

# UV-A Sensor

## GUVA-S12SD

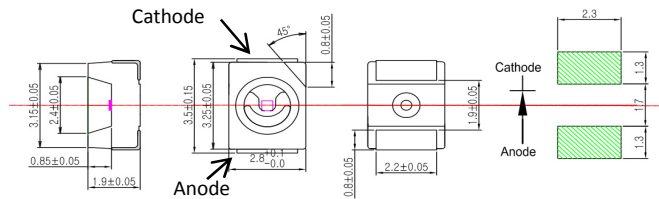


- Features**
- Gallium Nitride Based Material
  - Schottky-type Photodiode
  - Photovoltaic Mode Operation
  - Good Visible Blindness
  - High Responsivity & Low Dark Current



- Applications**
- UV Index Monitoring
  - UV-A Lamp Monitoring

### Outline Diagrams and Dimensions



### Absolute Maximum Ratings

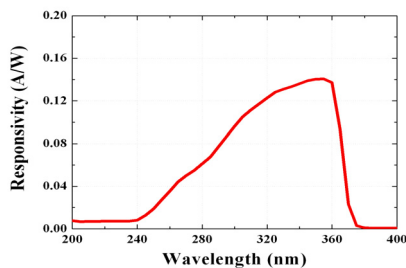
Parameter	Symbol	Min.	Max.	Unit	Remark
Storage Temperature	$T_{st}$	-40	90	°C	
Operating Temperature	$T_{op}$	-30	85	°C	
Reverse Voltage	$V_{r, max.}$		5	V	
Forward Current	$I_{f, max.}$		1	mA	
Optical Source Power Range	$P_{opt}$	0.1μ	100m	W/cm <sup>2</sup>	UVA Lamp
Soldering Temperature	$T_{sol}$		260	°C	within 10 sec.

※Notice: apply to us in the case that Optical Source Power is over 100mW/cm<sup>2</sup>

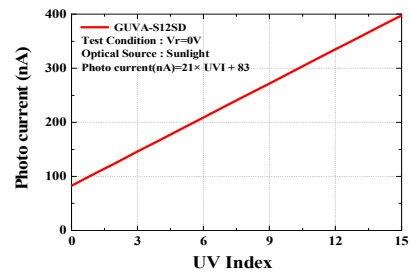
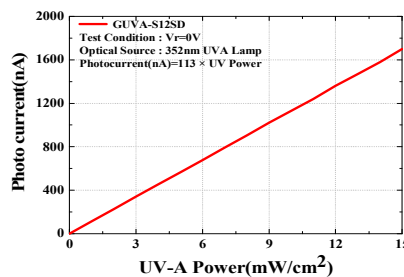
### Characteristics (at 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Dark Current	$I_d$			1	nA	$V_r = 0.1$ V
Photo Current	$I_{ph}$	101	113	125	nA	UVA Lamp, 1mW/cm <sup>2</sup>
			21		nA	1 UVI
Temperature Coefficient	$I_{tc}$		0.08		%/°C	UVA Lamp
Responsivity	R		0.14		A/W	$\lambda = 350$ nm, $V_r = 0$ V
Spectral Detection Range	$\lambda$	240		370	nm	10% of R
Active area			0.076		mm <sup>2</sup>	

### Responsivity Curve



### Photocurrent along UV Power



### Caution

ESD can damage the device hence please avoid ESD.