

DESCRIPTION

The **SD012-UVA-011** is a GaN UVA 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 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.

ABSOLUTE MAXIMUM RATINGS

| 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 |

T_a = 23°C unless noted

FEATURES

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

APPLICATIONS

- UVA Detection and Monitoring
- Medical
- Military

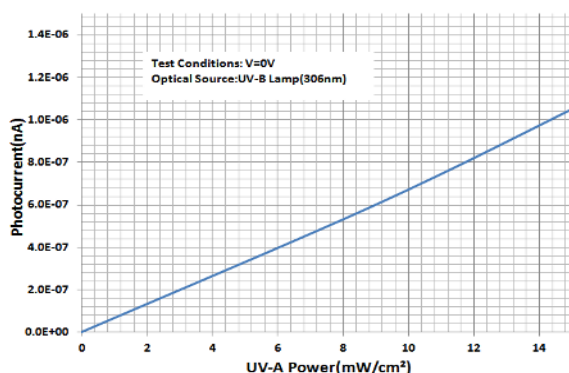
OPTO-ELECTRICAL PARAMETERS

T_a = 23°C unless noted otherwise

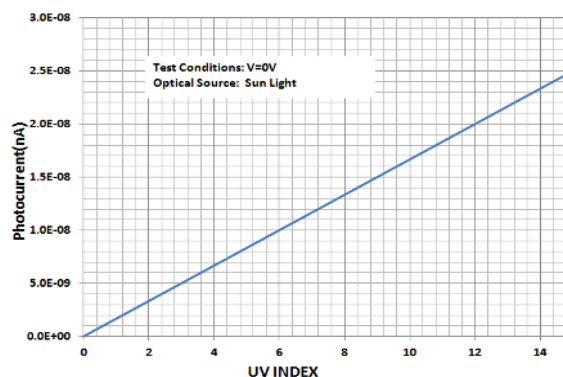
| PARAMETER | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------------------------|------------------------------------|-----|------|-----|---------------------------------------|
| Dark Current | V _R = 0.1V | - | 0.1 | 100 | pA |
| Shunt Resistance | V _R = 10 mV | 1.0 | 100 | - | GΩ |
| Short Circuit Current | UVI=1.0 | - | 20 | - | nA |
| Spectral Application Range | Spot Scan | 220 | - | 370 | nm |
| Responsivity Peak | λ = 350 nm V, V _R = 0 V | - | 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

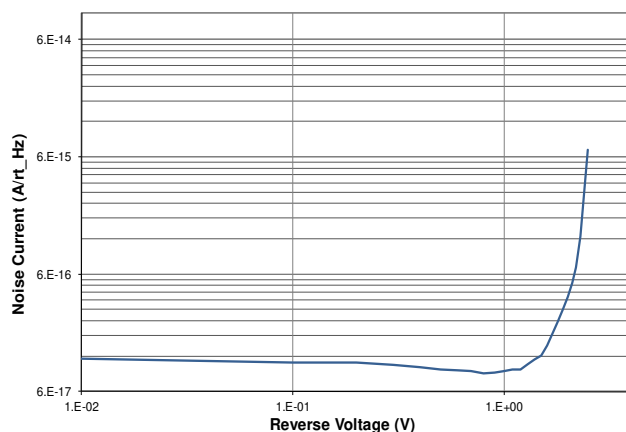
UV-A PHOTOCURRENT



UV-I PHOTOCURRENT



NOISE vs. BIAS



SPECTRAL RESPONSE

