

Blue Enhanced Photoconductive Silicon Photodiode

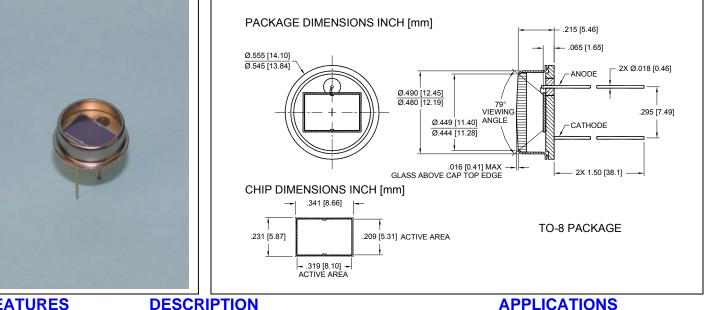
0.70 **(** 0.60 0.50

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0.00

250 300 350 400

450



## **FEATURES**

- Low noise
- Blue enhanced
- High shunt resistance
- High response

# DESCRIPTION

**PDB-C109** 

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

Instrumentation

500 - 550 - 550 - 550 - 550 - 600 - 600 - 600 - 650 - 770 - 770 - 770 - 770 - 770 - 820 - 820 - 820 - 820 - 900 - 900 - 900 - 9100 - 91100 - 1150 - 1

Wavelength (nm)

- Industrial
- Medical

## SPECTRAL RESPONSE

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		75	V
T <sub>STG</sub>	Storage Temperature	-55	+150	°C
To	Operating Temperature	-40	+125	°C
Ts	Soldering Temperature*		+240	°C

**ABSOLUTE MAXIMUM RATING** (TA)= 23°C UNLESS OTHERWISE NOTED

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

#### ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>sc</sub>	Short Circuit Current	H = 100 fc, 2850 K	450	500		μA
I <sub>D</sub>	Dark Current	V <sub>R</sub> = 10V		5	15	nA
R <sub>SH</sub>	Shunt Resistance	V <sub>R</sub> = 10 mV	30	100		MΩ
C」	Junction Capacitance	V <sub>R</sub> =10 V, <i>f</i> = 1 MHz		120		pF
$\lambda$ range	Spectral Application Range	Spot Scan	350		1100	nm
R	Responsivity	$\lambda$ = 450 nm V, V <sub>R</sub> = 0 V	0.15	0.17		A/W
$V_{BR}$	Breakdown Voltage	I = 10 μA	30	50		V
NEP	Noise Equivalent Power	$V_{R}$ = 0V @ $\lambda$ = Peak		5x10 <sup>-13</sup>		W/ $\sqrt{_{\rm Hz}}$
t <sub>r</sub>	Response Time**	RL = 50 Ω, V <sub>R</sub> = 0 V		190		- nS
		RL = 50 Ω,V <sub>R</sub> = 10 V		13		

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

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.

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