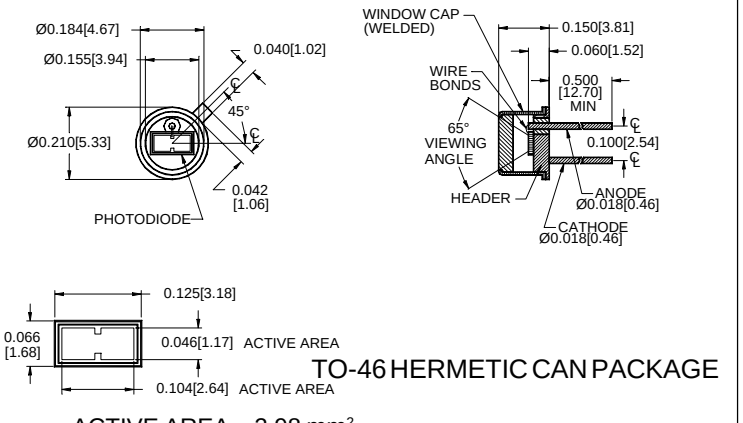
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photovoltaic
Type PDB-V104

PACKAGE DIMENSIONS INCH [mm]



TO-46 HERMETIC CAN PACKAGE

ACTIVE AREA = 2.98 mm^2

FEATURES

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

DESCRIPTION

The **PDB-V104** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-46 metal can with a flat window.

APPLICATIONS

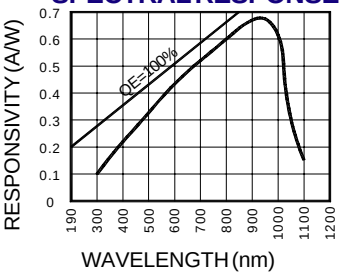
- Instrumentation
- Character recognition
- Laser detection
- Industrial controls

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	35	40		μA
I_D	Dark Current	H = 0, V_R = 10 V		150	300	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	1.0	6		GΩ
TCR_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		340		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	30	50		V
NEP	Noise Equivalent Power	V_R = 10 mV @ Peak		$5x10^{-14}$		W/ $\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 0 V		450		nS

 **f = 1 MHz