

## PS100-7 SMD

### Description

Low dark current PIN photodiode with 100 mm<sup>2</sup> square active area. Surface mount packaged with clear epoxy encapsulant. Reflow solderable.

### Features

- 100 mm<sup>2</sup> PIN active area
- High shunt resistance
- High sensitivity

### Applications

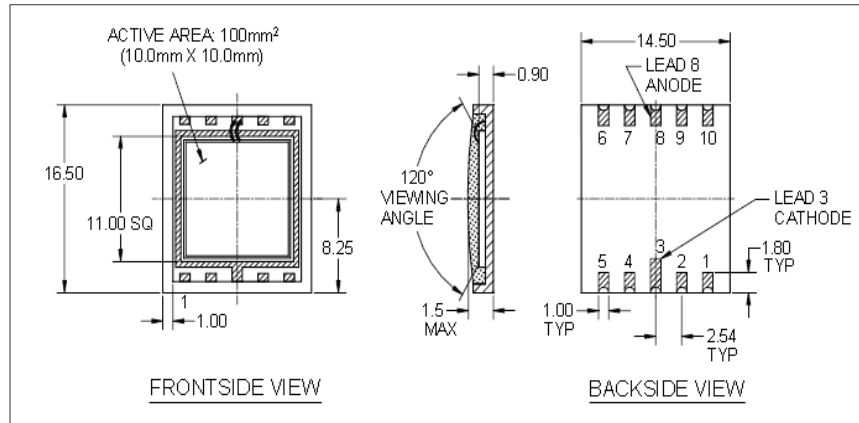
- Laser detection
- Analytical Instruments
- Radiation detection
- Pulsed light sensor

### RoHS

2011/65/EU

2015/863/EU

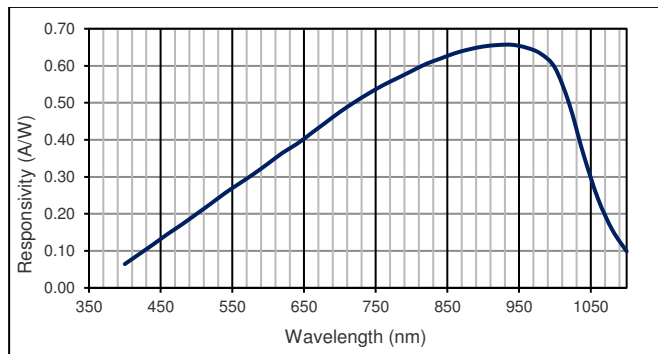
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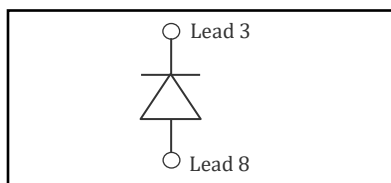
Absolute maximum rating

Symbol	Parameter	Min	Max	Unit
T <sub>STG</sub>	Storage temp	-20	80	°C
T <sub>OP</sub>	Operating temp	-20	60	°C
V <sub>max</sub>	Max reverse voltage		50	V
I <sub>PEAK</sub>	Peak DC current		10	mA

Spectral response (23°C)



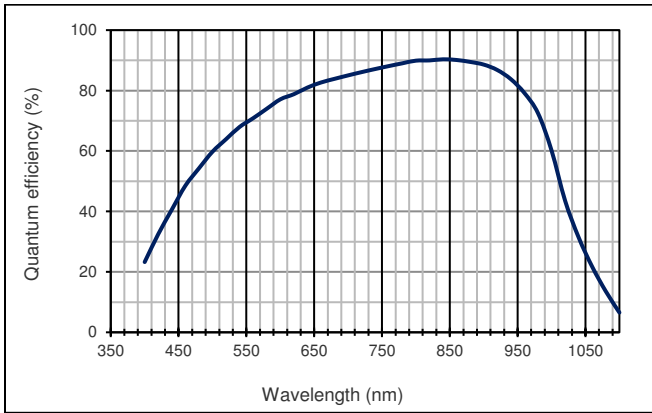
Schematic



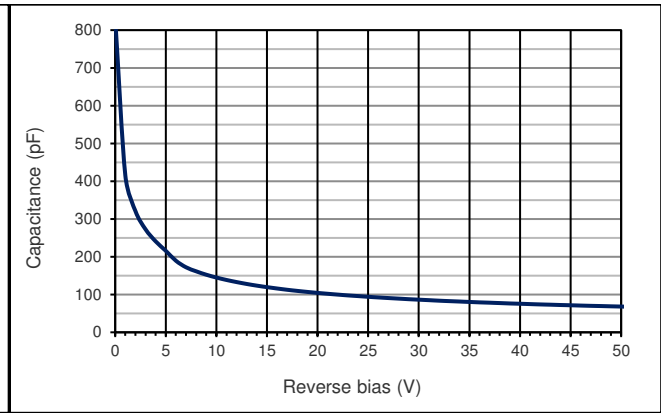
Electro-optical characteristics @ 23°C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		10000 x 10000			μm
	Active area		100			mm²
I <sub>D</sub>	Dark current	V <sub>R</sub> = 10 V		1	10	nA
C	Capacitance	V <sub>R</sub> = 0 V		900		pF
		V <sub>R</sub> = 10 V		160		pF
	Responsivity	λ = 632 nm		0.4		A/W
		λ = 900 nm		0.64		A/W
t <sub>R</sub>	Rise time	V <sub>R</sub> = 0 V; λ = 850 nm; R <sub>L</sub> = 50 Ω		2000		ns
		V <sub>R</sub> = 10 V; λ = 850 nm; R <sub>L</sub> = 50 Ω		40		ns
		V <sub>R</sub> = 80 V; λ = 850 nm; R <sub>L</sub> = 50 Ω		10		ns
	Shunt Resistance	V <sub>R</sub> = 10 mV		150		MΩ
V <sub>BR</sub>	Breakdown voltage	I <sub>R</sub> = 2 μA	50			V

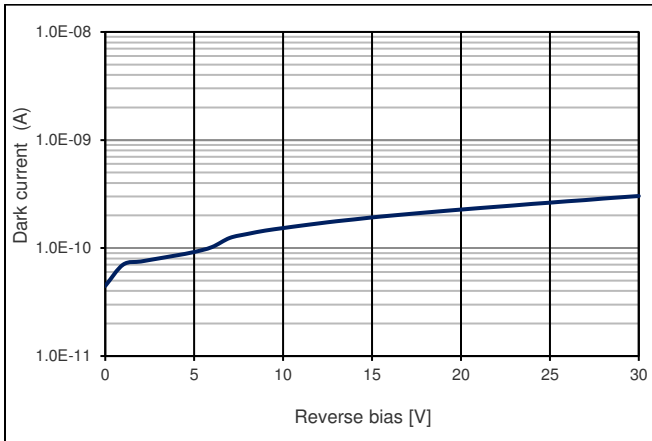
Quantum efficiency (23 °C)



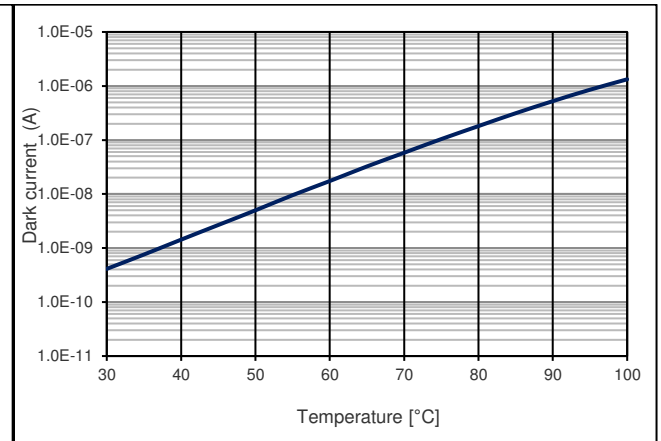
Capacitance as fct of reverse bias (23 °C)



Dark current as fct of bias (23 °C)



Dark current as fct of temperature (10 V)



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### Package Dimension:

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

### Handling:

Please refer to the document “Instruction 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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