

### Features

- Low profile quadrant detector
- Low dark current
- Fast rise time, low capacitance
- High QE at 1064 nm
- Very wide field of view of > 150°

### 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 flat AR coated clear glass window.

### Application

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

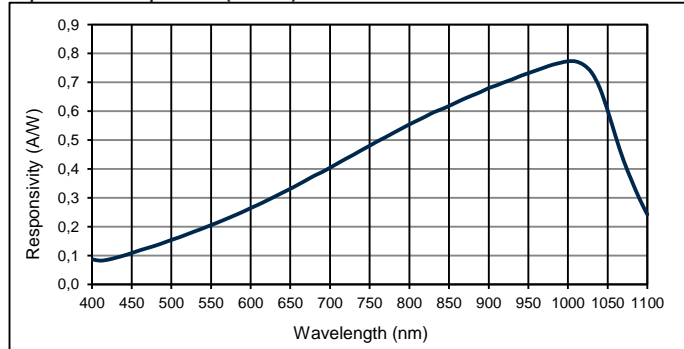
### RoHS

2011/65/EU

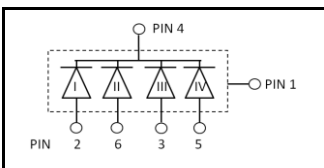
### Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T <sub>STG</sub>	Storage temp	-55	125	°C
T <sub>OP</sub>	Operating temp	-40	85	°C
V <sub>OP</sub>	Operating voltage		250	V
I <sub>PEAK</sub>	Peak DC current		10	mA
p	Outside pressure		2	bar

### Spectral response (23 °C)



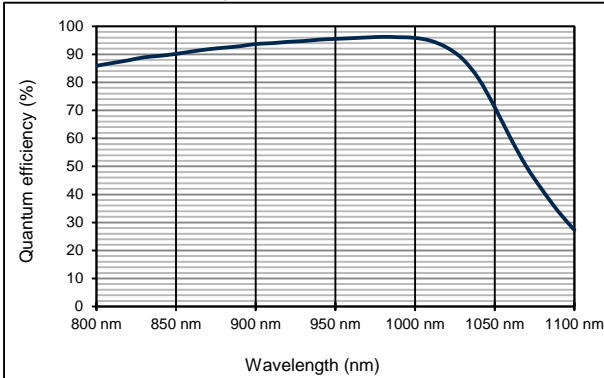
### Schematic



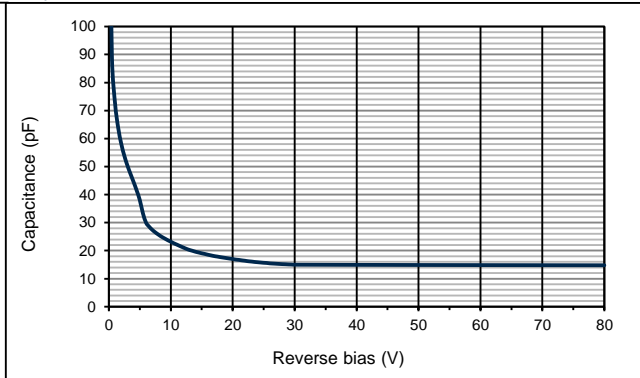
### Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area	diameter		14		mm
		per element, number of elements: 4 quadrants		38.5		mm <sup>2</sup>
	Gap	between elements		70		μm
I <sub>D</sub>	Dark current	V <sub>R</sub> = 150 V, per element		1	30	nA
C	Capacitance	V <sub>R</sub> = 150 V, per element		12	20	pF
	Responsivity	V <sub>R</sub> = 150 V; λ = 1064 nm; R <sub>L</sub> = 50 Ω	0.45	0.55		A/W
t <sub>r</sub>	Rise time	V <sub>R</sub> = 180 V; λ = 1064 nm; R <sub>L</sub> = 50 Ω		12		ns
		180 V; 1064 nm; TIA terminated (R <sub>L</sub> = 1 Ω)		6		ns
V <sub>BR</sub>	Breakdown voltage	I <sub>R</sub> = 2 μA	250			V
	Temperature coefficient	Change of I <sub>PH</sub> with temperature		1.07		%/K
	Cross talk	V <sub>R</sub> = 150 V; λ = 1064 nm; R <sub>L</sub> = 50 Ω		2		%
	N.E.P.	V <sub>R</sub> = 150 V, λ = 1064 nm		1.2E-13	2,30E-13	W/√Hz
FOV	Field of view			156		°

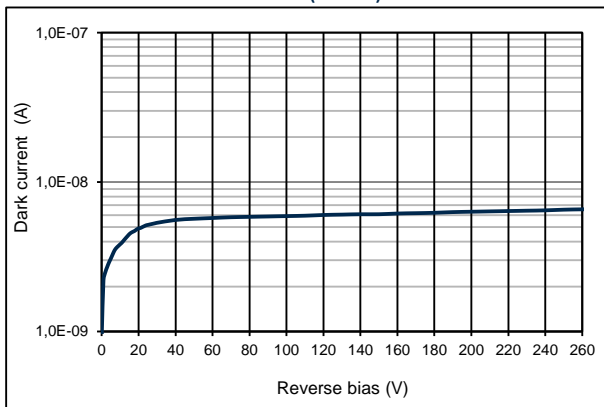
Quantum efficiency (23 °C)



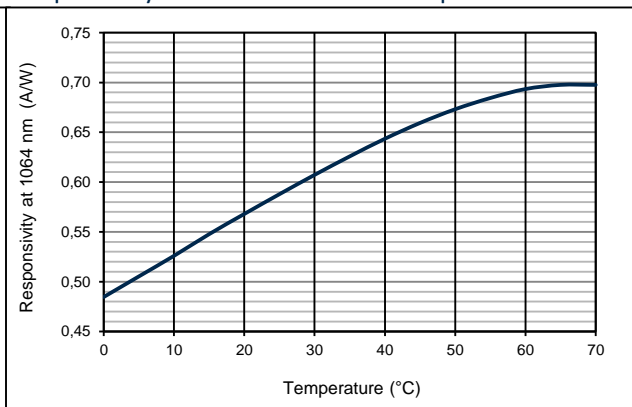
Capacitance as fct of reverse bias (23 °C)



Dark current as fct of bias (23 °C)



Responsivity at 1064 nm as fct of temperature



**Package dimension:**

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

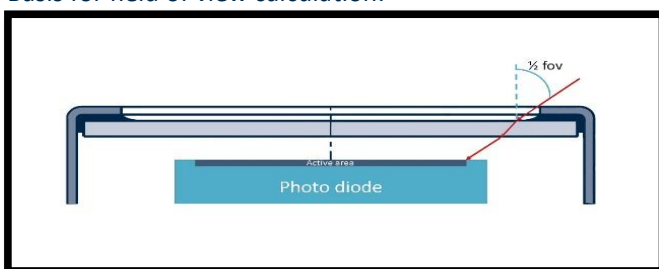
**Product family:**

The quadrant detector is also available with heater, please ask for part number 3001433.

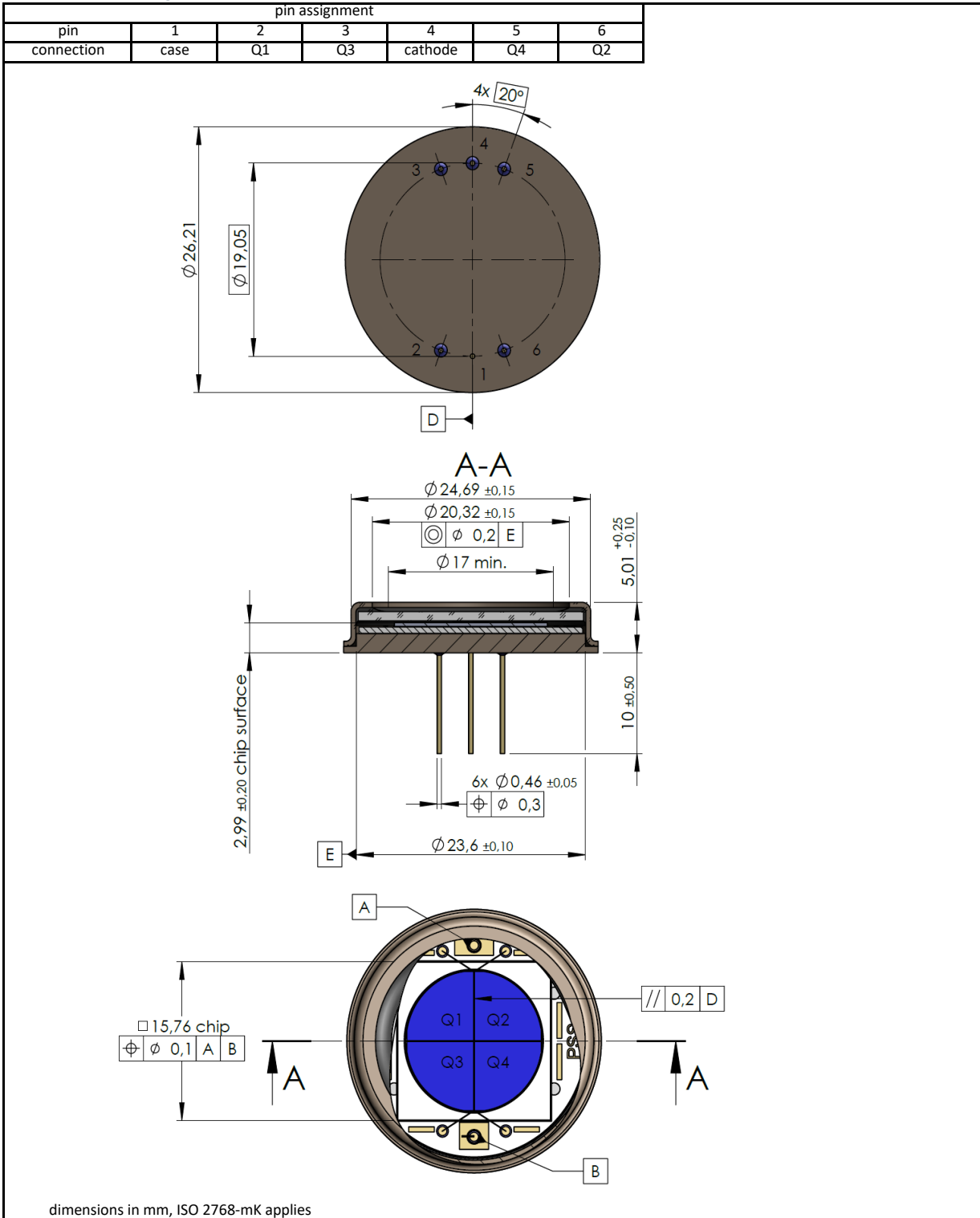
**Source of origin:**

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

**Basis for field of view calculation:**



## Technical Drawing



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