UV LED LAMP

VAOL-5EUV0T4

Feature

- Low Power Consumption
- I.C. compatible

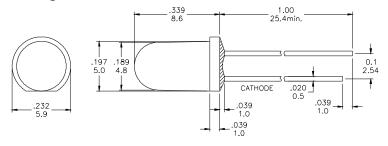
Applications

- 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

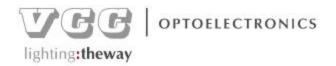
Absolute Maximum Ratings at Ta=25°C

| 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 _F | | 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





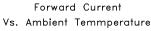


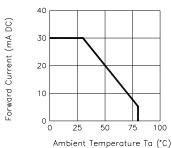
UV

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

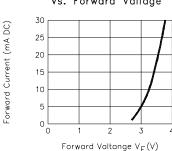
Relative Intensity

Forward Current (mA)

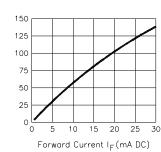




Forward Current Vs. Forward Valtage

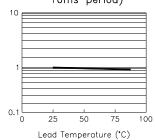


Relative Intensity Vs. Forward Current

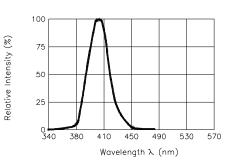


Relative Intensity (%)

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,

