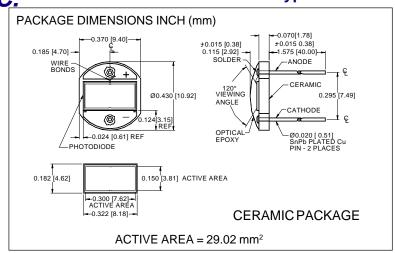
**PHOTONIC** DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photovoltaic Type PDB-V140





### **FEATURES**

- Low noise
- Blue enhanced
- High shunt resistance
- High response

#### DESCRIPTION

The PDB-V140 is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive applications. Packaged on a two lead ceramic substrate with a clear epoxy glob top.

#### **APPLICATIONS**

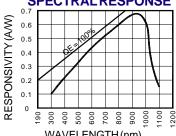
- Bar code scanner
- Instrumentation
- Industrial controls
- Laser detection

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

SYMBOL	PARAMETER	MIN	MAX	UNITS	
V <sub>BR</sub>	Reverse Voltage		75	V	
T <sub>STG</sub>	Storage Temperature	-40	+100	∘C	
То	Operating Temperature Range	-40	+90	∘C	
Ts	Soldering Temperature*		+240	∘C	
IL	Light Current		0.5	mA	

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

### **SPECTRAL RESPONSE**



#### WAVELENGTH (nm)

# 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	300	400		$\mu$ A
I <sub>D</sub>	Dark Current	$H = 0, V_R = 10 V$		2.0	5.0	nA
Rsн	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	50	100		МΩ
TC Rsh	RSH Temp. Coefficient	$H = 0$ , $V_R = 10 \text{ mV}$		-8		%/℃
CJ	Junction Capacitance	H = 0, V <sub>R</sub> = 0 V**		3800		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λр	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		1x10 <sup>-13</sup>		W/ √Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 0 V		925		nS