

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### **UV LED LAMP**

#### VAOL-5EUV8T4

#### **Feature**

- Low Power Consumption
- I.C. compatible

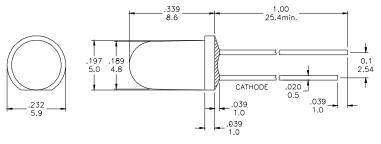
### **Applications**

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

### **Description**

- These LEDs are Based on InGaN Material Technology
- Emitted color: Purple (UV)
- Water Transparent Lens

### Package Dimension



\*Tolerance: ± Unit: ±

#### ↑ 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 hut
  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

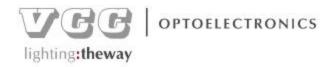
### Absolute Maximum Ratings at Ta=25°C

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		15		Deg.
IV	Luminous Intensity	IF = 20  mA		100		mcd.
λp	Peak Wavelength	IF= 20 mA	380	385		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		mcd V		nm		
	Grade	Range	Grade	Range	Grade	Range
	BIN8	65~90	P0	2.8~3.0	U2	380~385
	BIN 9	90~125	P1	3.0~3.2	U3	385~390
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



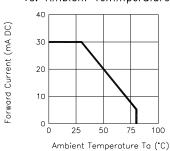




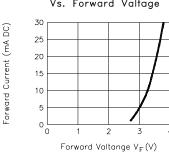
#### UV

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

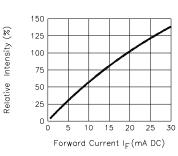
Forward Current Vs. Ambient Temmperature



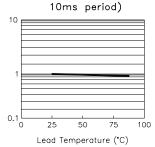
Forward Current Vs. Forward Valtage



Relative Intensity Vs. Forward Current



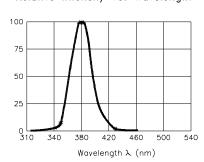
Relative Intensity Vs. Lead Temperarture (Pulsed 20 mA; 300us pulse,



Relative Intensity

Forward Current (mA)

Relative Intensity Vs. Wavelength



Relative Intensity (%)

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

