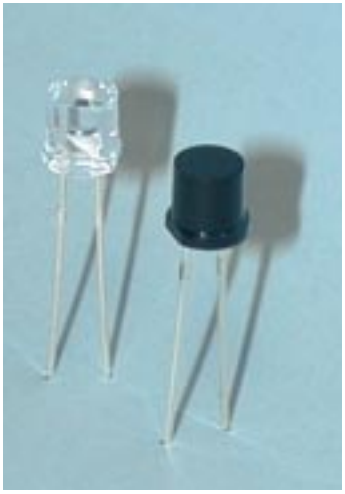
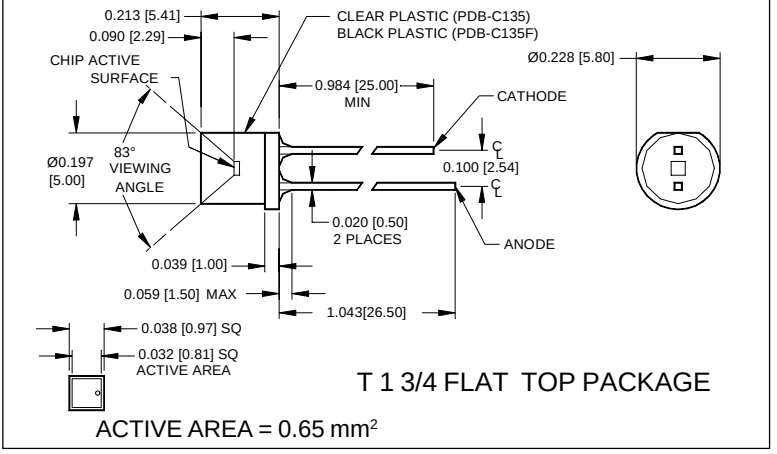
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photoconductive
Type PDB-C135 , with daylight filter Type PDB-C135F



PACKAGE DIMENSIONS INCH [mm]



T 1 3/4 FLAT TOP PACKAGE

ACTIVE AREA = 0.65 mm^2

FEATURES

- Flat top T 1 3/4
- High speed, 1 nS (tr)
- Low cost

DESCRIPTION: The **PDB-C135** detector is a 0.65 mm^2 planar pin photodiode packaged in a T 1 3/4,flat top, water clear plastic housing. Designed for high speed, low capacitance, photoconductive applications. The **PDB-C135F** includes a daylight filter.

APPLICATIONS

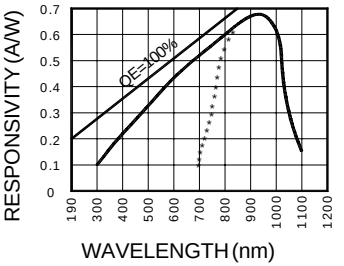
- Smoke detectors
- Light pen detectors
- TV & VCR remotes

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	-40	+100	^{O}C
T_{O}	Operating Temperature Range	-40	+80	^{O}C
T_{S}	Soldering Temperature*		+260	^{O}C
I_{L}	Light Current		0.5	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	8	10		μA
I_{D}	Dark Current	H = 0, V_R = 10 V		2	10	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	.5	5		GΩ
TCR_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / ^{o}C
C_{J}	Junction Capacitance	H = 0, V_R = 10 V*		2	5	pF
λrange	Spectral Application Range	(without daylight filter)**	400		1100	nm
λp	Spectral Response - Peak			950		nm
V_{BR}	Breakdown Voltage	I = 10 μA	50	100		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		$1.5x10^{-13}$		W/ $\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 50 V		5		nS

 *f = 1 MHz, ** daylight filter= 700 - 1100 nm