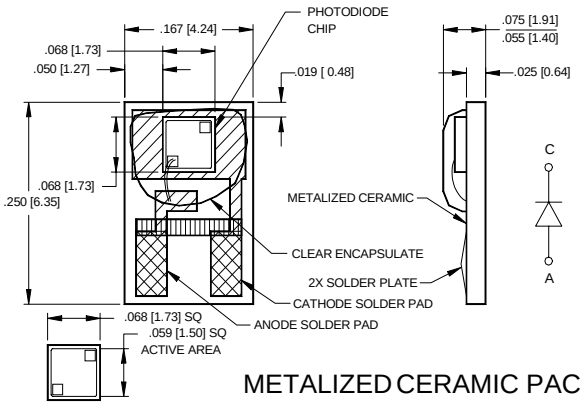
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photoconductive

Type PDB-C163

PACKAGE DIMENSIONS INCH [mm]



METALIZED CERAMIC PACKAGE

ACTIVE AREA = 2.03 mm^2

FEATURES

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

DESCRIPTION

The **PDB-C163** 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

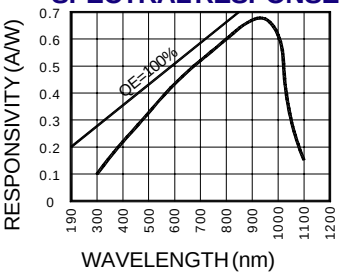
- Pulsed oximetry
- Glucometers
- Pulse meters

ABSOLUTE MAXIMUM RATING (TA=25^{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		5.0	mA

*1/16 inch from case for 3 secs max

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	20	25		μA
I_{D}	Dark Current	H = 0, V_R = 10 V		1.0	10	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	100	500		MΩ
TCR_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / ^{o}C
C_{J}	Junction Capacitance	H = 0, V_R = 10 V**		7		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		$1.0x10^{-14}$		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 50 V		35		nS

 ** f = 1 MHz