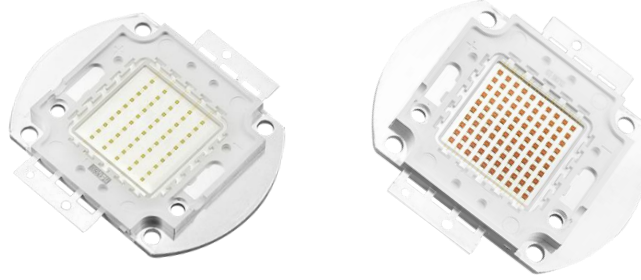


## Color GT-P100W-XX



### Product Description

Getian P100W color high power led series has been widely applied to plant grow lights, Aquarium Lights , and landscape lights, etc with ultimate cost performance and stability. Unique and perfect raw materials combination of Getian and strict reliability tests (eg: temperature shock test; high temperature aging test etc) ensures its stability and excellent performance in heat conduction, light quality and super high light output.

### Features

- red copper base with high heat conductivity
- integrated circuit with wide viewing angle
- RoHS Compliant.
- >50000Hrs

### Application

- plant grow lights
- Aquarium Lights, landscape lights, etc.

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## Characteristics

Characteristics	Unit	Min	Typical	Max
Dimension L*W	mm		56*52	
Diameter of Luminous Area $\Phi$	mm		24*24	
Beam Angle $\theta$	deg.		120	
Wavelength WL	nm	460		660
Power Dissipation PD	W		30/50/100	
Operating Temperature Top	°C	-40		+65
Storage Temperature Tst	°C	-40		+85
Testing Point Tc	°C			65
Junction Temperature Tj	°C			115
Reverse Current (Vr=5V) Ir	mA			1
ESD (HBM)	V			2000
Hand Soldering (Lead-Free) HST	°C			350

## Coding Rules

Model	GT	P	100W	XX	X	X	X	X	XX
Code	GT	P	Type	Emitting Color	Chip Size	Chip QTY	Beam Angle	Power	Brightness Grade
Meaning	Getian	High Power Series	100W:100W Holder	B3:460-470nm G6:520-530nm R1:620-630nm	4:45*45mil	30:30EA 50:50EA 100:100EA	0:120°	30:30W 50:50W 100:100W	300:300-600 500:500-1000 1A:1000-2000 2A:2000-2500 2B:2400-3000 4A:4000-5000 8A:80000-10000

**Specifications ( Tc = 25 °C )**
**Power: 30W Thermal Resistance: 0.4°C/W**

Color	Wavelength (nm)		Voltage (V)	Current (mA)	Im	Part Number
Blue	460	470	28-34	1050	300-600	GT-P100WB3430030300
Green	520	530	28-34	1050	2400-3000	GT-P100WG64300302B
Red	620	630	20-26	1200	1200-1500	GT-P100WR14300301A

**Power: 50W Thermal Resistance: 0.24°C/W**

Color	Wavelength (nm)		Voltage (V)	Current (mA)	Im	Part Number
Blue	460	470	28-34	1750	500-1000	GT-P100WB3450050500
Green	520	530	28-34	1750	4000-5000	GT-P100WG64500504A
Red	620	630	20-26	2000	2000-2500	GT-P100WR14500502A

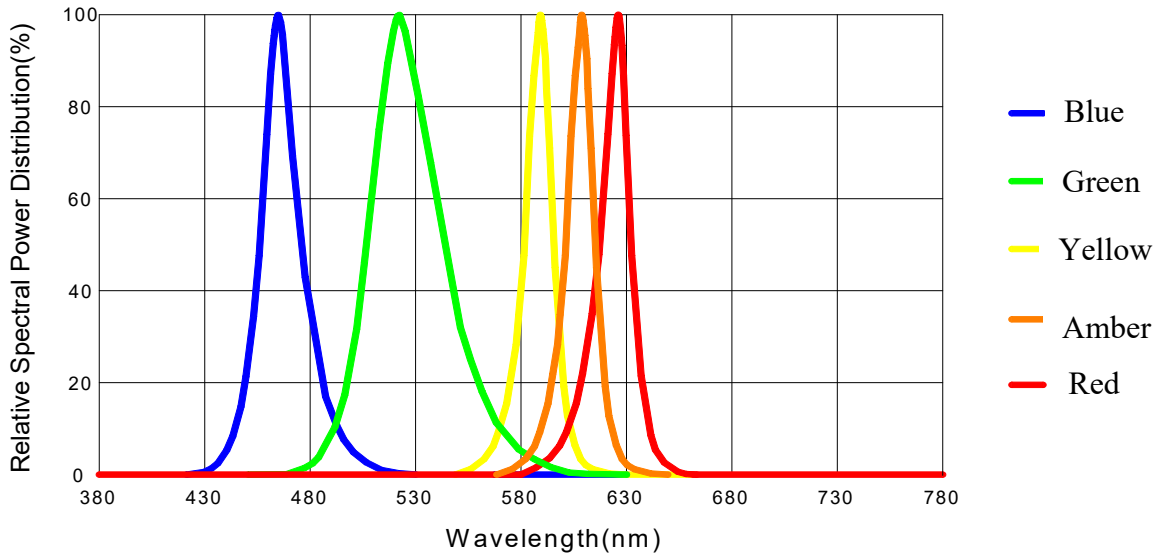
**Power: 100W Thermal Resistance: 0.12°C/W**

Color	Wavelength (nm)		Voltage (V)	Current (mA)	Im	Part Number
Blue	460	470	28-34	3500	1000-2000	GT-P100WB3410001001A
Green	520	530	28-34	3500	8000-10000	GT-P100WG6410001008A
Red	620	630	20-26	4000	4000-5000	GT-P100WR1410001004A

**Notes:**

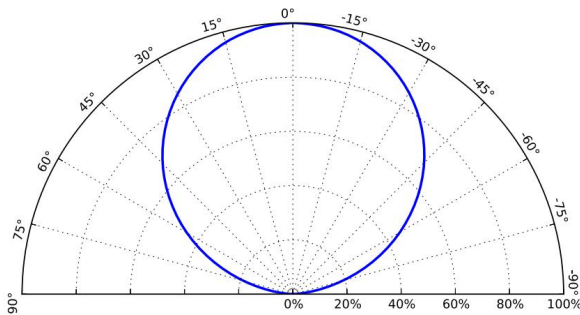
Above charts include the most regular specs for COB leds for reference. Please consult sales representative for specs that are not listed or please visit [www.getiangroup.com](http://www.getiangroup.com). Machine Tolerance  $\pm 3\%$  on luminous flux.

**Spectral Features (Tc = 25°C)**

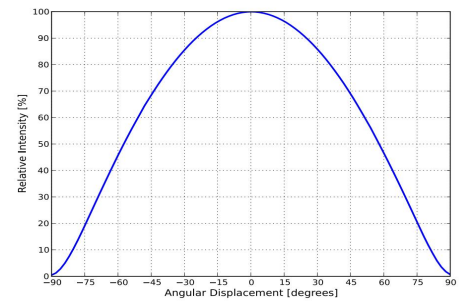


**Typical Spatial Distribution (Tc = 25°C)**

Intensity Distribution Diagram

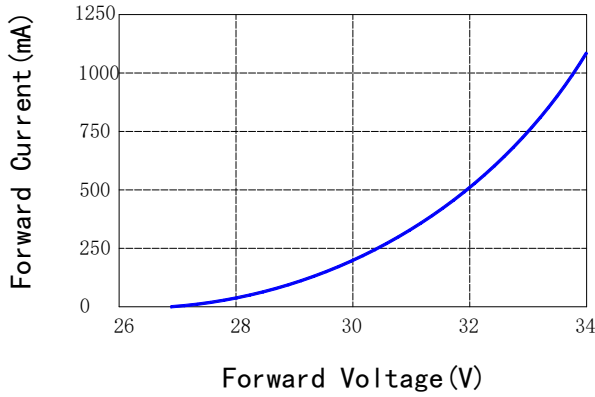


Intensity Distribution Curve

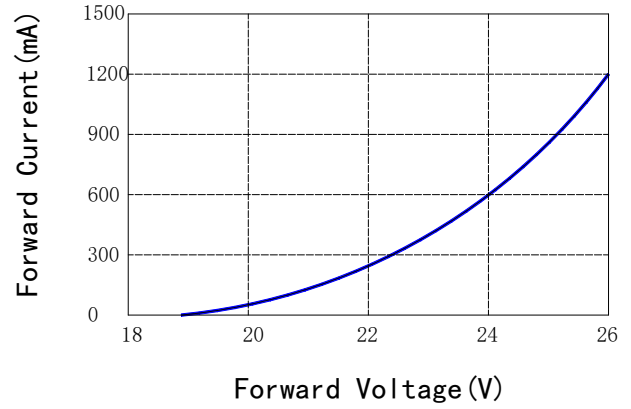


Electrical Features (Tc = 25°C)

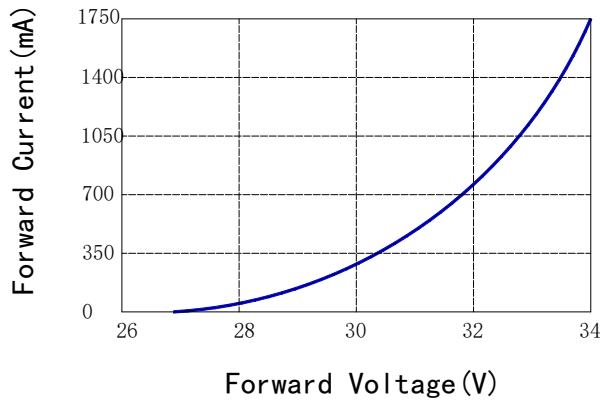
Power: 30W Green Blue



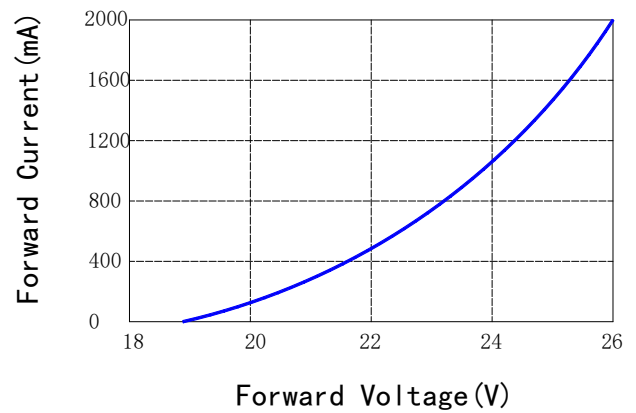
Power: 30W Red



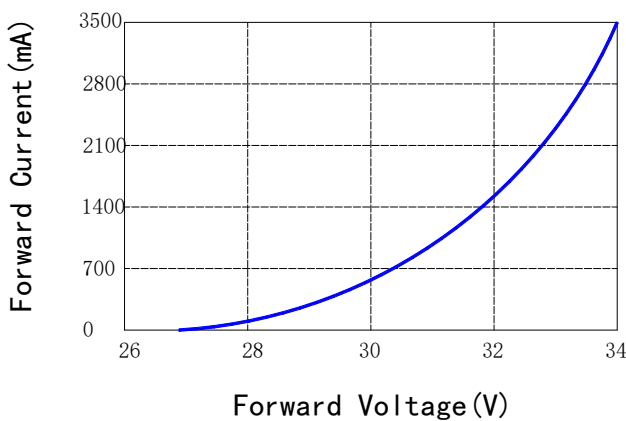
Power: 50W Green Blue



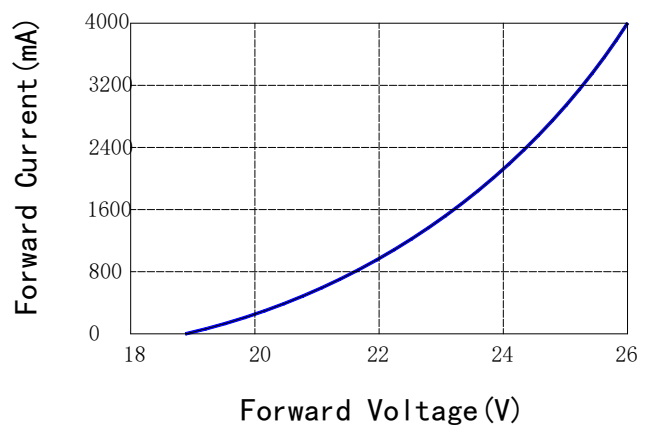
Power: 50W Red



Power: 100W Green Blue

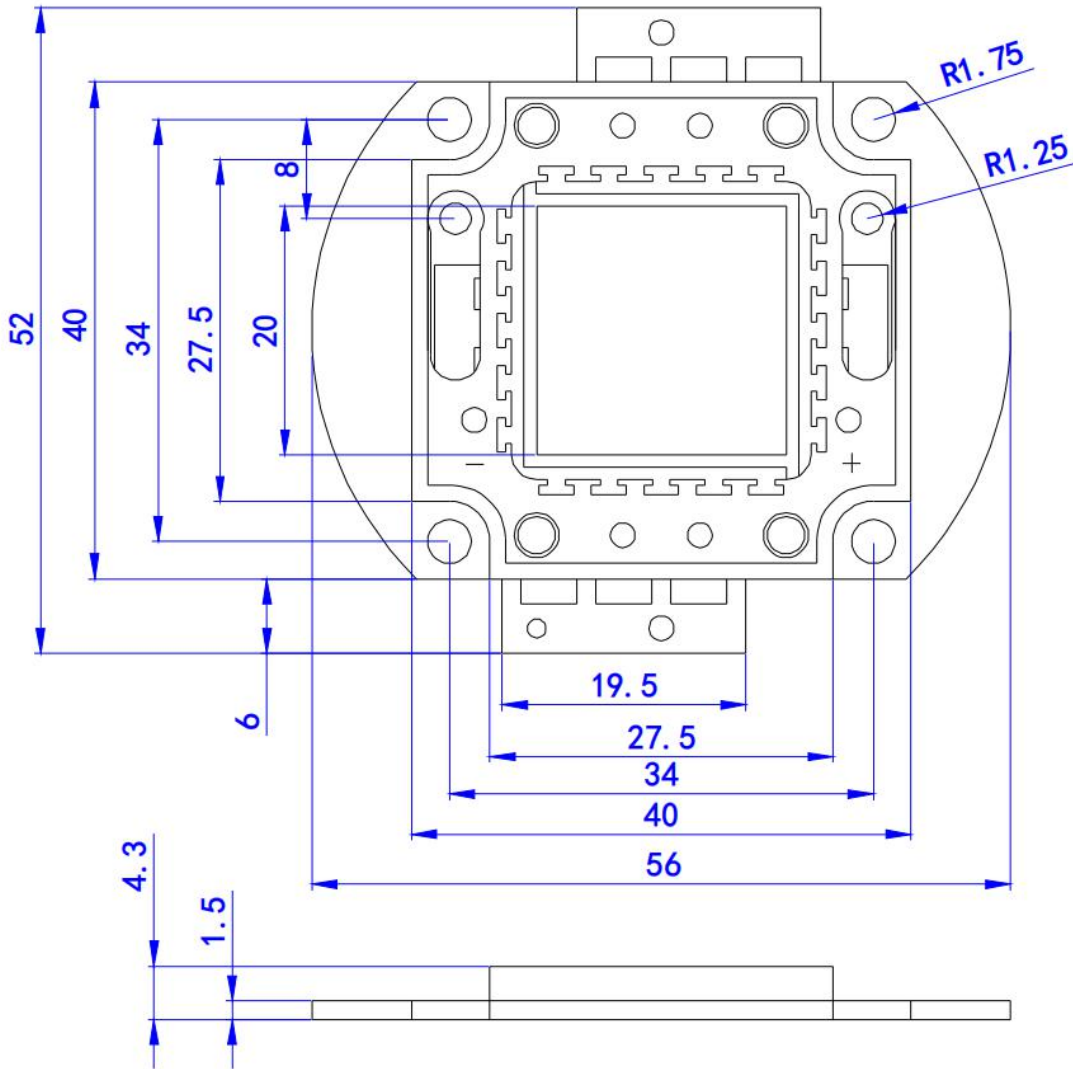


Power: 100W Red



Dimensions(Unit:mm)

Tolerance +/-0.5mm



## Reliability Tests

Test Items	Test Conditions
Aging Test	30W 520-530nm/IF=1050mA 30W 460-470nm/IF=1050mA 30W 620-630nm/IF=1200mA 50W 520-530nm/IF=1750mA 50W 460-470nm/IF=1750mA 50W 620-630nm/IF=2000mA 100W 520-530nm/IF=3500mA 100W 460-470nm/IF=3500mA 100W 620-630nm/IF=4000mA Ta=25°C×1000hrs 30W 520-530nm/IF=1050mA 30W 460-470nm/IF=1050mA 30W 620-630nm/IF=1200mA 50W 520-530nm/IF=1750mA 50W 460-470nm/IF=1750mA 50W 620-630nm/IF=2000mA 100W 520-530nm/IF=3500mA 100W 460-470nm/IF=3500mA 100W 620-630nm/IF=4000mA Ta=85°C×1000hrs
High Temperature Storage	100°C × 1000 hours
Low Temperature Storage	-40°C × 1000 hours
High Temp & Humidity	30W 520-530nm/IF=1050mA 30W 460-470nm/IF=1050mA 30W 620-630nm/IF=1200mA 50W 520-530nm/IF=1750mA 50W 460-470nm/IF=1750mA 50W 620-630nm/IF=2000mA 100W 520-530nm/IF=3500mA 100W 460-470nm/IF=3500mA 100W 620-630nm/IF=4000mA 85°C, 85 %RH for 1000 hours
Temperature Shock	-40°C × 30 minutes – +100°C × 30 minutes, 100 cycle
ESD (HBM)	2000V HBM/Time

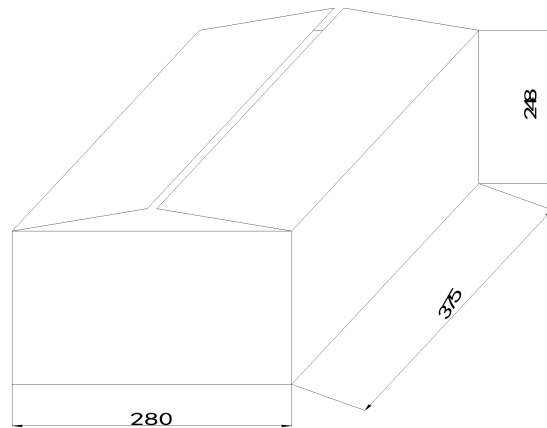
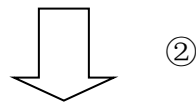
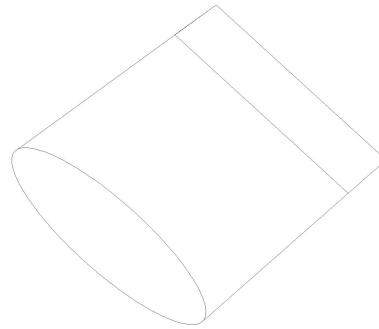
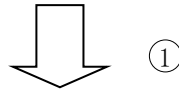
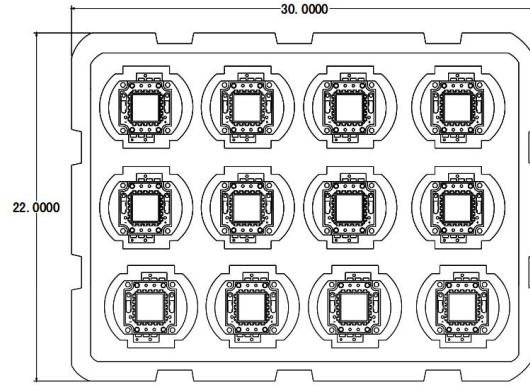
## Criteria for Judging LED Failure (Tc=25°C)

Items	Symbol	Test Conditions	Criteria for Judging LED Failure
Forward Voltage	VF	30W 520-530nm/IF=1050mA 30W 460-470nm/IF=1050mA 30W 620-630nm/IF=1200mA 50W 520-530nm/IF=1750mA 50W 460-470nm/IF=1750mA 50W 620-630nm/IF=2000mA 100W 520-530nm/IF=3500mA 100W 460-470nm/IF=3500mA 100W 620-630nm/IF=4000mA	>U × 1.1
Luminous Flux	φv	30W 520-530nm/IF=1050mA 30W 460-470nm/IF=1050mA 30W 620-630nm/IF=1200mA 50W 520-530nm/IF=1750mA 50W 460-470nm/IF=1750mA 50W 620-630nm/IF=2000mA 100W 520-530nm/IF=3500mA 100W 460-470nm/IF=3500mA 100W 620-630nm/IF=4000mA	<S × 0.7

U refers to max value; S refers to initial value.

Notes: Judging criteria based on Tc=25°C.

Packaging (Unit:mm)



**Packaging Details**

Tray:12pcs/Tray



## Notes

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### Product Specifications

This is a product family data sheet without extra emphasis on a specific model. The specifications in the document refers to its general value under certain test conditions. Please consult sales representative or technical people if encounters specs that are not listed. (Tolerance should be considered).

### Operation Tips

1. Please do not press emitting surface;
2. Please do not pour out products from trays or overlay them;
3. Keep the power supply lines 2-3mm striped and tin immersed;
4. Do not touch the emitting surface or the white dam by the soldering iron during soldering process;
5. Soldering time should be less than 5 seconds.;
6. Keep the soldering point clean and neat with no bulge, bend or cold-joint.
7. Instant test time less than 3 seconds.
8. Recommend to use thermal grease with conductivity >2.5.
9. Please keep the thermal grease inclusion-free;
10. Thermal grease spreading area should be a bit larger than the led substrate;
11. Thermal grease evenly spread with thickness about 0.1mm;
12. Place led flatly and do no push from side in case grease scraped;
13. Lens cover should be 0.2mm diameter larger than the COB emitting surface.

### Service Conditions

The products must be operated within the rated range of parameters. Constant current drivers are recommended.

### ESD Protection

Statics or surge volt would cause LED failure. When using the products, we suggest wearing anti-static wrist strap or gloves. All devices, equipment and machinery must be grounded. Precautions should be taken to protect the products from the surge voltage generated by the devices. It is recommended to inspect each LED whether it is electrostatic damaged. Inspection can be done by a indicating lamp or low forward current test (suggest 90mA). The destroyed products shows different features, for example, the forward voltage becoming lower, or no light emission under low current.

### Heat Dissipation

The thermal design of the end product is particularly important, please consider it seriously. Do avoid high temperature condensation on the product.

### Cleaning

Recommend ethanol as the only clean solvent.

### Others

The bright light emitted by LED may hurt the eyes. Do not look directly at the products when not wearing protective glasses. The strong irritant glare makes people feel uncomfortable and precautions should be taken during usage.