

## SD008-2151-112



### FEATURES

- Schottky-Type Photodiode
- Photovoltaic Mode Operation
- Low Noise
- High Speed
- Visible Blindness
- Isolated Anode and Cathode

### DESCRIPTION

The SD008-2151-112 is a GaN UVA 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 (220-370nm), thereby eliminating the need for optical filter. Photodiode is assembled in a hermetic TO-46 package.

### APPLICATIONS

- UVA Detection and Monitoring
- Medical
- Military

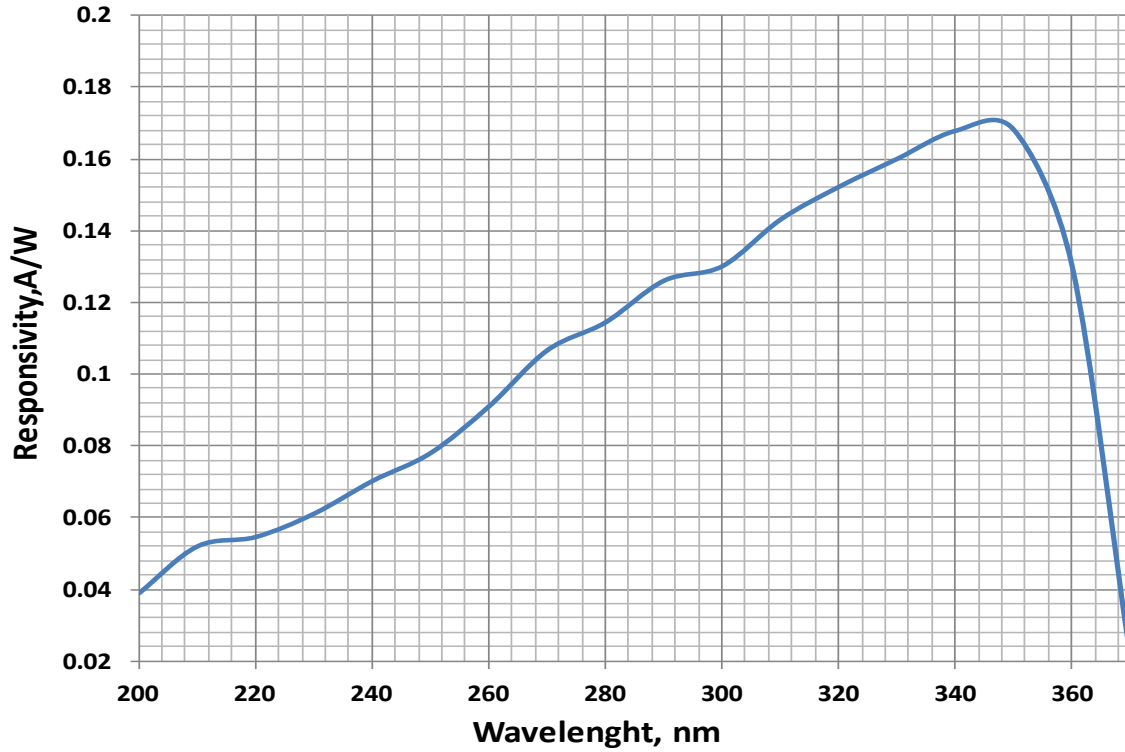
#### > Absolute Maximum Ratings

Part No.	Wavelength Range [nm]	Reverse Voltage [V]	Operating Temperature [C]	Storage Temperature [C]	Package
SD008-2151-112	220 to 370	5	-40 to +85	-55 to +125	TO-46

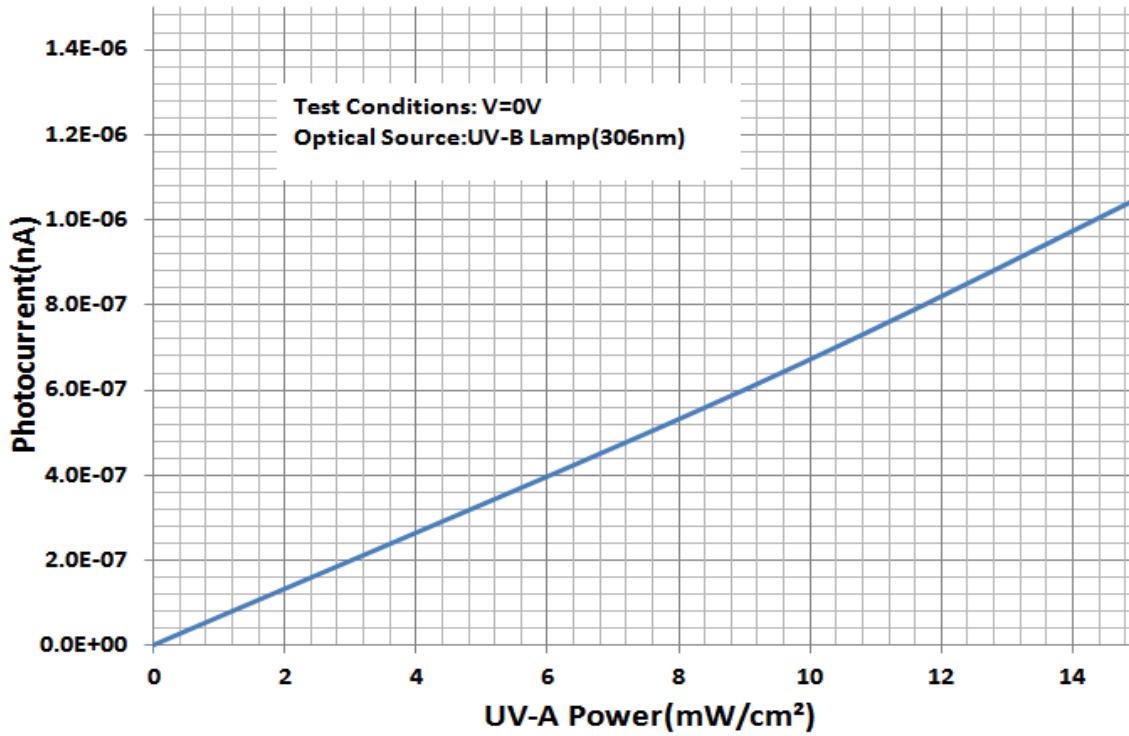
#### > Electrical and Optical Characteristics

Typical Characteristics (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Dark Current	V <sub>R</sub> = 0.1V	I <sub>d</sub>	-	1	100	pA
Diode Capacitance	V <sub>bias</sub> = 0V; f = 1 MHz	C <sub>D</sub>	-	5	-	pF
Short Circuit Current	UVI=1.0	I <sub>sc</sub>	-	20	-	nA
Peak Spectral Sensitivity	λ = 350nm, V <sub>R</sub> = 0 V	λ <sub>p</sub>	-	0.18	-	A/W
Rise Time		T <sub>r</sub>	-	1	-	ns
Fall Time		T <sub>f</sub>	-	1	-	ns
Shunt Resistance	V <sub>R</sub> = 10mV	R <sub>sh</sub>	1	100	-	GΩ
Noise Equivalent Power	λ = 350nm	NEP	-	1.6	-	10 <sup>-17</sup> W/Hz <sup>0.5</sup>

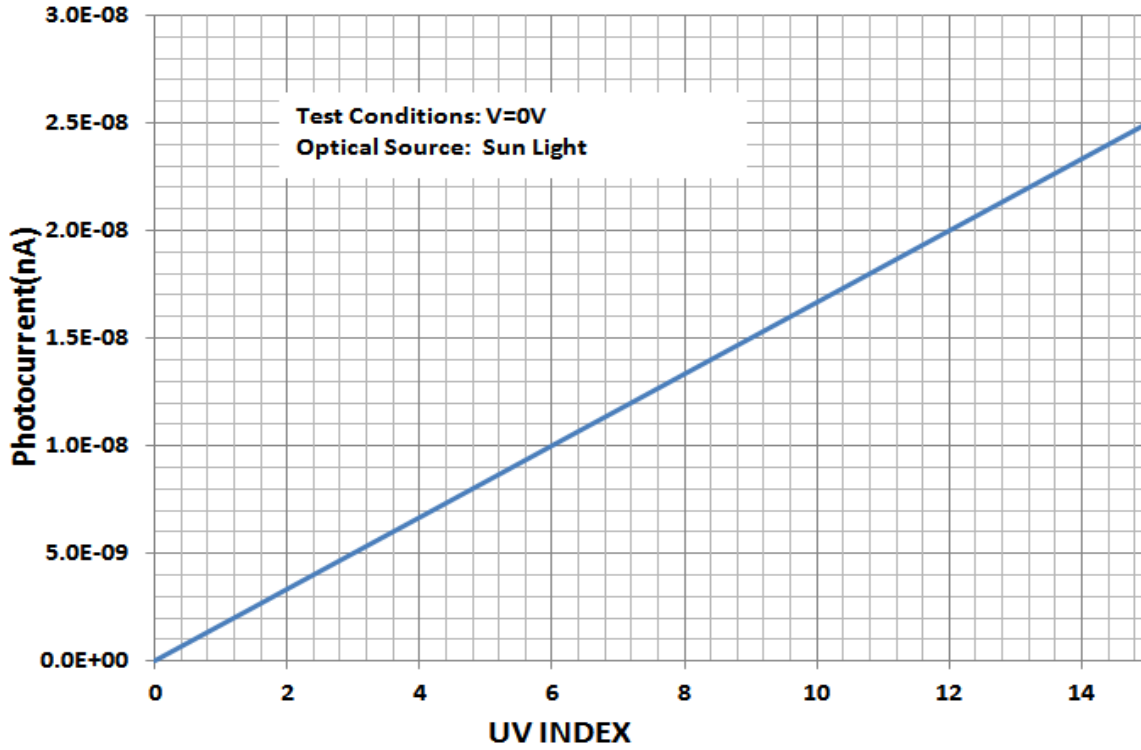
> Spectral Response



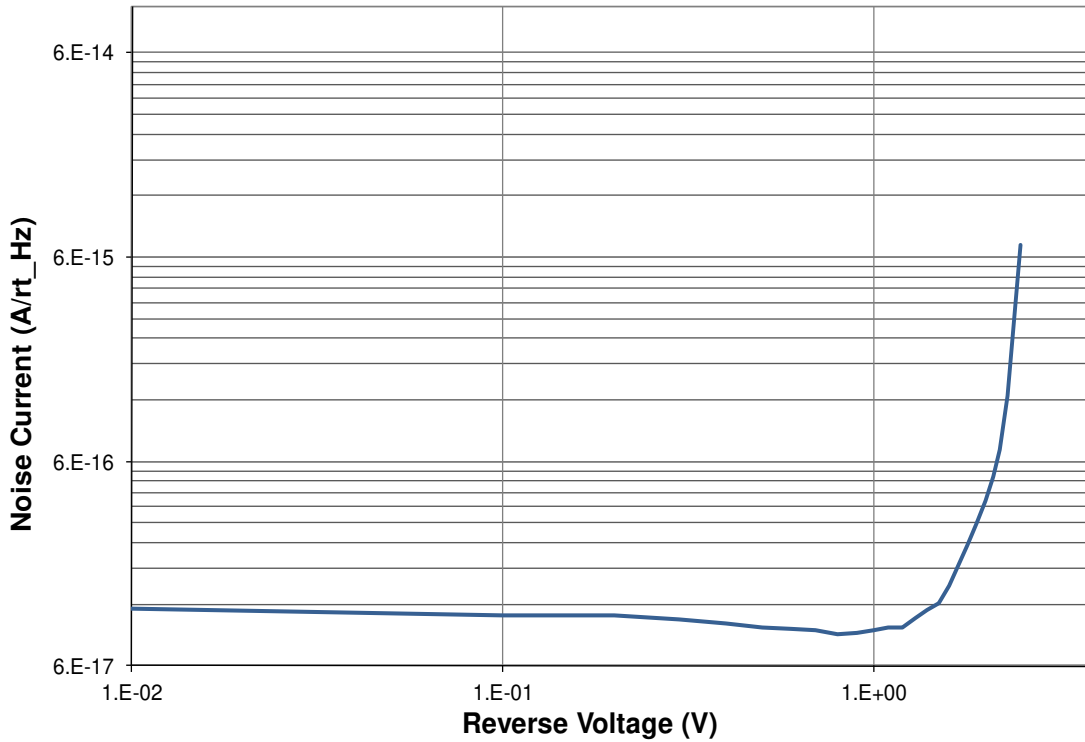
> UV-A Photocurrent



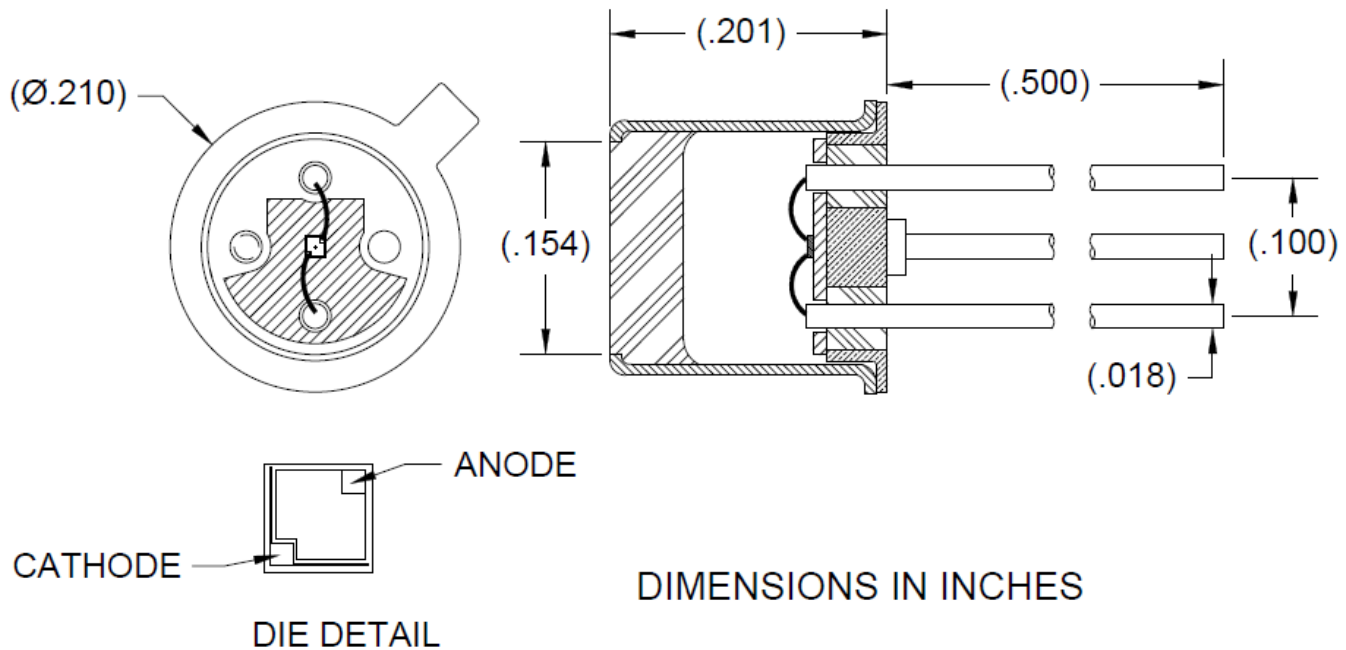
> UV-I Photocurrent



> Noise vs. Bias



> TO-46 Window Cap [SD008-2151-112]



>Soldering Conditions: 260°C 1/16 inch away from case for 3 seconds max.

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## MATERIALS SAFETY

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