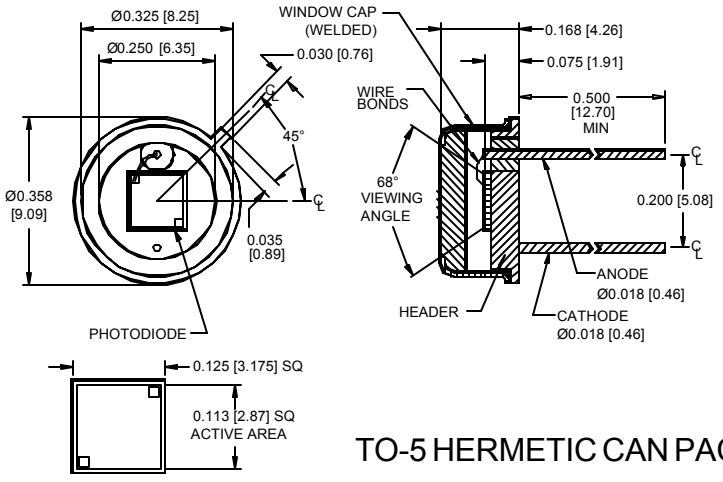
PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photovoltaic

(SFH 291 Industry Equivalent) Type PDU-V119

PACKAGE DIMENSIONS INCH [mm]



TO-5 HERMETIC CAN PACKAGE

ACTIVE AREA = 7.95 mm²

FEATURES

- Low noise
- U.V. enhanced
- High shunt resistance
- U.V. window

DESCRIPTION

The **PDU-V119** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-5 metal can with a flat U.V. transmitting window cap.

APPLICATIONS

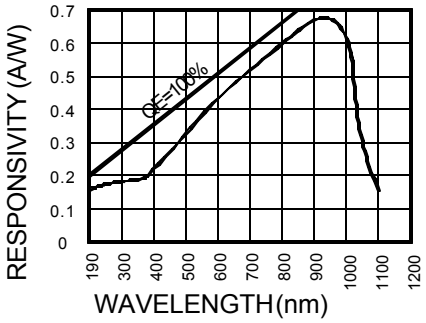
- Spectrometers
- Fluorescent analysers
- U.V. meters
- Colorimeters

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
T_O	Operating Temperature Range	-40	+125	°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	E_c = 0.1 mW/cm², λ = 350 nm	.60	1.0		μA
I_D	Dark Current	H = 0, V_R = 10 mV		10	50	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	.2	1		GΩ
TC R_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		2000		pF
λrange	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	V_R = 0 V, λ = 254 nm	.12	.18		A/W
V_{BR}	Breakdown Voltage	I = 10 μA	5	10		V
NEP	Noise Equivalent Power	V_R = 10 mV @ Peak		$2x10^{-14}$		W/√Hz
tr	Response Time	RL = 1 KΩ V_R = 0 V		900		nS