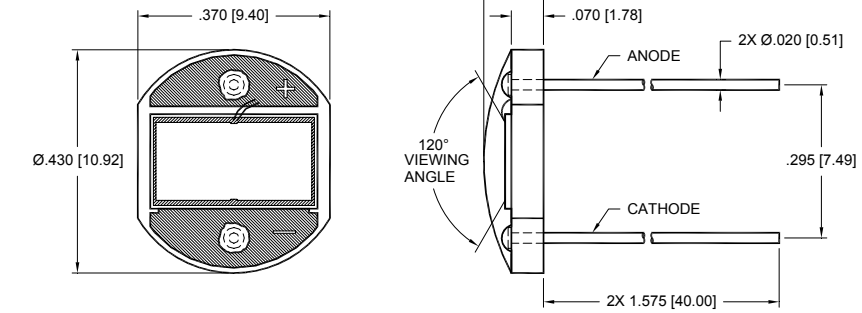
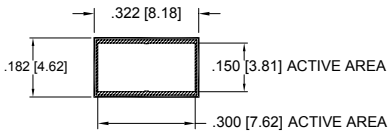
Blue Enhanced Photoconductive Silicon Photodiode

PDB-C140

PACKAGE DIMENSIONS INCH [mm]



CHIP DIMENSIONS INCH [mm]



CERAMIC PACKAGE

FEATURES

- Low noise
- Blue enhanced
- High shunt resistance
- High response

DESCRIPTION

The **PDB-C140** is a blue enhanced PIN silicon photodiode in a photoconductive mode, packaged in a ceramic package.

APPLICATIONS

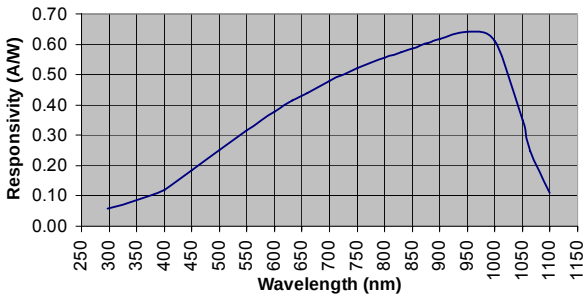
- Instrumentation
- Industrial
- Medical

ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		75	V
T_{STG}	Storage Temperature	-40	+100	°C
T_O	Operating Temperature	-40	+100	°C
T_S	Soldering Temperature*		+240	°C

* 1/16 inch from case for 3 seconds max.

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	300	350		μA
I_D	Dark Current	V_R = 10V		10	25	nA
R_{SH}	Shunt Resistance	V_R = 10 mV	5	50		MΩ
C_J	Junction Capacitance	V_R =10 V, f = 1 MHz		200		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
R	Responsivity	λ= 450 nm V, V_R = 0 V	0.15	0.18		A/W
V_{BR}	Breakdown Voltage	I = 10 μA	50	75		V
NEP	Noise Equivalent Power	V_R =10V @ λ=950nm		$9x10^{-13}$		W/ $\sqrt{}$ Hz
t_r	Response Time**	RL = 50 Ω, V_R = 0 V		190		nS
		RL = 50 Ω, V_R = 10 V		13		

**Response time of 10% to 90% is specified at 660nm wavelength light.

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