

FEATURES

- Large active area
- High speed
- Low cost

DESCRIPTION: The **PDB-C138** detector is a 1.55 mm² planar pin photodiode packaged in a T 1 3/4, water clear plastic housing. Designed for high speed, low capacitance, photoconductive applications. The **PDB-C138F** includes a daylight filter.

APPLICATIONS

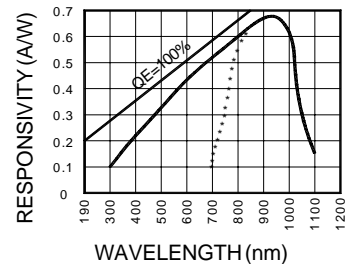
- Smoke detectors
- Light dimmers
- TV & VCR remotes

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V _{BR}	Reverse Voltage		100	V
T _{STG}	Storage Temperature	-40	+100	°C
T _O	Operating Temperature Range	-40	+80	°C
T _S	Soldering Temperature*		+260	°C
I _L	Light Current		0.5	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 _{SC}	Short Circuit Current	H = 100 fc, 2850 K	80	90		μA
I _D	Dark Current	H = 0, V _R = 10 V		2	30	nA
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV	.5	2		GΩ
TCR _{SH}	RSH Temp. Coefficient	H = 0, V _R = 10 mV		-8		% / °C
C _J	Junction Capacitance	H = 0, V _R = 10 V*		6	10	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		1.8x10 ⁻¹³		W/ √Hz
tr	Response Time	RL = 1 KΩ V _R = 50 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, ** daylight filter=700 - 1100 nm