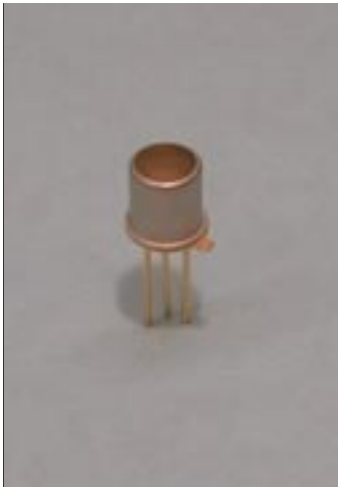
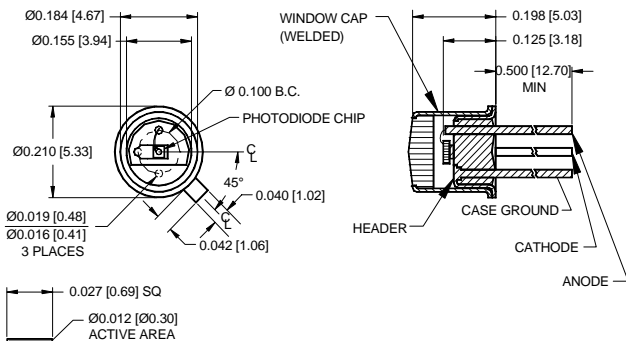


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Blue Enhanced Photoconductive Isolated Type PDB-C120-I



### PACKAGE DIMENSIONS inch [mm]



### TO-18 HERMETIC CAN PACKAGE

ACTIVE AREA =  $0.073 \text{ mm}^2$

### FEATURES

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

### DESCRIPTION

The **PDB-C120-I** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive applications. Packaged in a hermetic TO-18 metal can with a flat window and isolated ground lead.

### APPLICATIONS

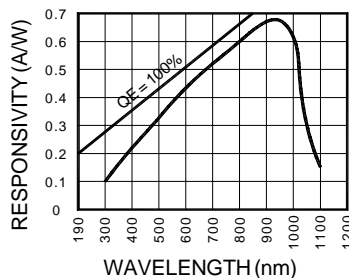
- Fiber optic
- Laser detection
- Light demodulation
- Matched to I.R. LEDs

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
$V_{BR}$	Reverse Voltage		200	V
$T_{STG}$	Storage Temperature	-65	+150	°C
$T_O$	Operating Temperature Range	-55	+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	1.2	1.5		$\mu\text{A}$
$I_D$	Dark Current	H = 0, $V_R = 10 \text{ V}$		0.5	2.0	nA
$R_{SH}$	Shunt Resistance	H = 0, $V_R = 10 \text{ mV}$	400	500		$\text{M}\Omega$
$\text{TCR}_{SH}$	RSH Temp. Coefficient	H = 0, $V_R = 10 \text{ mV}$		-8		% / °C
$C_J$	Junction Capacitance	H = 0, $V_R = 10 \text{ V}^{**}$		1		pF
$\lambda$ range	Spectral Application Range	Spot Scan	350		1100	nm
$\lambda_p$	Spectral Response - Peak	Spot Scan		950		nm
$V_{BR}$	Breakdown Voltage	I = $10 \mu\text{A}$	100	150		V
NEP	Noise Equivalent Power	$V_R = 10 \text{ V}$ @ Peak		$9.0 \times 10^{-15}$		$\text{W}/\sqrt{\text{Hz}}$
tr	Response Time	RL = $1 \text{ K}\Omega$ $V_R = 50 \text{ V}$		1.0		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 = 1MHz

[FORM NO. 100-PDB-C120-I REV N/C]