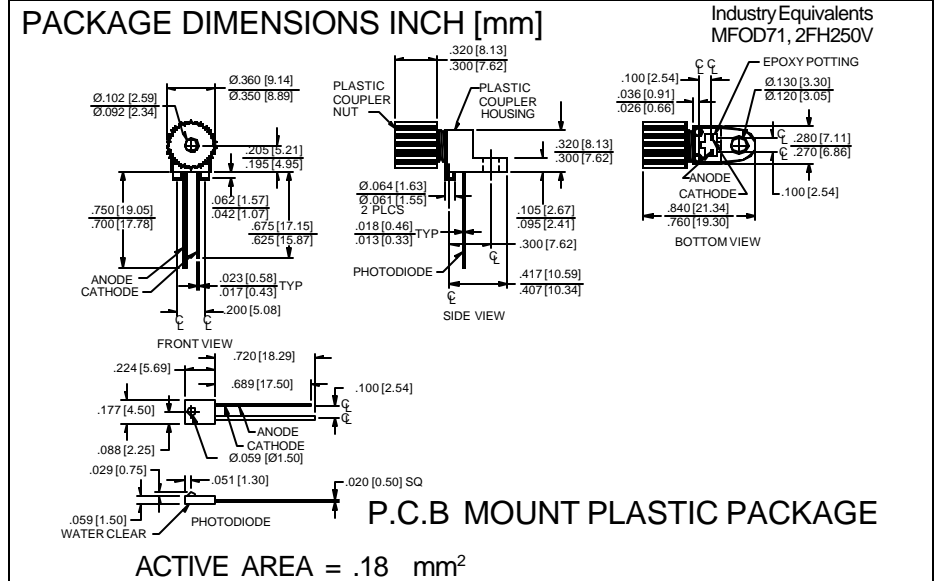


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Photoconductive Fiber Optic Detector Type PDB-C505



### FEATURES

- High speed, 50 Mhz
- Low cost, PCB mount
- Includes connector
- Light tight package

### DESCRIPTION

The **PDB-C505** is a high speed, PIN photodiode packaged in a low cost P.C.B mount plastic housing. Designed to interface with 1000 micron core plastic fiber for short haul fiber optic systems. Ideally matched with **PDI-E521 IR** or **PDR-E526** red emitter.

### APPLICATIONS

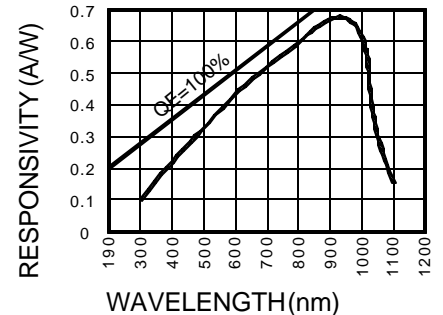
- High isolation interconnects
- Medical electronics
- Consumer electronics
- Microprocessor

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		100	V
P <sub>D</sub>	Total Power Dissipation		200	mW
T <sub>O</sub>	Operating Temperature Range	-40	+80	°C
T <sub>S</sub>	Soldering Temperature*		+260	°C
I <sub>L</sub>	Light Current		500	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 = 1000 lux, 2850 K		10		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 V		.20	20	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	500	1000		MΩ
TC R <sub>SH</sub>	RSH Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-10		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 10 V**		5		pF
λ <sub>range</sub>	Spectral Application Range	Flooded D.C.	400		1100	nm
λ <sub>p</sub>	Spectral Response - Peak	Spot Scan		950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	50	100		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ 850 nm		6x10 <sup>-15</sup>		W/√Hz
t <sub>r</sub>	Response Time	RL = 1 KΩ V <sub>R</sub> = 10 V		6		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-C505 REV A]