

# UV-A Sensor

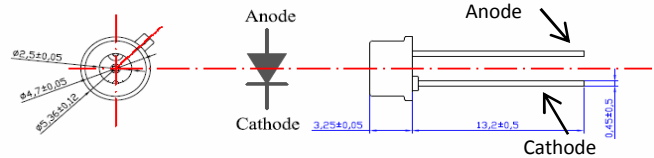
## YL-Φ5TO46F-UVAS(D)

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



- Applications**
- Full UV Band Monitoring
  - UV-A Lamp Monitoring
  - Sterilization Lamp Monitoring

**Outline Diagrams and Dimensions**



**Absolute Maximum Ratings**

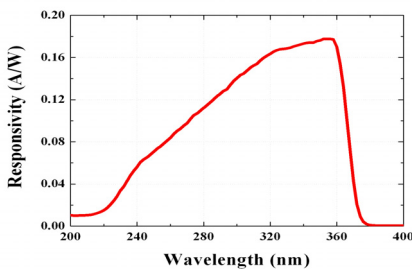
Parameter	Symbol	Min.	Max.	Unit	Remark
Storage Temperature	T <sub>st</sub>	-40	90	°C	
Operating Temperature	T <sub>op</sub>	-30	85	°C	
Reverse Voltage	V <sub>r, max.</sub>		5	V	
Forward Current	I <sub>f, max.</sub>		1	mA	
Optical Source Power Range	P <sub>opt</sub>	0.1μ	100m	W/cm <sup>2</sup>	UVA Lamp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

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

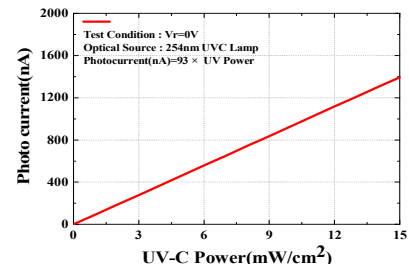
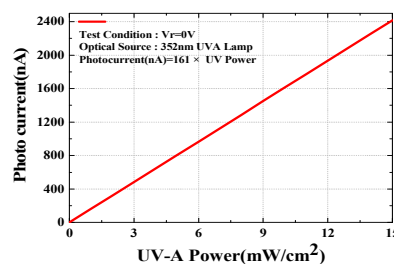
**Characteristics (at 25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Dark Current	I <sub>d</sub>			1	nA	V <sub>r</sub> = 0.1 V
Photo Current	I <sub>ph</sub>	145	161	177	nA	UVA Lamp, 1mW/cm <sup>2</sup>
			93		nA	UVC Lamp, 1mW/cm <sup>2</sup>
Temperature Coefficient	I <sub>tc</sub>		0.05		%/°C	UVA Lamp
Responsivity	R		0.18		A/W	λ = 350 nm, V <sub>r</sub> = 0 V
Spectral Detection Range	λ	220		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. Insulate the cap of TO-CAN or it can cause malfunction of the device.