



**DESCRIPTION**

The **PDB-C171SM** is a blue enhanced PIN silicon photodiode ideal for high speed photoconductive or photovoltaic applications assembled in a compact surface mount package. SMD package classified as a sensitivity level 2.

**FEATURES**

- Surface Mount
- Photoconductive
- High Speed
- Low cost

**RELIABILITY**

Contact Luna for recommendations on specific test conditions and procedures.

**APPLICATIONS**

- Photointerrupters
- Oximeter sensors
- Barcode
- Glucometers



**ABSOLUTE MAXIMUM RATINGS**

SYMBOL	MIN	MAX	UNITS	
Reverse Voltage	-	- 60	V	$T_a = 23^{\circ}\text{C}$ UNLESS OTHERWISE NOTED
Storage Temperature	-40	- +80	$^{\circ}\text{C}$	-
Operating Temperature	-40	to +100	$^{\circ}\text{C}$	-
Soldering Temperature	-	- +260	$^{\circ}\text{C}$	-
Wavelength Range	400	- 1050	Nm	
Maximum Power Dissipation	-	- 215	MW	

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

**OPTO-ELECTRICAL PARAMETERS**

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Breakdown Voltage	I <sub>bias</sub> = 10 μA	60	-	-	V
Responsivity	λ = 900 nm	0.60	0.68	-	A/W
Responsivity	λ = 1050 nm	-	0.3	-	A/W
Dark Current	V <sub>bias</sub> = 10V	-	2	30	nA
Capacitance	V <sub>bias</sub> = 3V; f = 1 MHz	-	25	-	pF
Rise Time (1KΩ load)	V <sub>bias</sub> = 10V; λ = 820 nm	-	100	-	ns
Noise Equivalent Power	λ = 950 nm Vr=10V	-	4X10 <sup>-14</sup>	-	W/√Hz

**TYPICAL PERFORMANCE**

**SPECTRAL RESPONSE**

