

# PRODUCT SPECIFICATION



**Part No. : JH-5054GRBW12J20-P1C**  
**High Power LED**

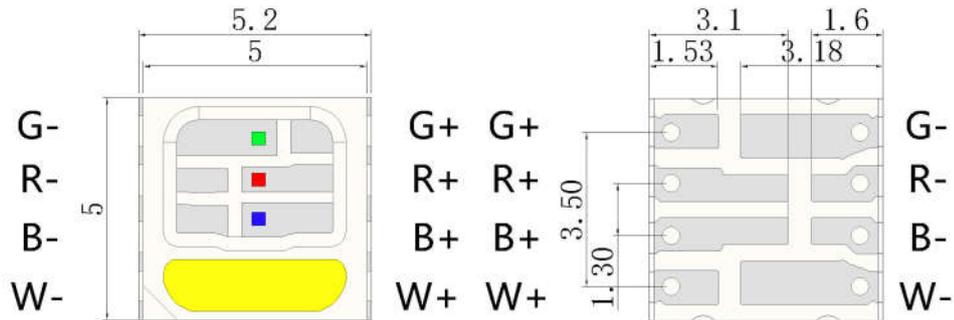
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# 1.Product Features

- High Brightness GRBW LED
- Plane Package
- Viewing Angle 120 Degree
- Chip Material: IngaN AlGaInP
- RoHS Compliant

# 2.Dimensions

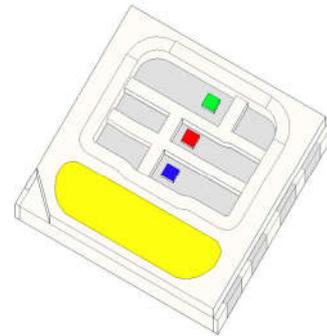


Top view

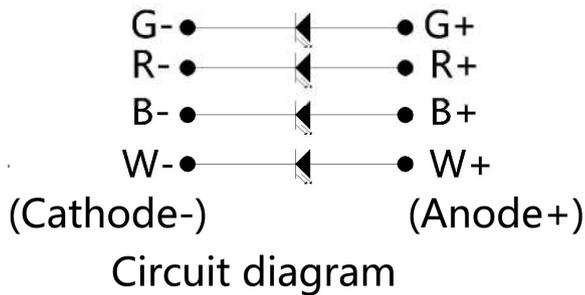
Bottom view



Side view



Perspective view



### Notes:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.1\text{mm}$  unless otherwise noted.

### 3. Single channel Absolute Maximum Rating @ Ta=25° C

Parameter	Symbol	Maximum Rating	Unit
Continuous Forward Current	IF	150	mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	IFp	300	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	0.5	W
Electrostatic Discharge	ESD	1000	V
Operating Temperature Range	TOPR	-25°C to +60°C	
Storage Temperature Range	TSTG	-35°C to +80°C	
Lead Soldering Temperature	TSOL	260°C	

### 4. Optical Character @ Ta=25° C

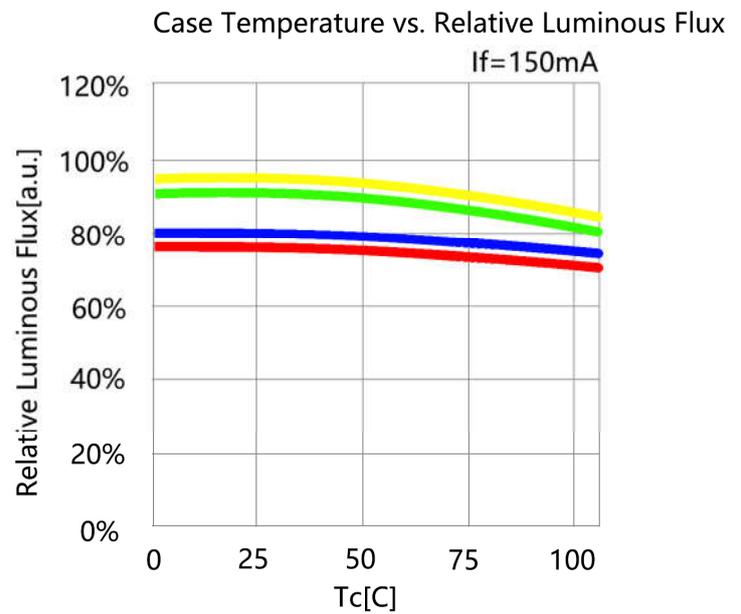
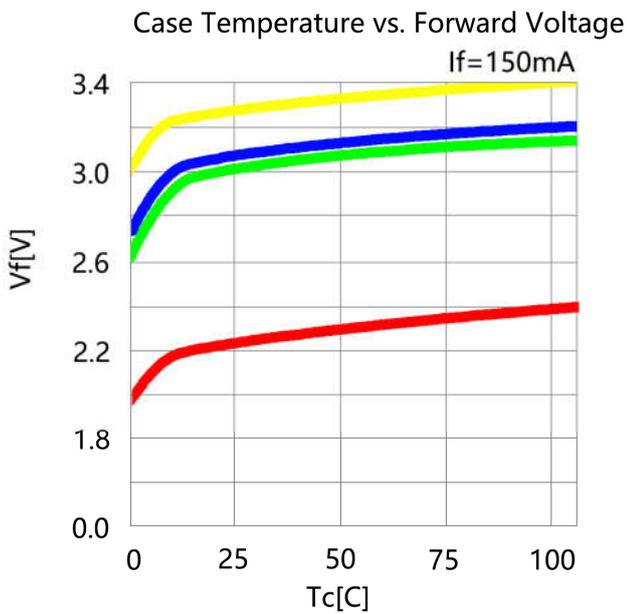
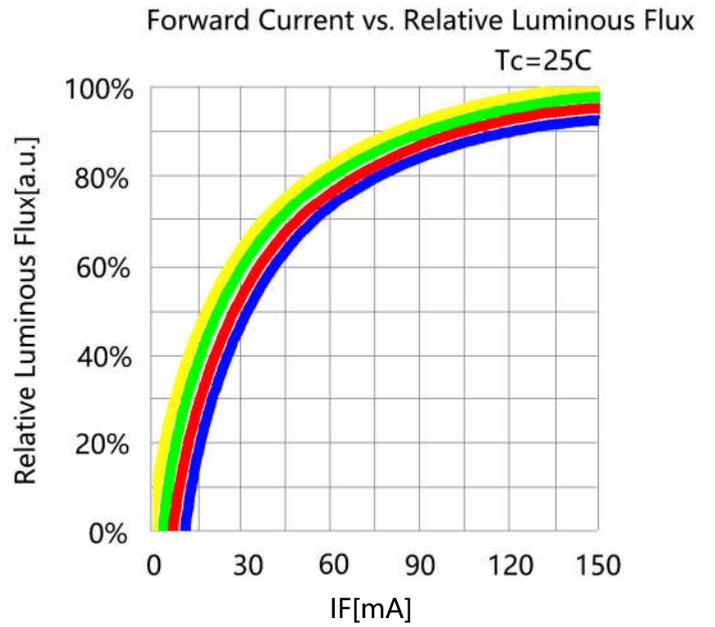
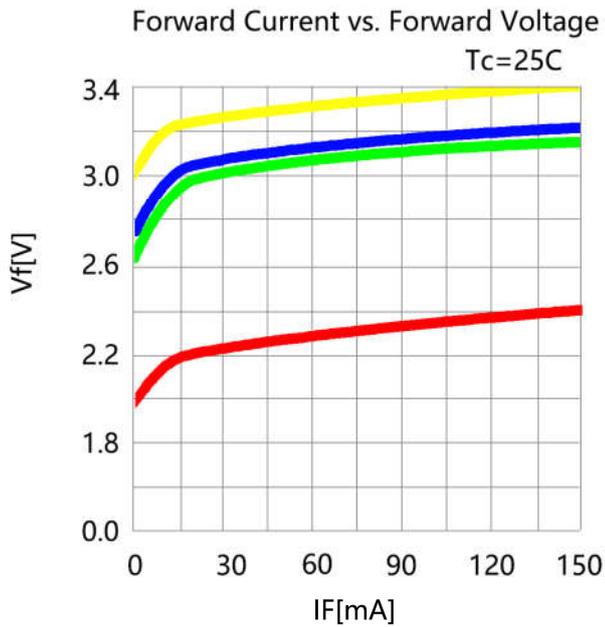
Parameter	Symbol	Color	Min.	Typ.	Max.	Unit	Test
Forward Voltage	VF	W	3.0		3.4	V	IF=150mA
		R	2.0		2.4	V	IF=150mA
		G/B	2.8		3.2	V	IF=150mA
Luminous Flux	Φ	W	70	80	90	Lm	IF=150mA
		R	15	20	25	Lm	IF=150mA
		G/B	30/5	35/8	40/15	Lm	IF=150mA
Dominant Wavelength	Wld	G	520	523	525	nm	IF=150mA
		R	620	623	625	nm	IF=150mA
		B	460	463	465	nm	IF=150mA
Color Temperature	Tc	W	4000	4250	4500	K	IF=150mA
Reverse Current	IR				10	μA	VR=5V
Viewing Angle	2θ1/2				120	deg	IF=150mA
Recommend Forward Current	IF(rec)	GRBW			150	mA	

#### Notes:

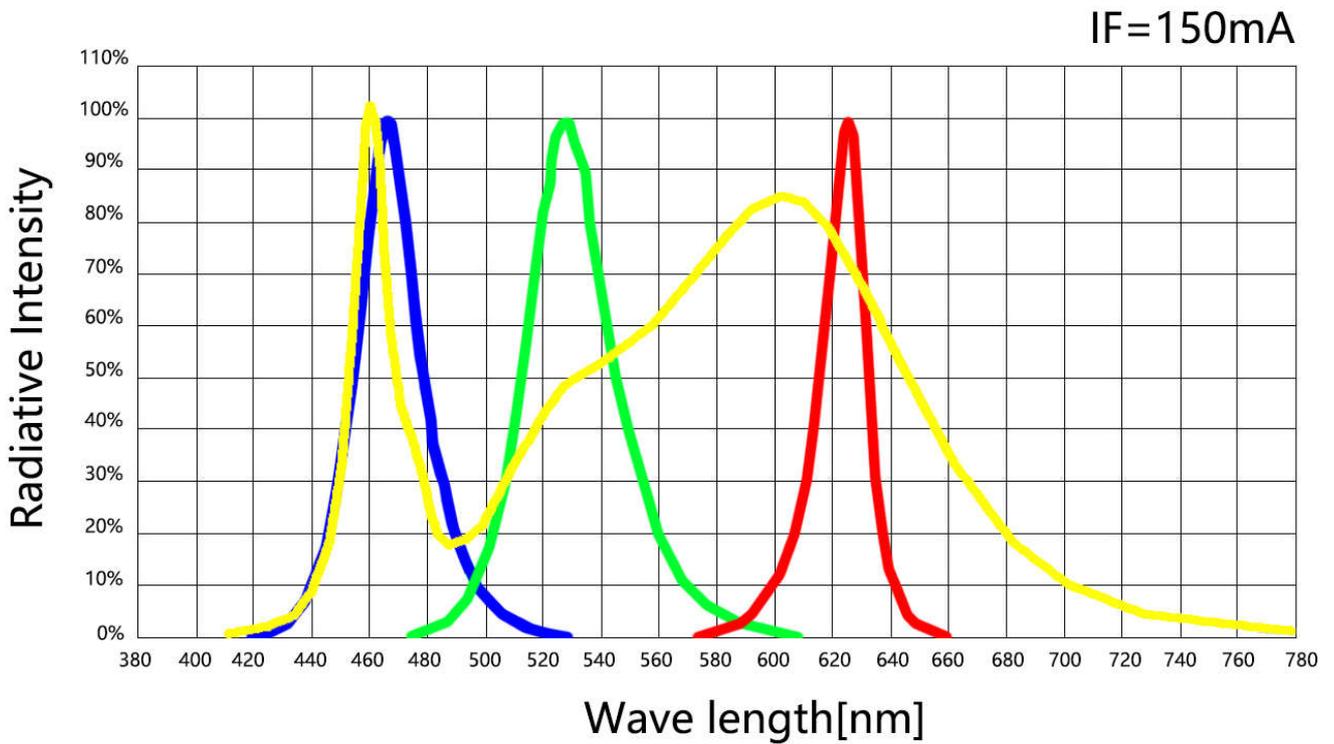
Measurement tolerance of forward voltage ±0.1V

## 5. Optical Character Curves

( 25 ° Ambient Temperature Unless Otherwise Noted )



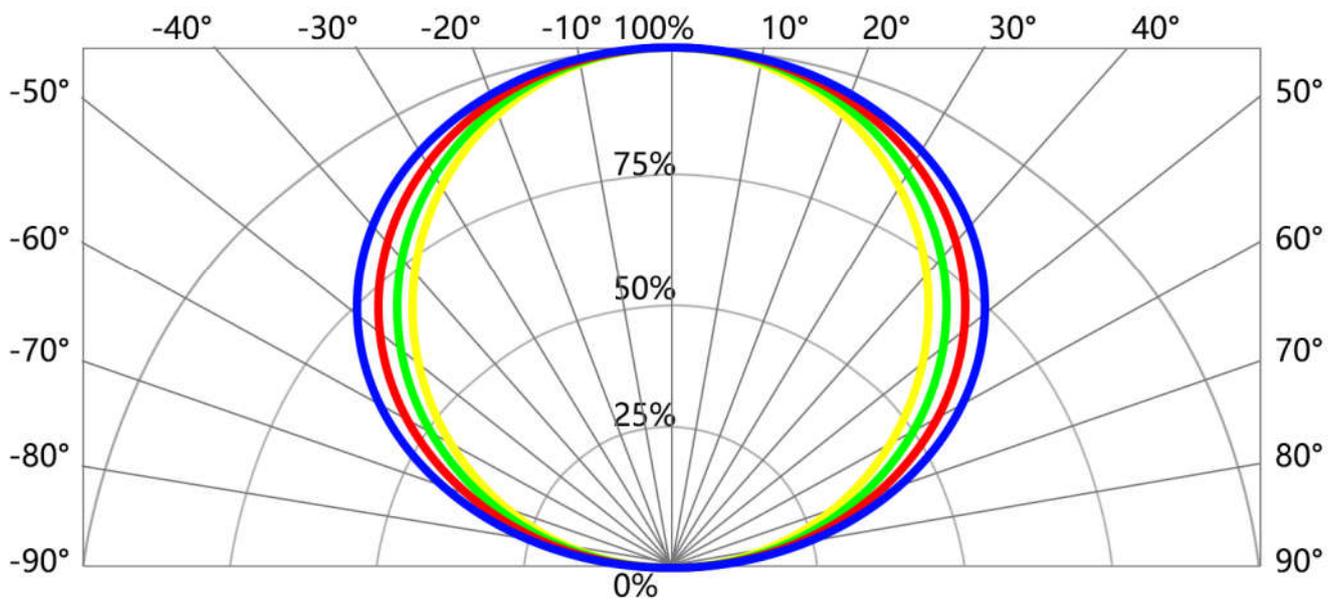
## 6. Spectrum Curves



## 7. Viewing Angle Curves

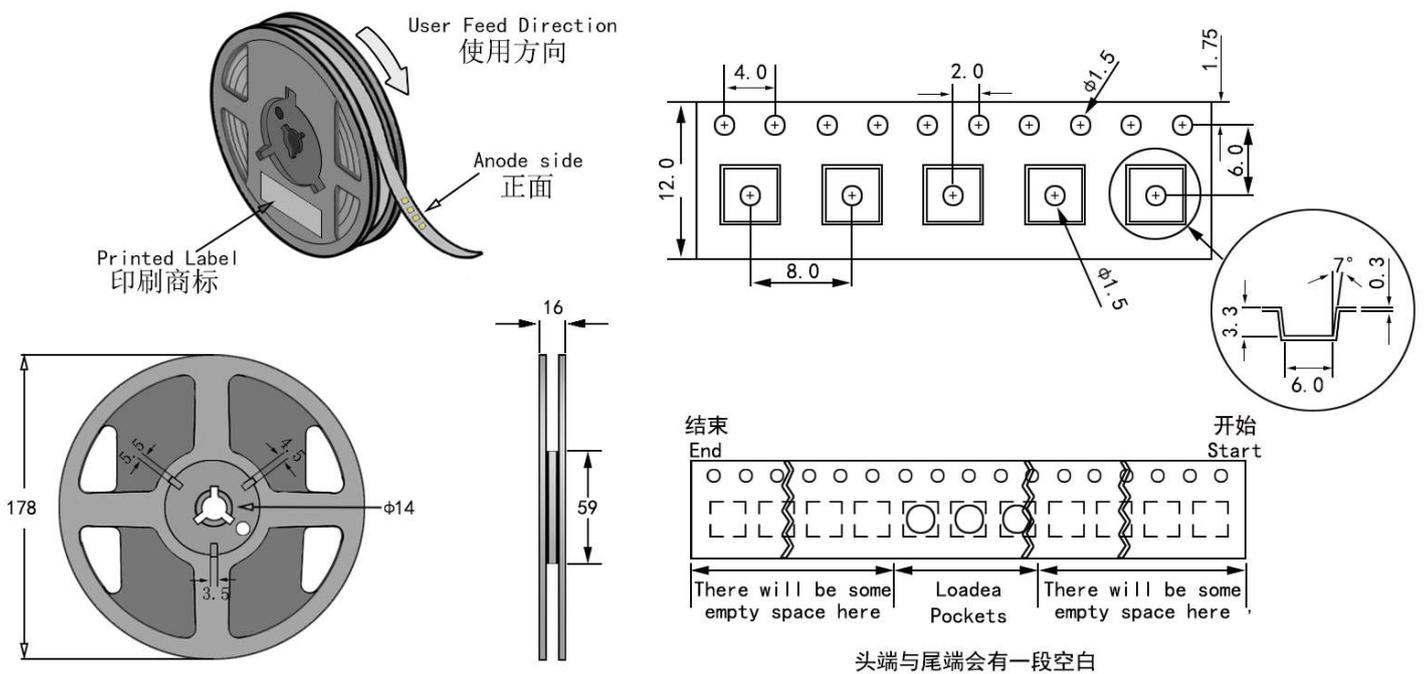
Radiation Characteristic

IF=150mA



## 8. Tape & Reel Packing

1. Recommend unpacked LED beads be welded within one day, if not, please vacuumize again and store in an environment of 20-35°C and 30-60% humidity. If can't vacuumize, please store LED beads in moisture proof box, control at 25°C ± 3°C, humidity 50-60%. If unpacked above 1 week, bake at 60 ± 5°C for 10-12 hours before weld.

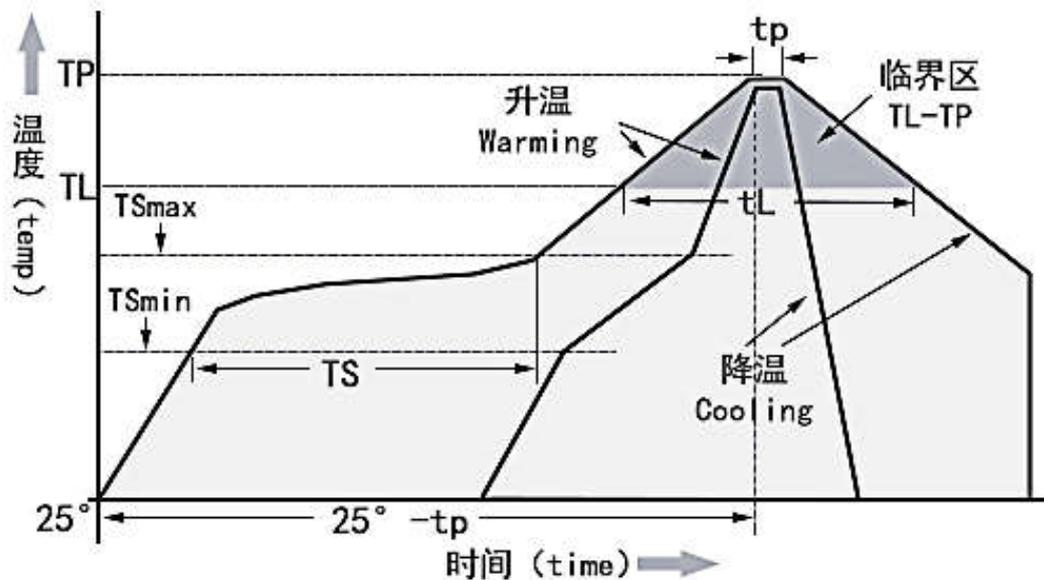


### Notes:

1. QTY: 1000pcs/Reel
2. Tolerance ±0.2mm.
3. Package: P/N

## 9.Soldering Advice

1. When soldering, don't touch the LED appearance gel during, this bad operation will destroy the LED. Moding LED usually use reflow soldering, please refer to the following reflow temperature curve , and recommend the user follow the soldering temperature curve of the solder paste.



Temperature Curve Character	Lead-free solder
Average heating rate(TSmin to Tp)	最高 3°C/秒 Top 3 °C / s
Preheating: Minimum temperature ( TSmin )	90°C
Preheating: Maximum temperature ( TSmax)	200°C
Preheating: Time ( TSmin to TSmax)	60-180 s
Duration above temperature: Temperature TL	240°C
Duration above temperature: Time tL	60-150 s
Peak/classification temperature (Tp)	260°C
Time within 5°C of actual peak temperature (tp)	20-40 s
Cooling speed	最高 6°C/秒 The highest 6 °C / s
Time to reach peak temperature at 25°C	最多 8 分钟 8 minutes Max

## 10. Cautions

### 1. Electrostatic Treatment

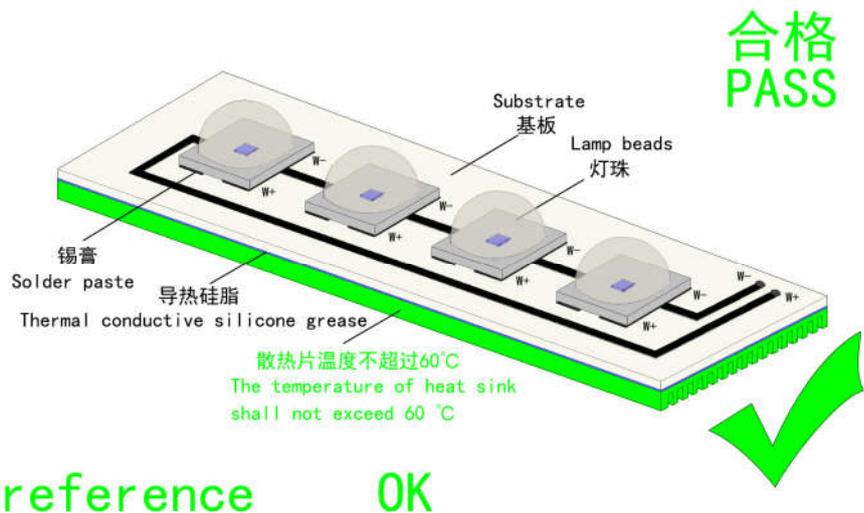
Do a full range of anti-static measures (such as: anti-static ring, anti-static clothes, machine, equipment grounding wire, etc.)



### 2. Heat Dissipation

A、 It is recommend to configure reasonable heat dissipation device for the product.

B、 The best working temperature range of the product is 40-60°. It is recommended to control the working temperature of the product within a reasonable range.



### 3. Installation Conditions

A、 Do not exert any pressure on the LED area during the use of the led beads. such as below:

