# PHOTONIC Silicon Photodiode, Blue Enhanced Photoconductive DETECTORS INC. Type PDB-C104L



PACKAGE DIMENSIONS INCH [mm]

#### 0.228 [5.79] Ø0.184 [4.67] 0.150 [3.81] 0.040 [1.02] 0.060 [1.52] Ø0.155 [3.94 Ø0.210 [5.33] 0.100 [2.54] ç LENS CAP (WELDED) 0.042 ANODE Ø0.018 [0.46] [1.06] PHOTODIODE HEADER CATHODE Ø0.018 [0.46] 0.125 [3.18] 0.066 0.046 [1.17] ACTIVE AREA TO-46 HERMETIC CAN PACKAGE 1 0.104 [2.64] ACTIVE ACTIVE AREA = 2.98 mm<sup>2</sup>

#### **FEATURES**

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

## DESCRIPTION

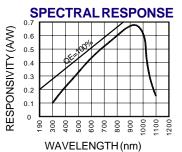
The **PDB-C104L** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive applications. Packaged in a hermetic TO-46 metal can with a glass lens cap.

#### **APPLICATIONS**

- Instrumentation
- Character recognition
- Laser detection
- Fiber optic

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

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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	
Ι	Light Current		0.5	mA	



\*1/16 inch from case for 3 secs max

#### ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TESTCONDITIONS	MIN	TYP	MAX	UNITS
I <sub>sc</sub>	Short Circuit Current	H = 100 fc, 2850 K	85	100		$\mu$ A
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 V		.15	1.0	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	.5	1.0		GΩ
TCR <sub>SH</sub>	RSH Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
C	Junction Capacitance	H = 0, V <sub>R</sub> = 10 V**		10		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λρ	Spectral Response - Peak	Spot Scan		950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	70	100		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ Peak		1.5x10 <sup>-14</sup>		W/ √ Hz
tr	Response Time	$RL = 1 K\Omega V_R = 50 V$		10		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 [FORM NO. 100-PDB-C104L REV N/C]