PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photovoltaic
Type PDU-V106

PACKAGE DIMENSIONS INCH [mm]

Ø0.325 [8.25]
Ø0.250 [6.35]
0.030 [0.76]
45°
Ø0.358 [9.09]
0.035 [0.89]
PHOTODIODE

WINDOW CAP (WELDED)
WIRE BONDS
55° VIEWING ANGLE
HEADER
0.168 [4.26]
0.075 [1.91]
0.500 [12.70] MIN
0.200 [5.08]
ANODE Ø0.018 [0.46]
CATHODE Ø0.018 [0.46]

0.154 [3.91] SQ
Ø0.1404 [Ø3.567] ACTIVE AREA

TO-5 HERMETIC CAN PACKAGE

ACTIVE AREA = 10.00 mm^2
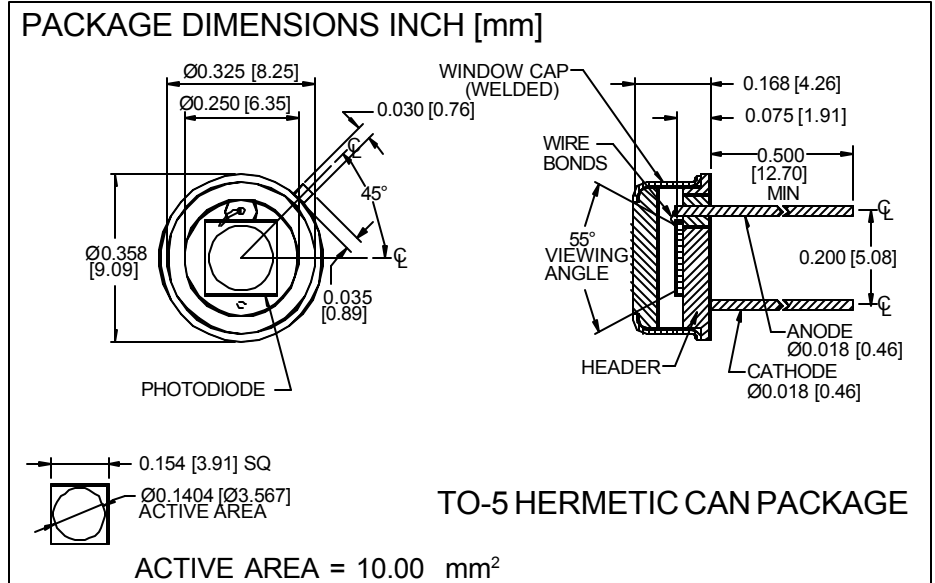
FEATURES

- Low noise
- U.V. enhanced
- High shunt resistance
- U.V. window

DESCRIPTION

The **PDU-V106** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-5 metal can with a flat U.V. transmitting window.

APPLICATIONS

- Spectrometers
- Fluorescent analysers
- U.V. meters
- Colorimeter

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	+150	^{O}C
T_O	Operating Temperature Range	-40	+125	^{O}C
T_S	Soldering Temperature*		+240	^{O}C
I_L	Light Current		500	mA

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE

QE=100%

RESPONSIVITY (A/W) vs WAVELENGTH (nm)
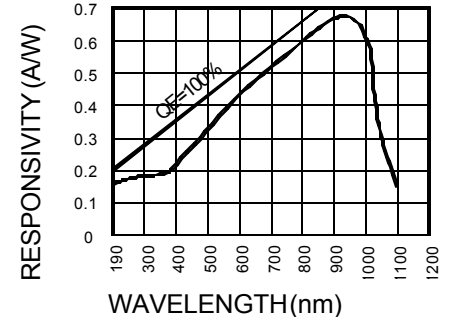
ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 2850 K	100	125		μA
I_D	Dark Current	H = 0, V_R = 10 mV		5	50	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		% / ^{O}C
C_J	Junction Capacitance	H = 0, V_R = 0 V**		1200		pF
λrange	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	V_R = 0 V, λ = 254 nm	.12	.18		A/W
V_{BR}	Breakdown Voltage	I = 10 μA	5	10		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		1.0×10^{-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-PDU-V106 REV B]