

DESCRIPTION

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

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

FEATURES

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

APPLICATIONS

- **UVA** Detection and Monitoring
- Medical
- Military

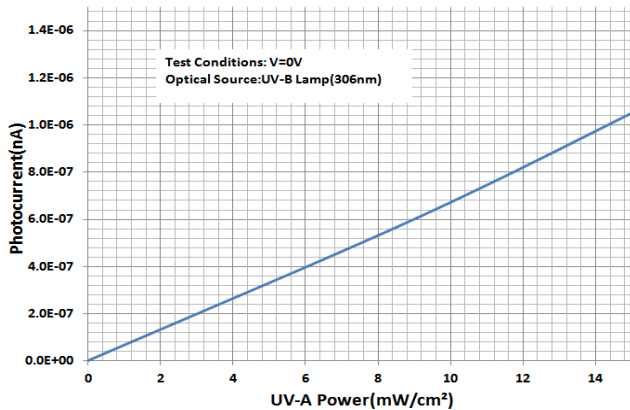
OPTO-ELECTRICAL PARAMETERS

T_a = 23°C UNLESS NOTED OTHERWISE

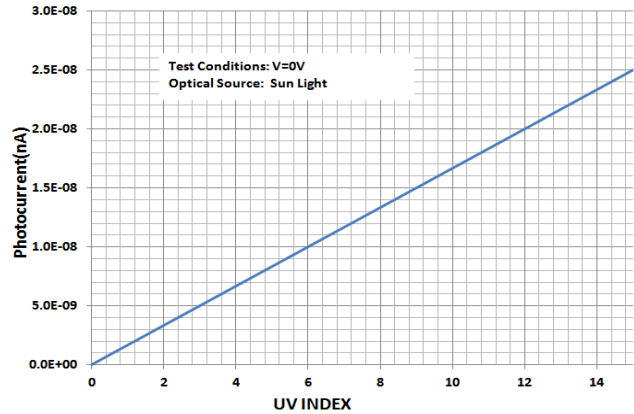
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V _R = 0.1V	-	0.1	100	pA
Shunt Resistance	V _R = 10 mV	1.0	100	-	GΩ
Short Circuit Current	UVI=1.0	-	20	-	nA
Spectral Application Range	Spot Scan	220	-	370	nm
Responsivity Peak	λ= 350 nmV, V _R = 0V	-	0.18	-	A/W
Capacitance	V _{bias} = 0V; f = 1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

TYPICAL PERFORMANCE

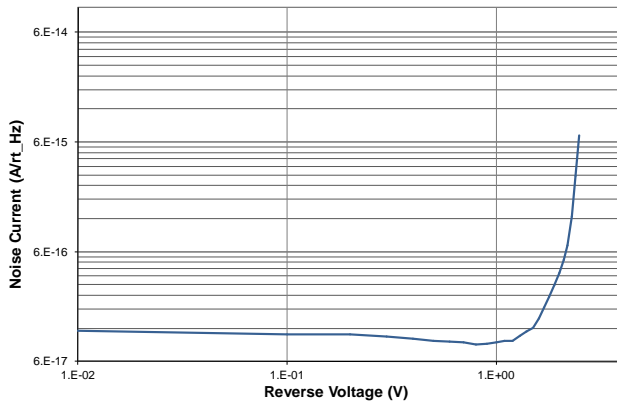
UV-A PHOTOCURRENT



UV-I PHOTOCURRENT



NOISE vs. BIAS



SPECTRAL RESPONSE

