

Ultraviolet selective GaN based UV sensor

AG38AS-SMD-S



Features

- UVA selective photodiode
- Optimally suited for low-cost UV consumer applications
- Intrinsically insensitive in the visible due to the wide-bandgap semiconductor material GaN
- Small SMD package (1608)
- 0.076 mm² active chip area
- High speed and low noise

Maximum Ratings

Parameter	Symbol	Value	Unit
Operating temperature range	T _{opt}	-40 ... +90	°C
Reverse voltage	V _{Rmax}	5	V

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General Characteristics

(T_a = 25 °C)

Parameter	Symbol	Value	Unit
Active area	A	0.076	mm ²
max. Dark current at 1 V reverse bias	I _d	1	nA
Capacitance	C	45	pF
Short circuit current at bright sun	I ₀	ca. 200	nA

Spectral Characteristics

(T_a = 25 °C)

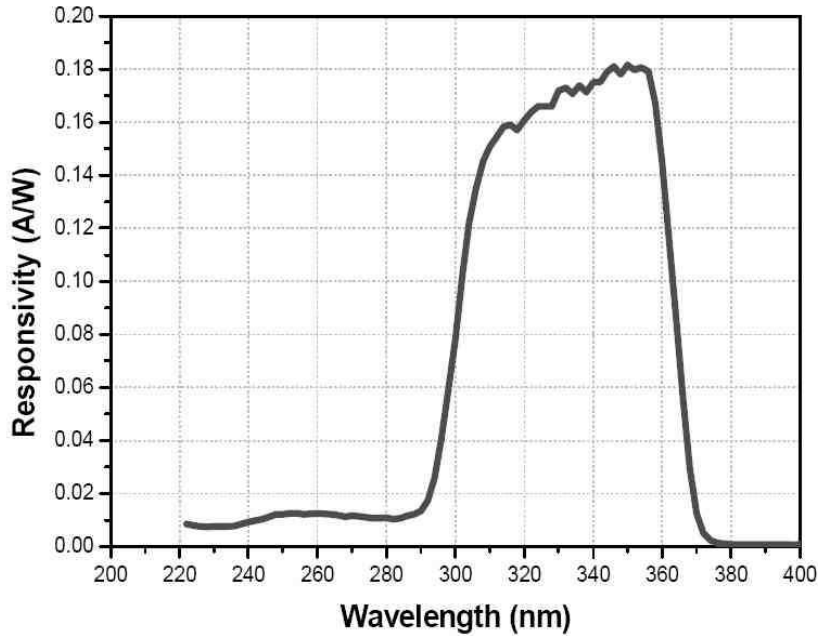
Parameter	Symbol	Value	Unit
Responsivity	S _{max}	0.1	A W ⁻¹
Wavelength of max. spectral sensitivity	λ _{Smax}	350	nm
Range of spectral sensitivity (S=0.1*S _{max})	-	290-375	nm

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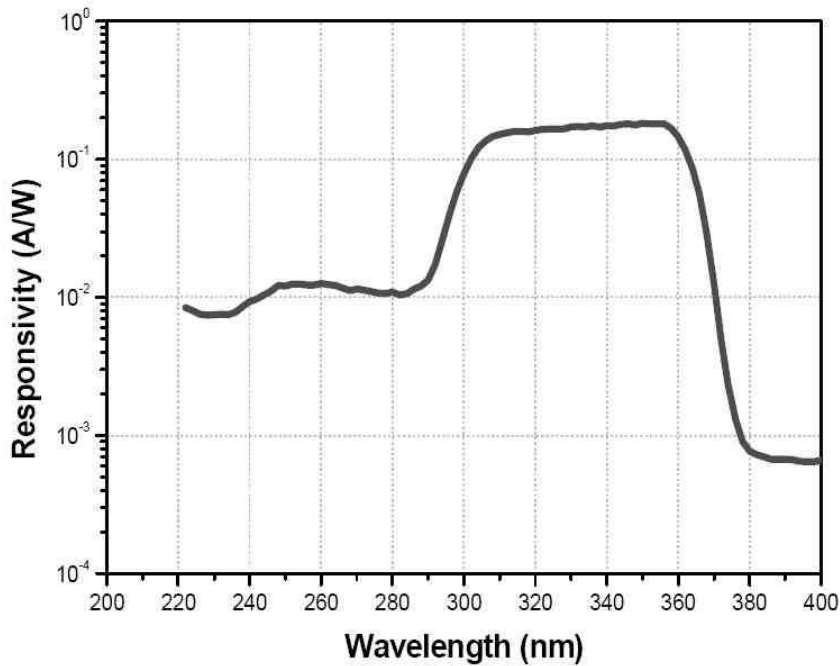
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Linear Spectral Response

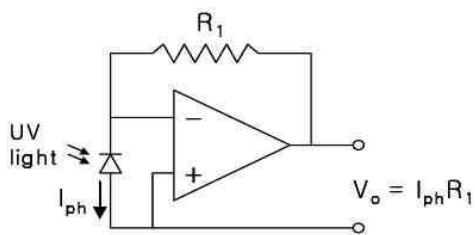


Logarithmic Spectral Response

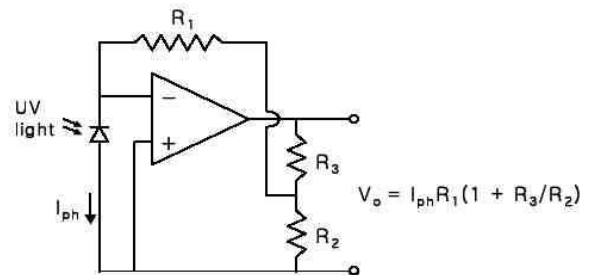


Application Examples

1. Basic Feedback Ammeter



2. Feedback Ammeter with Selective Voltage Gain



Pin Layout

