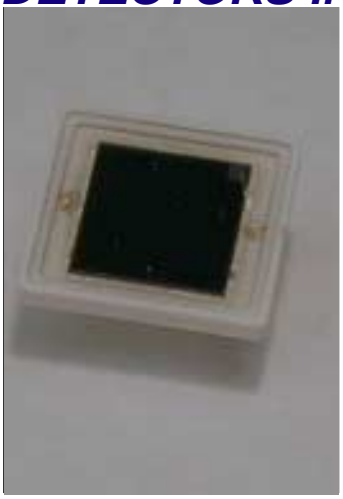
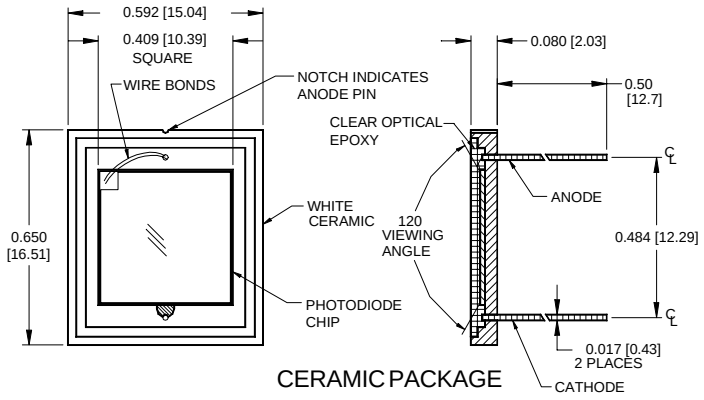
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photoconductive
Type PDB-C110



PACKAGE DIMENSIONS INCH (mm)



CERAMIC PACKAGE

ACTIVE AREA = 100.00 mm^2

FEATURES

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

DESCRIPTION

The **PDB-C110** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive applications. Packaged in low profile ceramic substrate with clear epoxy covering.

APPLICATIONS

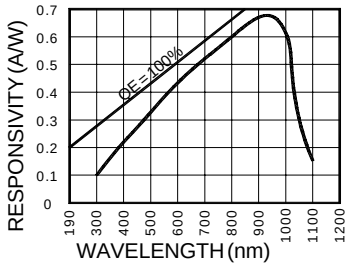
- Scintillation detection
- Optical power meters
- Instrumentation
- Particle detection

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		100	V
T_{STG}	Storage Temperature	-20	+80	°C
T_O	Operating Temperature Range	-20	+60	°C
T_S	Soldering Temperature*		+220	°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	1.0	1.3		mA
I_D	Dark Current	H = 0, V_R = 10 V		10	30	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	15	30		MΩ
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 10 V**		300		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 V @ Peak		$3x10^{-13}$		W/ $\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 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