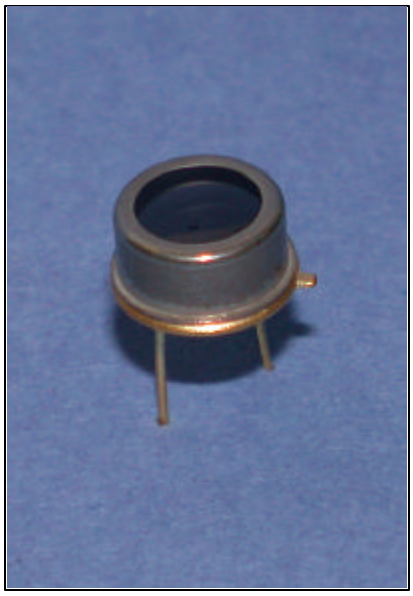
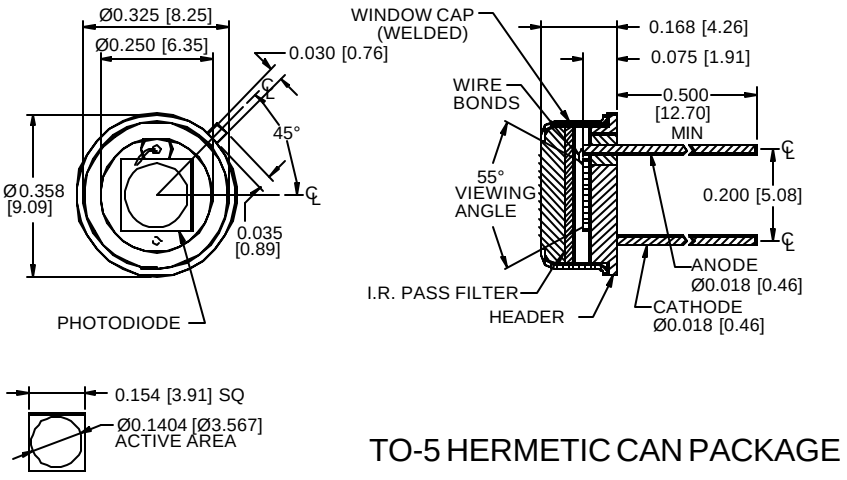
PHOTONIC DETECTORS INC.

Silicon Photodiode, Near I.R. Photovoltaic
Type PDI-V106-F



PACKAGE DIMENSIONS INCH [mm]



TO-5 HERMETIC CAN PACKAGE

ACTIVE AREA = 10.00 mm²

FEATURES

- Low noise
- I.R. pass visible rejection
- Match to I.R. emitters
- Hermetic package

DESCRIPTION

The **PDI-V106-F** is a silicon, PIN planar 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.

APPLICATIONS

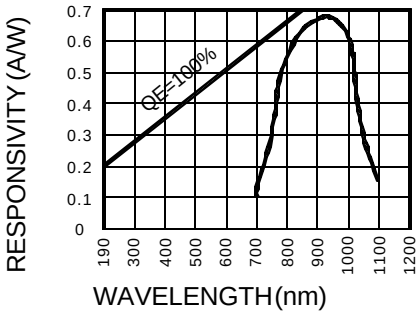
- I.R. detector
- I.R. laser detector
- Photo-interrupters
- Industrial controls

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		100	V
T_{STG}	Storage Temperature	-55	+100	°C
T_O	Operating Temperature Range	-40	+80	°C
T_S	Soldering Temperature*		+240	°C
I_L	Light Current		500	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	90	112		μA
I_D	Dark Current	H = 0, V_R = 10 V		300	500	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	.2	2		GΩ
TC R_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / °C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		1200		pF
λrange	Spectral Application Range	Spot Scan	700		1100	nm
λp	Spectral Response - Peak	Spot Scan		950		nm
V_{BR}	Breakdown Voltage	I = 10 μA	30	50		V
NEP	Noise Equivalent Power	V_R = 10 mV @ Peak		$1.0x10^{-14}$		$W/\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 0 V		800		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-V106-F REV A]