### **UV LED LAMP**

### VAOL-5EUV0T4

#### **Feature**

- Low Power Consumption
- I.C. compatible

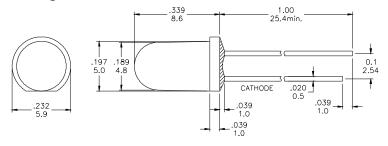
## **Applications**

- Disinfection and Sterilization
- Adhesive Curing
- Leak Detection
- Authentication

### **Description**

- These LEDs are Based on InGaN Material Technology
- Emitted color: Purple (UV)
- Water Transparent Lens
- LED junction temperature: 80°C

## **Package Dimension**



\*Tolerance: ±

## **CAUTION: EMITS ULTRAVIOLET RADIATION!!!**



- This UV (ultraviolet) LED during operation radiates intense UV light.
- Do Not look directly into the UV light during operation of device. This can be harmful to the hu to the eyes and skin, even for brief period due to the intense UV light.
- If viewing the UV light is necessary, please use UV filtered glasses to avoid damage by the UV light
- If the UV LED in your product might be viewed directly, please affix a caution label to your product to that effect
- Avoid direct eye and skin exposure to the UV light.
- Keep reach out of children

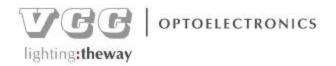
## Absolute Maximum Ratings at Ta=25°C

Symbol	Parameter	Max.	Unit			
PD	Power Dissipation	120	mW			
VR	Reverse Voltage	5	V			
IAF	Average Forward Current	30	mA			
IPF	Peak Forward Current (Duty=0.1, 1kHz)	100	mA			
	Derating Linear Form 25°C	0.4	mA/°C			
Topr	Operating Temperature Range	-20  to + 80	°C			
Tstg	Storage Temperature Range	-20  to + 100	°C			
Lead Soldering Temperature [1.6mm (0.063inch) From Body] 260°C For 5 Seconds.						

# Electrical / Optical Characteristics and Curves at Ta=25°C

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Unit
VF	Forward Voltage	IF= 20 mA	2.8	3.0	3.6	V
IR	Reverse Current	VR = 5 V			50	μΑ
Δθ	Half Intensity Angle	IF= 20 mA	10	15	20	Deg.
IV	Luminous Intensity	IF= 20 mA		200		mcd.
λp	Peak Wavelength	IF= 20 mA	400	405		nm





### Electrical Characteristics at Ta=25°C

Symbol		Iv		V <sub>F</sub>		λp	
Parameter	Luminous Intensity		Forward Voltage		Peak Wavelength		
Condition	IF=20mA		IF=20mA		IF=20mA		
Unit	med V		nm				
	Grade	Range	Grade	Range	Grade	Range	
	BIN10	125~175	P0	2.8~3.0	U6	400~405	
	BIN11	175~245	P1	3.0~3.2	U7	405~410	
Binning			P2	3.2~3.4			
			Р3	3.4~3.6			

Intensity: Tolerance of minimum and maximum =  $\pm 15\%$ Vf: Tolerance of minimum and maximum =  $\pm 0.05v$ 

NOTE:

1. Static electricity and surge damages the LED. It is recommend to use a anti-static wrist band or anti-electrostatic glove when handing the LEDs. All devices, equipment and machinery must be properly grounded.

## **Radiation Diagram**

## IF=20 mA 50% Power Angle Angle =15°

Radiation Diagram 10° 20° Relative radiant intensity (%) 100 30° 80 40° 50° 60 60° 70° 80° 50 90° 40 20 ()

Angular displacement -0





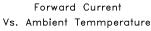


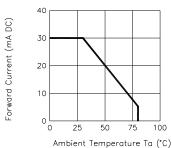
### UV

Typical Electro-optical Characteristic Curves (25°C Free Air Temperature Unless Otherwise Specified)

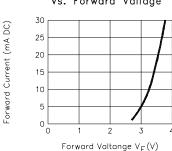
Relative Intensity

Forward Current (mA)

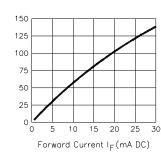




### Forward Current Vs. Forward Valtage

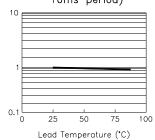


#### Relative Intensity Vs. Forward Current

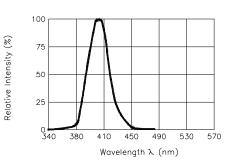


Relative Intensity (%)

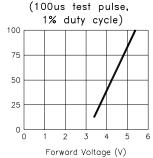
Relative Intensity Vs. Lead Temperarture (Pulsed 20 mA; 300us pulse, 10ms period)



#### Relative Intensity Vs. Wavelength



Peak Forward Voltage Vs. Forward Current (100us test pulse,





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