



# 中山市晶博光电科技有限公司

ZHONGSHAN KINGHOOD OPTOELECTRONICS CO.,LTD.

## DATA SHEET

PART NO. : 5R4B2HBE3C1

DATE : 2009-11-12

DEPARTMENT : R&D

REVISION : 1

<h3>RECEIVED</h3>			
<input type="checkbox"/> MASS PRODUCTION			
<input checked="" type="checkbox"/> PRELIMINARY			
<input type="checkbox"/> CUSTOMER DESIGN			
DEVICE NUMBER :		JBDL-5R4-028	
PAGE :		4	
CUSTOMER	DESIGNER	CHECKER	APPROVER

REV.	DESCRIPTION	RELEASE DATE

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

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## ZHONGSHAN KINGHOOD OPTOELECTRONICS CO.,LTD.

Device Number: JBDL-5R4-028

REV: 1.0

### 5.0mm Round Type LED Lamps

Model No.: 5R4B2HBE3C1

ECN: \_\_\_\_\_

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#### ■ Features :

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

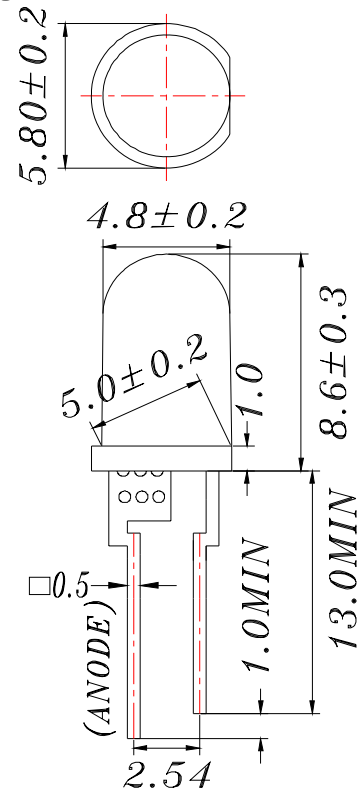
#### ■ Descriptions :

- 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  $\pm 0.25$ mm.

PART NO.	Chip		Lens Color
	Material	Emitted Color	
5R4B2HBE3C1	InGaN/Sapphire	Blue	Water Clear

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## ■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Forward Current	IF	150	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	450	mW
Peak Forward Current	IF(Peak)	300	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	V <sub>F</sub>	IF= 100 mA	/	3.0	3.3	V
Reverse Current	I <sub>R</sub>	VR= 7 V	/	/	2	μA
Luminous Intensity	I <sub>v</sub>	IF= 100 mA	1500	20000	40000	mcd
Viewing Angle	2θ 1/2	IF= 100 mA	/	60	/	deg
Peak Wavelength	λ <sub>p</sub>	IF= 100 mA	/	468	/	nm
Dominant Wavelength	λ <sub>d</sub>	IF= 100 mA	/	470	/	nm
Spectrum Radiation Bandwidth	△λ	IF= 100 mA	/	26	/	nm

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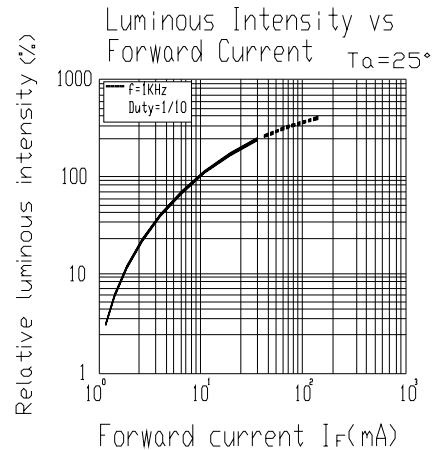
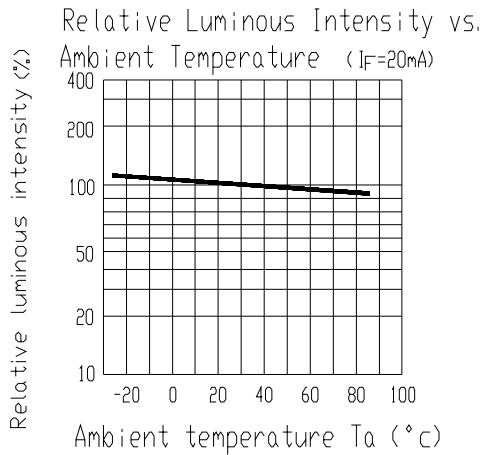
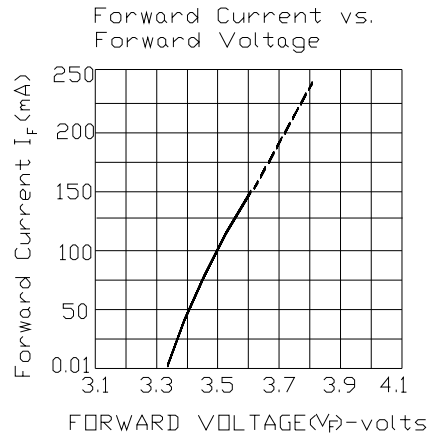
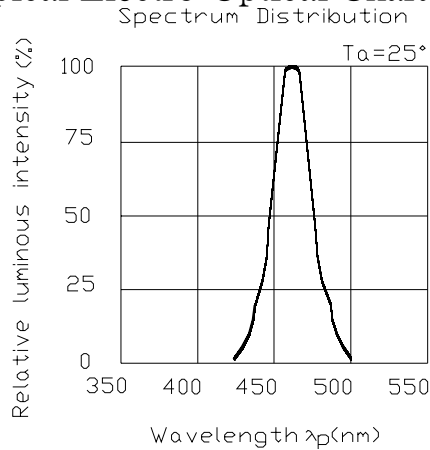
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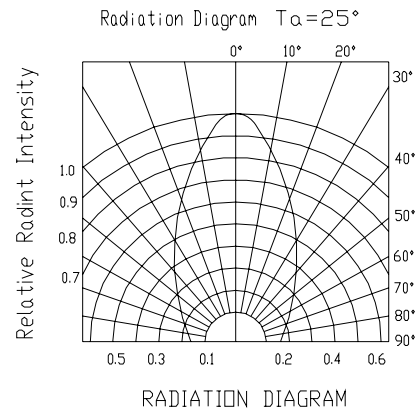
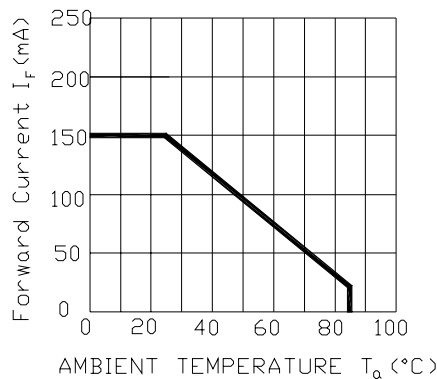
ECN: \_\_\_\_\_

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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 = 100mA	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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