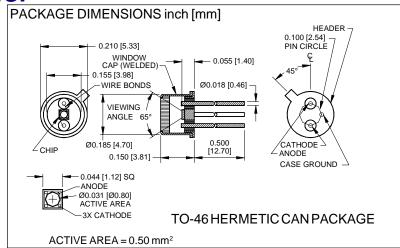
PHOTONIC DETECTORS INC.

Gallium Nitride (GaN), Ultra Violet (U.V.) Photodiode Type PDU-G101





FEATURES

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

DESCRIPTION

The PDU-G101 is a GaN, planar passivated U.V. photodiode. Spectral range from 200

• 360 nm peak response nm to 350 nm with a 0.80 mm diameter (.50

mm²) active area. Packaged in a isolated TO-46 with U.V. transmitting window can.

APPLICATIONS

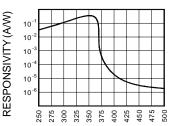
- Flame detectors
- U.V. sensors
- U.V. monitors
- U.V. instrumentation

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		100	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		0.5	mA

^{*1/16} inch from case for 3 secs max

SPECTRAL RESPONSE



WAVELENGTH (nm)

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

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SYMBOL	CHARACTERISTIC	TESTCONDITIONS	MIN	TYP	MAX	UNITS		
I _{sc}	Short Circuit Current	H = 100 fc, 360 nm	40	30		μΑ		
I _D	Dark Current	$H = 0, V_R = 10 \text{ mV}$		130	150	pA		
R _{SH}	Shunt Resistance	$H = 0, V_R = 10 \text{ mV}$	50	75		$\mathbf{M}\Omega$		
TCR _{SH}	RSH Temp. Coefficient	$H = 0, V_R = 10 \text{ mV}$		-8		%/℃		
C _J	Junction Capacitance	H = 0, V _R = 10 V**		30	50	pF		
λ range	Spectral Application Range	Spot Scan	200		425	nm		
λр	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/√ Hz		
tr	Response Time	$RL = 1 K\Omega V_p = 3 V$		50		nS		