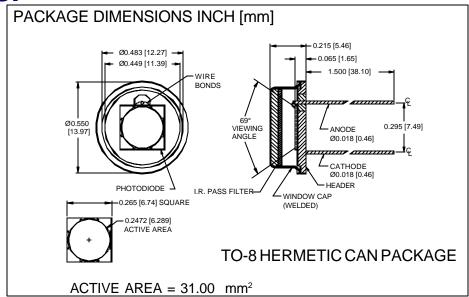
# **PHOTONIC DETECTORS INC.**

# Silicon Photodiode, Near I.R. Photovoltaic Type PDI-V108-F





RESPONSIVITY (A/W)

#### **FEATURES**

#### Low noise

- Match to I.R. emitters
- Hermetic package

#### **DESCRIPTION**

The PDI-V108-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-8 metal can with a flat window cap.

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

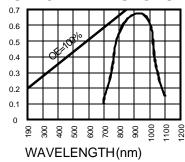
SYMBOL	PARAMETER	MIN	MAX	UNITS
VBR	Reverse Voltage		100	V
T <sub>STG</sub>	Storage Temperature	-55	+100	$\infty$
То	Operating Temperature Range	-40	+80	$\infty$
Ts	Soldering Temperature*		+240	$\infty$
IL	Light Current		500	mA

<sup>\*1/16</sup> inch from case for 3 secs max

### **APPLICATIONS**

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

#### **SPECTRALRESPONSE**



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Isc	Short Circuit Current	H = 100 fc, 2850 K	338	387		<b>m</b> A
ΙD	Dark Current	$H = 0, V_R = 10 V$		250	800	рА
RsH	Shunt Resistance	$H = 0, V_R = 10 \text{ mV}$	.2	1		GΩ
TC Rsh	RSH Temp. Coefficient	$H = 0, V_R = 10 \text{ mV}$		-8		%/℃
Сл	Junction Capacitance	$H = 0, V_R = 0 V^{**}$		2500		рF
λrange	Spectral Application Range	Spot Scan	700		1100	nm
λр	Spectral Response - Peak	Spot Scan		950		nm
VBR	Breakdown Voltage	I = 10 <b>m</b> A	30	40		V
NEP	Noise Equivalent Power	VR = 10 mV @ Peak		5x10 <sup>-14</sup>		W/√ <sub>Hz</sub>
tr	Response Time	$RL = 1 K\Omega V_R = 0 V$		950		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 [FORM NO. 100-PDI-V108-F REV A]