

Features

- 20 mm² PIN detector
- BP filter for lowest SNR
- High sensitivity
- High shunt resistance
- Blue-green enhanced

Description

Blue-green enhanced rectangular active area PIN photodiode with 20 mm² active area. Metal can type isolated, hermetic TO5 package with band pass filter.

Application

- Precision photometry
- Analytical instruments
- Medical equipment
- Fluorescence detector

RoHS

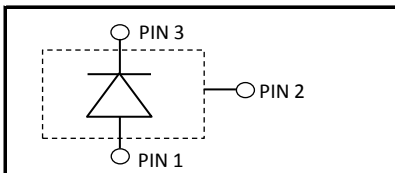
2002/95/EC



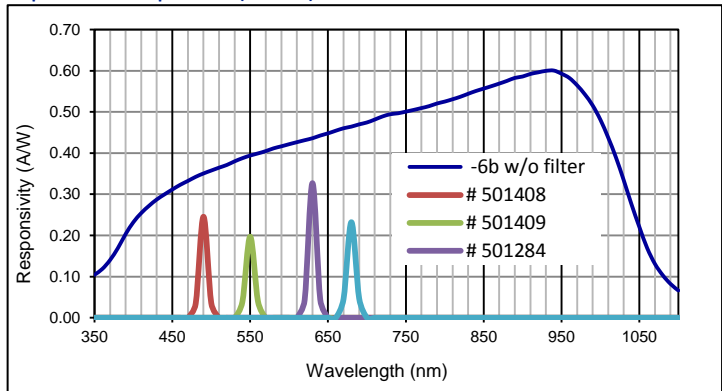
Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T _{STG}	Storage temp	-30	70	°C
T _{OP}	Operating temp	-25	70	°C
V _{max}	Max reverse voltage		50	V
I _{PEAK}	Peak DC current		10	mA

Schematic



Spectral response (23 °C)



Electro-optical characteristics @ 23 °C

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		5030 x 3890			µm
	Active area		20			mm ²
I _D	Dark current	V _R = 5 V		0.35		nA
C	Capacitance	V _R = 0 V		160		pF
		V _R = 5 V		50		pF
	Responsivity	#501408: BP488nm (T=0.7,FWHM 10nm) λ=488nm	0.19			A/W
		#501409: BP550nm (T=0.5,FWHM 10nm) λ=550nm	0.16			A/W
		#501284: BP633nm (T=0.8,FWHM 10nm) λ=633nm	0.26			A/W
		#501410: BP680nm (T=0.5,FWHM 10nm) λ=680nm	0.19			A/W
t _R	Rise time	V _R = 0 V; λ = 410 nm; R _L = 50 Ω		140		ns
		V _R = 5 V; λ = 410 nm; R _L = 50 Ω		70		ns
	Shunt Resistance	V _R = 5 mV	100	200		MΩ
	N.E.P.	V _R = 5 V; λ = 550 nm w/o filter		2.9 E-14		W/√Hz
V _{BR}	Breakdown voltage	I _R = 2 µA	50			V

European, International Sales:



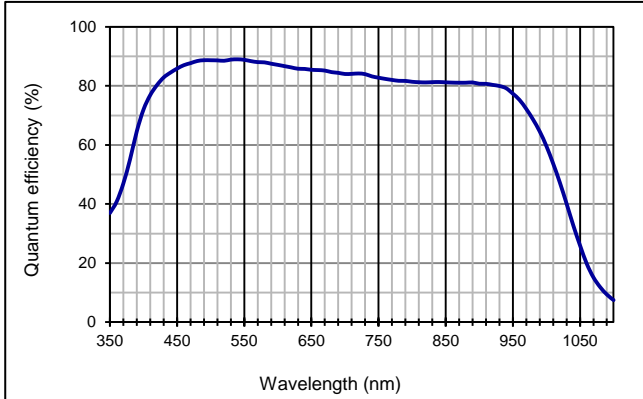
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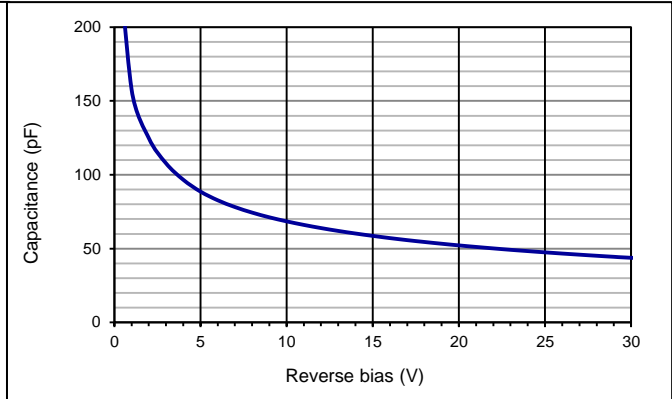


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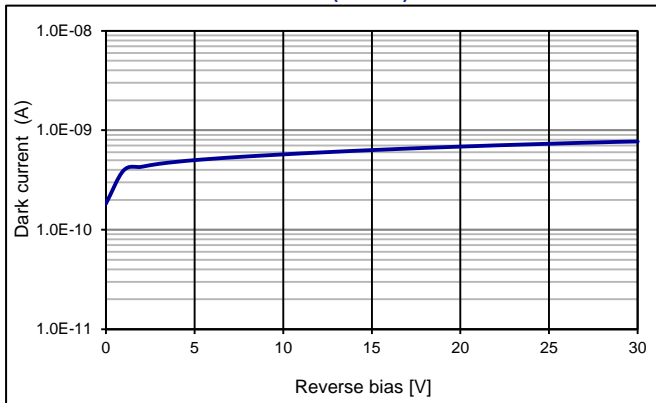
Quantum efficiency without filter (23 °C)



Capacitance as fct of reverse bias (23 °C)



Dark current as fct of bias (23 °C)



Filter options of PR20-6b TO

Order #	Filter	Center wavelength λ_p (nm)	Filter transmission (%)	FWHM (nm)	Min. responsivity @ λ_p (A/W)
501408	band pass	488	70	10	0.19
501409	band pass	550	50	10	0.16
501284	band pass	633	75	10	0.26
501410	band pass	680	50	10	0.19

Package dimension:

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

Handling:

Please refer to document "Instructions for handling and processing"

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

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