

Feature

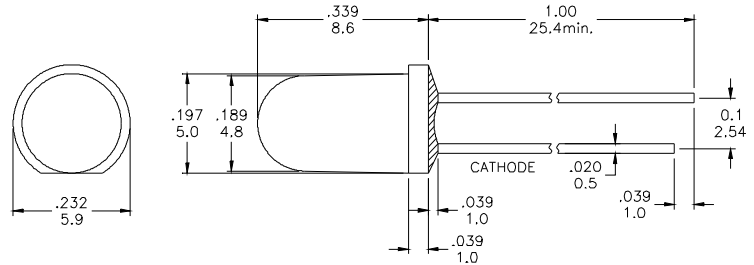
- § Low Power Consumption
- § High Intensity
- § I.C. compatible

Applications

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

Description

- § These High Intensity LEDs are Based on AlInGaP/GaAs Material Technology
- § Color Transparent Lens

Package Dimension


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

Absolute Maximum Ratings at Ta = 25°C

| Symbol | Parameter | Max. | Unit |
|---|---------------------------------------|---------------|---------|
| PD | Power Dissipation | 80 | 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 | | 2.0 | 2.4 | V |
| IR | Reverse Current | VR = 5 V | | | 50 | μA |
| $\Delta \theta$ | Half Intensity Angle | IF = 20 mA | | 15 | | Deg. |
| IV | Luminous Intensity | IF = 20 mA | | 1650 | | mcd. |
| λd | Peak Wavelength | IF = 20 mA | | 570 | | nm |



Electrical Characteristics at Ta=25°C

| Symbol | I _v | | V _F | | 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 16 | 950~1300 | B | 1.8~1.9 | G8 | 567~569 |
| | BIN 17 | 1300~1800 | C | 1.9~2.0 | G9 | 569~571 |
| | BIN 18 | 1800~2500 | D | 2.0~2.1 | G10 | 571~573 |
| | | | E | 2.1~2.2 | | |
| | | | F | 2.2~2.3 | | |
| | | | G | 2.3~2.4 | | |
| | | | | | | |

Intensity: Tolerance of minimum and maximum = ± 15%

V_f: Tolerance of minimum and maximum = ± 0.05v

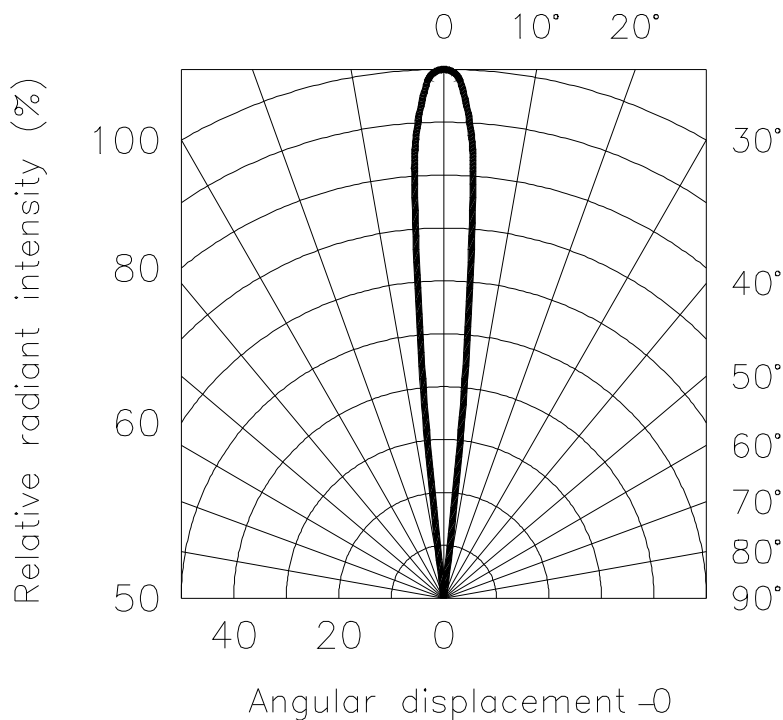
NOTE:

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





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

Fig 1. Forward Current vs. Forward Voltage

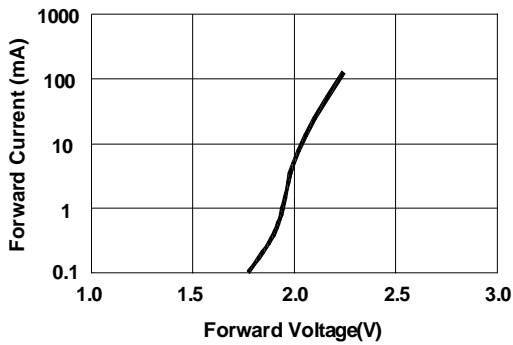


Fig 2. Relative Intensity vs. Forward Current

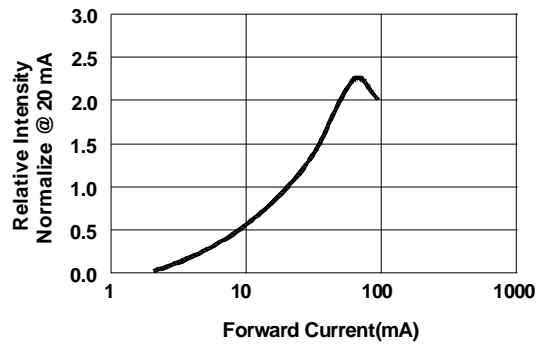


Fig 3. Forward Voltage vs. Temperature

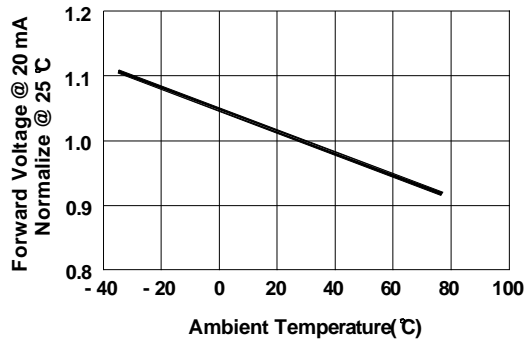


Fig 4. Relative Intensity vs. Temperature

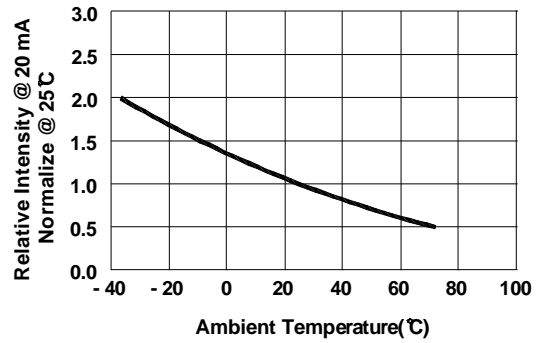


Fig 5. Relative Intensity vs. Wavelength

