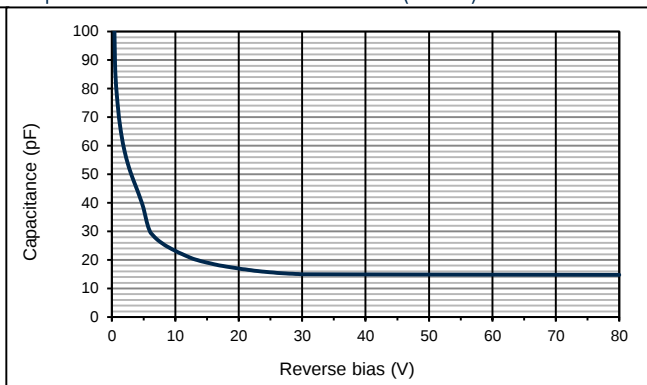
Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Number of elements		4 quadrants			
	Active area	diameter	14			mm
	Active area	per element	38.5			mm ²
	Gap	between elements	70			μ m
I_D	Dark current	$V_R = 150$ V, per element		1	30	nA
C	Capacitance	$V_R = 150$ V, per element		12	20	pF
	Responsivity	$V_R = 150$ V; $\lambda = 1064$ nm; $R_L = 50$ Ω	0.45	0.55	0.65	A/W
t_R	Rise time	$V_R = 180$ V; $\lambda = 1064$ nm; $R_L = 50$ Ω		12		ns
V_{BR}	Breakdown voltage	$I_R = 2$ μ A	250			V
	Temperature coefficient	Change of I_{PH} with temperature		1.07		%/K
	Cross talk	$V_R = 150$ V; $\lambda = 1064$ nm; $R_L = 50$ Ω		2		%
	Heating time	23°C to 70°C with 21V power supply	5	6	7	s
	Heater resistance	23°C	36	40	44	Ω
	Temp. sensor resistance	PTC, TK = 3500 $\pm$ 200 ppm/K	9950	10000	10050	Ω
	N.E.P.	$V_R = 150$ V, $\lambda = 1064$ nm		1.2E-13		W/ $\sqrt$ Hz
FOV	Field of view		132			°

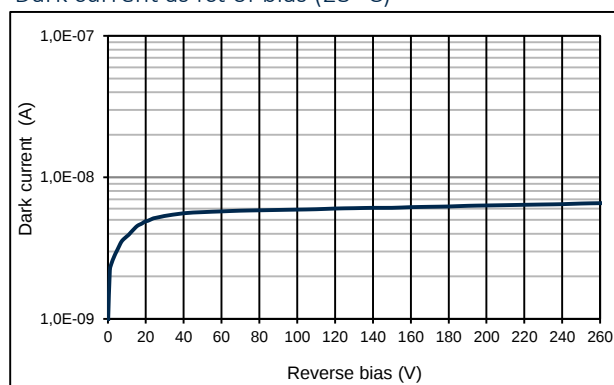
Quantum efficiency (23 °C)



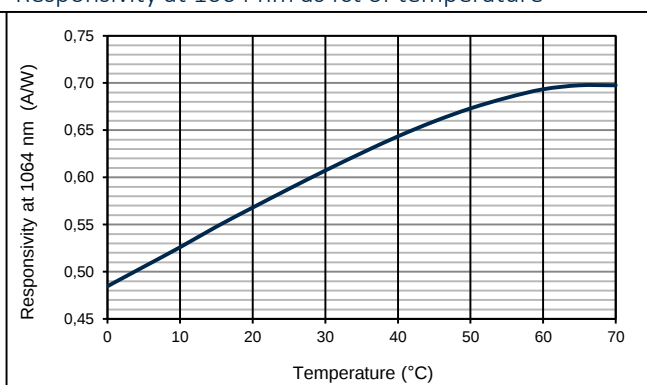
Capacitance as fct of reverse bias (23 °C)



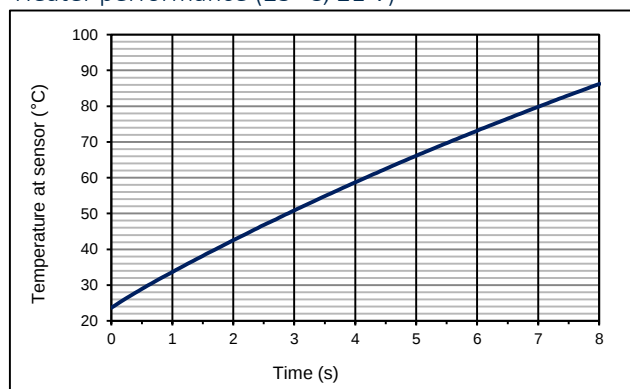
Dark current as fct of bias (23 °C)



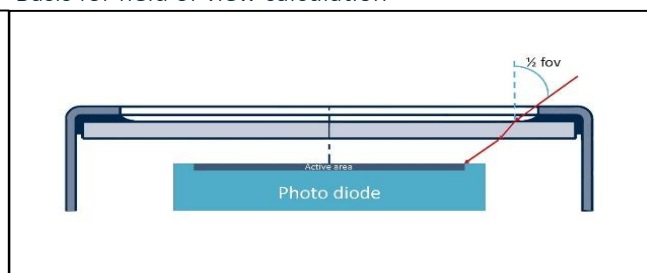
Responsivity at 1064 nm as fct of temperature



Heater performance (23 °C, 21 V)



Basis for field of view calculation



Package dimension:

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

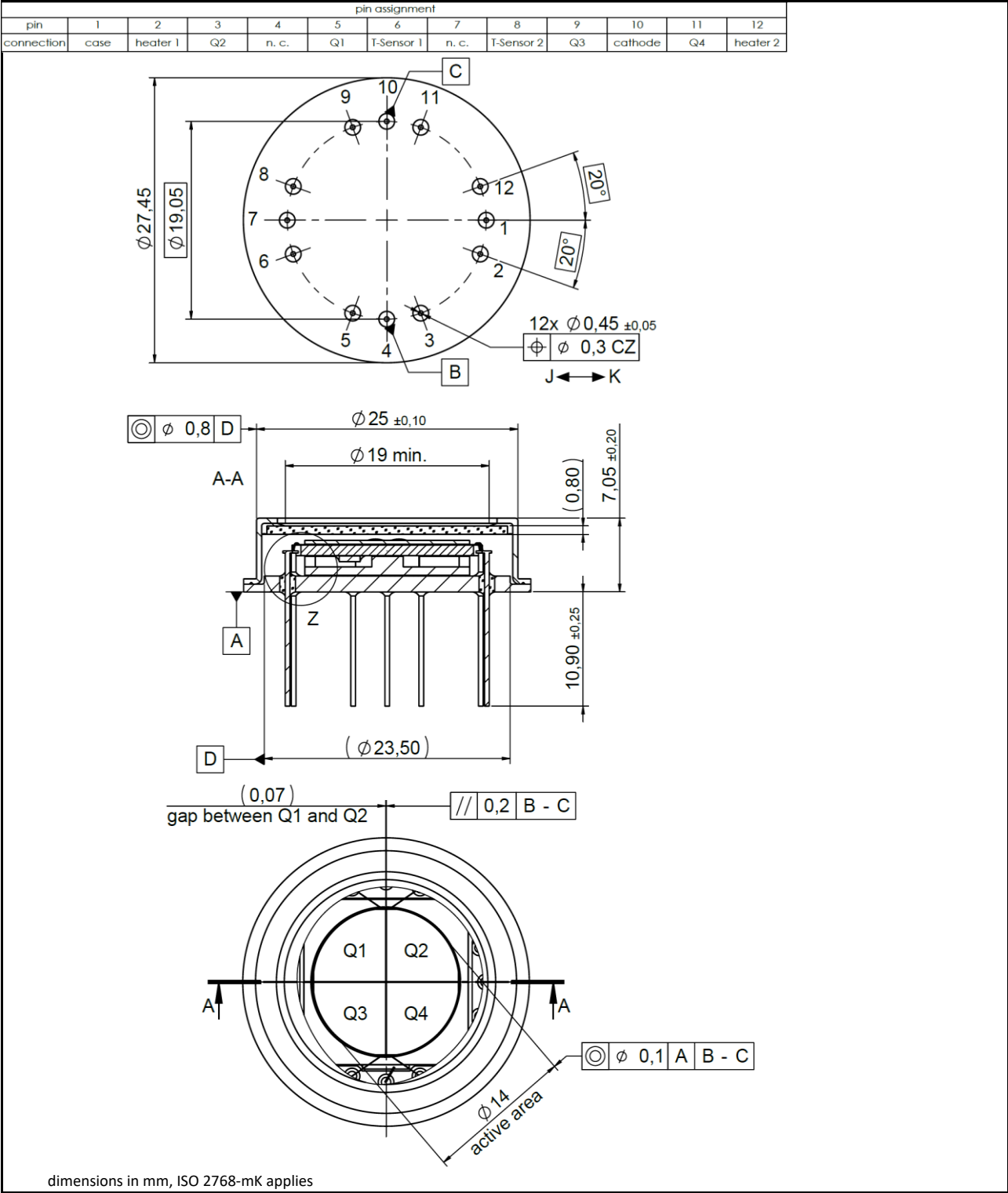
Source of origin:

This detector is manufactured in Germany and does not contain any ITAR-restricted components.

Product family:

The quadrant detector is also available without heater, please ask for part number 3001386.

Technical Drawing



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