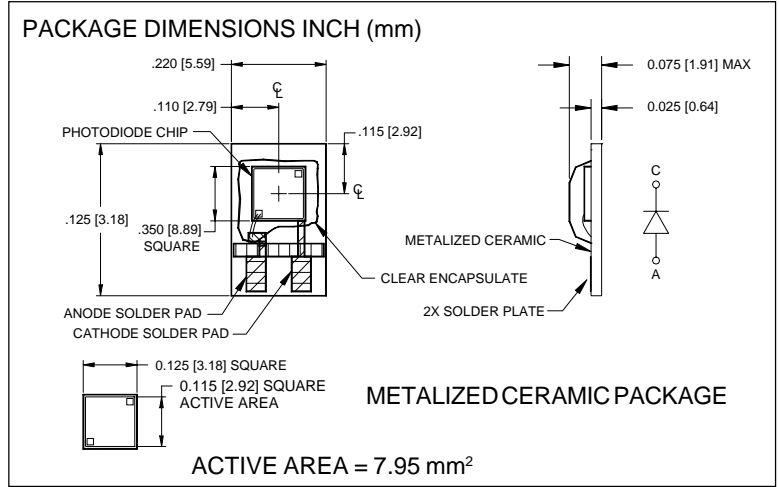


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Blue Enhanced Photoconductive Type PDB-C165



### FEATURES

- High speed
- Specially matched to 660 nm and near IR emitters

### DESCRIPTION

The **PDB-C165** is a silicon, PIN planar diffused, photodiode. Ideal for many OEM pulsed oximeter probe assemblies. Packaged in a metalized ceramic substrate with top side pre-tinned solder contacts.

### APPLICATIONS

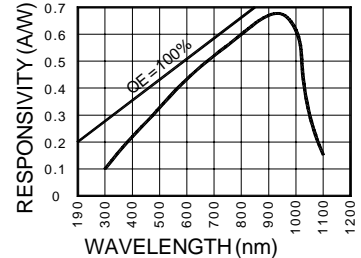
- Pulsed oximetry
- Glucometers
- Pulse meters

### ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		100	V
T <sub>STG</sub>	Storage Temperature	-45	+100	°C
T <sub>O</sub>	Operating Temperature Range	-40	+80	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C
I <sub>L</sub>	Light Current		5.0	mA

\*1/16 inch from case for 3 secs max

### SPECTRAL RESPONSE



### ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>SC</sub>	Short Circuit Current	H = 100 fc, 2850 K	90	110		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 V		1	10	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	100	500		MΩ
TC <sub>RSH</sub>	R <sub>SH</sub> Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 10 V**		60		pF
λ <sub>range</sub>	Spectral Application Range	Spot Scan	350		1100	nm
λ <sub>p</sub>	Spectral Response - Peak	Spot Scan		950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	50	75		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ Peak		9.0x10 <sup>-14</sup>		W/√Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 50 V		100		nS

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. \*\*f = 1 MHz

[FORM NO. 100-PDB-C165 REV AJ]