



DESCRIPTION

The **PDB-C609-2** is a silicon red enhanced solderable photodiode designed for low capacitance and high speed for photoconductive applications.

FEATURES

- Red Enhanced
- Photoconductive
- High quantum efficiency

RELIABILITY

Contact Luna for recommendations on specific test conditions and procedures.

APPLICATIONS

- Optical encoder
- Position Sensor
- Industrial Controls
- Instrumentation

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN		MAX	UNITS	
Reverse Voltage	-	-	75	V	$T_a = 23^{\circ}\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-40	-	125	$^{\circ}\text{C}$	-
Operating Temperature	-40	to	+100	$^{\circ}\text{C}$	-
Soldering Temperature*	-	-	+224	$^{\circ}\text{C}$	-

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

OPTO-ELECTRICAL PARAMETERS

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit Current	$H = 100 \text{ fc}$, 2850 K	490	545	-	μA
Dark Current	$V_R = 5 \text{ V}$	-	30	75	nA
Shunt Resistance	$V_R = 10 \text{ mV}$	3	10	-	$\text{M}\Omega$
Junction Capacitance	$V_R = 5\text{V}$; $f = 1 \text{ MHz}$	-	240	-	$\text{G}\Omega$
Spectral Application Range	Spot Scan	350	-	0.5	nA
Breakdown Voltage	$I = 10 \mu\text{A}$	25	50	-	pF
Noise Equivalent Power	$V_R = 0\text{V}$ @ $\lambda = \text{Peak}$	-	4×10^{-13}	-	$\text{W}/\sqrt{\text{Hz}}$
Response Time**	$R_L = 1\text{K}$, $V_R = 50 \text{ V}$	-	30	-	nS

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

TYPICAL PERFORMANCE

SPECTRAL RESPONSE

