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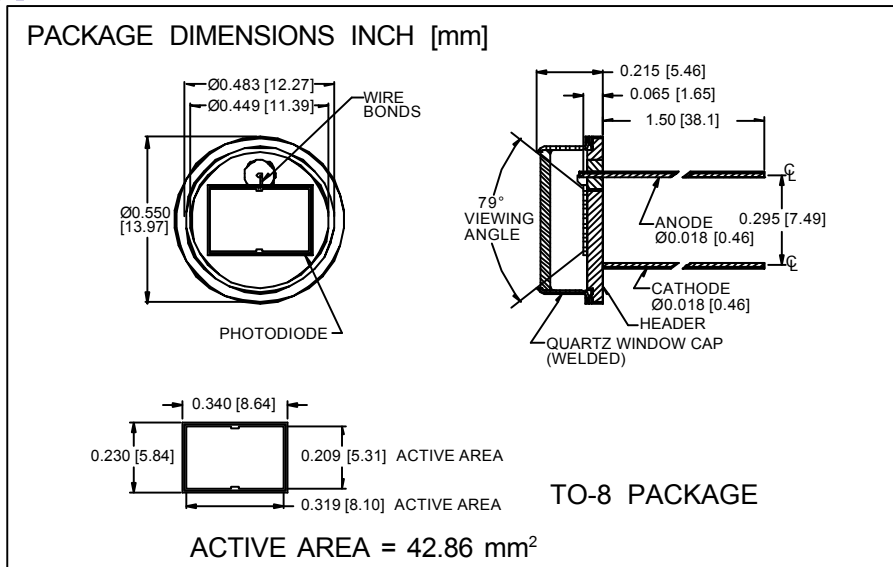
[Advanced Photonix, Inc.](#)
[PDU-V109Q](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photovoltaic Type PDU-V109-Q



FEATURES

- Low noise
- U.V. enhanced
- High shunt resistance
- Quartz window

DESCRIPTION

The **PDU-V109-Q** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a TO-8 metal can with a flat quartz window.

APPLICATIONS

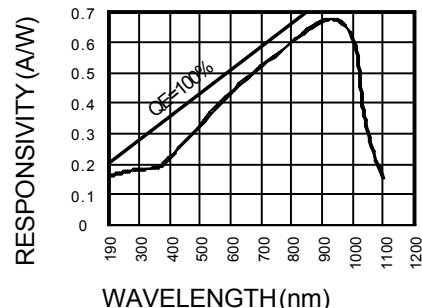
- Spectrometers
- Fluorescent analysers
- U.V. meters
- Colorimeters

ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V _{BR}	Reverse Voltage		75	V
T _{STG}	Storage Temperature	-55	+150	°C
T _O	Operating Temperature Range	-40	+125	°C
T _S	Soldering Temperature*		+240	°C
I _L	Light Current		500	mA

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{SC}	Short Circuit Current	H = 100 fc, 2850 K	405	500		μA
I _D	Dark Current	H = 0, V _R = 10 mV		66	200	pA
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV	50	150		MΩ
TC R _{SH}	R _{SH} Temp. Coefficient	H = 0, V _R = 10 mV		-8		% / °C
C _J	Junction Capacitance	H = 0, V _R = 0 V**		4,500		pF
λ _{range}	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	V _R = 0 V, λ = 254 nm	.12	.18		A/W
V _{BR}	Breakdown Voltage	I = 10 μA	5	10		V
NEP	Noise Equivalent Power	V _R = 10 mV @ Peak		1.0x10 ⁻¹⁴		W/√Hz
tr	Response Time	RL = 1 KΩ V _R = 0 V		1,000		nS

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. **f = 1 MHz

[FORM NO. 100-PDU-V109-Q REV N/C]