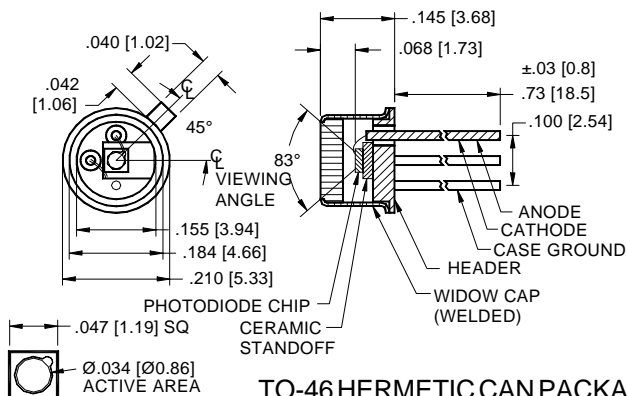


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Blue Enhanced Photoconductive Isolated Type PDB-C100



### PACKAGE DIMENSIONS inch [mm]



### TO-46 HERMETIC CAN PACKAGE

ACTIVE AREA = 0.59 mm<sup>2</sup>

### FEATURES

- High speed
- Low capacitance
- Isolated chip
- Low dark current

### DESCRIPTION

The **PDB-C100** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive & fiberoptic applications. Packaged in a hermetic TO-46 metal can with a flat window and isolated ground lead.

### APPLICATIONS

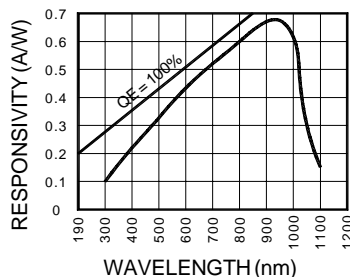
- Fiber optic
- Industrial controls
- Laser detection
- Particle detection

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		100	V
T <sub>STG</sub>	Storage Temperature	-55	+150	°C
T <sub>O</sub>	Operating Temperature Range	-40	+125	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C
I <sub>L</sub>	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 <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	9	11		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 15 V		1.0	2.0	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	.50	5		GΩ
TCR <sub>SH</sub>	RSH Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 15 V**		5	7	pF
λ range	Spectral Application Range	Spot Scan	400		1150	nm
λ <sub>p</sub>	Spectral Response - Peak	Spot Scan		850		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	100	125		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 15 V @ Peak		40x10 <sup>-15</sup>		W/√Hz
tr	Response Time	RL = 50 Ω V <sub>R</sub> = 15 V		3		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-C100 REV N/C]