

Excellent Integrated System Limited

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[Advanced Photonix, Inc.](#)
[PDB-V109](#)

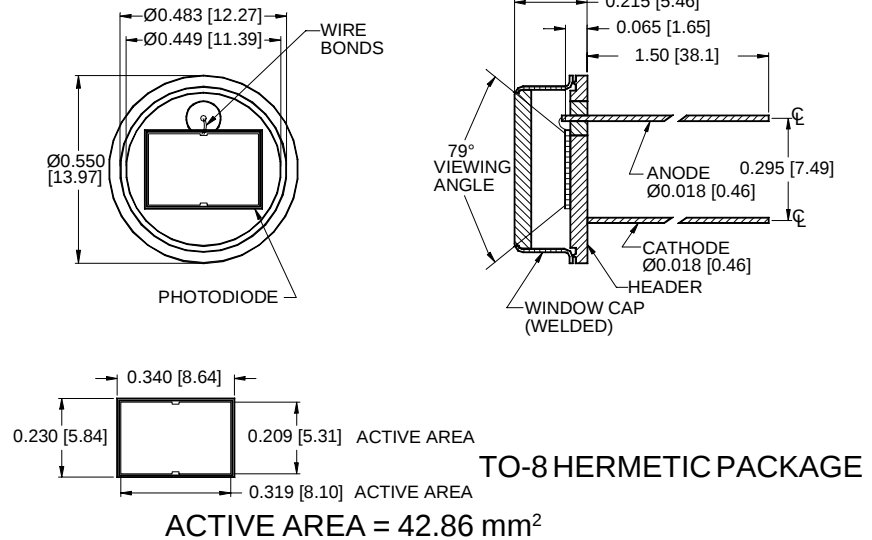
For any questions, you can email us directly:

sales@integrated-circuit.com

Silicon Photodiode, Blue Enhanced Photovoltaic Type PDB-V109



PACKAGE DIMENSIONS INCH [mm]



FEATURES

- Low noise
- Blue enhanced
- High shunt resistance
- High response

DESCRIPTION

The **PDB-V109** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-8 metal can with a flat window.

APPLICATIONS

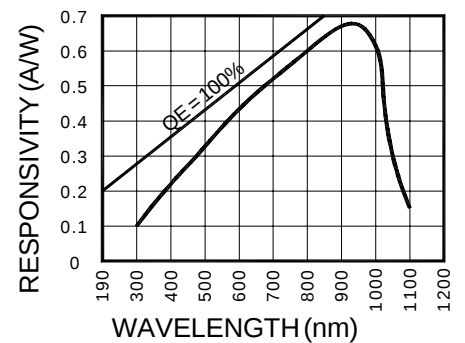
- Instrumentation
- Industrial controls
- Photoelectric switches
- Encoder sensors

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		0.5	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
TCR _{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	350		1100	nm
λ _p	Spectral Response - Peak	Spot Scan		950		nm
V _{BR}	Breakdown Voltage	I = 10 μA	20	30		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