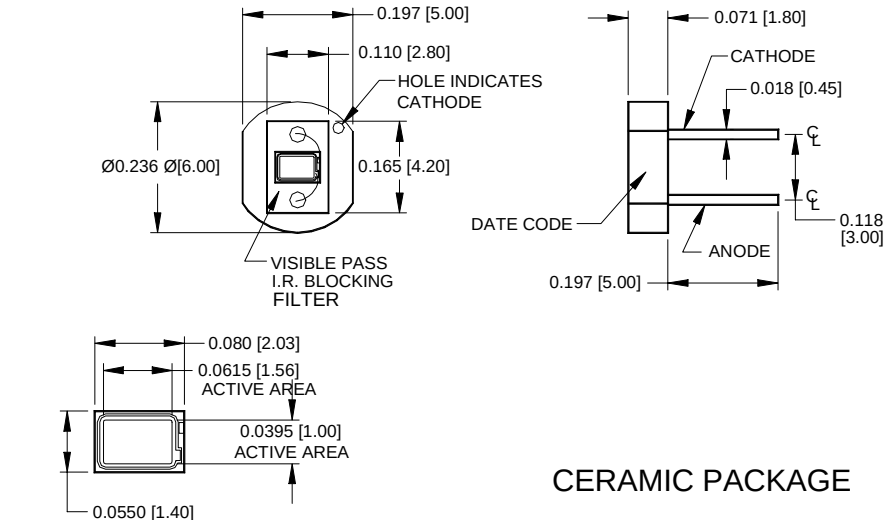
PHOTONIC DETECTORS INC.

Silicon Photodiode, Visible Light Detector
Type PDV-V419

PACKAGE DIMENSIONS INCH [mm]



CERAMIC PACKAGE

ACTIVE AREA = 1.55 mm^2

FEATURES

- Visible response
- Low dark current
- Good linearity
- Low noise

DESCRIPTION

The **PDV-V419** is a silicon PIN photodiode, with a built in visible pass, I.R. blocking optical filter. Housed in a black ceramic package with two leads. Designed for photovoltaic operation with 0 volt bias.

APPLICATIONS

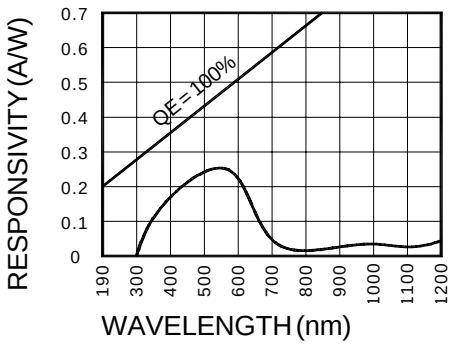
- Camera exposure meter
- Light meters
- Visible detector

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		10	V
T_{STG}	Storage Temperature	-20	+80	°C
T_O	Operating Temperature Range	-20	+60	°C
T_S	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	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	2	2.8		μA
I_D	Dark Current	H = 0, V_R = 10 V		75	150	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	1.5	2.0		GΩ
TC R_{SH}	R_{SH} Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		500	600	pF
λrange	Spectral Application Range	Spot Scan	320		730	nm
λp	Spectral Response - Peak	Spot Scan		560		nm
V_{BR}	Breakdown Voltage	I = 10 μA	10	15		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		$3x10^{-14}$		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 10 V		500		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