

**Feature**

- Low Power Consumption
- I.C. compatible

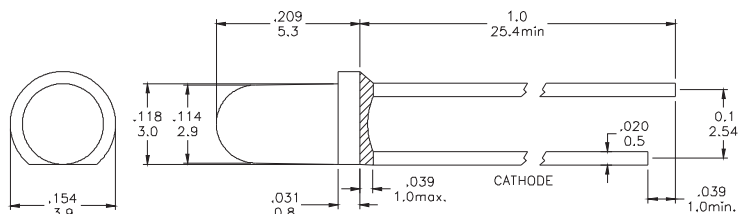
**Applications**

- 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 :  $\pm \frac{0.01}{0.25}$  Unit :  $\pm \frac{\text{inch}}{\text{mm}}$

**⚠ 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 human body especially 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. | Typ. | Max. | Unit |
|--------|----------------------|----------------|------|------|------|------|
| VF     | Forward Voltage      | IF= 20 mA      | 2.8  | 3.0  | 3.6  | V    |
| IR     | Reverse Current      | VR= 5 V        |      |      | 100  | μ A  |
| Δ θ    | Half Intensity Angle | IF= 20 mA      |      | 15   |      | Deg. |
| IV     | Luminous Intensity   | IF= 20 mA      | --   | 150  | --   | med. |
| λ p    | Peak Wavelength      | IF= 20 mA      | 400  | 405  | --   | nm   |

### Electrical Characteristics at Ta=25°C

| Symbol    | I <sub>v</sub>     |         | V <sub>F</sub>  |         | λ <sub>p</sub>  |         |
|-----------|--------------------|---------|-----------------|---------|-----------------|---------|
| Parameter | Luminous Intensity |         | Forward Voltage |         | Peak Wavelength |         |
| Condition | IF=20mA            |         | IF=20mA         |         | IF=20mA         |         |
| Unit      | mcd                |         | V               |         | nm              |         |
| Binning   | Grade              | Range   | Grade           | Range   | Grade           | Range   |
|           | BIN 9              | 90~125  | P0              | 2.8~3.0 | U6              | 400~405 |
|           | BIN 10             | 125~175 | P1              | 3.0~3.2 | U7              | 405~410 |
|           |                    |         | P2              | 3.2~3.4 |                 |         |
|           |                    |         | P3              | 3.4~3.6 |                 |         |
|           |                    |         |                 |         |                 |         |
|           |                    |         |                 |         |                 |         |

Intensity: Tolerance of minimum and maximum = ± 15%

V<sub>f</sub>: Tolerance of minimum and maximum = ± 0.05v

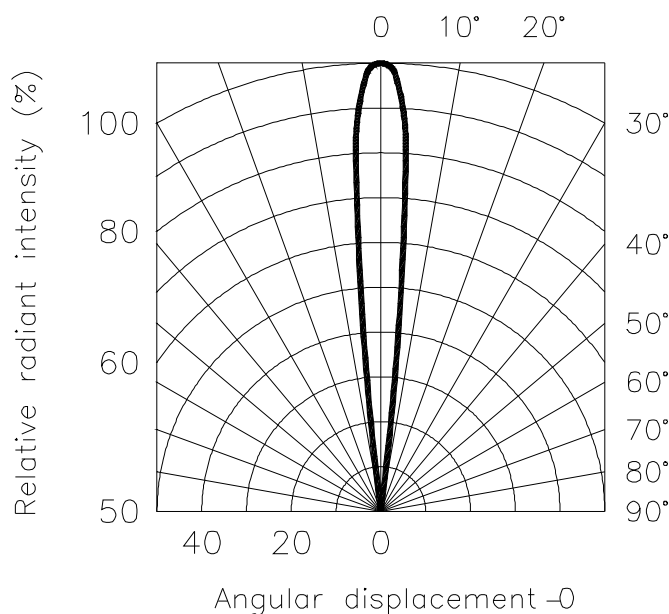
NOTE:

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°**

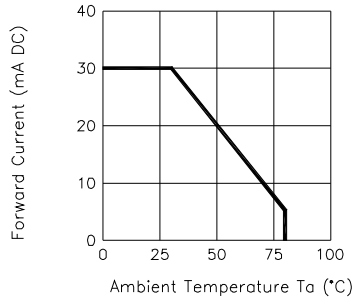
Radiation Diagram



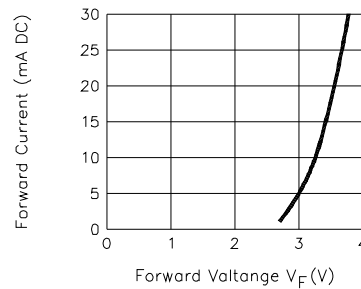
## UV

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

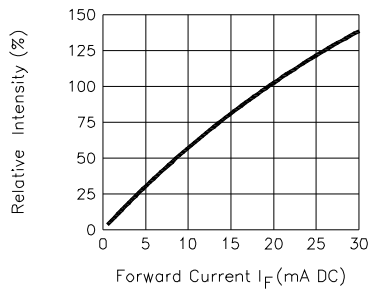
Forward Current  
Vs. Ambient Temperature



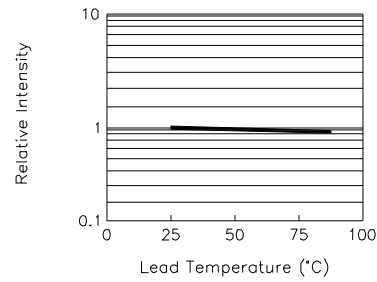
Forward Current  
Vs. Forward Voltage



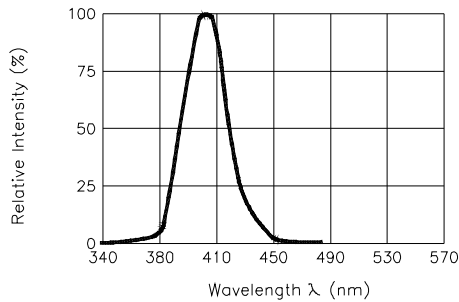
Relative Intensity  
Vs. Forward Current



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



Relative Intensity Vs. Wavelength



Peak Forward Voltage  
Vs. Forward Current  
(100us test pulse,  
1% duty cycle)

