

DESCRIPTION

The **SD012-UVB-011** is a GaN **UVB** photodiode with a 0.076 mm² 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 API high-reliability detector is in principle able to meet military test requirements (Mil-STD-750, Mil-STD-883) after proper screening and group test. Contact API for recommendations on specific test conditions and procedures.

FEATURES

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

APPLICATIONS

- **UVB** Detection and Monitoring
- Medical
- Military

ABSOLUTE MAXIMUM RATINGS

T_a = 23°C unless noted

PARAMETER	MIN	MAX	UNITS
Storage Temperature	-30	+85	°C
Operating Temperature	-40	+125	°C
Soldering Temperature*	-	+240	°C
Forward Current	-	1.0	mA
Reverse Voltage	-	5.0	V

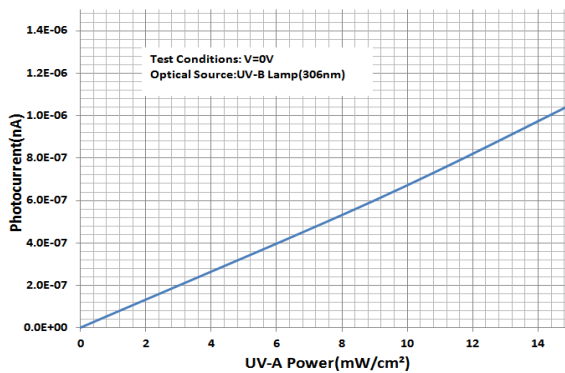
OPTO-ELECTRICAL PARAMETERS

T_a = 23°C unless noted otherwise

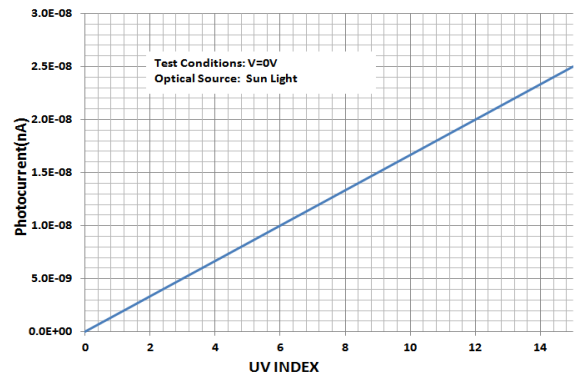
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Dark Current	V _R = 0.1V	-	0.1	100	pA
Shunt Resistance	V _R = 10 mV	1.0	100	-	GΩ
Short Circuit Current	UVI=1.0	-	20	-	nA
Spectral Application Range	Spot Scan	220	-	370	nm
Responsivity Peak	λ = 290 nm V, V _R = 0 V	-	0.14	-	A/W
Capacitance	V _{bias} = 0V; f = 1 MHz	-	10	-	pF
Noise Equivalent Power	λ = 350 nm	-	1.6	-	10 ⁻¹⁷ W/Hz ^{0.5}

TYPICAL PERFORMANCE

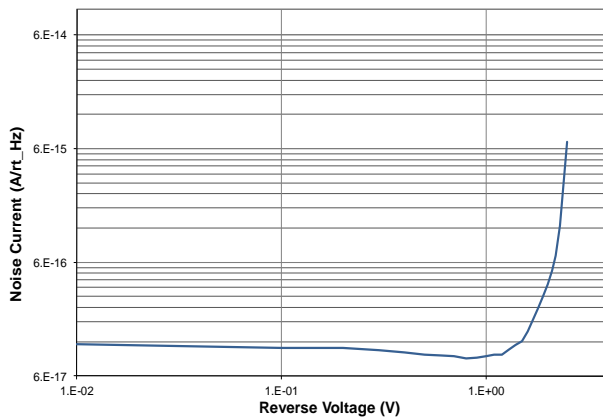
UV-A PHOTOCURRENT



UV-I PHOTOCURRENT



NOISE vs. BIAS



SPECTRAL RESPONSE

