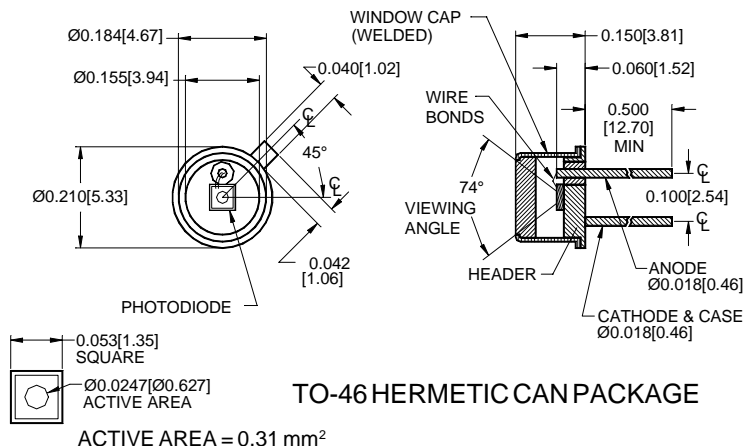


PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photovoltaic Type PDU-V101



PACKAGE DIMENSIONS inch [mm]



FEATURES

- Low noise
- U.V. enhanced
- High shunt resistance
- Quartz windows

DESCRIPTION

The **PDU-V101** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-46 metal can with a flat quartz window.

APPLICATIONS

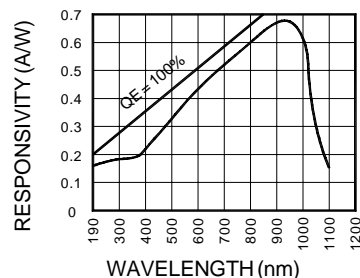
- Spectrometers
- Fluorescent analysers
- U.V. meters
- Colorimeters

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		75	V
T_{STG}	Storage Temperature	-55	+150	°C
T_O	Operating Temperature Range	-40	+125	°C
T_S	Soldering Temperature*		+240	°C
I_L	Light Current		.5	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	$H = 100 \text{ fc}, 2850 \text{ K}$	4	4.5		μA
I_D	Dark Current	$H = 0, V_R = 10 \text{ mV}$		6	10	pA
R_{SH}	Shunt Resistance	$H = 0, V_R = 10 \text{ mV}$	1	1.6		$\text{G}\Omega$
TCR_{SH}	RSH Temp. Coefficient	$H = 0, V_R = 10 \text{ mV}$		-8		% / °C
C_J	Junction Capacitance	$H = 0, V_R = 0 \text{ V}^{**}$		115		pF
λ range	Spectral Application Range	Spot Scan	190		1100	nm
R	Responsivity	$V_R = 0 \text{ V}, \lambda = 254 \text{ nm}$.12	.18		A/W
V_{BR}	Breakdown Voltage	$I = 10 \mu\text{A}$	5	10		V
NEP	Noise Equivalent Power	$V_R = 10 \text{ mV @ Peak}$		2.5×10^{-15}		$\text{W}/\sqrt{\text{Hz}}$
tr	Response Time	$\text{RL} = 1 \text{ K}\Omega, V_R = 0 \text{ V}$		450		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-V101 REV N/C]