

### Features

- $\varnothing$  1500  $\mu$ m active area
- High QE for  $\lambda$  = 850-1064 nm
- Low noise
- Low slope multiplication curve

### Description

Circular active area APD chip with IR enhanced sensitivity. Very low dark current due to guard ring diode. Metal can type hermetic TO5i package with clear glass window.

### Application

- Pulsed 1064 nm laser detection
- Laser range finding
- Fluorescence detection

### RoHS

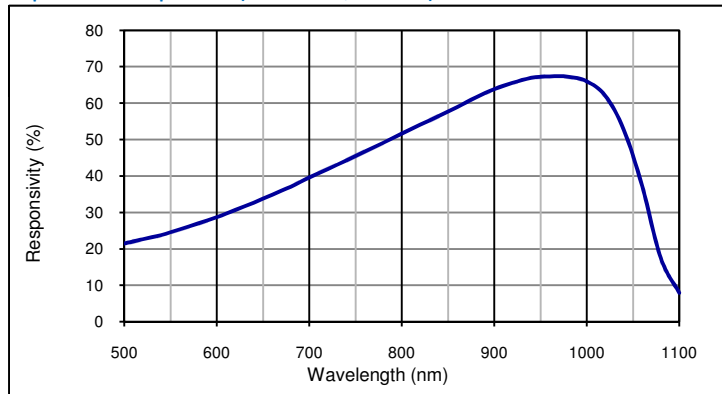
2002/95/EC



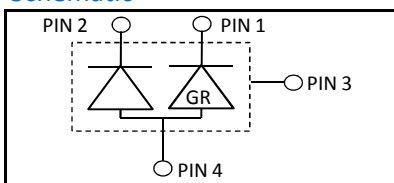
### Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
$T_{STG}$	Storage temp	-55	125	$^{\circ}$ C
$T_{OP}$	Operating temp	-15	70	$^{\circ}$ C
$M_{max}$	Gain ( $I_{PO} = 1$ nA)	1000		
$I_{PEAK}$	Peak DC current		0.25	mA

### Spectral response (M = 100; 22 $^{\circ}$ C)



### Schematic



### Electro-optical characteristics @ 22 $^{\circ}$ C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		$\varnothing$ 1500			$\mu$ m
	Active area		1.77			mm <sup>2</sup>
$I_D$	Dark current	M = 100		7	90	nA
C	Capacitance	M = 100		3		pF
	Responsivity	M = 100; $\lambda$ = 905 nm		65		A/W
	Responsivity	M = 100; $\lambda$ = 1064 nm		36		A/W
$t_R$	Rise time	M = 100; $\lambda$ = 1064 nm; $R_i = 50 \Omega$		5		ns
$t_R$	Cut-off frequency	-3dB		70		MHz
$V_{BR}$	Breakdown voltage	$I_R = 2 \mu$ A	220	300	600	V
	Temperature coefficient			3.3		V/K
	N.E.P.	M = 100; $\lambda$ = 1064 nm		1.5 E-13		W/ $\sqrt$ Hz
	Noise current	M = 100; $\lambda$ = 1064 nm		5.5		pA/ $\sqrt$ Hz

#### European, International Sales:



International AG

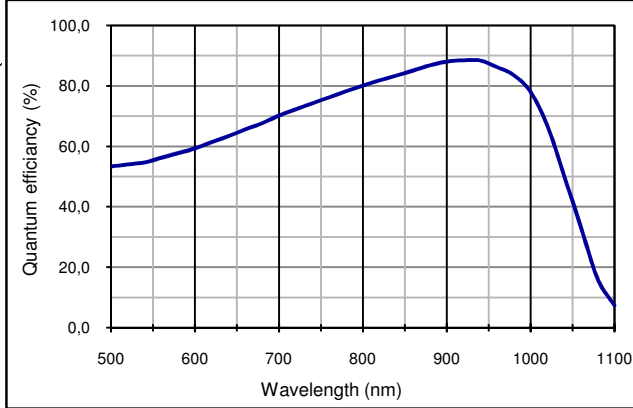
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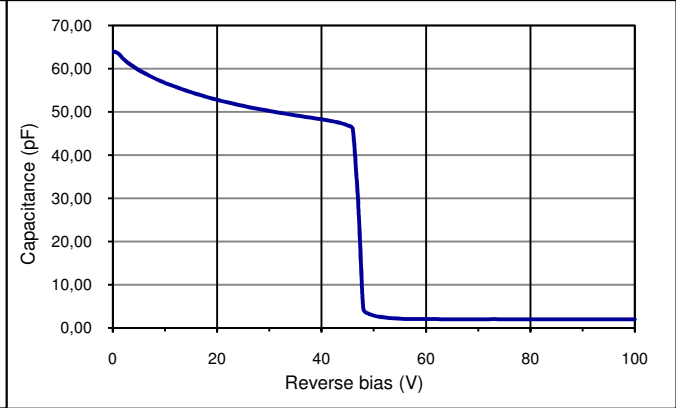


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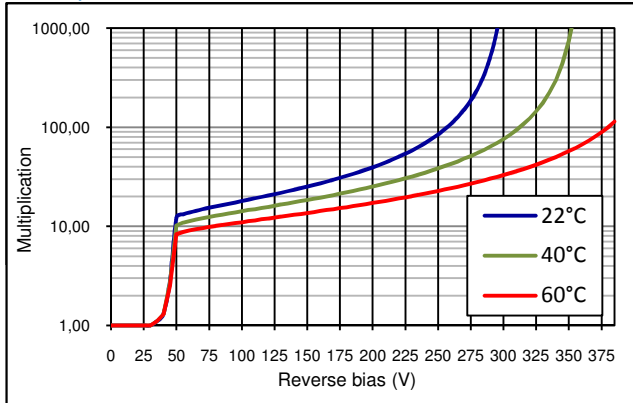
Quantum efficiency (22 °C)



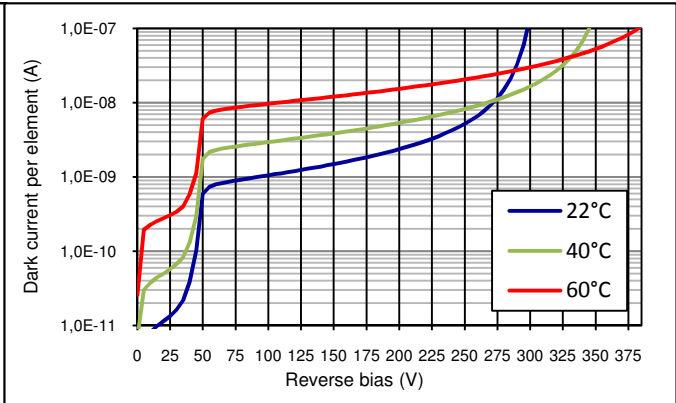
Capacitance as fct of reverse bias (22°C)



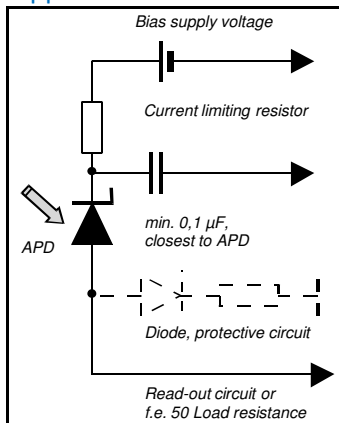
Multiplication as fct of reverse bias



Dark current as fct of reverse bias



Application hints:



- Current should be limited by a protecting resistor or current limiting - IC inside the power supply
- For low light level applications blocking of ambient light should be used
- For high gain applications bias voltage should be temperature compensated
- Please consider basic ESD protection while handling
- Use low noise read-out - IC
- For further questions please refer to document "Instructions for handling and processing"

Package dimension:

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

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

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