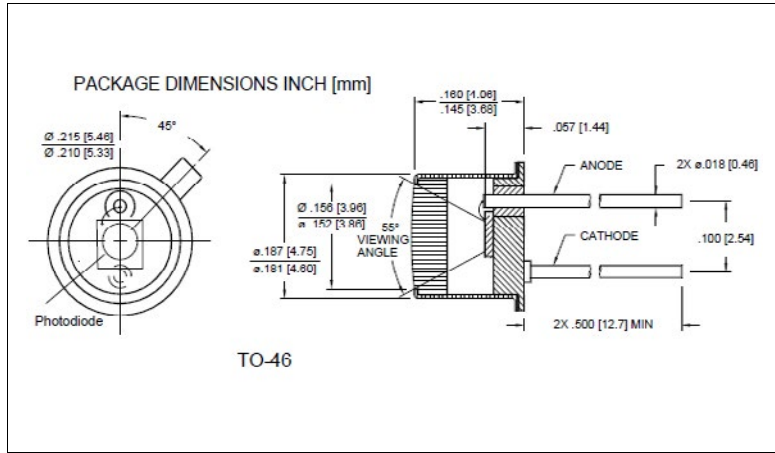
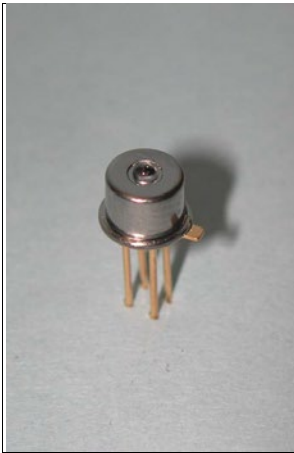


GaN UV Photodiode
SD012-UVA-011

Precision – Control – Results



DESCRIPTION

The SD012-UVA-005 is a GaN UV photodiode with a 0.076 mm² active area. Unlike most UV detectors it cuts off unwanted visible light from its detection spectrum (220-370nm), thereby eliminating the need for optical filter. Photodiode is assembled packaged in a hermetic TO-46 package

RELIABILITY

This Luna high-reliability device is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test. Contact Luna for recommendations on specific test conditions and procedures.

FEATURES

- Schottky-Type Photodiode
- Photovoltaic Mode Operation
- Low Noise
- High Speed
- Visible Blindness

APPLICATIONS

- UV Detection and Monitoring
- Medical
- Military

ABSOLUTE MAXIMUM RATINGS

SYMBOL	MIN	MAX	UNITS	T _a = 23°C UNLESS NOTED OTHERWISE	
Storage Temperature	-40	to +125	°C	-	-
Operating Temperature	-30	to +85	°C	-	-
Soldering Temperature	-	-	+260	°C	-
Forward Current	-	-	1.0	mA	-
Reverse Voltage	-	-	5.0	V	-

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.

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**GaN UV Photodiode
SD012-UVA-011**

Precision – Control – Results

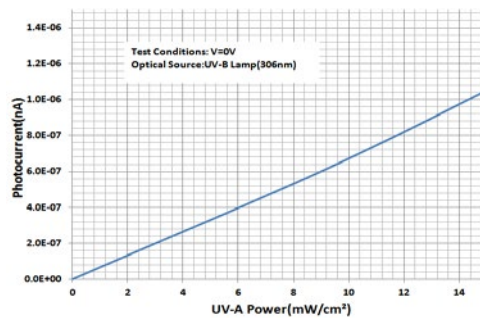
OPTO-ELECTRICAL PARAMETERS

T_a = 23°C UNLESS NOTED OTHERWISE

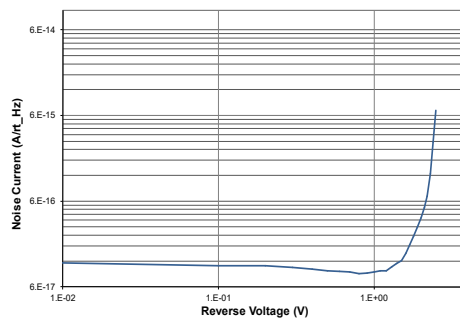
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V _R = 0.1V	-	0.1	100	pA
Shunt Resistance	V _R = 10 mV	1.0	100	-	GΩ
Short Circuit Current	UVI=1.0	-	20	-	nA
Spectral Application Range	Spot Scan	220	-	370	nm
Responsivity Peak	λ = 350 nm V, V _R = 0 V	-	0.18	-	A/W
Capacitance	V _{bias} = 0V; f = 1 MHz	-	10	-	pF
Noise Equivalent Power	λ=350	-	1.6	-	10 ⁻¹⁷ W/Hz ^{0.5}

TYPICAL PERFORMANCE

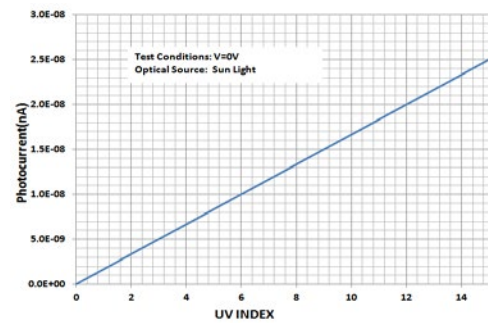
UV-A PHOTOCURRENT



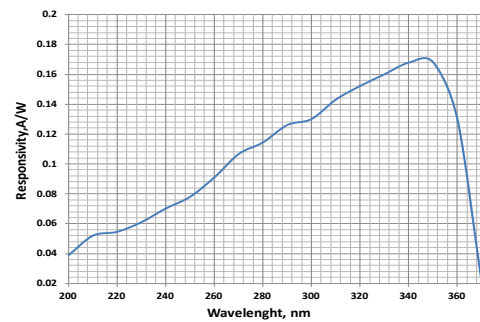
NOISE vs. BIAS



UV-I PHOTOCURRENT



SPECTRAL RESPONSE



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