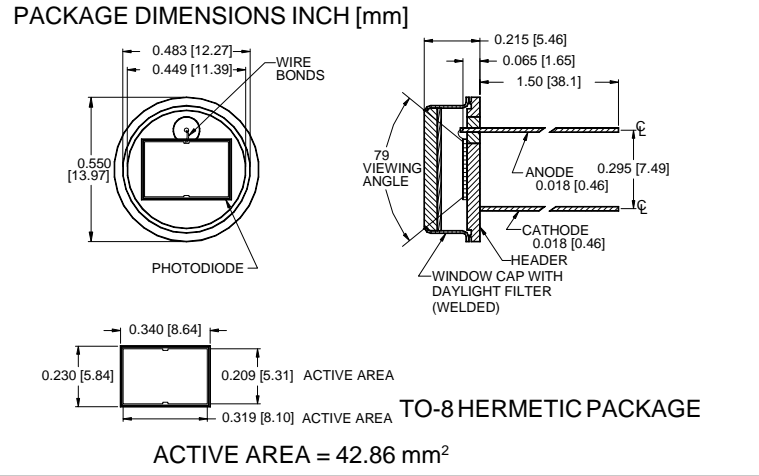


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Blue Enhanced Photovoltaic with daylight filter Type PDB-V109F



### FEATURES

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

### DESCRIPTION

The **PDB-V109F** 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 and a daylight filter.

### APPLICATIONS

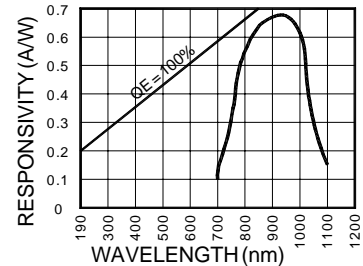
- Instrumentation
- Industrial controls
- Photoelectric switches
- Encoder sensors

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		75	V
T <sub>STG</sub>	Storage Temperature	-55	+150	°C
T <sub>O</sub>	Operating Temperature Range	-40	+125	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C
I <sub>L</sub>	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 <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	405	500		mA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 mV		66	200	pA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	50	150		MΩ
TC <sub>RSH</sub>	R <sub>SH</sub> Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 0 V**		4,500		pF
λ <sub>range</sub>	Spectral Application Range	Spot Scan	350		1100	nm
λ <sub>p</sub>	Spectral Response - Peak	Spot Scan		950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 mA	20	30		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		1.0x10 <sup>-14</sup>		W / √ Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 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-PDB-V109F REV N/C]