
FEATURES

- \varnothing 3.57 mm active area
- Small gap
- Low dark current
- High resolution

DESCRIPTION

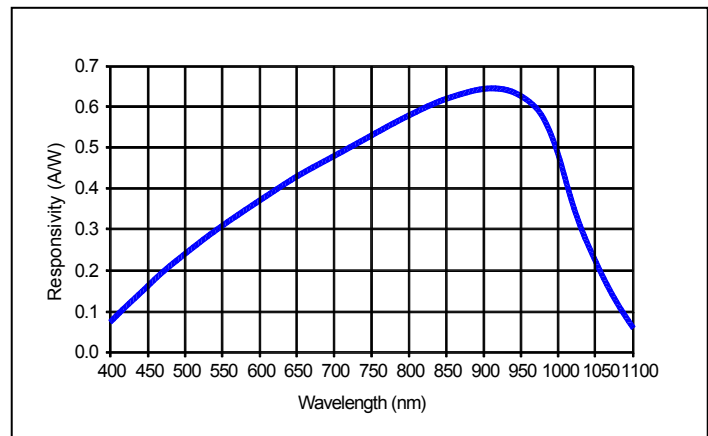
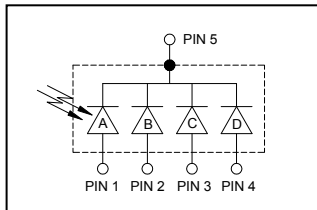
4 X 2.45 mm² Low Dark Current Quadrant Photodiode with P on N construction and 28 μ m gaps. Hermetically packaged in a TO-5 with a low profile clear borosilicate glass window cap.

APPLICATIONS

- Laser beam position sensor
- Autocollimators
- Optical tweezers
- Ellipsometers


ABSOLUTE MAXIMUM RATING

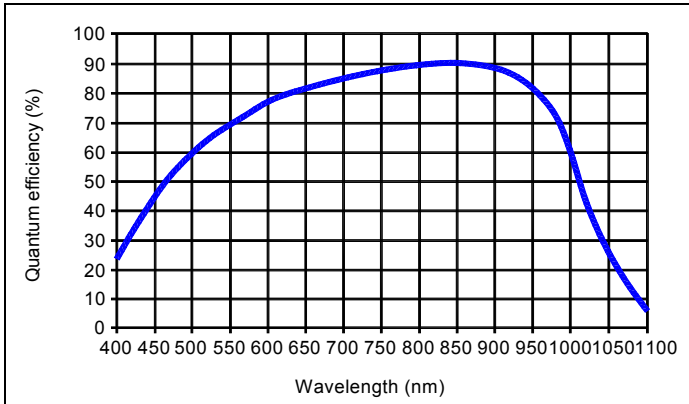
SYMBOL	PARAMETER	MIN	MAX	UNITS
T _{STG}	Storage Temp	-55	+125	°C
T _{OP}	Operating Temp	-40	+100	°C
V _{R(OP)}	Reverse Operating Voltage	-	20	V
I _(PEAK)	Peak DC Current	-	10	mA

SPECTRAL RESPONSE

SCHEMATIC

ELECTRO-OPTICAL CHARACTERISTICS @ 23° C

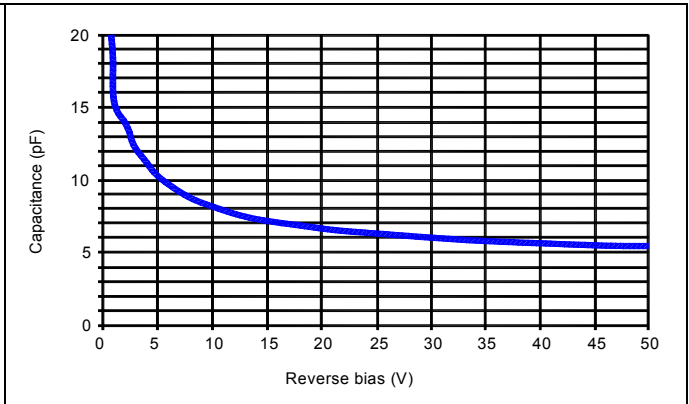
SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
R _{SH}	Shunt Resistance	V _R = \pm 5 mV; per element	---	250	---	M Ω
I _D	Dark Current	V _R = 10 V; per element	---	0.4	---	nA
C	Capacitance	V _R = 0 V; per element	---	30	---	pF
		V _R = 10 V; per element	---	5	---	
	Responsivity	V _R = 0 V; λ = 632 nm	---	0.40	---	A/W
		V _R = 0 V; λ = 900 nm	---	0.64	---	
V _{BR}	Breakdown Voltage	I _R = 2 μ A	20	50	---	V
t _r	Rise Time	V _R = 0 V; λ = 850 nm; R _L = 50 Ω	---	2000	---	ns
		V _R = 10 V; λ = 850 nm; R _L = 50 Ω	---	15	---	
		V _R = 80 V; λ = 850 nm; R _L = 50 Ω	---	7	---	
	NEP	V _R = 5 V; λ = 900 nm; per element	---	1.8 E-14	---	W/ \sqrt Hz
	Uniformity of Sensitivity	V _R = 10 V; λ = 880 nm	---	\pm 1	\pm 2	%

Disclaimer: Due to our policy of continued development, specifications are subject to change without notice.

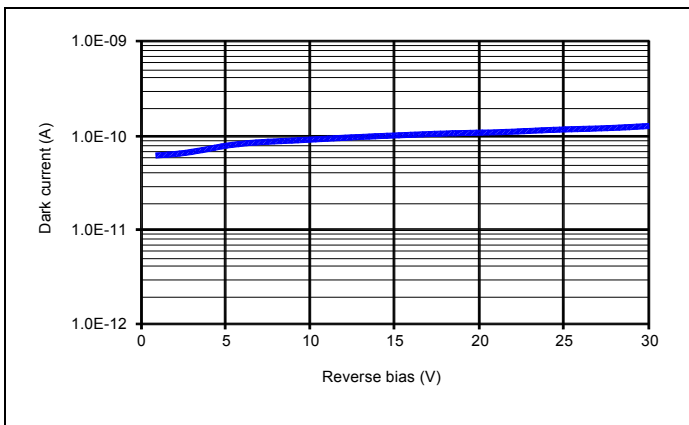
Quantum Efficiency (23 °C)



Capacitance vs. Reverse Bias (23 °C; per element)



Dark Current vs. Reverse Bias (23 °C; per element)



Package Dimension:

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

Handling Precautions:

- Soldering temperature max. 260 °C for 10 seconds. The device must be protected against solder flux vapor.
- Minimum pin length is 2 mm.
- For ESD protection standard precautionary measures are sufficient.
- For further questions please refer to document "Instructions for handling and processing".

USA:

Pacific Silicon Sensor, Inc.
5700 Corsa Avenue, #105
Westlake Village, CA 91362 USA
Phone (818) 706-3400
Fax (818) 889-7053
Email: sales@pacific-sensor.com
www.pacific-sensor.com



International sales:

First Sensor AG
Peter-Behrens-Str. 15
12459 Berlin, Germany
Phone +49 (0) 30 / 63 99 23 99
Fax +49 (0) 30 / 63 99 23 752
Email: sales.opto@first-sensor.de
<http://www.first-sensor.de>