

Features

- 100 mm² PIN detector
- Light blocking encapsulant
- Low dark current
- Low capacitance
- High shunt resistance
- High sensitivity

Description

Square active area PIN photodiode with 100 mm² active area. Ceramic carrier type 2-pin package with light blocking black epoxy encapsulant. Reflow solderable. Non-hermetic.

Application

- Ionizing radiation detector
- Medical equipment
- Personal dosimeter

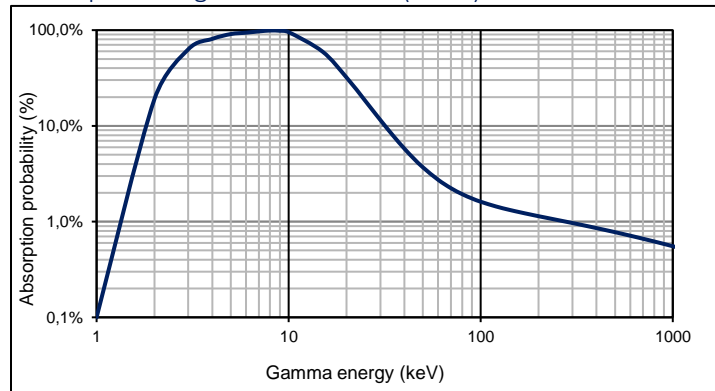
RoHS

2011/65/EU

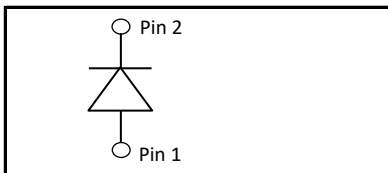
Absolute maximum ratings

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

Absorption of gamma radiation (23 °C)



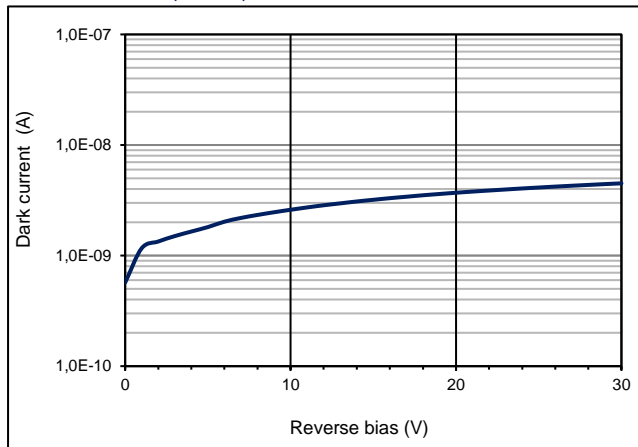
Schematic



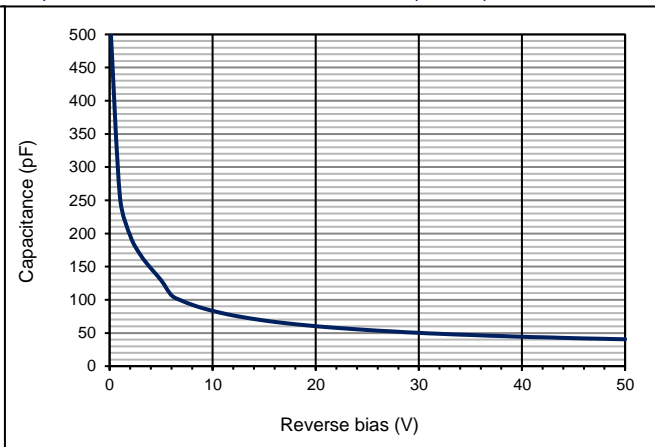
Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		10 x 10			mm
	Active area		100			mm ²
	Energy range of detectable radiation	Gamma radiation	5		1000	keV
I _D	Dark current	V _R = 10 V		1.5	3	nA
T _K (I _D)	Temperature coefficient	V _R = 10 V; change of dark current		13		%/K
C	Capacitance	V _R = 0 V; f = 10 kHz		500		pF
		V _R = 10 V; f = 10 kHz		90		pF
t _R	Rise time	V _R = 12 V; E = 10 keV; R _L = 50 Ω			500	ns
	Shunt Resistance	V _R = 10 mV		40		MΩ
	Noise current	V _R = 12 V		6.1 E-14		A/√Hz
V _{BR}	Breakdown voltage	I _R = 2 μA	50	80		V

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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First Sensor:

[X100-7-SMD](#)