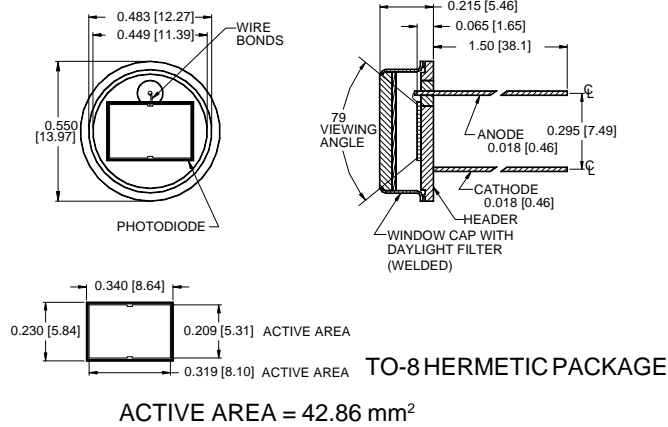


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Blue Enhanced Photoconductive with daylight filter Type PDB-C109F



### PACKAGE DIMENSIONS INCH [mm]



### FEATURES

- High speed
- Low capacitance
- Blue enhanced
- Low dark current

### DESCRIPTION

The **PDB-C109F** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive applications. Packaged in a hermetic TO-8 metal can with a flat window and a daylight filter.

### APPLICATIONS

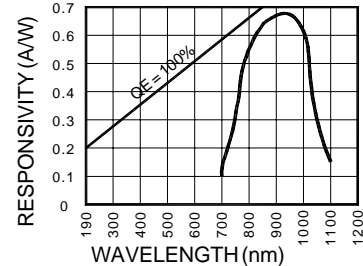
- Instrumentation
- Industrial controls
- Laser detection
- Power meter sensors

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		100	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	450	500		mA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 V		5	15	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	30	100		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> = 10 V**		120		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	30	50		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ Peak		5x10 <sup>-13</sup>		W/ √ Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 50 V		25		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-C109F REV N/C]