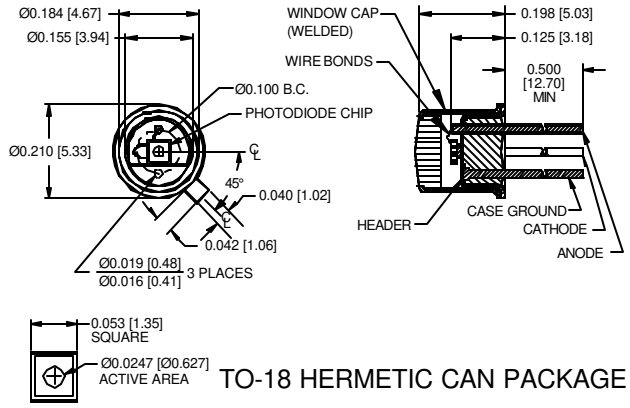
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photovoltaic
Isolated Type PDB-V101-I

PACKAGE DIMENSIONS inch [mm]



TO-18 HERMETIC CAN PACKAGE

ACTIVE AREA = 0.31 mm²

FEATURES

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

DESCRIPTION

The **PDB-V101-I** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-18 metal can with a flat window and isolated ground lead.

APPLICATIONS

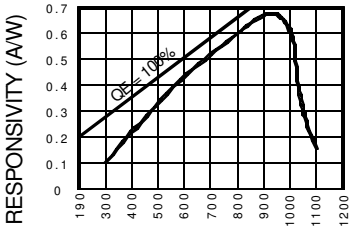
- Instrumentation
- Industrial controls
- Laser detection
- Particle detection

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		.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	4	4.5		mA
I_D	Dark Current	H = 0, V_R = 10 V		20	45	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	1	1.6		GW
TC R_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		115		pF
l range	Spectral Application Range	Spot Scan	350		1100	nm
l p	Spectral Response - Peak	Spot Scan		950		nm
V_{BR}	Breakdown Voltage	I = 10 mA	30	50		V
N E P	Noise Equivalent Power	V_R = 10 mV @ Peak		$2.5x10^{-15}$		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KW V_R = 0 V		450		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