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.

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VCC | OPTOELECTRONICS
lighting:theway

# SUPERBRIGHT LED LAMP

## VAOL-5LSBY4

## Feature

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

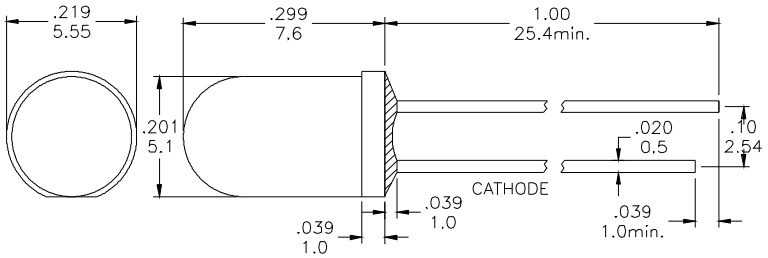
## Applications

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

## Description

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

## Package Dimension




∗Tolerance：± 0.01/0.25　　Unit：± inch/mm

## Absolute Maximum Ratings at Ta＝25℃

| Symbol | Parameter | Max. | Unit |
|---|---|---|---|
| PD | Power Dissipation | 100 | mW |
| VR | Reverse Voltage | 5 | V |
| IAF | Average Forward Current | 20 | mA |
| IPF | Peak Forward Current（Duty＝0.1，1kHz） | 85 | mA |
| — | Derating Linear Form 25℃ | 0.4 | mA/℃ |
| Topr | Operating Temperature Range | -40 to + 80 | ℃ |
| Tstg | Storage Temperature Range | -40 to + 100 | ℃ |
| Lead Soldering Temperature [1.6mm（0.063inch） From Body] 260℃ For 5 Seconds. | | | |

## Electrical / Optical Characteristics and Curves at Ta＝25℃

| 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 | | | 100 | μA |
| △θ | Half Intensity Angle | IF＝ 20 mA | | 60 | | Deg. |
| IV | Luminous Intensity | IF＝ 20 mA | | 1500 | | mcd. |
| λd | Dominant Wavelength | IF＝ 20 mA | | 470 | | nm |

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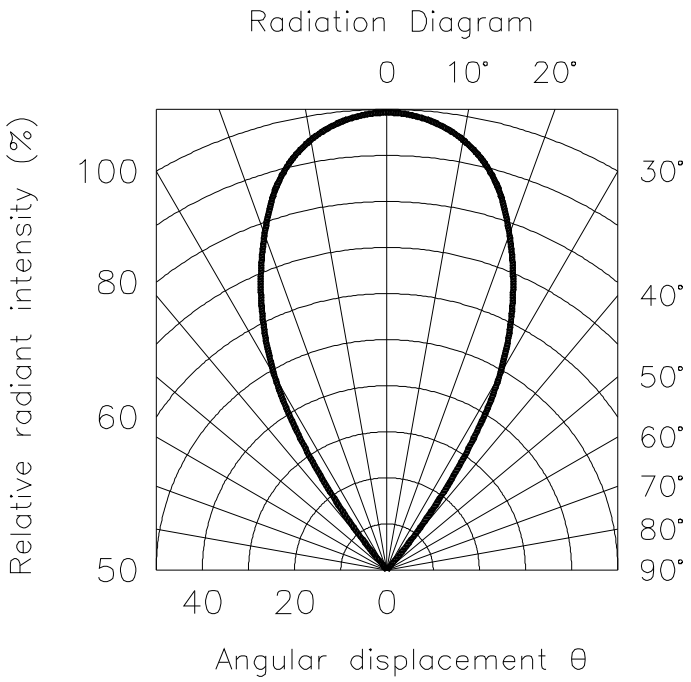
## Electrical Characteristics at Ta＝25℃

| Symbol | Iv | | $V_F$ | | λ D | |
|---|---|---|---|---|---|---|
| Parameter | Luminous Intensity | | Forward Voltage | | Dominant Wavelength | |
| Condition | IF＝20mA | | IF＝20mA | | IF＝20mA | |
| Unit | mcd | | V | | nm | |
| | Grade | Range | Grade | Range | Grade | Range |
| | BIN 17 | 1300~1800 | P0 | 2.8~3.0 | B5 | 460~465 |
| | BIN18 | 1800~2500 | P1 | 3.0~3.2 | B6 | 465~470 |
| | | | P2 | 3.2~3.4 | B7 | 470~475 |
| | | | P3 | 3.4~3.6 | | |
| | | | P4 | 3.6~3.8 | | |
| | | | P5 | 3.8~4.0 | | |

Intensity: 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

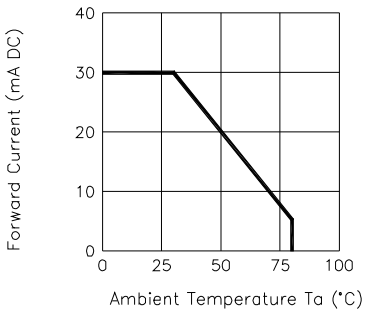
**IF=20 mA 50% Power Angle Angle =60°**



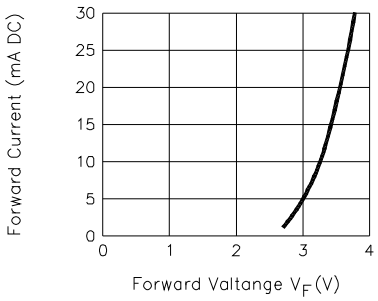
# BLUE

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

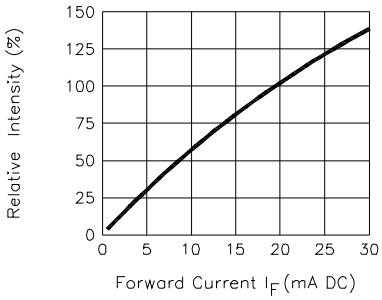
Forward Current
Vs. Ambient Temmperature



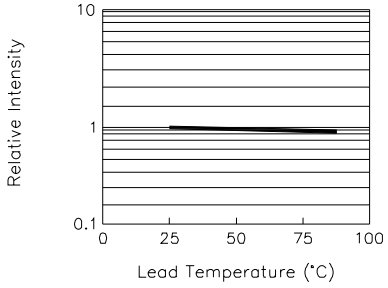

Forward Current
Vs. Forward Valtage



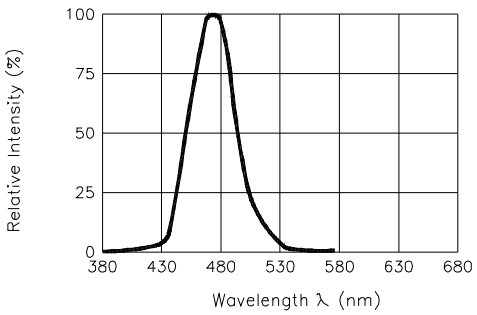

Relative Intensity
Vs. Forward Current




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




Relative Intensity Vs. Wavelength




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