

[illegible]

- High transmission
- 10^{-4} rejection
- +/- 2nm CWL
- Match to 880 nm LED

The **PDI-V488** 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.

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V _{BR}	Reverse Voltage		100	V
T _{STG}	Storage Temperature	-20	+85	°C
To	Operating Temperature Range	-15	+70	°C
T _S	Soldering Temperature*		+240	°C
I _L	Light Current		0.5	mA

Figure 1 is a graph showing the responsivity of the device as a function of wavelength. The x-axis represents Wavelength (nm) from 190 to 1200, and the y-axis represents Responsivity (A/W) from 0 to 0.7. A sharp resonance peak is observed at approximately 880 nm with a responsivity of about 0.5 A/W. A linear fit line is shown for the range 190-800 nm with a slope of 1.00% and a width of 50 nm at 73% of the maximum. An inset shows a zoomed-in view of the resonance peak.

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 _o) +/- 2 nm		880		nm
HBW	Half Bandwidth	(FWHM)		50		nm
V _{BR}	Breakdown Voltage	I = 10 μA	50	75		V
N _{EP}	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

[FORM NO. 100-PDI-V488 REV N/C]