

### Features

- 100 mm<sup>2</sup> PIN detector
- Light blocking encapsulant
- Low dark current
- Low capacitance
- High shunt resistance
- High sensitivity

### Description

Square active area PIN photodiode with 100 mm<sup>2</sup> active area. Ceramic carrier type LCC10 package with light blocking black epoxy encapsulant. Reflow solderable. Non-hermetic.

### Application

- Ionizing radiation detector
- Medical equipment
- Personal dosimeter

### RoHS

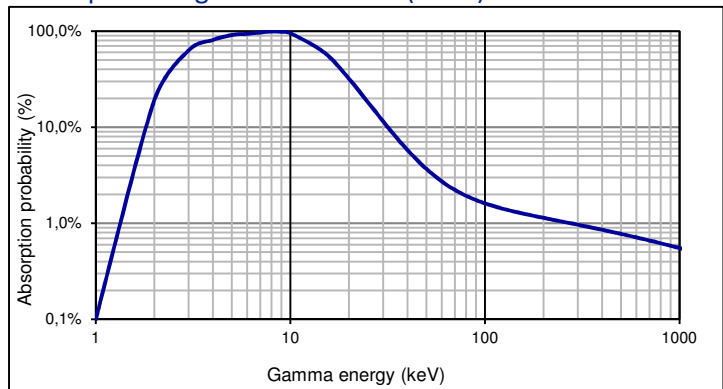
2002/95/EC



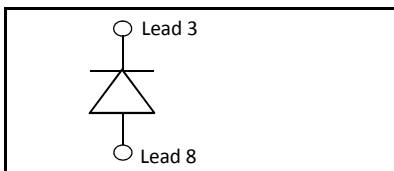
### Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T <sub>STG</sub>	Storage temp	-40	100	°C
T <sub>OP</sub>	Operating temp	-20	70	°C
V <sub>max</sub>	Max reverse voltage		50	V
I <sub>PEAK</sub>	Peak DC current		10	mA

### Absorption of gamma radiation (23 °C)



### Schematic



### Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area			10 x 10		mm
	Active area			100		mm <sup>2</sup>
	Energy range of detectable radiation	Gamma radiation	5		1000	keV
I <sub>D</sub>	Dark current	V <sub>R</sub> = 12 V		1.5	3	nA
T <sub>K</sub> (I <sub>D</sub> )	Temperature coefficient	V <sub>R</sub> = 12 V; change of dark current		13		%/K
C	Capacitance	V <sub>R</sub> = 0 V; f = 10 kHz		500		pF
		V <sub>R</sub> = 12 V; f = 10 kHz		80		pF
t <sub>R</sub>	Rise time	V <sub>R</sub> = 12 V; E = 10 keV; R <sub>L</sub> = 50 Ω			500	ns
	Shunt Resistance	V <sub>R</sub> = 10 mV		40		MΩ
	Noise current	V <sub>R</sub> = 12 V		6.1 E-14		A/√Hz
V <sub>BR</sub>	Breakdown voltage	I <sub>R</sub> = 2 μA	50	80		V

#### European, International Sales:



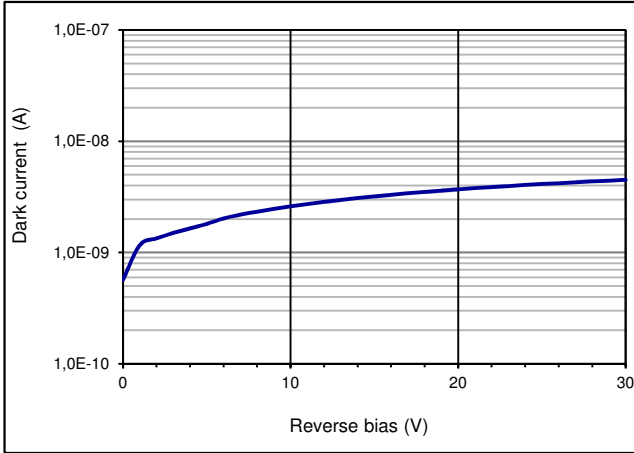
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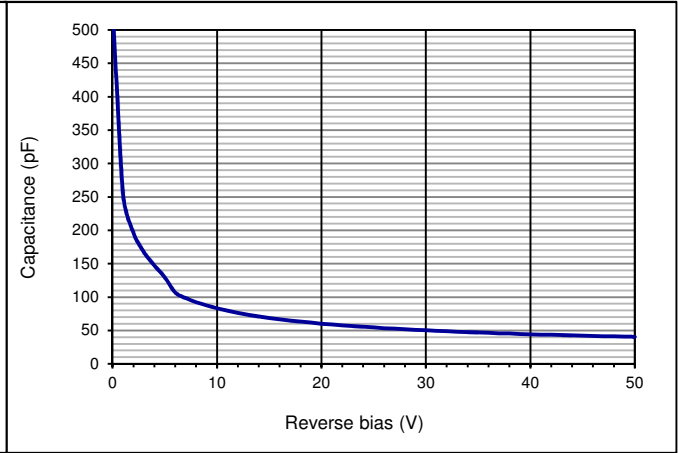


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**Dark current (23 °C)**



**Capacitance as fct of reverse bias (23 °C)**



**Package dimension:**

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

**Handling:**

Please refer to document "Instructions for handling and processing"

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

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