
**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**

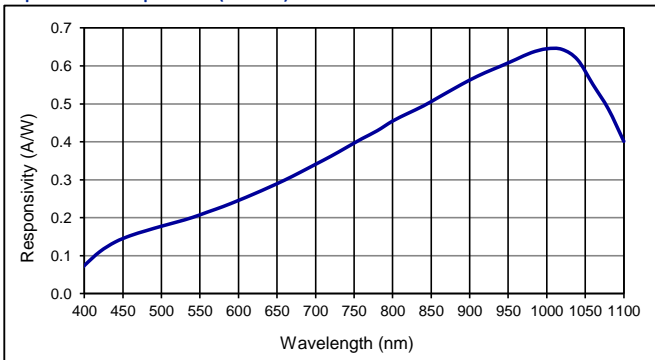
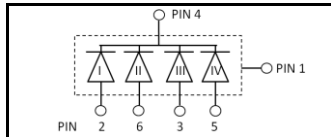
- 1064 nm laser detection
- High speed photometry
- NIR pulsed light sensor
- Laser guidance

**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		5	bar

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

**Schematic**

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

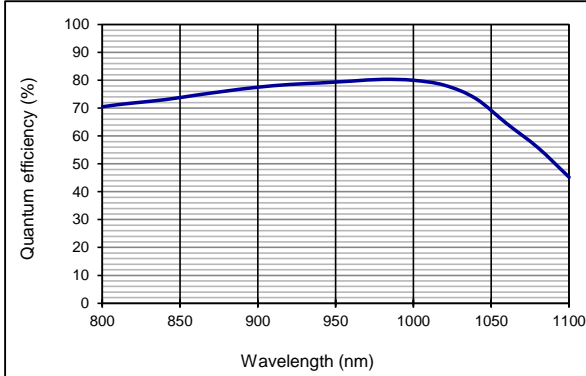
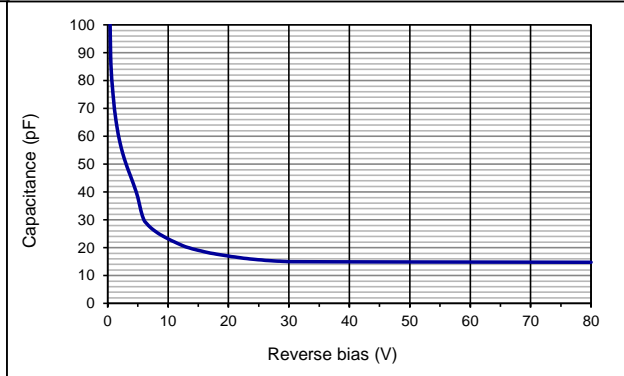
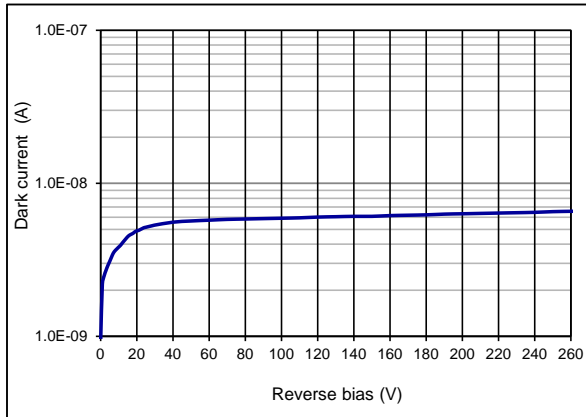
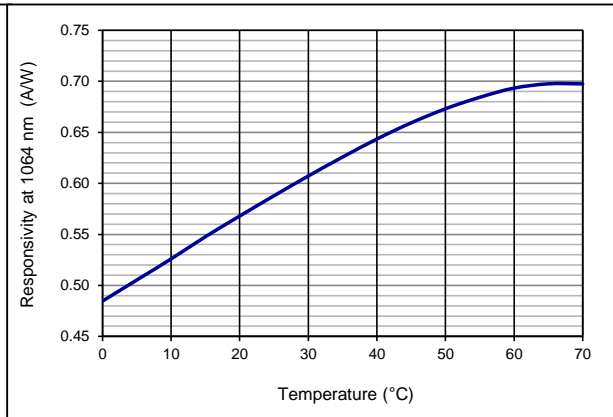
Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area	diameter		14		mm
		per element, number of elements: 4 quadrants		38.5		$\text{mm}^2$
	Gap	between elements		70		$\mu\text{m}$
$I_D$	Dark current	$V_R = 150\text{ V}$ , per element		10	30	nA
C	Capacitance	$V_R = 150\text{ V}$ , per element		14	20	pF
	Responsivity	$V_R = 150\text{ V}$ ; $\lambda = 1064\text{ nm}$ ; $R_L = 50\ \Omega$	0.42	0.48	0.65	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		W/√Hz
FOV	Field of view			$\pm 75$		$^{\circ}$

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**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 50131305.

**Source of origin:**

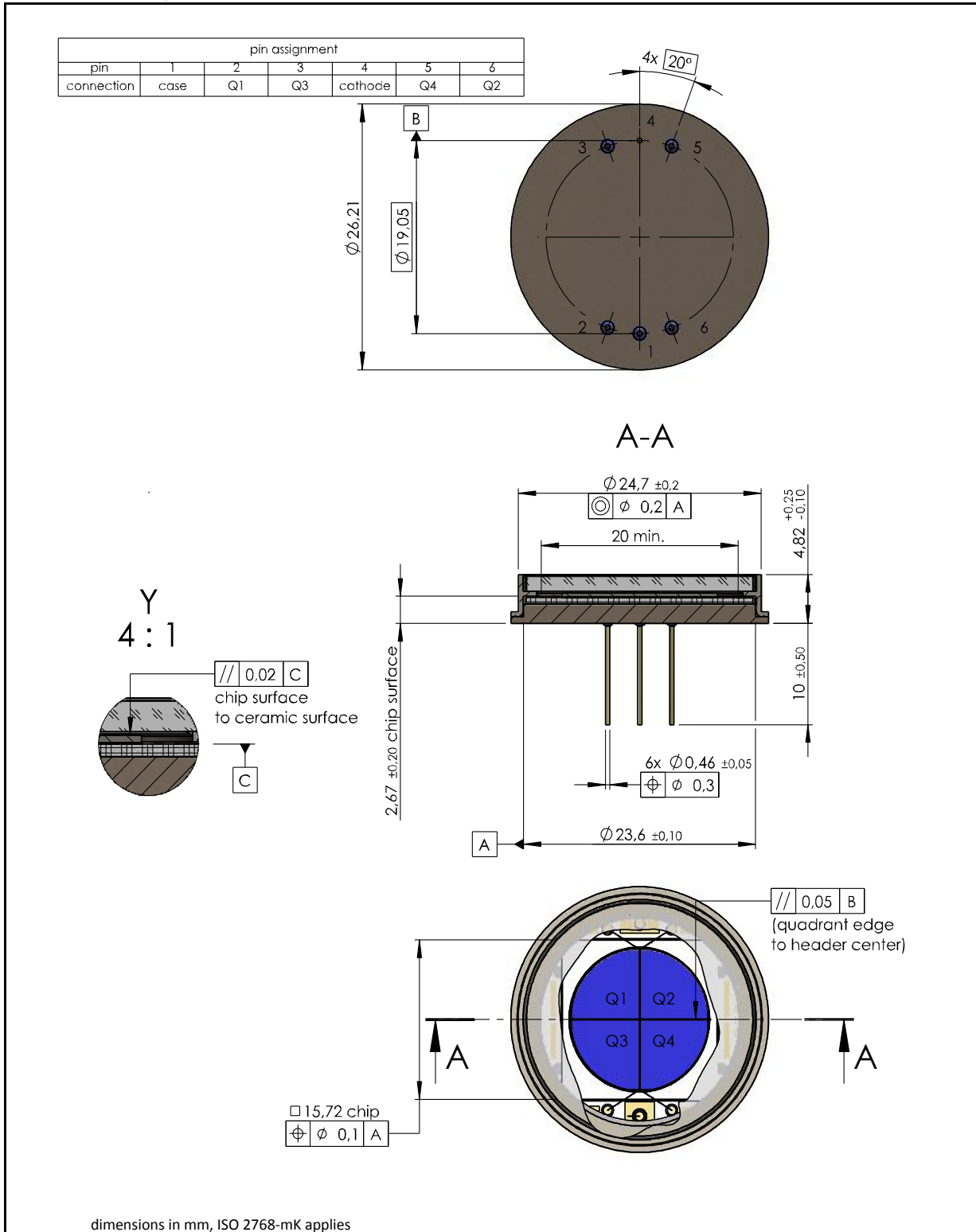
This detector is manufactured in Germany and does not contain any ITAR-restricted components.

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**Technical Drawing**


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

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