

### Features

- $\varnothing$  1900  $\mu\text{m}$  active area
- High QE for  $\lambda = 350\text{-}750\text{ nm}$
- Low noise
- Fast rise time

### Description

Circular active area APD chip with blue enhanced sensitivity. Metal can type hermetic TO5i package with UV glass window.

### Application

- Analytical equipment
- Scintillation
- Medical equipment
- High speed photometry

### RoHS

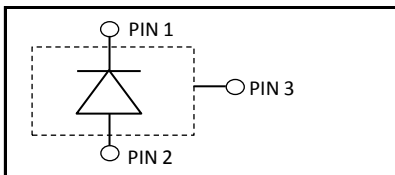
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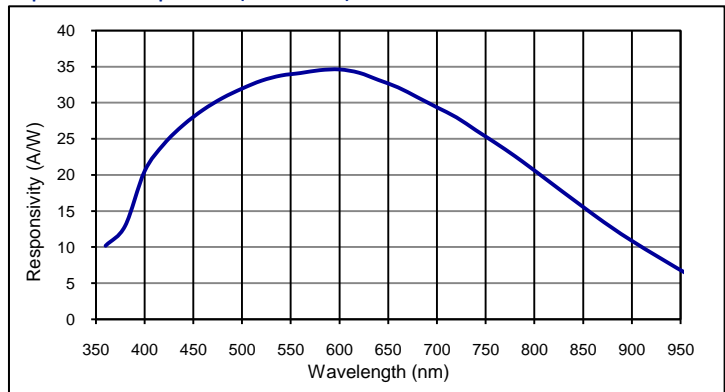
### Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
$T_{STG}$	Storage temp	-55	125	$^{\circ}\text{C}$
$T_{OP}$	Operating temp	-40	85	$^{\circ}\text{C}$
$M_{max}$	Gain ( $I_{PO} = 1\text{ nA}$ )	200		
$I_{PEAK}$	Peak DC current		0.25	mA

### Schematic



### Spectral response (M = 100)



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

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		diameter 1950			$\mu\text{m}$
	Active area		3.0			$\text{mm}^2$
$I_D$	Dark current	M = 100		5.0	20.0	nA
C	Capacitance	M = 100		10		pF
	Responsivity	M = 100; $\lambda = 410\text{ nm}$		22		A/W
	Responsivity	M = 100; $\lambda = 500\text{ nm}$		32		A/W
$t_R$	Rise time	M = 100; $\lambda = 410\text{ nm}$ ; $R_L = 50\ \Omega$		2		ns
	Cut-off frequency	-3dB		175		MHz
$V_{BR}$	Breakdown voltage	$I_R = 2\ \mu\text{A}$ , $V_{BR}$ - binning available	90		240	V
	Temperature coefficient	Change of $V_{BR}$ with temperature		0.88		V/K
	Excess noise factor	M = 100		2.0		
	Excess noise index	M = 100		0.15		

#### European, International Sales:

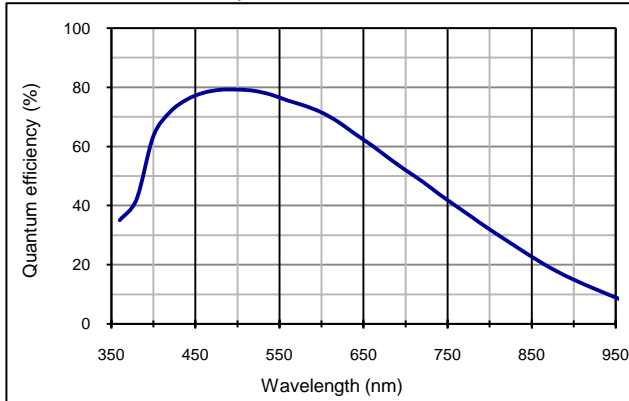
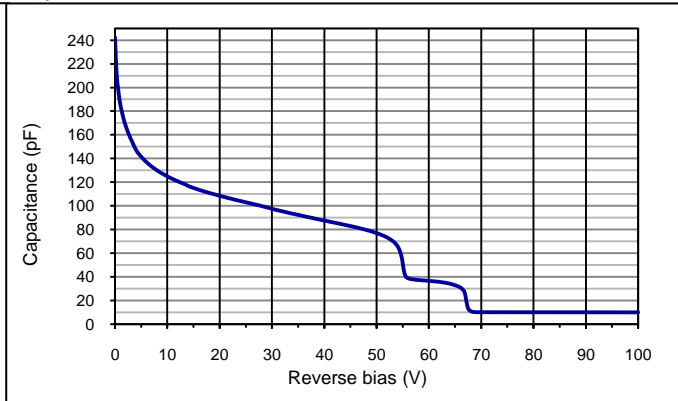
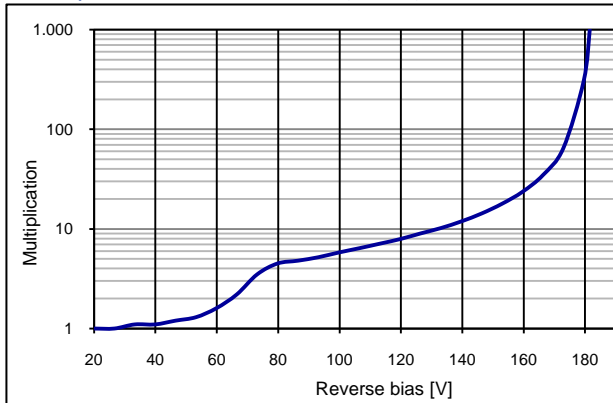
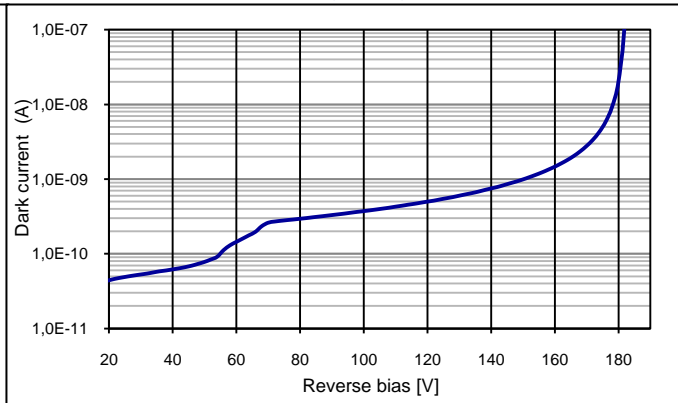
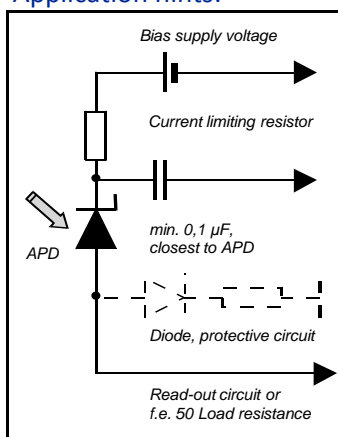


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**Quantum efficiency (23 °C)**

**Capacitance as fct of reverse bias (23 °C)**

**Multiplication as fct of bias (23 °C)**

**Dark current as fct of bias (23 °C)**

**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"
- Optimum gain: 50-80

**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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