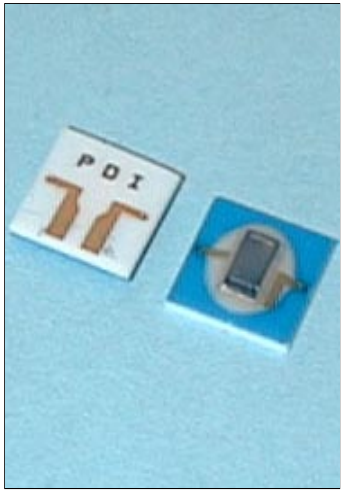
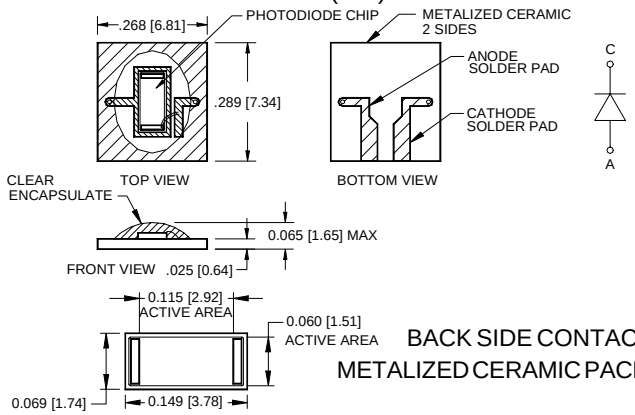
PHOTONIC DETECTORS INC.

Pulsed Oximeter, Silicon Photodiode, Photoconductive

Type PDB-C166



PACKAGE DIMENSIONS INCH (mm)



ACTIVE AREA = 4.41 mm^2

FEATURES

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

DESCRIPTION

The **PDB-C166** is a silicon, PIN planar diffused, photodiode. Ideal for many OEM pulsed oximeter probe assemblies . Packaged in a metalized ceramic substrate with back side anode and cathode contacts.

APPLICATIONS

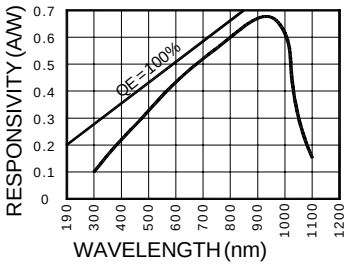
- Pulsed oximetry
- Glucometers
- Pulse meters

ABSOLUTE MAXIMUM RATING (TA=25^{o}C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		100	V
T_{STG}	Storage Temperature	-45	+100	^{o}C
T_O	Operating Temperature Range	-40	+80	^{o}C
T_S	Soldering Temperature*		+240	^{o}C
I_L	Light Current		50.0	mA

*Temperature controlled soldering irons required with low temperature solder. Two second max dwell time.

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25^{o}C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	60	75		μA
I_D	Dark Current	H = 0, V_R = 10 V		1	10	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	50	100		MΩ
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / ^{o}C
C_J	Junction Capacitance	H = 0, V_R = 10 V**		100		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λp	Spectral Response - Peak	Spot Scan		950		nm
V_{BR}	Breakdown Voltage	I = 10 μA	50	75		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		2.0×10^{-14}		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 50 V		15		nS

 ** f = 1 MHz