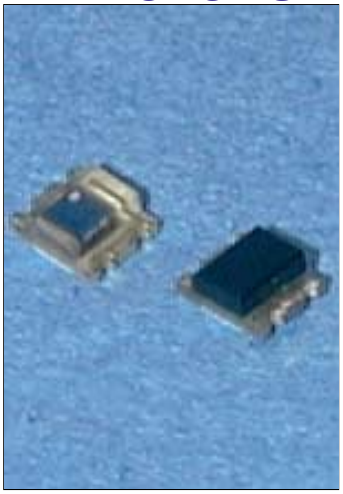
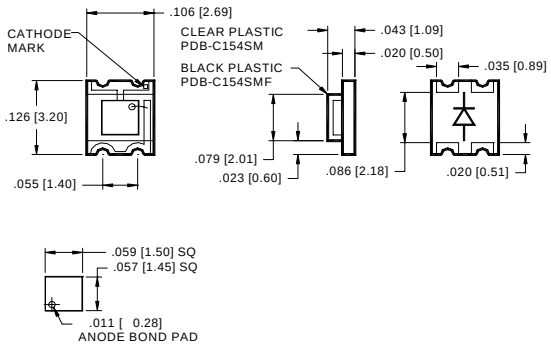
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photoconductive
Type PDB-C154SM, with daylight filter Type PDB-C154SMF



PACKAGE DIMENSIONS INCH [mm]



MINIATURE SURFACE MOUNT PACKAGE

ACTIVE AREA = 2.10 mm^2

FEATURES

- Surface mount
- Low cost
- Tape and reeled
- High speed

DESCRIPTION

The **PDB-C154SM** is a silicon, PIN planar diffused, surface mount photodiode packaged in water clear resin. Ideal for high speed photoconductive operations. The **PDB-C154SMF** includes a daylight filter.

APPLICATIONS

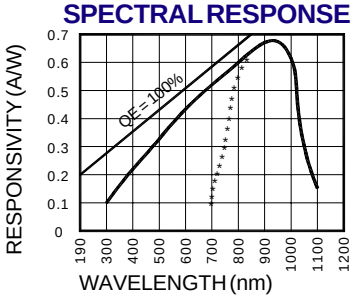
- Floppy disk drives
- Industrial controls
- Opto switches
- Opto counters

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		15	V
T_{STG}	Storage Temperature	-30	+85	°C
T_O	Operating Temperature Range	-25	+85	°C
T_S	Soldering Temperature*		+240	°C
I_L	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_{SC}	Short Circuit Current	H = 100 fc, 2850 K	20	25		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
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 10 V**		4	6	pF
λrange	Spectral Application Range	(without daylight filter)**	400		1100	nm
λp	Spectral Response - Peak	Spot Scan		950		nm
V_{BR}	Breakdown Voltage	I = 10 µA	33	170		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		$1.5x10^{-13}$		$W/\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 10 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, **day light filter = 700 - 1100 nm