# PHOTONIC <u>DETECTORS INC.</u>

## Silicon Photodiode, Blue Enhanced Photovoltaic Type PDB-V113

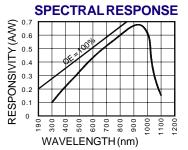


#### PACKAGE DIMENSIONS INCH (mm) RED DOT INDICATES ANODE -0.140 [3.56] MAX 0 070 [1 78] 1.50 [38.1] MIN 0.224 [5.69] WIRE ANODE BONDS PHOTODIODE Ģ 120° VIEWING 0.200 [5.08] Ø0.265 [6.73] ANGLE Lç Ø0.020 [0.51] OPTICAL EPOXY CATHODE CERAMIC 0.125 [3.18] SQUARE 0.113 [2.87] SQ ACTIVE AREA **CERAMIC PACKAGE** ACTIVE AREA = 7.95 mm<sup>2</sup> **APPLICATIONS** DESCRIPTION

- Smoke detector
- Bar code sensor
- Security sensor
- Camera meter

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

SYMBOL	PARAMETER	MIN	MAX	UNITS	
Vbr	Reverse Voltage		75	V	
T <sub>stg</sub>	Storage Temperature	-40	+100	°C	
To	Operating Temperature Range	-40	+90	°C	
Ts	Soldering Temperature*		+240	°C	
Ι	Light Current		0.5	mA	



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

**FEATURES** 

Low noise

Blue enhanced

• High response

High shunt resistance

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

SYMBOL	CHARACTERISTIC	TESTCONDITIONS	MIN	TYP	MAX	UNITS
lsc	Short Circuit Current	H = 100 fc, 2850 K	60	80		$\mu$ A
ΙD	Dark Current	H = 0, V <sub>R</sub> = 10 V		300	500	pА
Rsн	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	100	200		MΩ
TC Rsh	RsH Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
CJ	Junction Capacitance	H = 0, V <sub>R</sub> = 0 V**		800		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λρ	Spectral Response - Peak	Spot Scan		950		nm
Vbr	Breakdown Voltage	I = 10 μA	30	50		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		6x10 <sup>-14</sup>		W/ √ Hz
tr	Response Time	$RL = 1 K\Omega V_R = 0 V$		750		nS

The PDB-V113 is a silicon, PIN planar

for low noise photovoltaic applications.

with a clear epoxy glob top.

diffused, blue enhanced photodiode. Ideal

Packaged on a two lead ceramic substrate

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-V113 REV B]