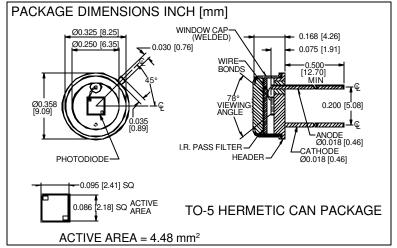
## **PHOTONIC** DETECTORS INC.

## Silicon Photodiode, Near I.R. Photovoltaic Type PDI-V105-F





### **FEATURES**

### Low noise

- Match to I.R. emitters
- Hermetic package

## **DESCRIPTION**

The PDI-V105-F is a silicon, PIN planar • I.R. pass visible rejection diffused photodiode with NIR pass, visible light rejection optical filter. Ideal for low noise photovoltaic NIR applications. Packaged in a hermetic TO-5 metal can with a

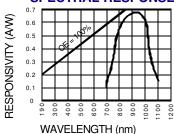
# flat window cap. ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	MAX	UNITS	
V <sub>BR</sub>	Reverse Voltage		100	V	
T <sub>stg</sub>	Storage Temperature	-55	+100	°C	
To	Operating Temperature Range	-40	+80	°C	
Ts	Soldering Temperature*		+240	°C	
I	Light Current		0.5	mA	

## **APPLICATIONS**

- I.R. detector
- I.R. laser detector
- Photo-interrupters
- · Industrial controls

## **SPECTRAL RESPONSE**



## **ELECTRO-OPTICAL CHARACTERISTICS** (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
lsc	Short Circuit Current	H = 100 fc, 2850 K	27	45		mA
ΙD	Dark Current	$H = 0, V_{R} = 10 V$		200	400	pA
Rsh	Shunt Resistance	$H = 0, V_{R} = 10 \text{ mV}$	2	5		GΩ
TC Rsh	RSH Temp. Coefficient	$H = 0, V_{R} = 10 \text{ mV}$		-8		%/°C
Cı	Junction Capacitance	$H = 0, V_{R} = 0 V^{**}$		500		pF
λrange	Spectral Application Range	Spot Scan	700		1100	nm
λр	Spectral Response - Peak	Spot Scan		950		nm
V <sub>BR</sub>	Breakdown Voltage	I = 10 <b>m</b> A	10	50		V
N EP	Noise Equivalent Power	V <sub>R</sub> = 10 mV @ Peak		.5x10 <sup>-14</sup>		W/ <del>V Hz</del>
tr	Response Time	$RL = 1 K\Omega V_R = 0 V$		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