



## DESCRIPTION

The **PDB-C609-3** 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	-	$\mu\text{A}$
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	-	pF
Spectral Application Range	Spot Scan	350	-	1100	nm
Breakdown Voltage	$I = 10 \mu\text{A}$	25	50	-	V
Noise Equivalent Power	$V_R = 10\text{V}$ @ $\lambda = \text{Peak}$	-	$4 \times 10^{-13}$	-	$\text{W}/\sqrt{\text{Hz}}$
Response Time**	$R_L = 1\text{K}$ , $V_R = 5 \text{ V}$	-	30	-	nS

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

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**

