



**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	-

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

**OPTO-ELECTRICAL PARAMETERS**

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit Current	H=100 fc, 2850 K	0.9	1.2	-	μA
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 <sub>R</sub> = 0V, f = 1 MHz	-	10	12	nF
Spectral Application Range	Spot Scan	350	-	1100	nm
Responsivity	λ = 450nm V, V <sub>R</sub> = 0V	0.15	0.17	-	A/W
Breakdown Voltage	I = 10 μA	20	30	-	V
Noise Equivalent Power	V <sub>R</sub> = 0V @ λ = Peak	-	8x10 <sup>-14</sup>	-	W/√Hz
Response Time**	RL = 50Ω, V <sub>R</sub> = 0V	-	190	-	nS
	RL = 50Ω, V <sub>R</sub> = 10V	-	13	-	

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

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**

