
Features

- 500 μm x 500 μm active area
- Low dark current
- Fast response time
- High speed epitaxy
- Fully depleted at 3.5 V

Description

High speed epitaxy PIN photodiode with 0.25 mm^2 square active area. PCB carrier type non hermetic SMD 1206 package with epoxy mould. Reflow solderable.

Application

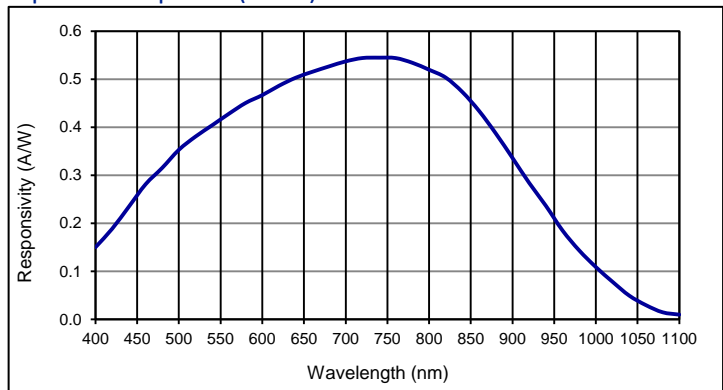
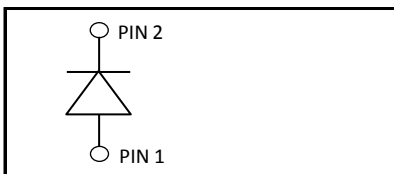
- Pulsed light detection
- High speed photometry
- High speed optical communications
- Fiber optic light monitoring

RoHS

2002/95/EC


Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-25	100	$^{\circ}\text{C}$
T_{OP}	Operating temp	-20	70	$^{\circ}\text{C}$
V_{max}	Max reverse voltage		30	V
I_{PEAK}	Peak DC current		10	mA

Spectral response (23 $^{\circ}\text{C}$)

Schematic

Electro-optical characteristics @ 23 $^{\circ}\text{C}$

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		500 x 500			μm
	Active area		0.25			mm^2
I_D	Dark current	$V_R = 3.5 \text{ V}$		0.01	0.1	nA
C	Capacitance	$V_R = 0 \text{ V}$		5		pF
C	Capacitance	$V_R = 3.5 \text{ V}$		1.3		pF
	Responsivity	$\lambda = 635 \text{ nm}$		0.49		A/W
	Responsivity	$\lambda = 800 \text{ nm}$		0.52		A/W
t_R	Rise time	$V_R = 3.5 \text{ V}; \lambda = 850 \text{ nm}; R_L = 50 \Omega$		0.4		ns
V_{BR}	Breakdown voltage	$I_R = 2 \mu\text{A}$	20	50		V
	Shunt resistance	$V_R = 10 \text{ mV}$		10000		$\text{M}\Omega$
	N.E.P.	$V_R = 3.5 \text{ V}; \lambda = 850 \text{ nm}$		4 E-15		$\text{W}/\sqrt{\text{Hz}}$

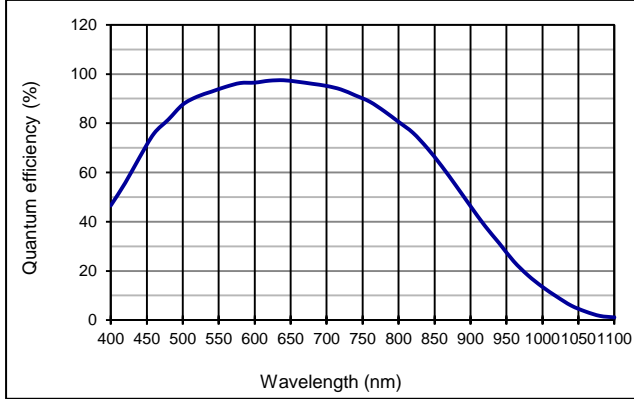
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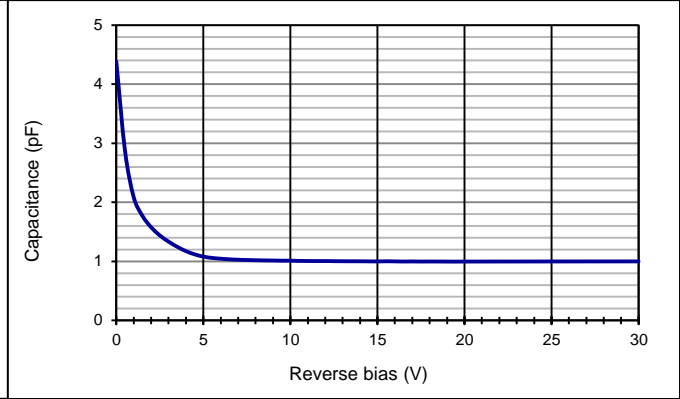
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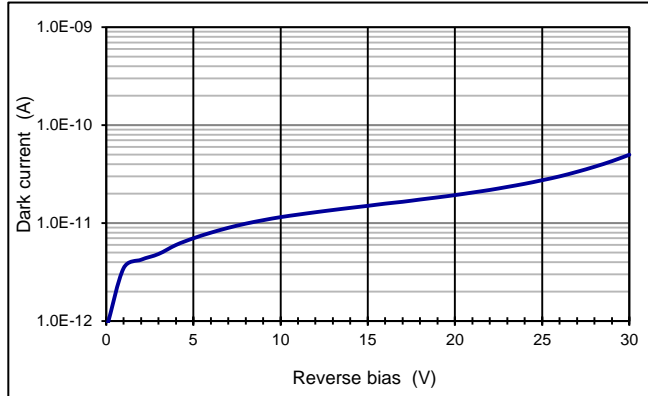
Quantum efficiency (23 °C)



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"

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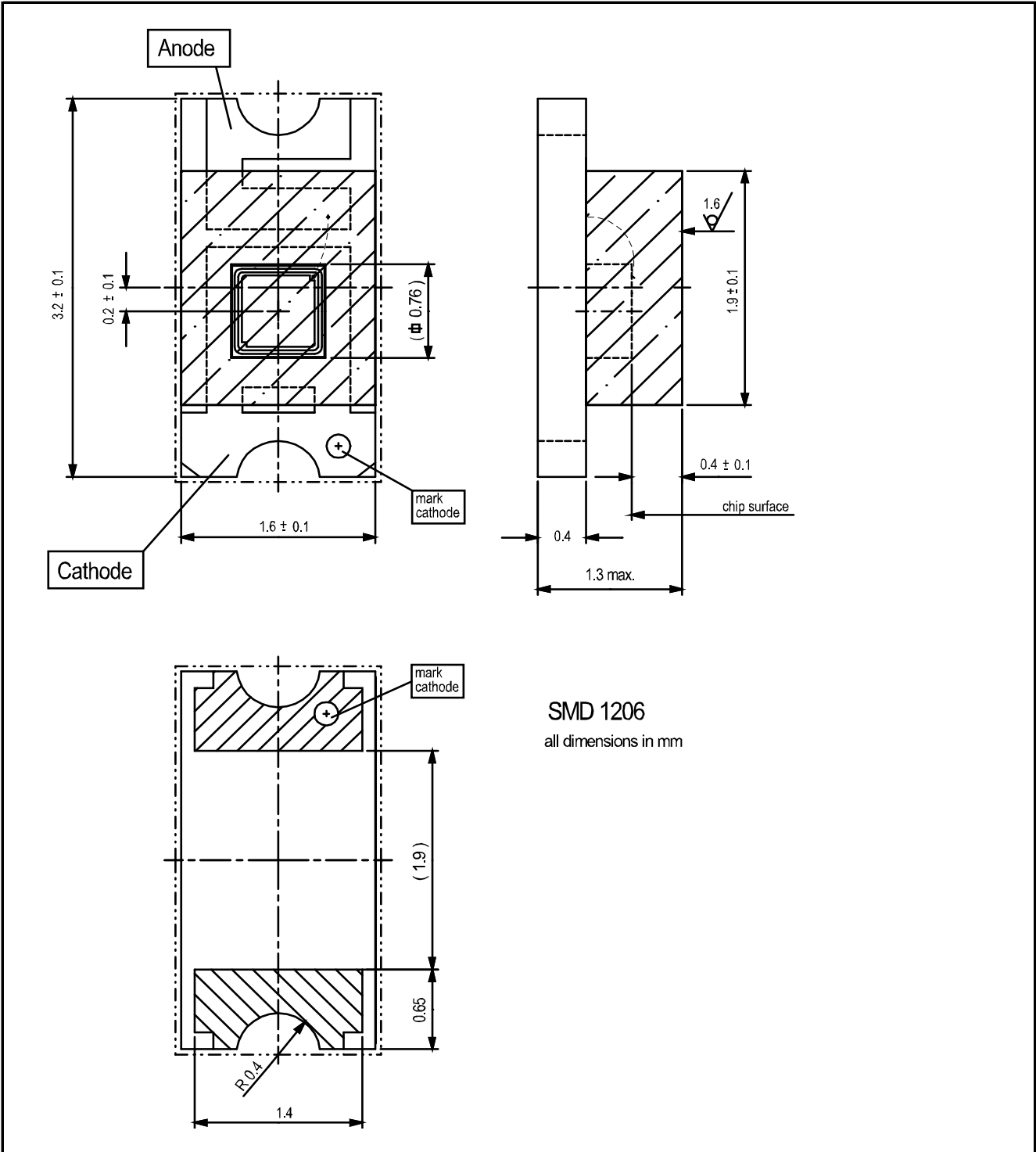
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Technical Drawing, Package: SMD1206



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

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