

**DESCRIPTION**

The **SD012-UVB-011** is a GaN **UVB** photodiode with a 0.076 mm<sup>2</sup> active area. Unlike most UV detectors it cuts off unwanted visible light from its detection spectrum (**220-320nm**), 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.

**ABSOLUTE MAXIMUM RATINGS**

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

**FEATURES**

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

**APPLICATIONS**

- UVB Detection and Monitoring
- Medical
- Military

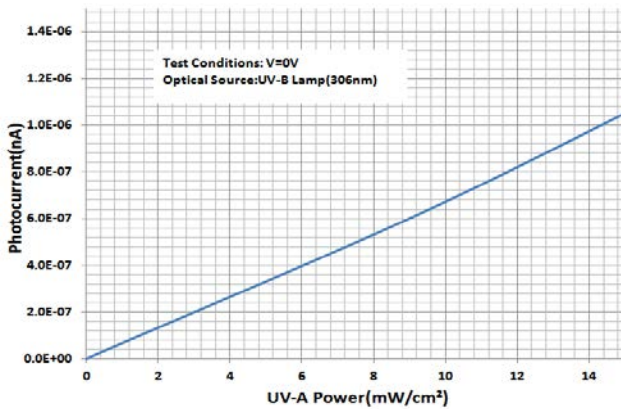
**OPTO-ELECTRICAL PARAMETERS**

T<sub>a</sub> = 23°C UNLESS NOTED OTHERWISE

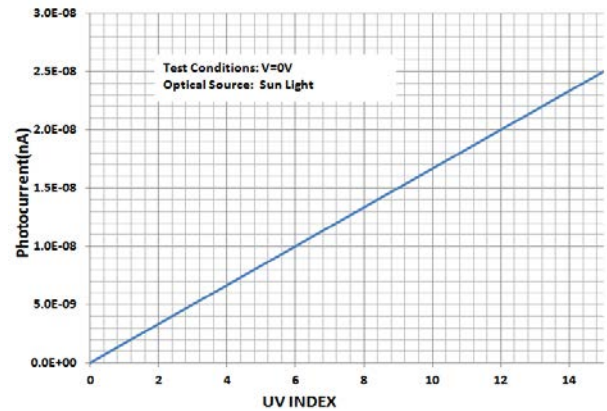
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V <sub>R</sub> = 0.1V	-	0.1	100	pA
Shunt Resistance	V <sub>R</sub> = 10 mV	TBD	-	-	MΩ
Short Circuit Current	UVI=1.0	-	20	-	nA
Spectral Application Range	Spot Scan	220	-	370	Nm
Responsivity Peak	λ= 300 nm V, V <sub>R</sub> = 0.V	-	0.1	-	A/W
Capacitance	V <sub>bias</sub> = 0V; f = 1 MHz	-	10	-	pF
Noise Equivalent Power	λ= 300 nm	-	1.6	-	10 <sup>-17</sup> W/Hz <sup>0.5</sup>

**TYPICAL PERFORMANCE**

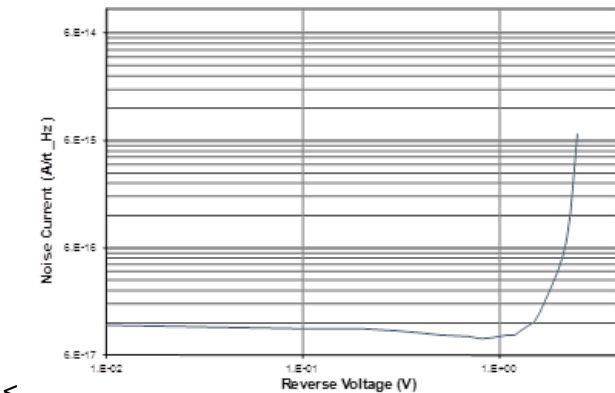
**UV-A PHOTOCURRENT**



**UV-I PHOTOCURRENT**



**NOISE VS. BIAS**



**SPECTRAL RESPONSE**

