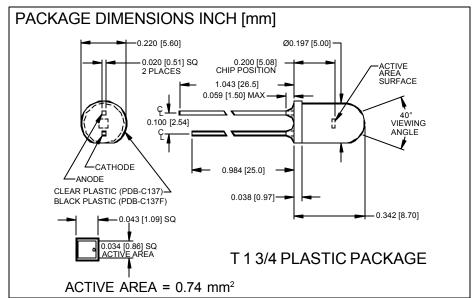
# **PHOTONIC** Silicon Photodiode, Blue Enhanced Photoconductive **DETECTORS INC.** Type PDB-C137, with daylight filter Type PDB-C137F





### **FEATURES**

- Photoconductive
- High speed
- Low cost

**DESCRIPTION:** The **PDB-C137** detector is a 0.74 mm<sup>2</sup> planar pin photodiode packaged in a T 1 3/4, water clear plastic housing. Designed for high speed, low capacitance, photoconductive applications. The **PDB-C137F** includes a daylight filter.

## **APPLICATIONS**

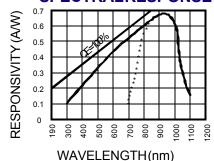
- Smoke detectors
- Light dimmers
- TV & VCR remotes
- · I.R. receivers

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

SYMBOL	PARAMETER	MIN	MAX	UNITS	
V <sub>ER</sub>	Reverse Voltage		50	V	
T <sub>STG</sub>	Storage Temperature	-40	+100	∘C	
T <sub>O</sub>	Operating Temperature Range	-40	+80	⊙C	
T <sub>s</sub>	Soldering Temperature*		+260	∘C	
IL	Light Current		500	mA	

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

### **SPECTRALRESPONSE**



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

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SYMBOL	CHARACTERISTIC 1	TEST CONDITIONS	MIN	TYP	MAX	UNITS
l <sub>sc</sub>	Short Circuit Current	H = 100 fc, 2850 K	28	35		$\mu$ A
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 V		2	10	nA
R <sub>sH</sub>	Shunt Resistance	$H = 0, V_R = 10 \text{ mV}$	500	1000		MΩ
TCR <sub>SH</sub>	RSH Temp. Coefficient	$H = 0, V_R = 10 \text{ mV}$		-8		%/℃
C <sub>J</sub>	Junction Capacitance	$H = 0, V_R = 0 V^*$		4		pF
λrange	Spectral Application Range (	without daylight filter)**	400		1100	nm
λр	Spectral Response - Peak			950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	15	25		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ Peak		1.5x10 <sup>-14</sup>		W/ √ Hz
tr	Response Time	RL = 1 K $\Omega$ V <sub>R</sub> = 10 V		10		nS