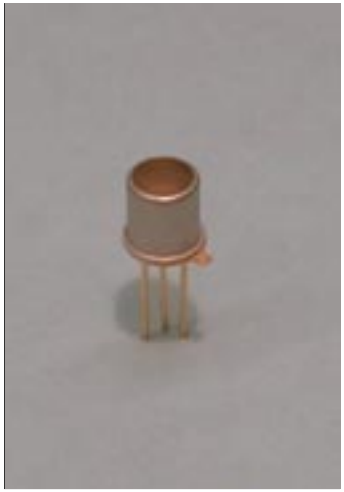
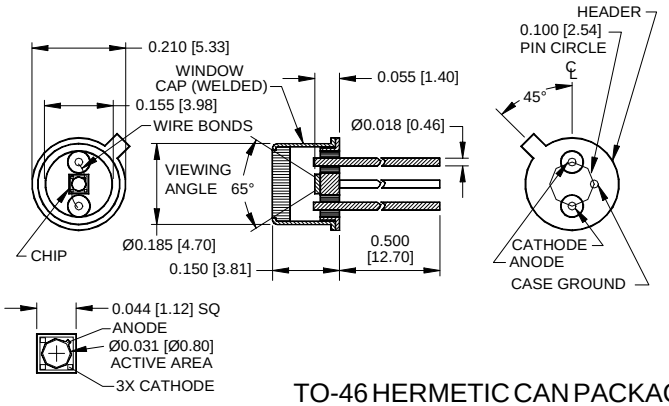
PHOTONIC DETECTORS INC.

Gallium Nitride (GaN), Ultra Violet (U.V.) Photodiode

Type PDU-G101



PACKAGE DIMENSIONS inch [mm]



TO-46 HERMETIC CAN PACKAGE

ACTIVE AREA = 0.50 mm^2

FEATURES

- 0.194 A/W @ 360 nm
- High shunt resistance
- 360 nm peak response
- Short wavelength resp.

DESCRIPTION

The **PDU-G101** is a GaN, planar passivated U.V. photodiode. Spectral range from 200 nm to 350 nm with a 0.80 mm diameter (.50 mm^2) active area. Packaged in a isolated TO-46 with U.V. transmitting window can.

APPLICATIONS

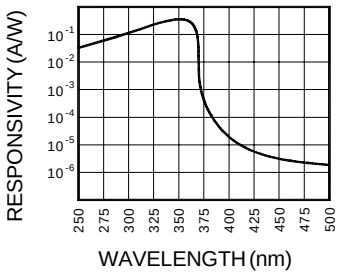
- Flame detectors
- U.V. sensors
- U.V. monitors
- U.V. instrumentation

ABSOLUTE MAXIMUM RATING (TA=25^{o}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		0.5	mA

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25^{o}C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{SC}	Short Circuit Current	H = 100 fc, 360 nm	40	30		μA
I_D	Dark Current	H = 0, V_R = 10 mV		130	150	pA
R_{SH}	Shunt Resistance	H = 0, V_R = 10 mV	50	75		MΩ
TCR_{SH}	RSH Temp. Coefficient	H = 0, V_R = 10 mV		-8		% / ^{o}C
C_J	Junction Capacitance	H = 0, V_R = 10 V**		30	50	pF
λ range	Spectral Application Range	Spot Scan	200		425	nm
λp	Spectral Response - Peak	Spot Scan		360		nm
V_{BR}	Breakdown Voltage	I = 10 μA		3		V
NEP	Noise Equivalent Power	V_R = 10 V @ Peak		$1.5x10^{-14}$		W/$\sqrt{Hz}$
tr	Response Time	RL = 1 KΩ V_R = 3 V		50		nS

 ** f = 1MHz