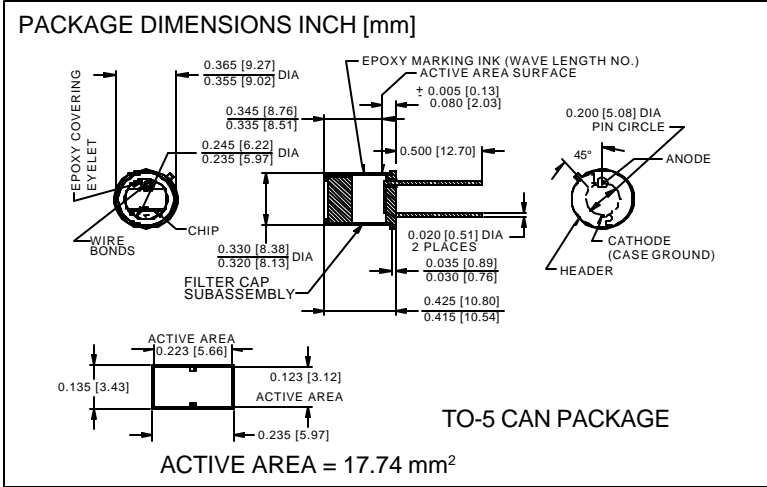


PHOTONIC DETECTORS INC.

Silicon Photodiode, Filter Combination Photovoltaic (center wavelength 900 nm) Type PDI-V490



FEATURES

- High transmission
- 10⁻⁴ rejection
- +/- 2nm CWL
- Match to GaAIAs LED

DESCRIPTION

The **PDI-V490** is a silicon, PIN planar diffused, photodiode with a wide band interference filter. The detector filter combination has a wide 50 nm half bandwidth designed for low noise photovoltaic applications. Packaged in a TO-5 metal can.

APPLICATIONS

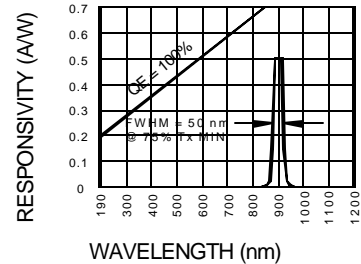
- I.R. sensor
- GaAIAs LED sensor
- Spectrophotometry
- Chemistry instrumentation

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V _{BR}	Reverse Voltage		100	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	150	200		μA
I _D	Dark Current	H = 0, V _R = 10 mV		10	50	pA
R _{SH}	Shunt Resistance	H = 0, V _R = 10 mV	.20	2		GΩ
TC R _{SH}	R _{SH} Temp. Coefficient	H = 0, V _R = 10 mV		-8		% / °C
C _J	Junction Capacitance	H = 0, V _R = 10 V**		1700		pF
CWL	Center Wavelength	(CWL, λ ₀) +/- 2 nm		900		nm
HBW	Half Bandwidth	(FWHM)		50		nm
V _{BR}	Breakdown Voltage	I = 10 μA	50	75		V
NEP	Noise Equivalent Power	V _R = 10 mV @ Peak		9x10 ⁻¹⁵		W/√Hz
tr	Response Time	RL = 1 KΩ V _R = 10 V		1.0		μS

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