
**FEATURES**

- Ø 1.13 mm active area
- Small gap
- Low dark current
- High resolution

**DESCRIPTION**

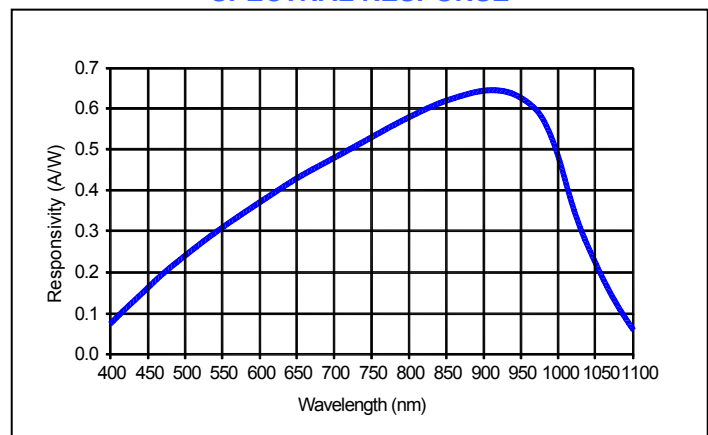
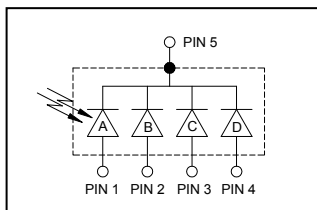
4 X 0.25 mm<sup>2</sup> Low Dark Current Quadrant Photodiode with P on N construction and 16 µm gaps. Hermetically packaged in a TO-52 with a clear borosilicate glass window cap.

**APPLICATIONS**

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


**ABSOLUTE MAXIMUM RATING**

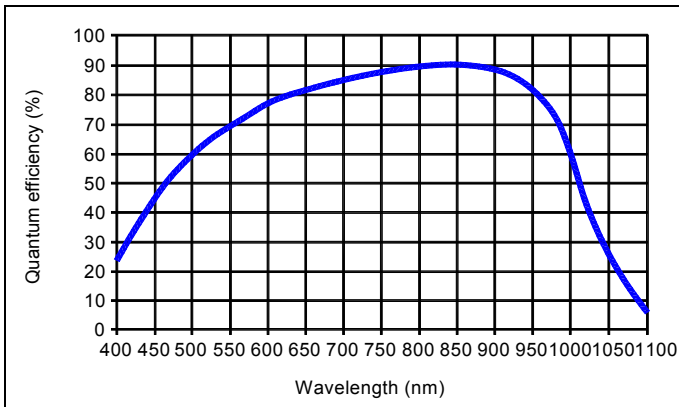
SYMBOL	PARAMETER	MIN	MAX	UNITS
T <sub>STG</sub>	Storage Temp	-55	+125	°C
T <sub>OP</sub>	Operating Temp	-40	+100	°C
V <sub>R(OP)</sub>	Reverse Operating Voltage	-	50	V
I <sub>(PEAK)</sub>	Peak DC Current	-	10	mA

**SPECTRAL RESPONSE**

**SCHEMATIC**

**ELECTRO-OPTICAL CHARACTERISTICS @ 23° C**

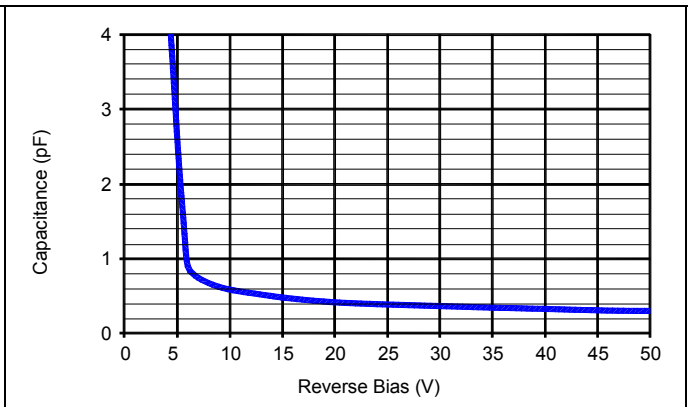
SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
R <sub>SH</sub>	Shunt Resistance	V <sub>R</sub> = ±5 mV; per element	500	1000	---	MΩ
I <sub>D</sub>	Dark Current	V <sub>R</sub> = 10 V; per element	---	0.1	---	nA
C	Capacitance	V <sub>R</sub> = 0 V; per element	---	5	---	pF
		V <sub>R</sub> = 10 V; per element	---	0.75	1.0	
	Responsivity	V <sub>R</sub> = 0 V; λ = 632 nm	---	0.40	---	A/W
		V <sub>R</sub> = 0 V; λ = 900 nm	---	0.64	---	
V <sub>BR</sub>	Breakdown Voltage	I <sub>R</sub> = 2 µA	50	100	---	V
t <sub>r</sub>	Rise Time	V <sub>R</sub> = 0 V; λ = 850 nm; R <sub>L</sub> = 50 Ω	---	2000	---	ns
		V <sub>R</sub> = 10 V; λ = 850 nm; R <sub>L</sub> = 50 Ω	---	10	---	
		V <sub>R</sub> = 80 V; λ = 850 nm; R <sub>L</sub> = 50 Ω	---	5	---	
	NEP	V <sub>R</sub> = 5 V; λ = 900 nm; per element	---	9 E-15	---	W/√Hz
	Uniformity of Sensitivity	V <sub>R</sub> = 10 V; λ = 880 nm	---	±1	±2	%

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

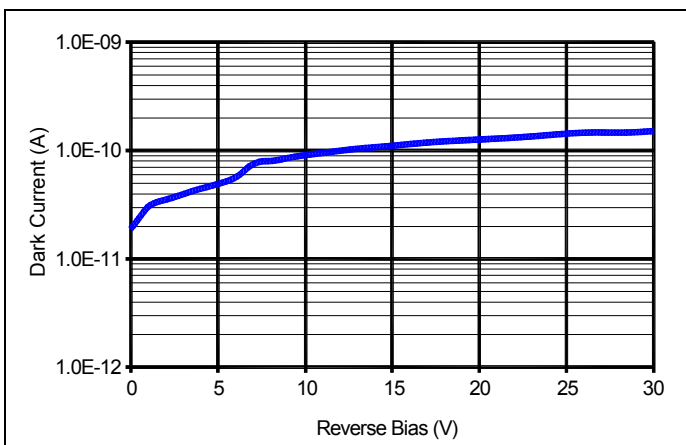
**Quantum Efficiency (23 °C)**



**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".

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