



DESCRIPTION

The **PDB-C109** is a blue enhanced PIN silicon photodiode in a photoconductive mode, packaged in a TO-8 package.

FEATURES

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

RELIABILITY

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	$T_a = 23^{\circ}\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-55	to	+150	$^{\circ}\text{C}$	-
Operating Temperature	-40	to	+125	$^{\circ}\text{C}$	-
Soldering Temperature*	-	-	+240	$^{\circ}\text{C}$	-

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

OPTO-ELECTRICAL PARAMETERS

$T_a = 23^\circ\text{C}$ UNLESS OTHERWISE NOTED

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit Current	$H=100\text{ fc}$, 2850 K	450	500	-	μA
Dark Current	$V_R = 10\text{V}$	-	5	15	nA
Shunt Resistance	$V_R = 10\text{ mV}$	30	100	-	$\text{M}\Omega$
Junction Capacitance	$V_R = 10\text{V}$, $f = 1\text{ MHz}$	-	120	-	pF
Spectral Application Range	Spot Scan	350	-	1100	nm
Responsivity	$\lambda = 450\text{nm}$, $V_R = 0\text{V}$	0.15	0.17	-	A/W
Breakdown Voltage	$I = 10\text{ }\mu\text{A}$	30	50	-	V
Noise Equivalent Power	$V_R = 0\text{V}$ @ $\lambda = \text{Peak}$	-	5×10^{-13}	-	$\text{W}/\sqrt{\text{Hz}}$
Response Time**	$R_L = 50\Omega$, $V_R = 0\text{V}$	-	190	-	nS
	$R_L = 50\Omega$, $V_R = 10\text{V}$	-	13	-	

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

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

