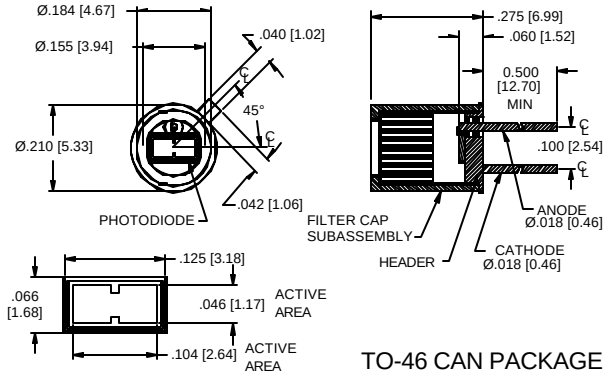
PHOTONIC DETECTORS INC.

Silicon Photodiode, Filter Combination Photovoltaic (center wavelength 680 nm) Type PDR-V468-46

PACKAGE DIMENSIONS INCH [mm]



TO-46 CAN PACKAGE

ACTIVE AREA = 2.98 mm^2

FEATURES

- 680 nm CWL
- 10 nm FWHM
- Large active area

DESCRIPTION

The **PDR-V468-46** is a silicon, PIN planar diffused, photodiode with a narrow band interferance filter. The detector filter combination has a narrow 10 nm half bandwidth designed for low noise photovoltaic applications. Packaged in a TO-46 metal can.

APPLICATIONS

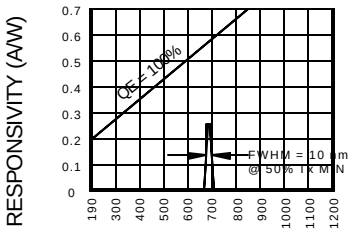
- Spectrophotometry
- Chemistry instrumentation
- Liquid chromatography

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		75	V
T_{STG}	Storage Temperature	-20	+85	°C
T_O	Operating Temperature Range	-15	+70	°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	35	40		μA
I_D	Dark Current	H = 0, V_R = 10 V		150	300	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	1.0	6		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**		340		pF
CWL	Center Wavelength	(CWL, λo) +/- 2 nm		680		nm
HBW	Half Bandwidth	(FWHM)		10		nm
V_{BR}	Breakdown Voltage	I = 10 μA	30	50		V
NEP	Noise Equivalent Power	V_R = 10 mV @ Peak		$5x10^{-14}$		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 0 V		450		nS