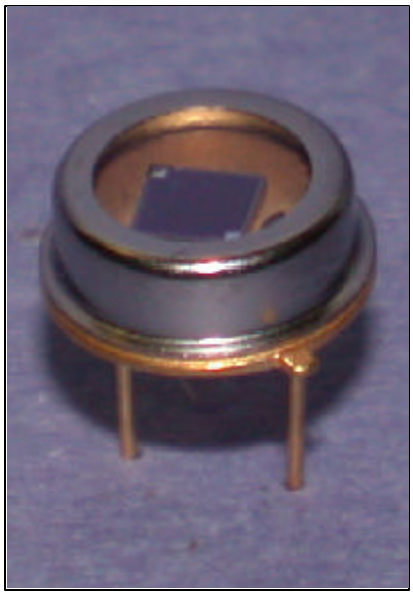
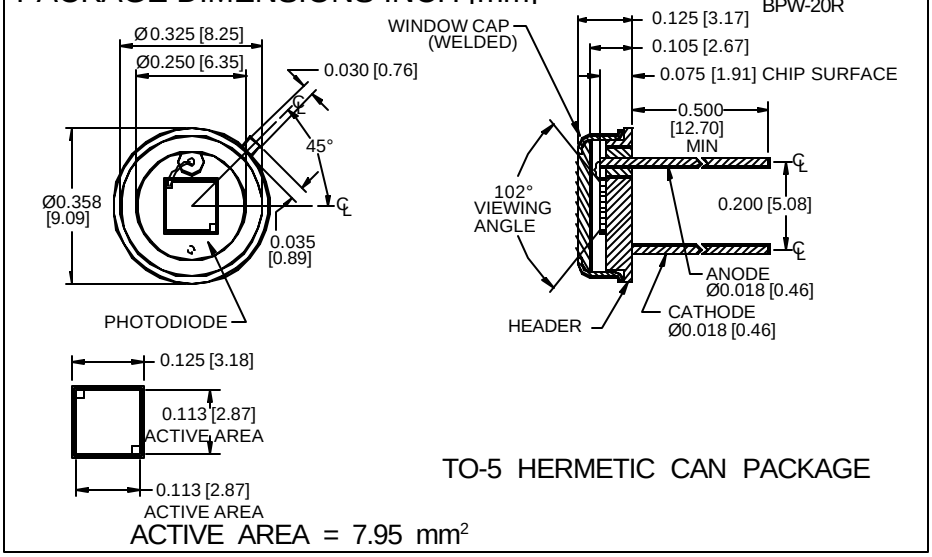
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photoconductive
Low Profile Type PDB-C119-LP



PACKAGE DIMENSIONS INCH [mm]

Industry Equivalent: BPW-20R



TO-5 HERMETIC CAN PACKAGE

ACTIVE AREA = 7.95 mm²

FEATURES

- Blue enhanced
- High speed
- Low profile package
- Low dark current

DESCRIPTION

The **PDB-C119-LP** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for high speed photoconductive & photovoltaic applications. Packaged in a hermetic TO-5 metal can with a low profile glass window cap.

APPLICATIONS

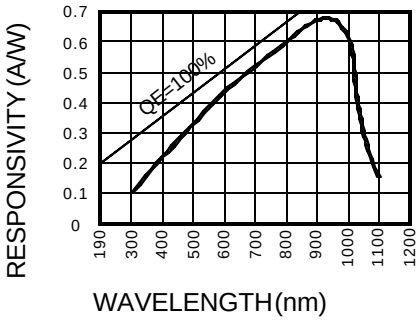
- Light sensor
- NIR sensor
- Laser detection
- Instrumentation

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		100	V
T_{STG}	Storage Temperature	-55	+125	°C
T_O	Operating Temperature Range	-40	+100	°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	90	110		μA
I_D	Dark Current	H = 0, V_R = 10 V		5	20	nA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	150	300		MΩ
TC R_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 10 V**		60	150	pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λp	Spectral Response - Peak	Spot Scan		950		nm
V_{BR}	Breakdown Voltage	I = 10 μA	75	100		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		$5x10^{-14}$		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 10 V		50		nS