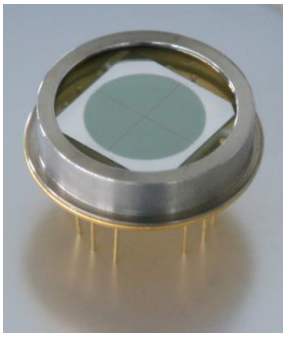
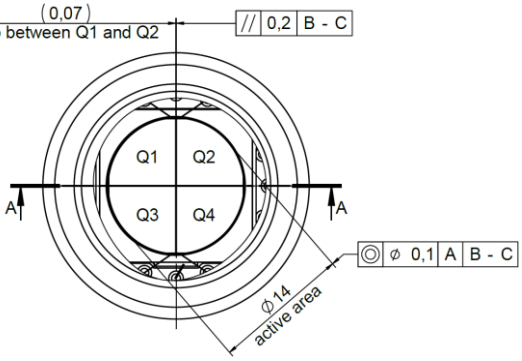




Features
- Quadrant detector
- Low dark current
- Fast rise time, low capacitance
- High QE at 1064 nm
- Including heater and temperature sensor

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

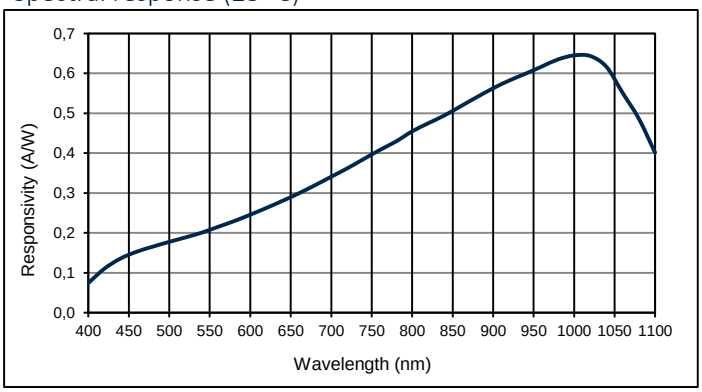
Application
- 1064 nm laser detection
- High speed photometry
- NIR pulsed light sensor
- Laser guidance

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

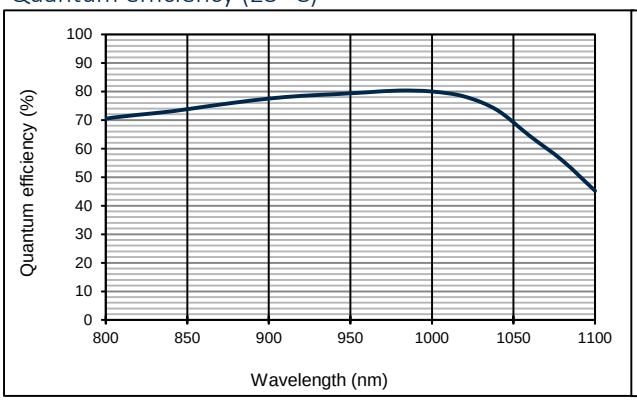
Spectral response (23 °C)



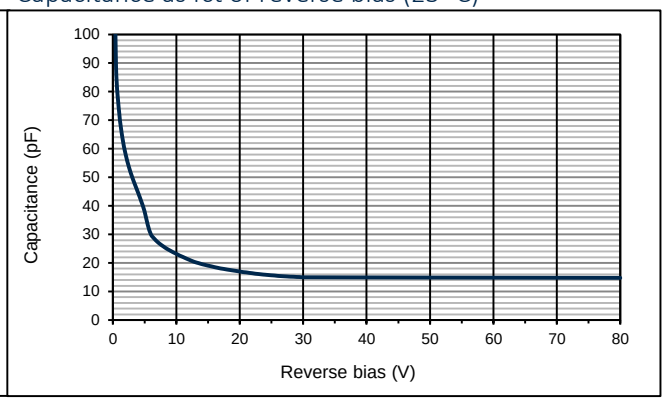
Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Number of elements			4 quadrants		
	Active area	diameter		14		mm
	Active area	per element		38.5		mm²
	Gap	between elements		70		µm
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; λ = 1064 nm; R_L = 50 Ω	0.45	0.55	0.65	A/W
t_R	Rise time	V_R = 180 V; λ = 1064 nm; R_L = 50 Ω		12		ns
V_{BR}	Breakdown voltage	I_R = 2 µA	250			V
	Temperature coefficient	Change of I_{PH} with temperature		1.07		%/K
	Cross talk	V_R = 150 V; λ = 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 ± 200 ppm/K	9950	10000	10050	Ω
	N.E.P.	V_R = 150 V, λ = 1064 nm		1.2E-13		W/√Hz
FOV	Field of view			132		°

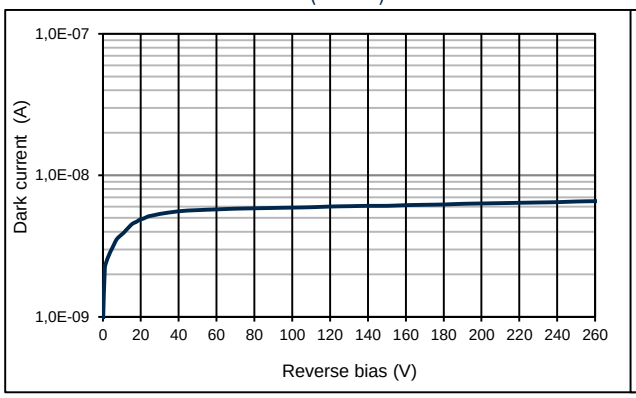
Quantum efficiency (23 °C)



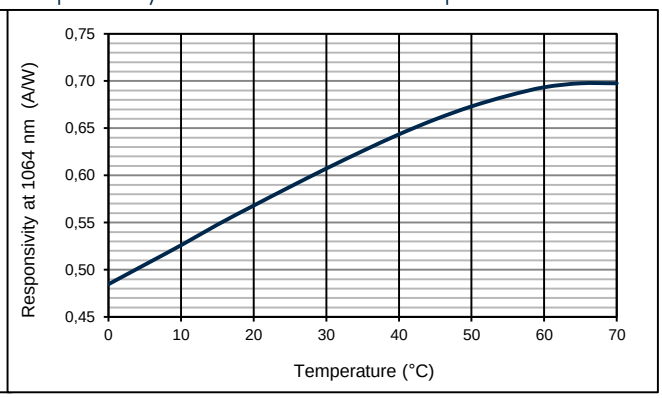
Capacitance as fct of reverse bias (23 °C)



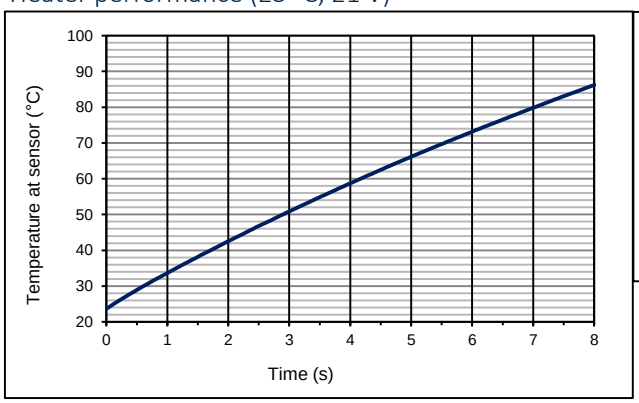
Dark current as fct of bias (23 °C)



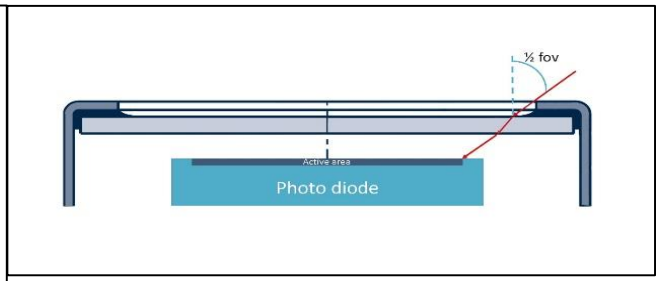
Responsivity at 1064 nm as fct of temperature



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:

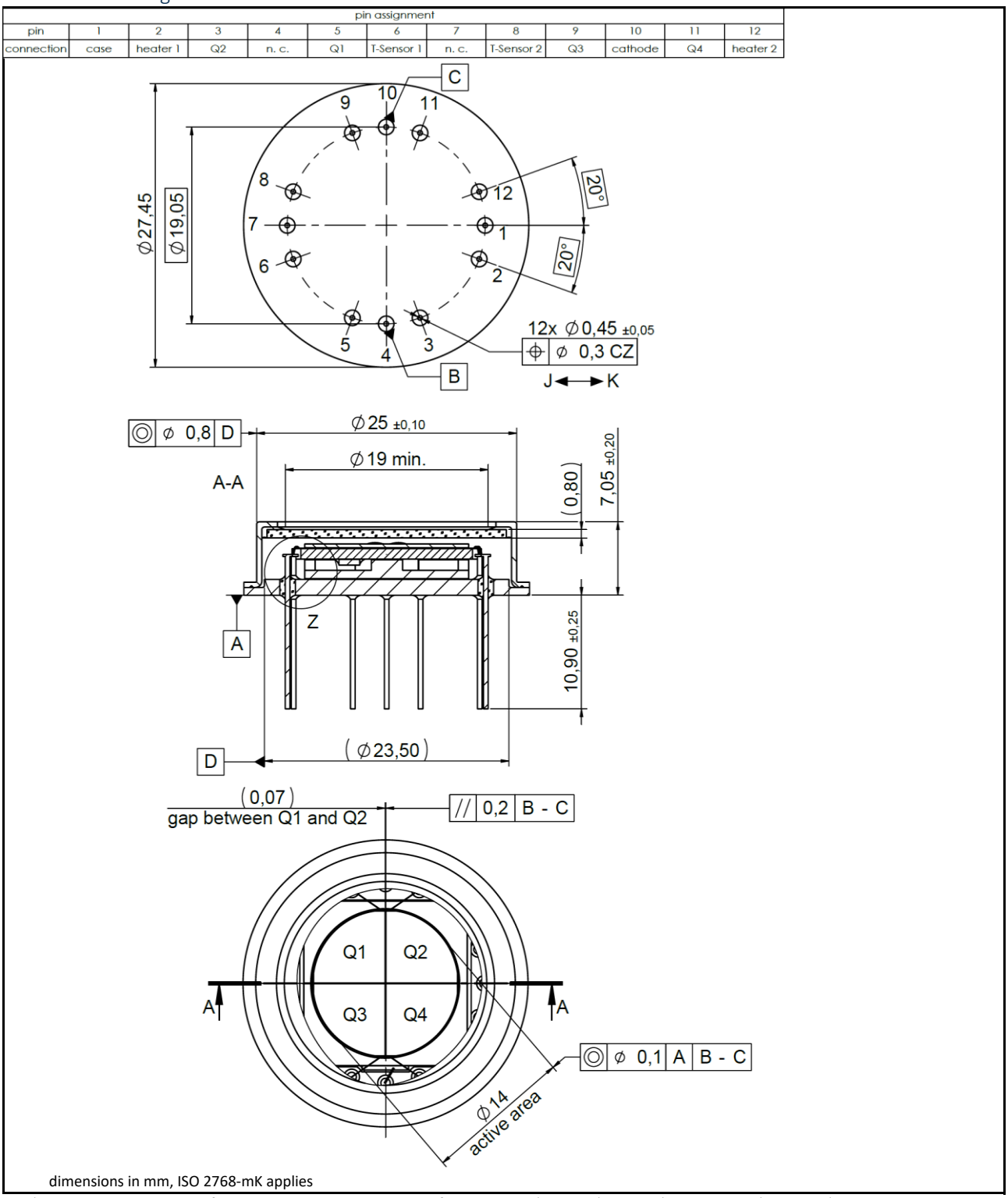
This detector is manufactured in Germany and does not contain any ITAR-restricted components.

Product family:

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

Technical Drawing

pin assignment												
pin	1	2	3	4	5	6	7	8	9	10	11	12
connection	case	heater 1	Q2	n. c.	Q1	T-Sensor 1	n. c.	T-Sensor 2	Q3	cathode	Q4	heater 2



dimensions in mm, ISO 2768-mK applies

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