

**Features**

- APD with 0.04 mm<sup>2</sup> active area
- Slow multiplication curve
- QE > 80% @ 750 nm-910 nm
- Fast rise time, low noise
- Optimum gain: 50-60

**Description**

Circular active area APD chip with NIR enhanced sensitivity. Ceramic carrier type non hermetic SMD package with clear glass or filter window. Reflow solderable.

**Application**

- Laser range finder
- High speed photometry
- High speed optical communications
- Medical equipment

**RoHS**

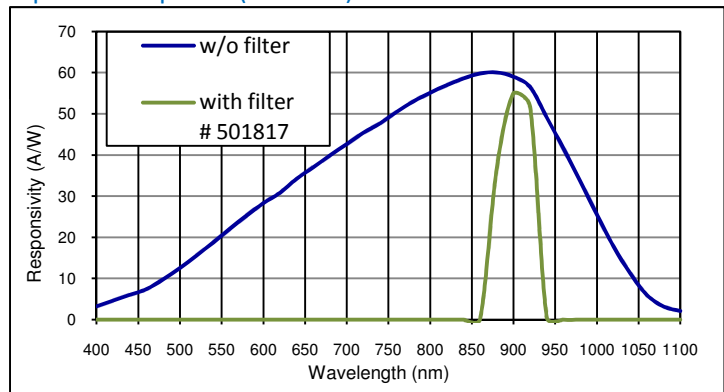
2002/95/EC



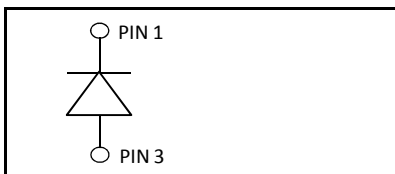
**Absolute maximum ratings**

Symbol	Parameter	Min	Max	Unit
T <sub>STG</sub>	Storage temp	-40	100	°C
T <sub>OP</sub>	Operating temp	-20	70	°C
M <sub>max</sub>	Gain (I <sub>PO</sub> = 1 nA)	200		
I <sub>PEAK</sub>	Peak DC current		0.25	mA

**Spectral response (M = 100)**



**Schematic**



**Electro-optical characteristics @ 22°C**

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		diameter 230			µm
	Active area		0.04			mm <sup>2</sup>
I <sub>D</sub>	Dark current	M = 100		0.5	1.5	nA
C	Capacitance	M = 100		0.6		pF
	Responsivity	M = 100; λ = 905 nm	55	60		A/W
	Responsivity with filter	Article <b>501817</b> ; M = 100; λ = 905 nm	44	57		A/W
t <sub>R</sub>	Rise time	M = 100; λ = 905 nm; R <sub>L</sub> = 50 Ω		0.5		ns
	Cut-off frequency	-3dB		0.6		GHz
V <sub>BR</sub>	Breakdown voltage	I <sub>R</sub> = 2 µA, V <sub>BR</sub> - binning available	160		240	V
	Temperature coefficient	Change of V <sub>BR</sub> with temperature	1.25		1.55	V/K
	Excess noise factor	M = 100		2.5		
	Excess noise index	M = 100		0.2		
	N.E.P.	M = 100; λ = 905 nm		1 E-14		W/√Hz
	Noise current	M = 100; λ = 905 nm		0.6		pA/√Hz

**European, International Sales:**



International AG

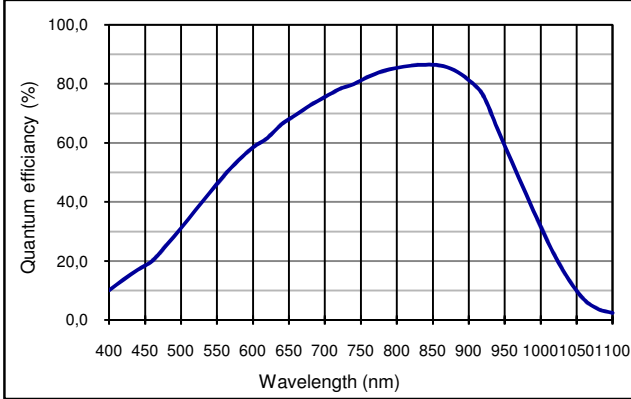
Silicon Sensor International AG  
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 E-Mail: sales@silicon-sensor.com

**USA:**

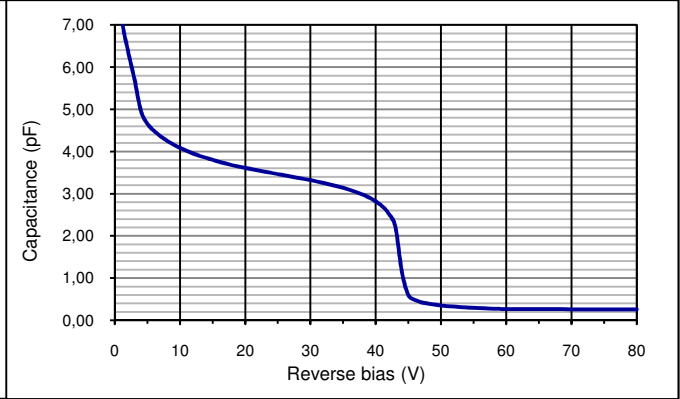


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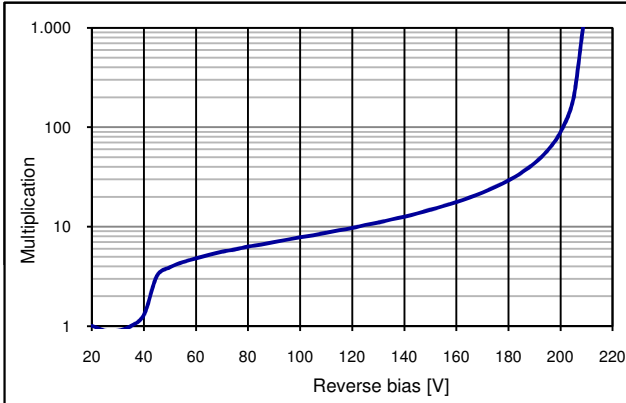
Quantum efficiency (22 °C)



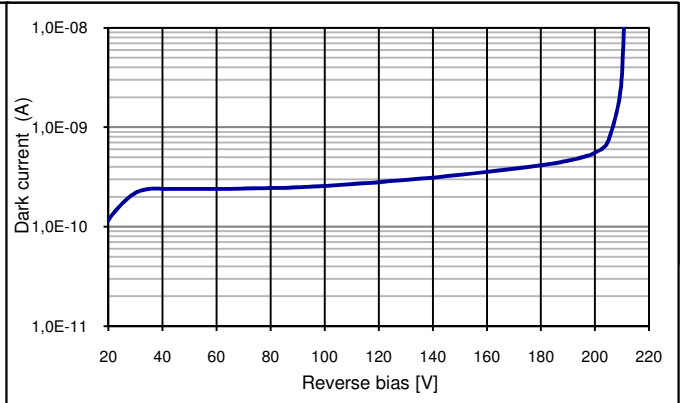
Capacitance as fct of reverse bias (22 °C)



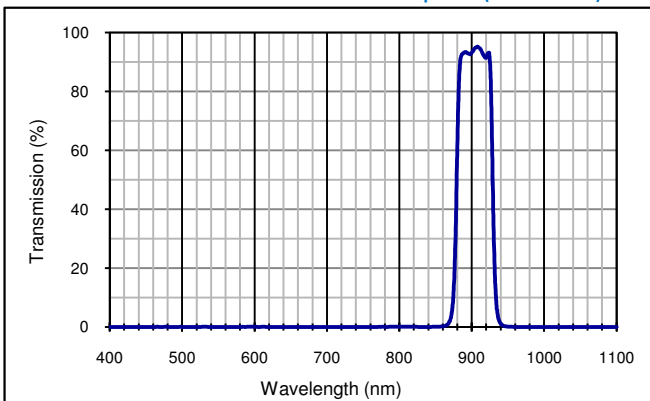
Multiplication as fct of bias (22 °C)



Dark current as fct of bias (22 °C)



Filter characteristics 905 nm band pass (#501817)



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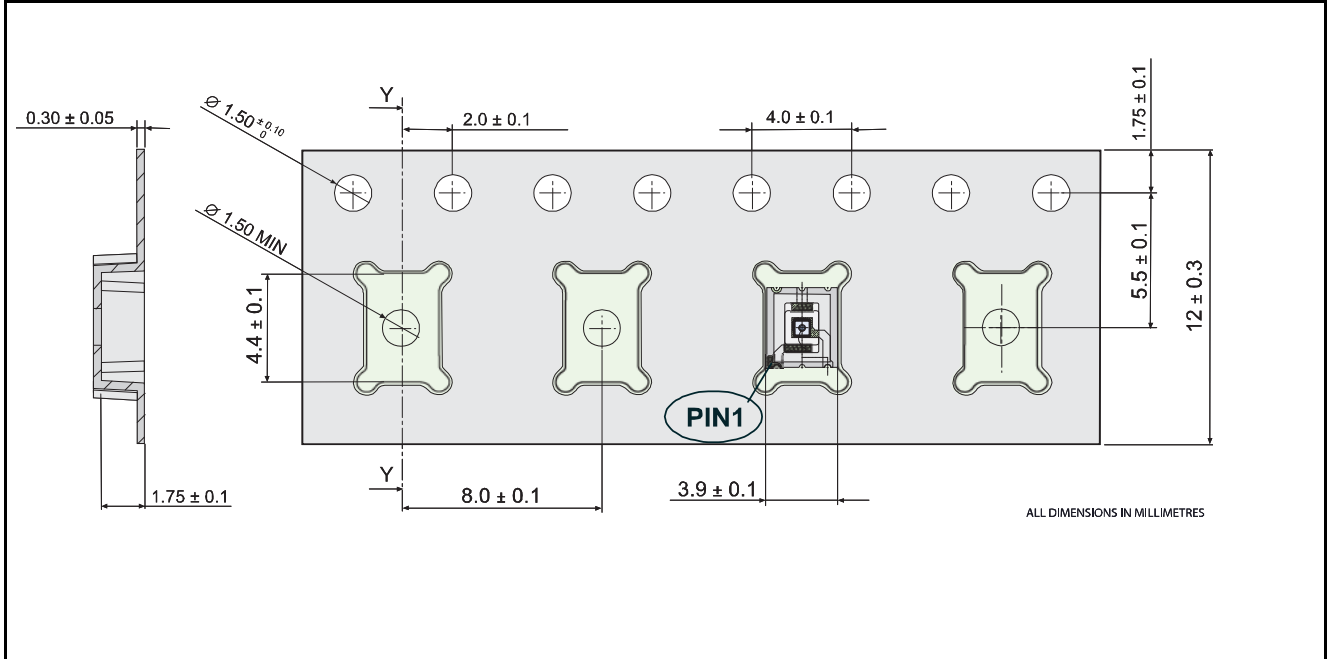
USA:



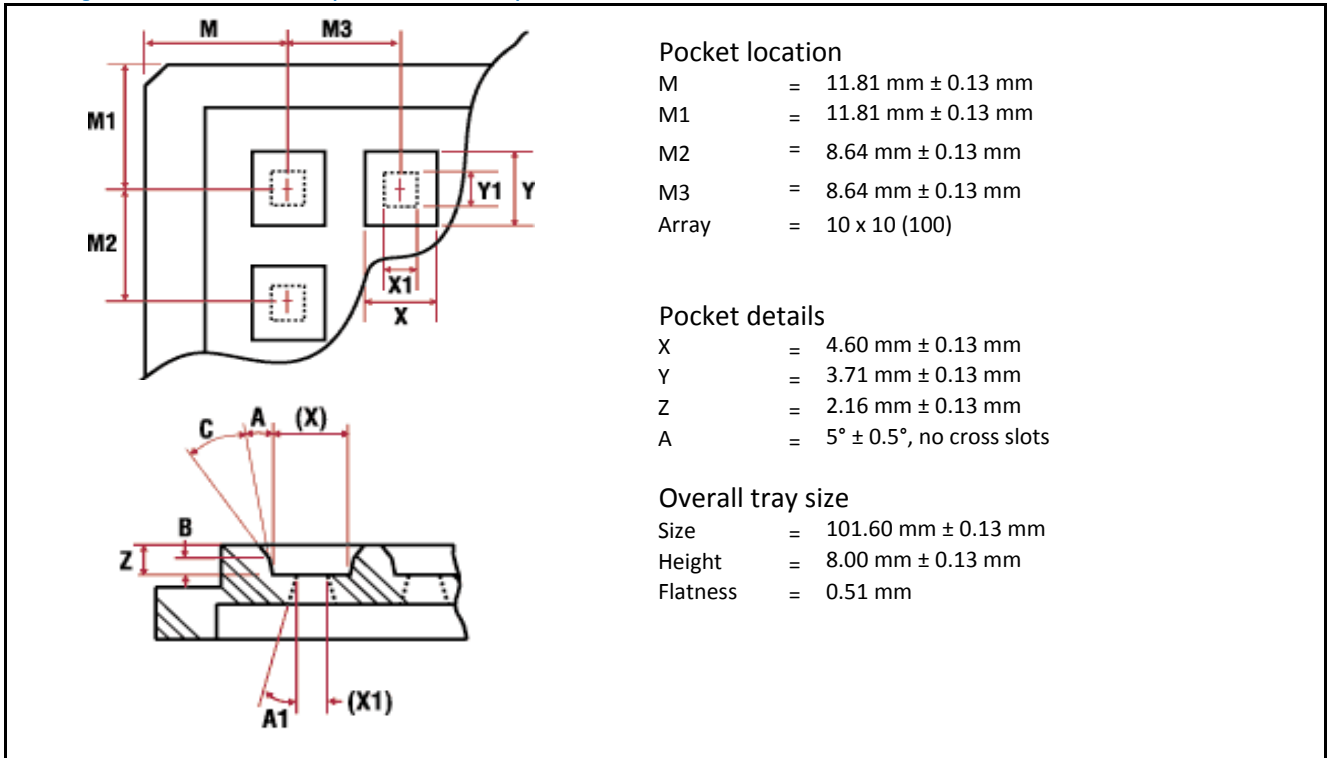
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Package dimension, large quantities on reel



Package dimension, small quantities in trays



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

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