

**Feature**

- Low Power Consumption
- High Intensity
- I.C. compatible

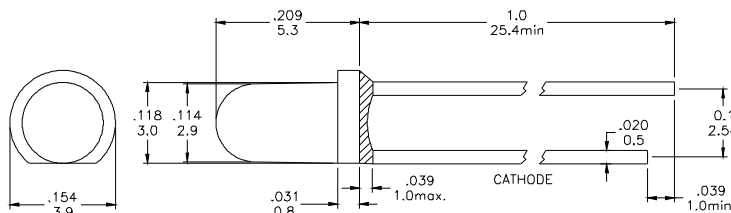
**Applications**

- Commercial Outdoor Sign Board
- Front Panel Indicator
- Dot-Matrix Module
- LED Bulb

**Description**

- These High Intensity LEDs are Based on InGaN/Sapphire Material Technology
- Emitted color: White
- Water Transparent Lens

**Package Dimension**



\* Tolerance:  $\frac{0.01}{0.25}$  Unit:  $\frac{\text{inch}}{\text{mm}}$

**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             | - 40 to + 80  | °C      |
| Tstg   | Storage Temperature Range               | - 40 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     |      | 3.5  | 4.0  | V    |
| IR              | Reverse Current      | VR = 5 V       |      |      | 50   | μA   |
| $\Delta \theta$ | Half Intensity Angle | IF = 20 mA     |      | 30   |      | Deg. |
| IV              | Luminous Intensity   | IF = 20 mA     |      | 3500 |      | mcd. |
| X               | Chromaticity         | IF = 20 mA     |      | 0.24 |      |      |
| Y               | Coordination         | IF = 20 mA     |      | 0.25 |      |      |



### Electrical Characteristics at Ta=25°C

| Symbol    | I <sub>v</sub>     |           | V <sub>F</sub>  |         | λ D                 |                 |
|-----------|--------------------|-----------|-----------------|---------|---------------------|-----------------|
| Parameter | Luminous Intensity |           | Forward Voltage |         | Dominant Wavelength |                 |
| Condition | IF = 20mA          |           | IF = 20mA       |         | IF = 20mA           |                 |
| Unit      | mcd                |           | V               |         | nm                  |                 |
| Binning   | Grade              | Range     | Grade           | Range   | Grade               | Range           |
|           | BIN 18             | 1800~2500 | P1              | 3.0~3.2 | WA                  | Bluish White    |
|           | BIN 19             | 2500~3500 | P2              | 3.2~3.4 | WB                  | Pure White      |
|           | BIN 20             | 3500~4500 | P3              | 3.4~3.6 | WC                  | White           |
|           |                    |           | P4              | 3.6~3.8 | WD                  | Yellowish White |
|           |                    |           | P5              | 3.8~4.0 |                     |                 |

Intensit : Tolerance of minimum and maximum = ± 15%

Vf: Tolerance of minimum and maximum = ± 0.05v

NOTE:

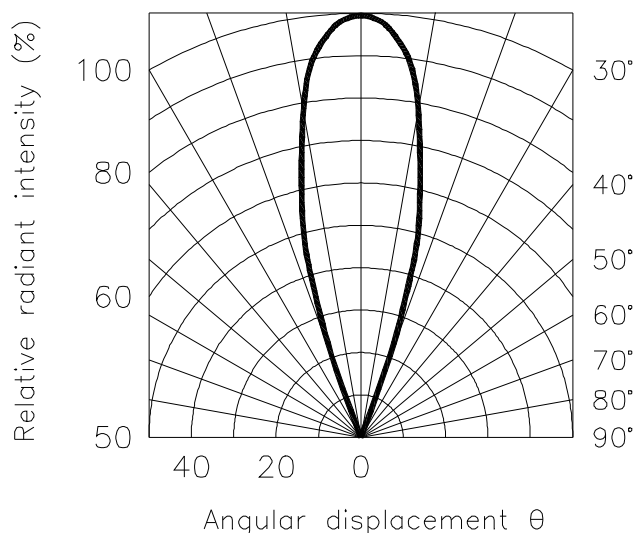
1. Static electricity and surge damages the LED. It is recommend to use a anti-static wrist band or anti-electrostatic glove when handing the LEDs. All devices, equipment and machinery must be properly grounded.
2. Specific binning requirements- please contact our home office

### Radiation Diagram

**IF=20 mA 50% Power Angle Angle =30°**

Radiation Diagram

0 10° 20°



# WHITE

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

