



中山市晶博光电科技有限公司

ZHONGSHAN KINGHOOD OPTOELECTRONICS CO.,LTD.

Device Number: JBDL-5R4-029

REV: 1.0

5.0mm Round Type LED Lamps

Model No.: 5R4B49BXXC

ECN: _____

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■ Features :

- High radiant intensity
- Choice of various viewing angles
- Reliable and robust

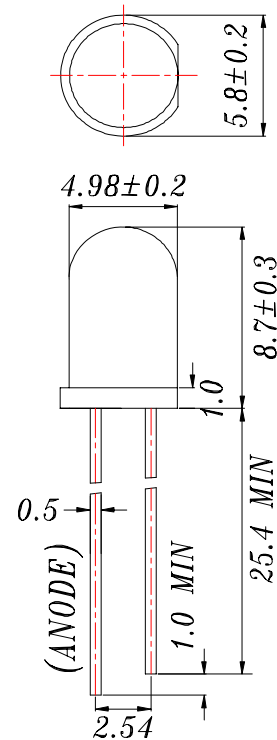
■ Descriptions :

- The series is specially designed for applications requiring higher brightness.
- The led lamps are available with different colors, intensities, epoxy colors, etc.

■ Applications :

- TV set
- Monitor
- Telephone
- Computer

■ Package Dimensions:



- Notes:**
1. All dimensions are in millimetres
 2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
 3. Tolerances unless Dimension ± 0.25 mm.

| PART NO. | Chip | | Lens Color |
|------------|-----------|---------------|-------------|
| | Material | Emitted Color | |
| 5R4B49BXXC | InGaN/SiC | Blue | Water Clear |

Address: Bld.8,Fuwan Industrial Zone,Eastern,Zhongshan,Guangdong,China

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Prepared by: George

Prepared date: 09-7-20

907044



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■ Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Rating | Unit |
|-------------------------|----------|-------------|------|
| Forward Current | IF | 30 | mA |
| Operating Temperature | Topr | -40 to +85 | °C |
| Storage Temperature | Tstg | -40 to +100 | °C |
| Electrostatic Discharge | ESD | 2000 | V |
| Soldering Temperature | Tsol | 260 ± 5 | °C |
| Power Dissipation | Pd | 120 | mW |
| Peak Forward Current | IF(Peak) | 100 | mA |
| Reverse Voltage | VR | 7 | V |

Note: *1:IFP Conditions --Pulse Width ≤ 1msec and Duty ≤ 1/10.

*2:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|------------------------------|--------|-----------|------|------|-------|------|
| Forward Voltage | VF | IF= 20 mA | 3.0 | 3.1 | 3.4 | V |
| Reverse Current | IR | VR= 7 V | / | / | 2 | μA |
| Luminous Intensity | Iv | IF= 20 mA | 4000 | / | 20000 | mcd |
| Viewing Angle | 2θ 1/2 | IF= 20 mA | / | 10 | / | deg |
| Peak Wavelength | λ p | IF= 20 mA | 460 | 465 | 468 | nm |
| Dominant Wavelength | λ d | IF= 20 mA | 462 | 467 | 470 | nm |
| Spectrum Radiation Bandwidth | Δλ | IF= 20 mA | / | 26 | / | nm |

| BIN# | M16 | M17 | M18 | M19 |
|---------------------|-------------|-------------|-----------|------------|
| Iv(mcd) @IF=20mA | 3111-4356 | 4356-6098 | 6098-8538 | 8538-11953 |
| BIN# | M20 | M21 | | |
| Iv(mcd) @IF=20mA | 11953-16734 | 16734-23427 | | |

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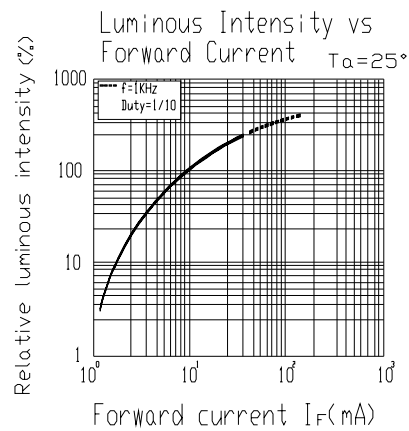
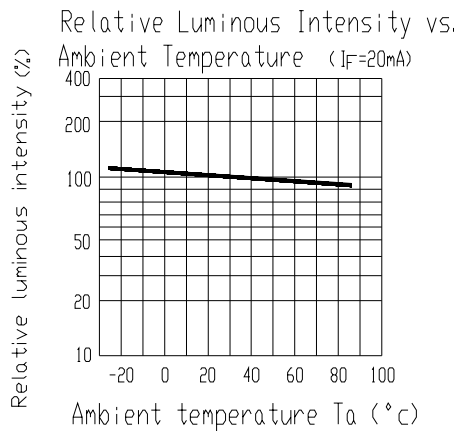
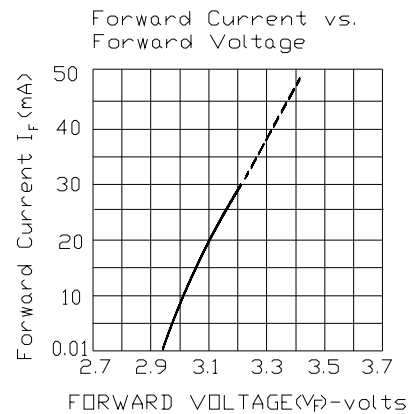
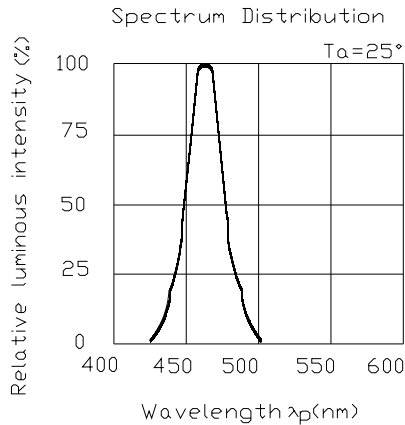
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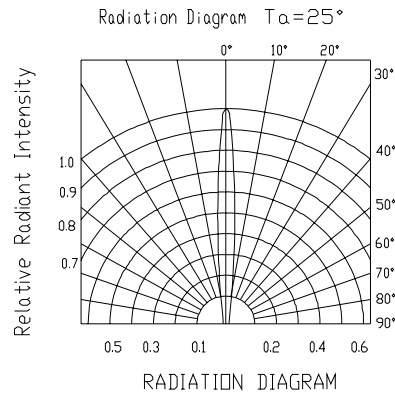
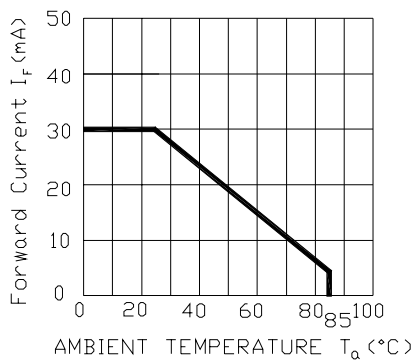
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Typical Electro-Optical Characteristic Curves:



Forward Current Derating Curve



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■ Reliability test items and conditions:

| NO | Item | Test Conditions | Test Hours/Cycle | Sample size | Ac/Re |
|----|---------------------------------|--|------------------|-------------|-------|
| 1 | Solder Heat | TEMP : 260°C ± 5 °C | 10 SEC | 76 PCS | 0/1 |
| 2 | Temperature Cycle | H : +100°C 15min ∩ 5 min L : -40°C 15min | 300 CYCLES | 76 PCS | 0/1 |
| 3 | Thermal Shock | H : +100°C 5min ∩ 10 sec L : -10°C 5min | 300 CYCLES | 76 PCS | 0/1 |
| 4 | High Temperature Storage | TEMP : 100°C | 1000 HRS | 76 PCS | 0/1 |
| 5 | Low Temperature Storage | TEMP : -40°C | 1000 HRS | 76 PCS | 0/1 |
| 6 | DC Operating Life | TEMP : 25°C IF = 20mA | 1000 HRS | 76 PCS | 0/1 |
| 7 | High Temperature/ High Humidity | 85°C / 85% RH | 1000 HRS | 76 PCS | 0/1 |

*Iv: BRIGHTNESS ATTENUATE DIFFERENCE(1000hrs) < 10%

*VF: FORWARD VOLTAGE DIFFERENCE < 3%

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