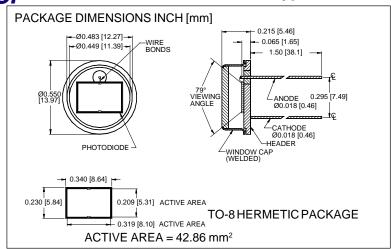
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photovoltaic Type PDB-V109





FEATURES

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

DESCRIPTION

The PDB-V109 is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-8 metal can with a flat window.

APPLICATIONS

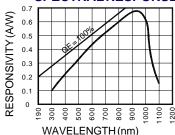
- Instrumentation
- Industrial controls
- Photoelectric switches
- **Encoder sensors**

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V _{BR}	Reverse Voltage		75	V
T _{STG}	Storage Temperature	-55	+150	∘C
To	Operating Temperature Range	-40	+125	∘C
Ts	Soldering Temperature*		+240	∘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	TESTCONDITIONS	MIN	TYP	MAX	UNITS
Isc	Short Circuit Current	H = 100 fc, 2850 K	405	500		μ A
ΙD	Dark Current	$H = 0$, $V_R = 10 \text{ mV}$		66	200	pА
Rsh	Shunt Resistance	H = 0, V _R = 10 mV	50	150		МΩ
TC Rsh	RsH Temp. Coefficient	H = 0, V _R = 10 mV		-8		%/℃
Cı	Junction Capacitance	H = 0, V _R = 0 V**		4,500		pF
λrange	Spectral Application Range	Spot Scan	350		1100	nm
λр	Spectral Response - Peak	Spot Scan		950		nm
VBR	Breakdown Voltage	I = 10 μA	20	30		V
NEP	Noise Equivalent Power	V _R = 10 mV @ Peak		1.0x10 ⁻¹⁴		W/ √Hz
tr	Response Time	RL = 1 KΩ V _R = 0 V		1,000		nS