

UV-A Photodetector

GUVA-S20ED

Features

- Gallium Nitride based material
- Schottky-type photodiode
- No cut-off filters needed
- Intrinsic visible blindness
- High responsivity
- Low dark current
- Designed to operate in photovoltaic mode
- SMD plastic package : 1.6 × 0.8 × 0.4 mm
- Sensitivity area : 0.076mm²

Applications

- UV exposure measurement for commodity applications
- Sterilization lamp monitoring
- Flame detection

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Test Conditions
Storage Temperature	T _{st}	-40	90	°C	
Operating Temperature	T _{op}	-30	85	°C	
Reverse Voltage	V _{r, max.}		5	V	
Forward Current	I _{f, max.}		1	mA	
Soldering Temperature	T _{sol}		260	°C	within 10 sec.

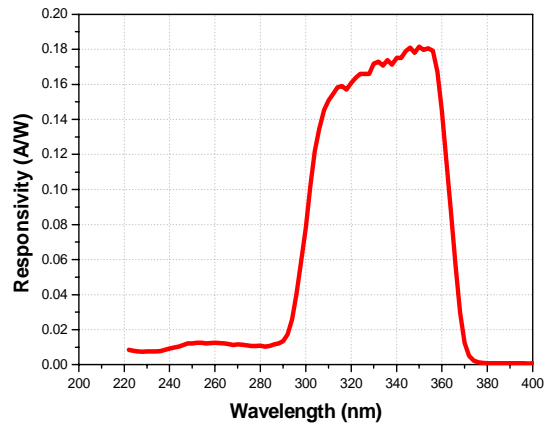
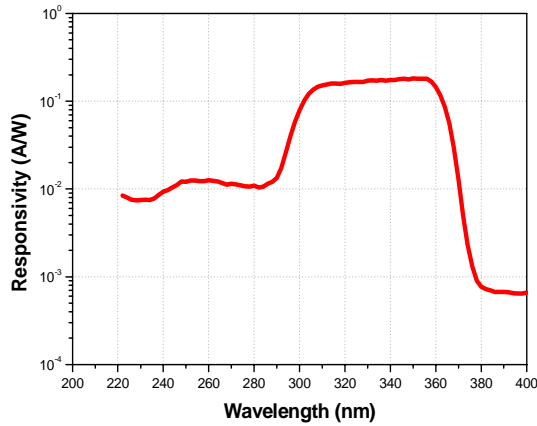
Electro-optical Characteristics (T=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Dark Current	I _d		50		nA	@ V = -1.0V
Responsivity	R		0.18		A/W	@ λ=350nm, V=0.0V
Spectral Detection Range	λ	290		370	nm	Monochromator light scan.
Breakdown Voltage	V _{BR}		10			I _r =1uA
Junction Capacitance	C _j		24		pF	V _r =0V
Short Circuit Current	I _{sc}		100		nA	UVI=1
Detectivity	D*		1×10 ¹⁴			cmHz ^{1/2} W ⁻¹

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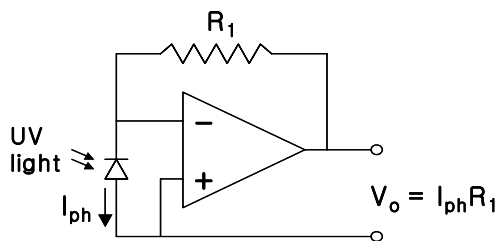
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Spectral Response

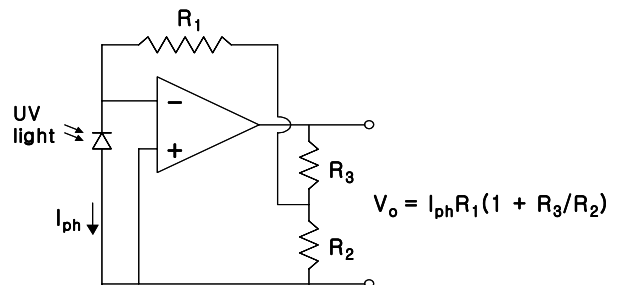


Application Circuit Example

1. Basic Feedback Ammeter



2. Feedback Ammeter with Selective Voltage Gain



Package Dimension

