

### Features

- 500 μm x 500 μm active area
- Low dark current
- Fast response time
- High speed epitaxy

### Description

High speed epitaxy PIN photodiode with 0.25 mm<sup>2</sup> square active area. PCB carrier type non hermetic SMD 1206 package with epoxy moulding. Reflow solderable.

### Application

- Pulsed light detection
- High speed photometry
- High speed optical communications
- Fiber optic light monitoring

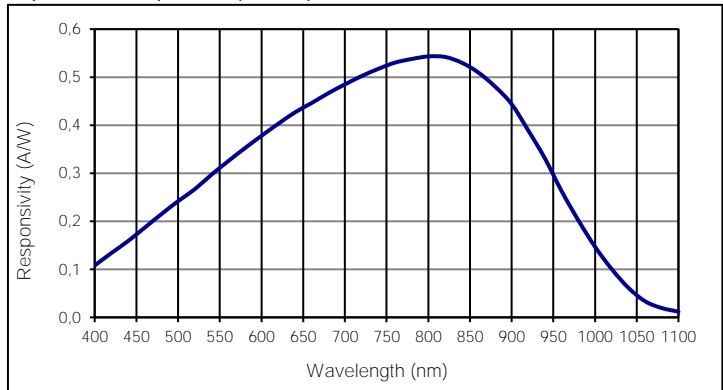
### RoHS

2011/65/EU

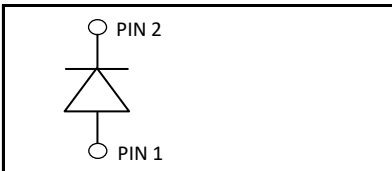
### Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T <sub>STG</sub>	Storage temp	-45	100	°C
T <sub>OP</sub>	Operating temp	-40	85	°C
V <sub>max</sub>	Max reverse voltage		30	V
I <sub>PEAK</sub>	Peak DC current		10	mA

### Spectral response (23 °C)



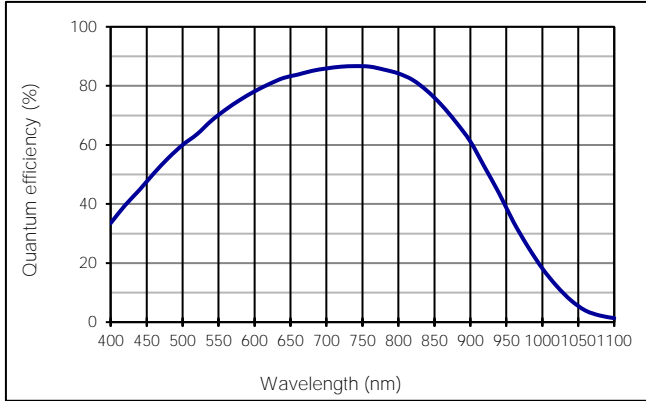
### Schematic



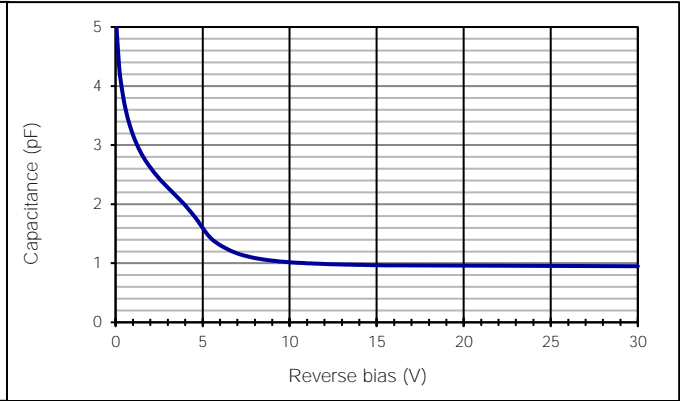
### Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		500 x 500			μm
	Active area		0.25			mm <sup>2</sup>
I <sub>D</sub>	Dark current	V <sub>R</sub> = 20 V		0.1		nA
C	Capacitance	V <sub>R</sub> = 0 V		6		pF
C	Capacitance	V <sub>R</sub> = 20 V		1.8		pF
	Responsivity	λ = 635 nm		0.4		A/W
	Responsivity	λ = 800 nm		0.52		A/W
t <sub>R</sub>	Rise time	V <sub>R</sub> = 20 V; λ = 850 nm; R <sub>L</sub> = 50 Ω		0.4		ns
V <sub>BR</sub>	Breakdown voltage	I <sub>R</sub> = 2 μA	30	50		V
	Shunt resistance	V <sub>R</sub> = 10 mV		1000		MΩ
	N.E.P.	V <sub>R</sub> = 20 V; λ = 850 nm		1.1 E-14		W/√Hz

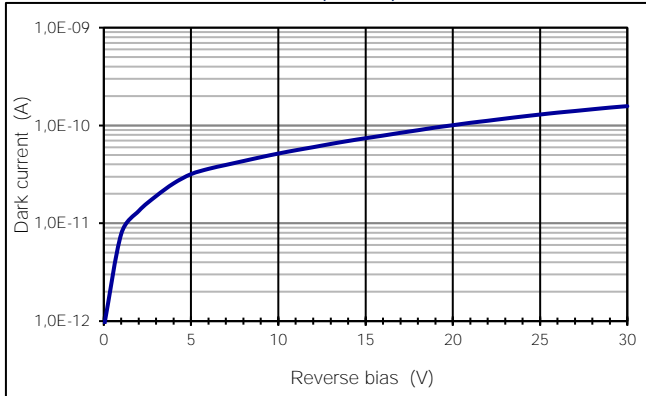
Quantum efficiency (23 °C)



Capacitance as fct of reverse bias (23 °C)



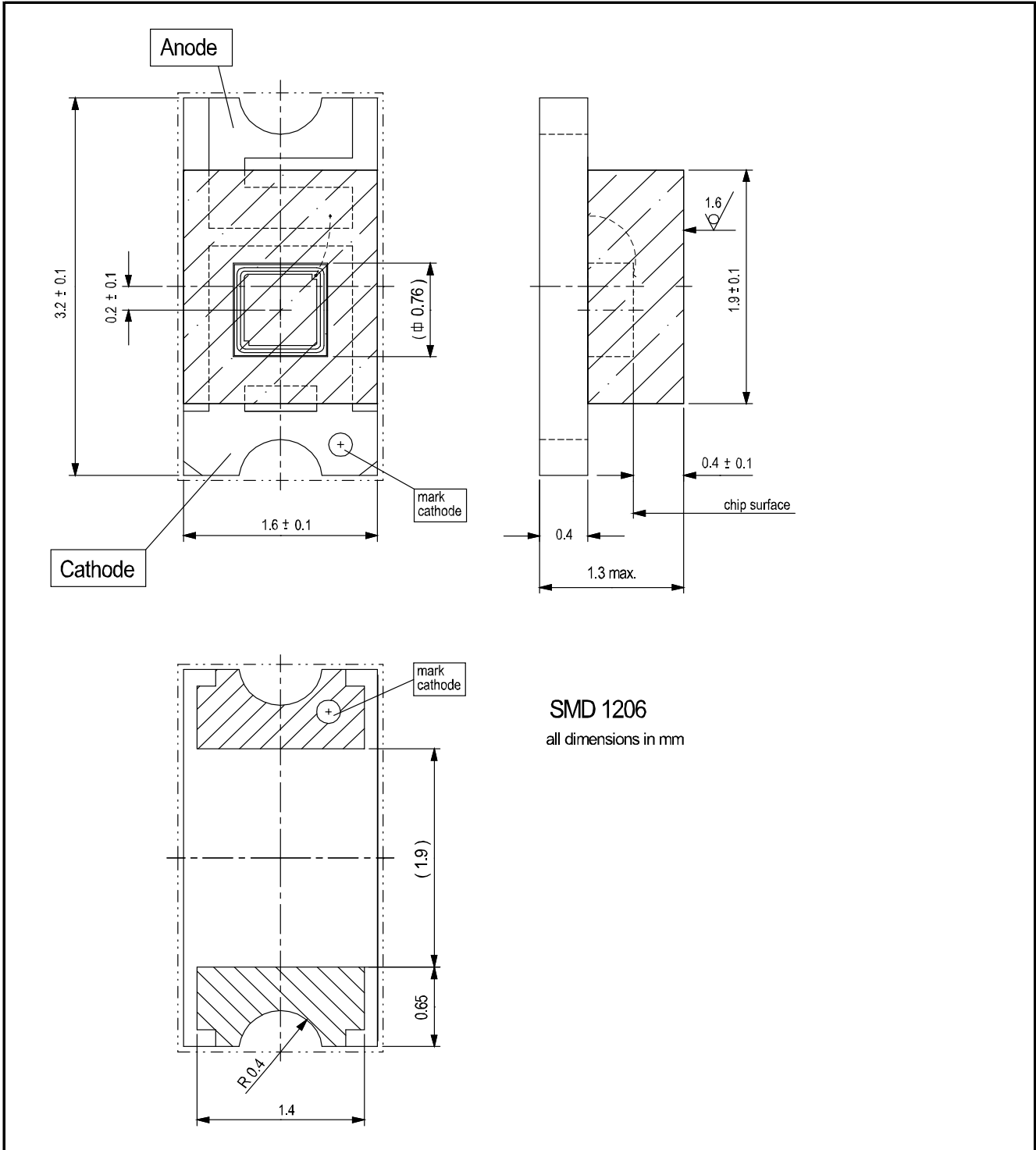
Dark current as fct of bias (23 °C)



Application hints:

Please refer to document "Instructions for handling and processing"

Technical Drawing, Package: SMD1206



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