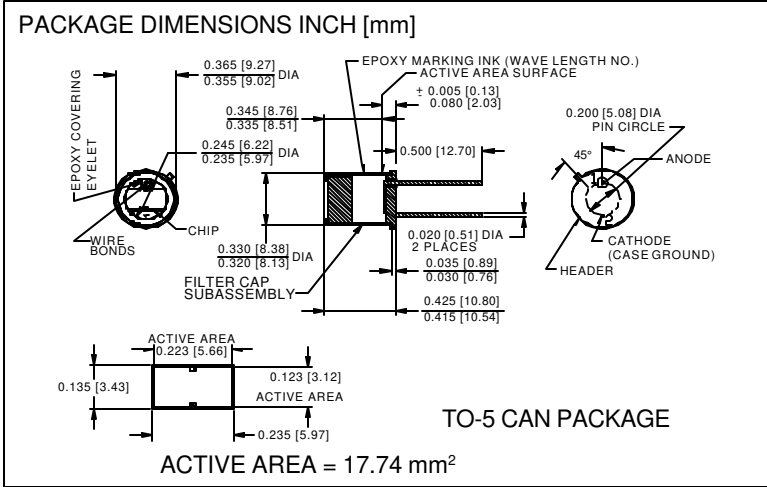


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Filter Combination Photovoltaic (center wavelength 254 nm) Type PDU-V425



### FEATURES

- High transmission
- 10<sup>-4</sup> rejection
- +/- 2nm CWL

### DESCRIPTION

The **PDU-V425** is a silicon, PIN planar diffused, U.V. enhanced photodiode with a narrow bandpass filter. The detector filter combination has a narrow 10 nm half bandwidth designed for low noise photovoltaic applications. Packaged in a TO-5 metal can.

### APPLICATIONS

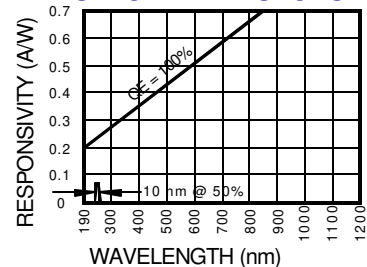
- Spectrophotometry
- Chemistry instrumentation
- Liquid chromatography

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V <sub>BR</sub>	Reverse Voltage		50	V
T <sub>STG</sub>	Storage Temperature	-20	+85	°C
T <sub>O</sub>	Operating Temperature Range	-15	+70	°C
T <sub>S</sub>	Soldering Temperature*		+240	°C
I <sub>L</sub>	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 <sub>SC</sub>	Short Circuit Current***	H = 100 fc, 2850 K	200	230		μA
I <sub>D</sub>	Dark Current	H = 0, V <sub>R</sub> = 10 mV		335	550	nA
R <sub>SH</sub>	Shunt Resistance	H = 0, V <sub>R</sub> = 10 mV	.20	1		GΩ
TC R <sub>SH</sub>	R <sub>SH</sub> Temp. Coefficient	H = 0, V <sub>R</sub> = 10 mV		-8		% / °C
C <sub>J</sub>	Junction Capacitance	H = 0, V <sub>R</sub> = 10 V**		2000		pF
CWL	Center Wavelength	(CWL, λ <sub>0</sub> ) +/- 2 nm		254		nm
HBW	Half Bandwidth	(FWHM)		10		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 μA	30	50		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		2x10 <sup>-14</sup>		W/√Hz
tr	Response Time	RL = 1 KΩ V <sub>R</sub> = 10 V		900		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, \*\*\*without filter

[FORM NO. 100-PDU-V425 REV A]