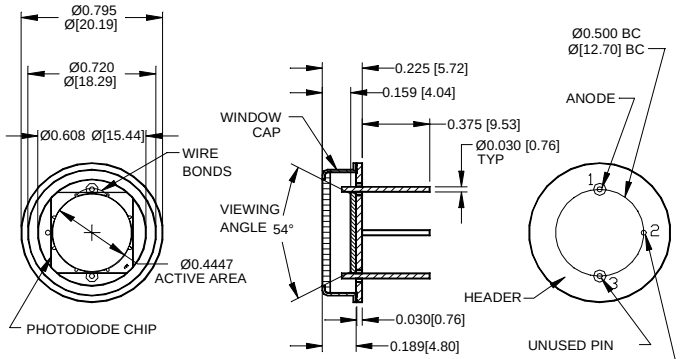
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photovoltaic
Type PDB-V111

PACKAGE DIMENSIONS INCH (mm)



TO-8 .795 INCH (20.19) DIA HERMETIC PACKAGE

ACTIVE AREA = 100.20 mm^2

FEATURES

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

DESCRIPTION

The **PDB-V111** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a low cost TO-8 metal can with a flat window.

APPLICATIONS

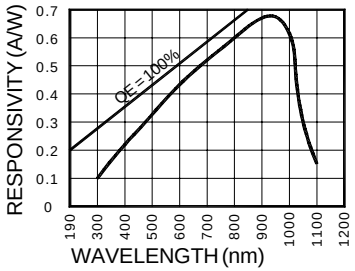
- Instrumentation
- Power meters
- Colorimeters
- Laser power meters

ABSOLUTE MAXIMUM RATING (TA=25^{O}C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		75	V
T_{STG}	Storage Temperature	-55	+150	^{O}C
T_O	Operating Temperature Range	-40	+125	^{O}C
T_S	Soldering Temperature*		+224	^{O}C
I_L	Light Current		0.5	mA

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25^{O}C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	0.9	1.2		mA
I_D	Dark Current	H = 0, V_R = 10 mV		200	335	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	30	50		MΩ
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / ^{O}C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		10,000	12,000	pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λp	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		$2x10^{-14}$		W/ $\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 0 V		2000		nS

 **f = 1 MHz