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Stocking Distributor

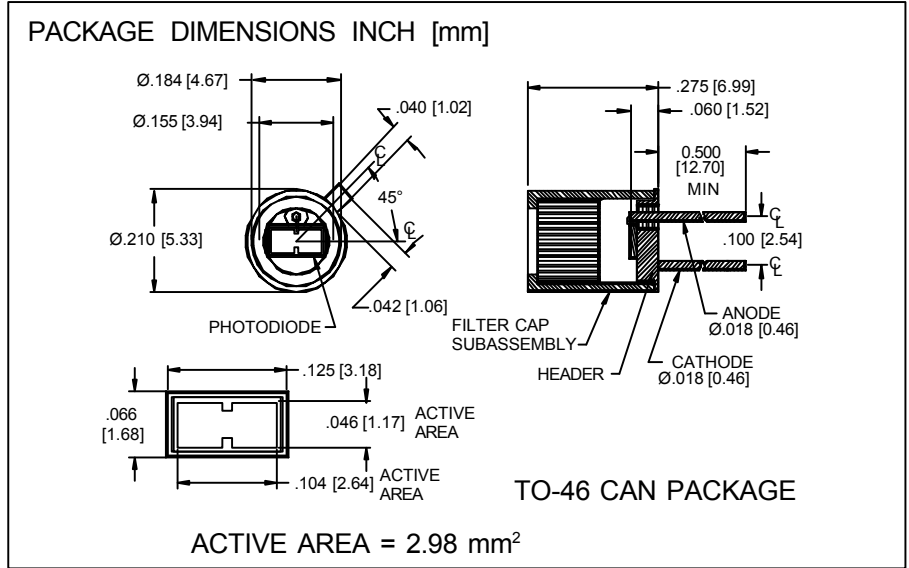
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[Advanced Photonix, Inc.](#)  
[PDB-C440-46B](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# PHOTONIC DETECTORS INC. Silicon Photodiode, Filter Combination Photoconductive (center wavelength 400 nm) Type PDB-C440-46B



## FEATURES

- 400 nm CWL
- 40 nm FWHM
- Large active area

## DESCRIPTION

The **PDB-C440-46B** is a silicon, PIN planar diffused, photodiode with a wide band interference filter. The detector filter combination has a wide 40 nm half bandwidth designed for high speed photoconductive applications. Packaged in a TO-46 metal can.

## APPLICATIONS

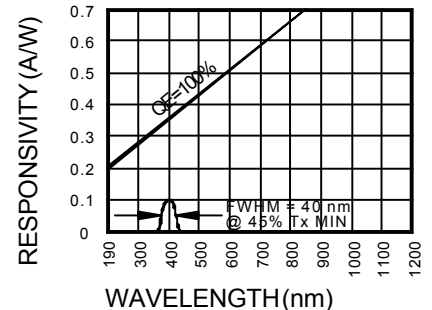
- Spectrophotometry
- Chemistry instrumentation
- Liquid chromatography

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		75	V
T <sub>STG</sub>	Storage Temperature	-20	+85	°C
T <sub>O</sub>	Operating Temperature Range	-15	+70	°C
T <sub>S</sub>	Soldering Temperature*		+240	°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 = 100 fc, 2850 K	40	45		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 V		150	300	pA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	.5	1.0		GΩ
TC R <sub>SH</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> = 0 V**		10		pF
CWL	Center Wavelength	(CWL, λ <sub>0</sub> ) +/- 2 nm		400		nm
HBW	Half Bandwidth	(FWHM)		40		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	70	100		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		1.5x10 <sup>-14</sup>		W/√Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 0 V		10		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, \*\*\*without filter

[FORM NO. 100-PDB-C440-46B REV N/C]