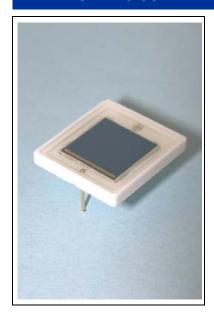
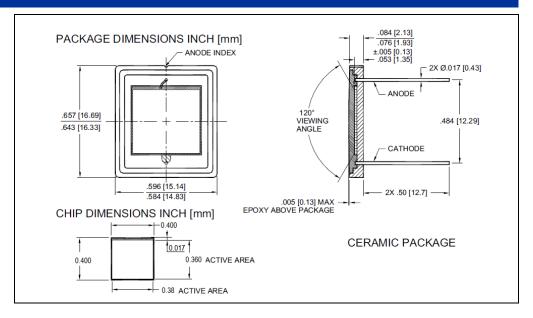


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# **Precision – Control – Results**





#### **DESCRIPTION**

The **PDB-V110** is a blue enhanced PIN silicon photodiode in a photovoltaic mode, packaged in a ceramic package.

#### **FEATURES**

- Low Noise
- Blue Enhanced
- High Shunt Resistance
- High Response

### **RELIABILITY**

This Luna high-reliability device is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test.

Contact Luna for recommendations on specific test conditions and procedures.

### **APPLICATIONS**

- Instrumentation
- Industrial
- Medical

#### **ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN		MAX	UNITS	
Reverse Voltage	-	-	75	V	T <sub>a</sub> = 23°C NON CONDENSING
Storage Temperature	-20	to	+80	°C	-
Operating Temperature	-20	to	+60	°C	-
Soldering Temperature*	-	-	+240	°C	-

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



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# T<sub>a</sub> = 23°C UNLESS OTHERWISE NOTED

# **OPTO-ELECTRICAL PARAMETERS**

PARAMETER	TEST CONDITIONS	MIN	ТҮР	MAX	UNITS
Short Circuit Current	H=100 fc, 2850 K	0.9	1.2	-	μΑ
Dark Current	V <sub>R</sub> = 10 mV	-	200	333	nA
Shunt Resistance	V <sub>R</sub> = 10 mV	30	50	-	MΩ
Junction Capacitance	$V_R = 0V$ , $f = 1$ MHz	-	10	12	nF
Spectral Application Range	Spot Scan	350	-	1100	nm
Responsivity	$\lambda$ = 450nm V, V <sub>R</sub> =0V	0.15	0.17	-	A/W
Breakdown Voltage	Ι = 10 μΑ	20	30	-	V
Noise Equivalent Power	V <sub>R</sub> = 0V@ λ=Peak	-	8x10 <sup>-14</sup>	-	W/ $\sqrt{_{Hz}}$
Response Time**	$RL = 50\Omega, V_R = 0V$	-	190	-	
	$RL = 50\Omega$ , $V_R = 10V$	-	13	-	nS

<sup>\*\*</sup>Response time of 10% to 90% is specified at 660nm wavelength light.

# **TYPICAL PERFORMANCE**

#### SPECTRAL RESPONSE

