

### 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  $\mu\text{m}$  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

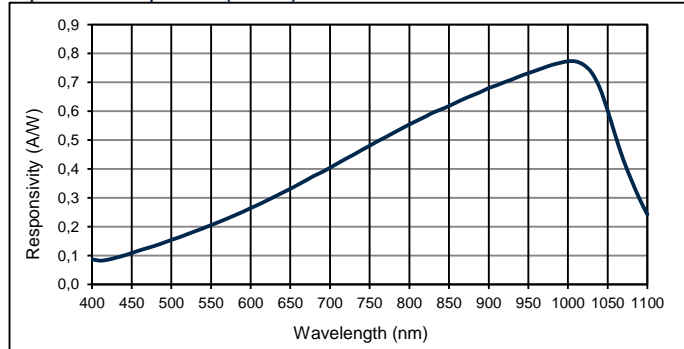
### RoHS

2011/65/EU

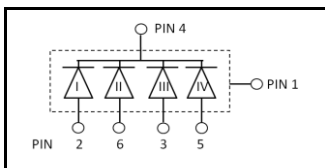
### Absolute maximum ratings

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

### Spectral response (23 $^{\circ}\text{C}$ )



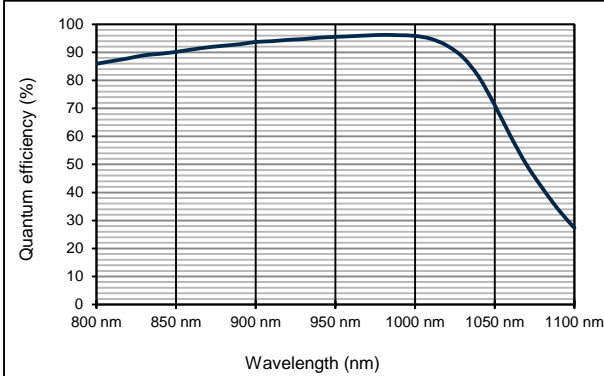
### Schematic



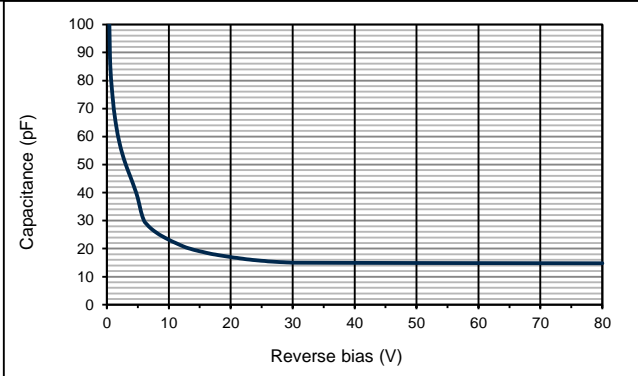
### Electro-optical characteristics @ 23 $^{\circ}\text{C}$

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area	diameter		14		mm
		per element, number of elements: 4 quadrants		38.5		$\text{mm}^2$
	Gap	between elements		70		$\mu\text{m}$
$I_D$	Dark current	$V_R = 150\text{ V}$ , per element		1	30	nA
C	Capacitance	$V_R = 150\text{ V}$ , per element		12	20	pF
	Responsivity	$V_R = 150\text{ V}$ ; $\lambda = 1064\text{ nm}$ ; $R_L = 50\ \Omega$	0.45	0.55		A/W
$t_r$	Rise time	$V_R = 180\text{ V}$ ; $\lambda = 1064\text{ nm}$ ; $R_L = 50\ \Omega$		12		ns
		180 V; 1064 nm; TIA terminated ( $R_L = 1\ \Omega$ )		6		ns
$V_{BR}$	Breakdown voltage	$I_R = 2\ \mu\text{A}$	250			V
	Temperature coefficient	Change of $I_{PH}$ with temperature		1.07		%/K
	Cross talk	$V_R = 150\text{ V}$ ; $\lambda = 1064\text{ nm}$ ; $R_L = 50\ \Omega$		2		%
	N.E.P.	$V_R = 150\text{ V}$ , $\lambda = 1064\text{ nm}$		1.2E-13	2,30E-13	W/ $\sqrt{\text{Hz}}$
FOV	Field of view			156		$^{\circ}$

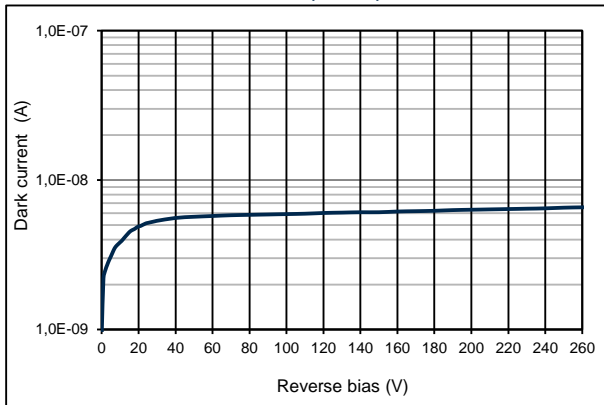
Quantum efficiency (23 °C)



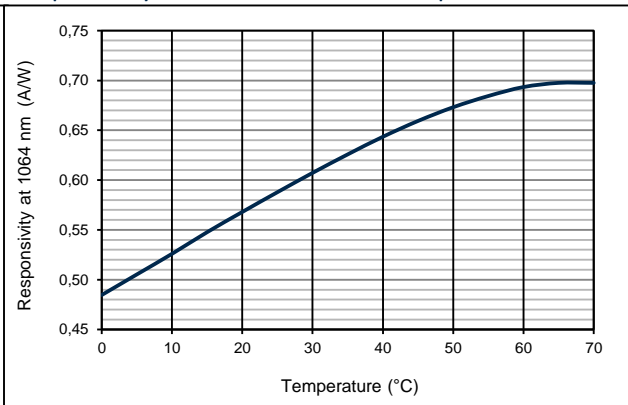
Capacitance as fct of reverse bias (23 °C)



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)

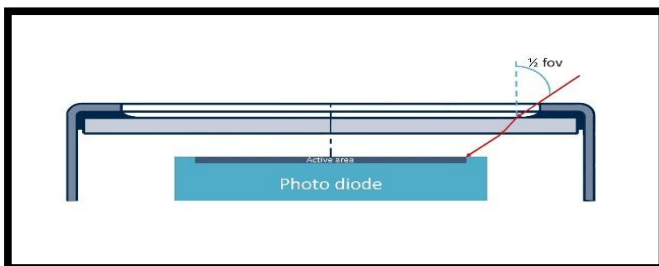
**Product family:**

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

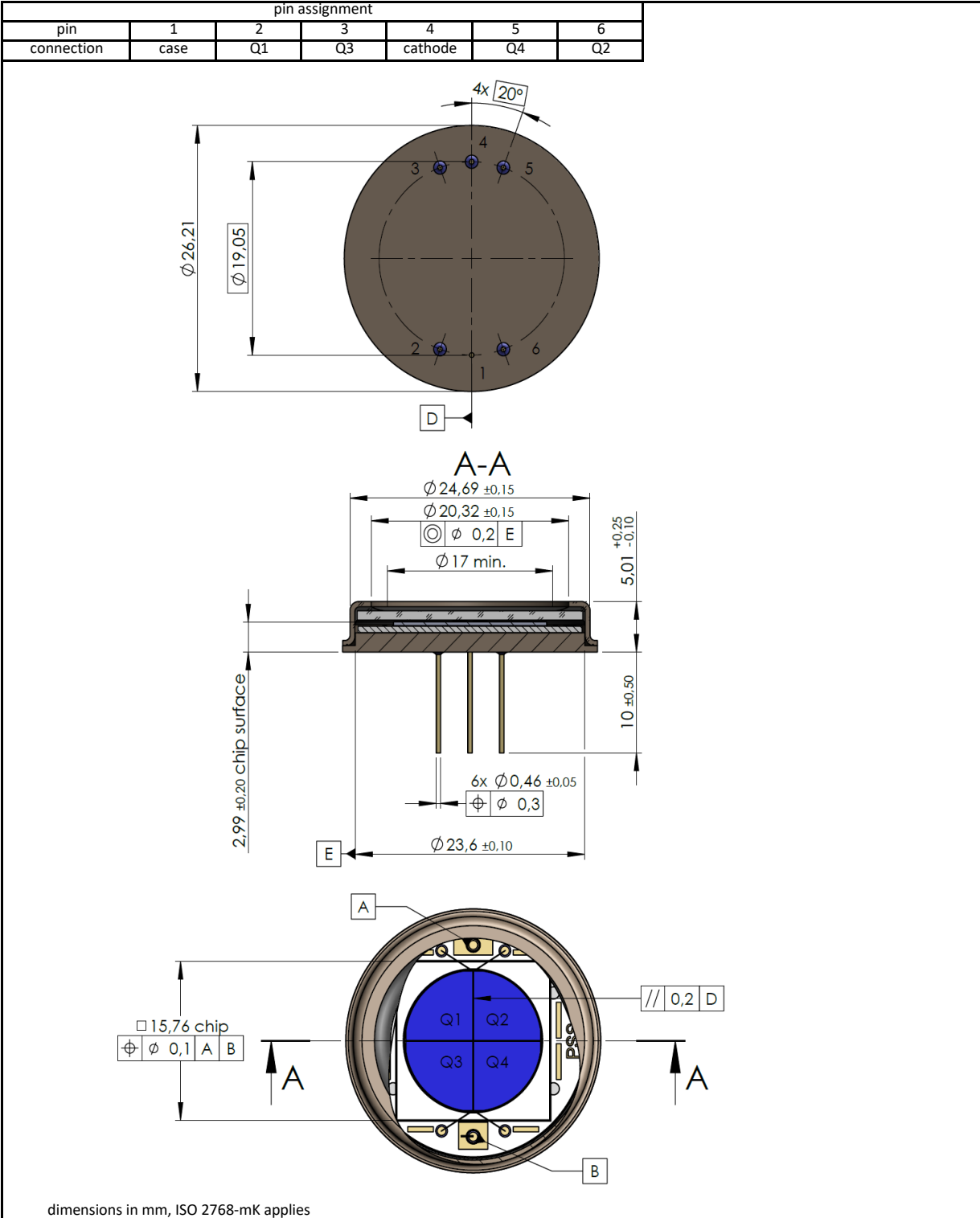
**Source of origin:**

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.