

Color GT-P10W-XX



Product Description

Getian P10W 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, CCT unity, light quality and super high light output.

Features

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

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Application

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



Characteristics

Characteristics	Unit	Min	Typical	Max
Dimension L*W	mm		37.8*22.48	
Diameter of Luminous Area Φ	mm		7.31*7.31	
Beam Angle θ	deg.		120	
Wavelength WL	nm	460		620
Power Dissipation PD	W		9	
Operating Temperature Top	°C	-40		+65
Storage Temperature Tst	°C	0		+60
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	10W	XX	X	X	X	X	X
Code	GT	P	Type	Emitting Code	Chip Size	Chip QTY	Beam Angle	Power	LM
Meaning	Getian	High Power Series	10W:10W Holder	R1:620-630nm G6: 460-470nm B3:520-530nm RGB:620-630nm 460-470nm 520-530nm	4:42mi 4:45mil	9:9EA	0:120°	9:9W	350:350-450 700:700-1000 90:90-100

Specifications (Tc = 25 °C)
Thermal Resistance: 1.33°C/W

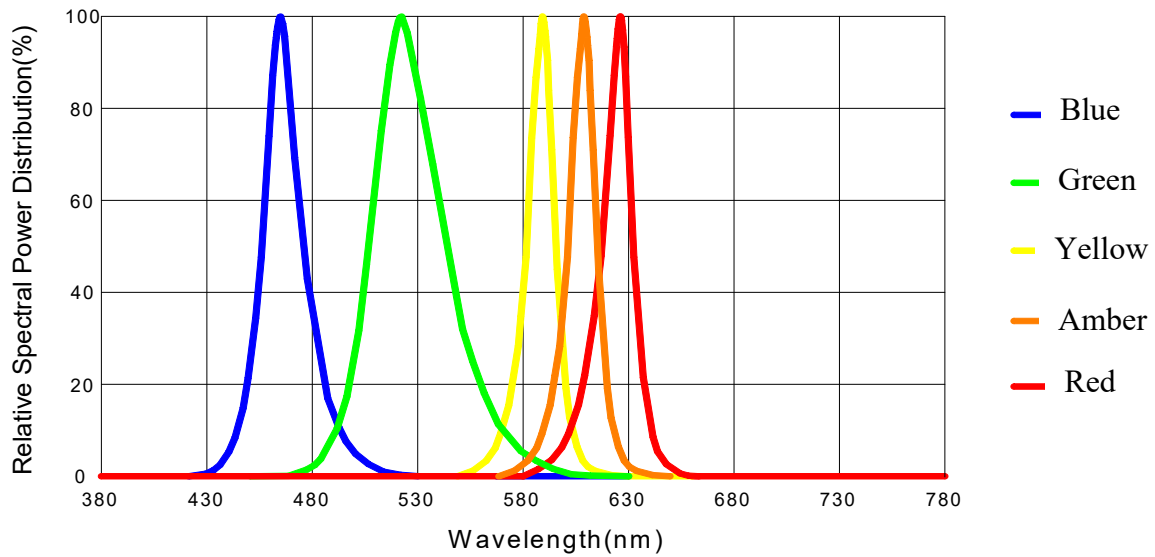
Power	Color	Wavelength (nm)		Voltage (V)	Current (mA)	lm	Part No.
9W	Red	620	630	6-8	1200	350-450	GT-P10WR14909350
9W	Green	520	530	9-11	1050	700-1000	GT-P10WG64909700
9W	Blue	460	470	9-11	1050	90-100	GT-P10WB3490990
9W	Red	620	630	6-8	400	90-120	GT-P10WRGB4909
	Green	520	530	9-11	350	240-270	
	Blue	460	470	9-11	350	30-60	

Notes:

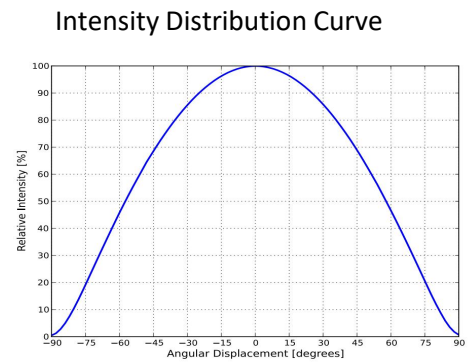
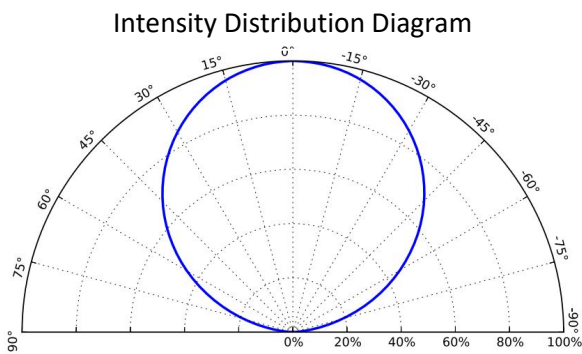
Above charts include the most regular specs for Color COB leds for reference. Please consult sales representative for specs that are not listed or please visit www.getiangroup.com.

Machine Tolerance $\pm 3\%$ on luminous flux.

Spectral Features (Tc = 25°C)

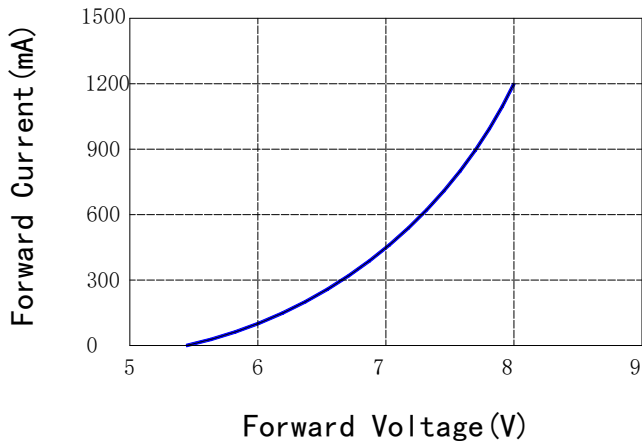


Typical Spatial Distribution (Tc = 25°C)

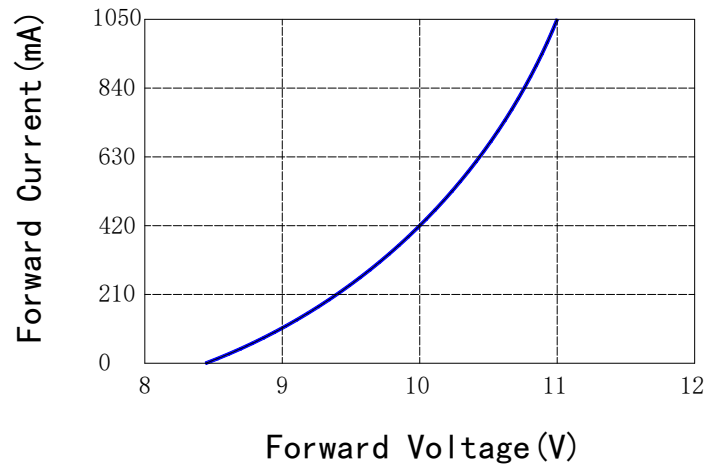


Electrical Features (Tc = 25°C)

Power: 9W Red

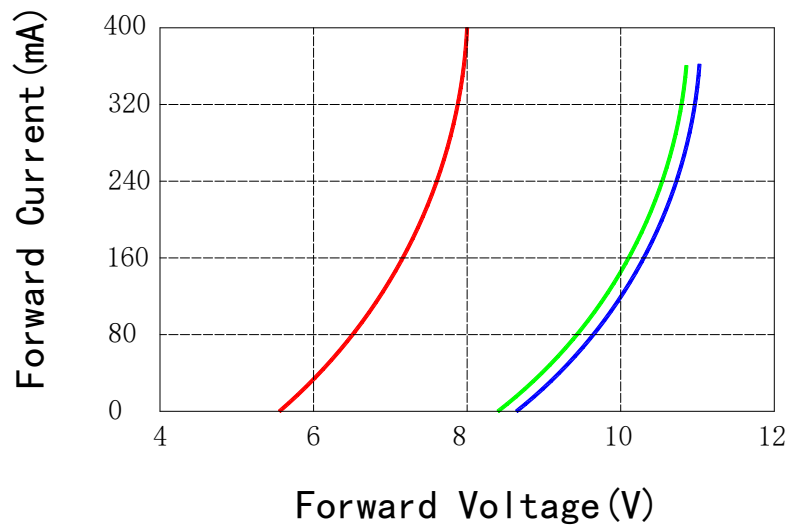


Power: 9W Green Blue



Power: 10W

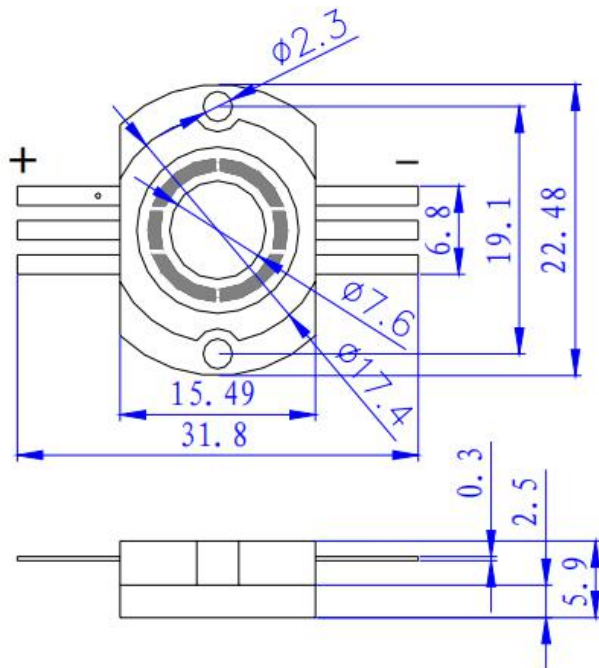
- █ Red
- █ Green
- █ Blue



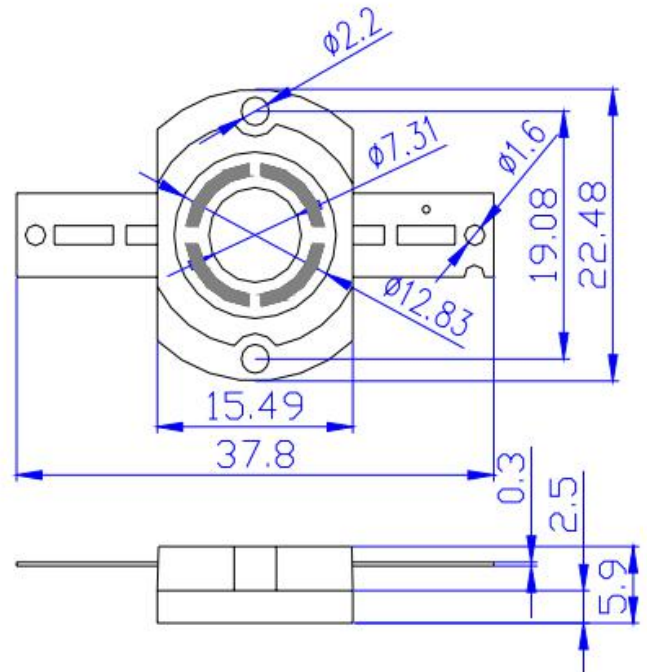
Dimensions(Unit:mm)

Tolerance +/-0.5mm

P10RGB



P10R,G,B



Reliability Tests

Test Items	Test Conditions
Aging Test	9WRed/IF=1200mA 9W Green/IF=1050mA 9W Blue/IF=1050mA 9W RGB/IF=1200/1050/1050mA Ta=25°C×1000hrs 9WRed/IF=1200mA 9W Green/IF=1050mA 9W Blue/IF=1050mA 9W RGB/IF=400/350/350mA Ta=85°C×1000hrs
High Temperature Storage	100°C × 1000 hours
Low Temperature Storage	-40°C × 1000 hours
High Temp & Humidity	9WRed/IF=1200mA 9W Green/IF=1050mA 9W Blue/IF=1050mA 9W RGB/IF=400/350/350mA 85°C, 85 %RH for 1000 hours
Temperature Shock	-40°C × 30 minutes – +100°C × 30 minutes, 100 cycle
ESD (HBM)	2000V HBM/Time

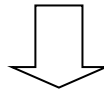
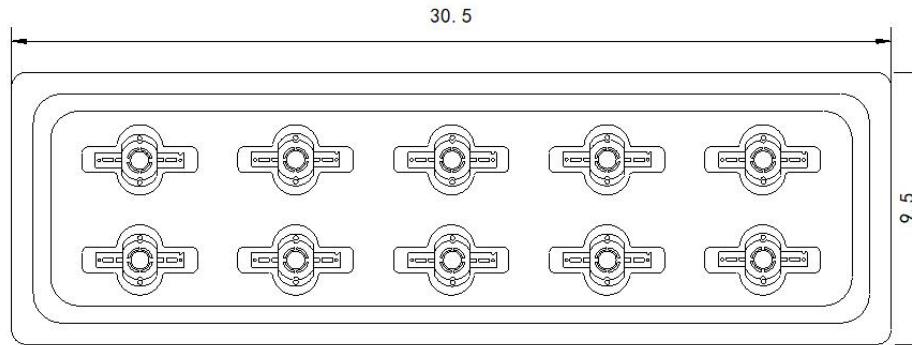
Criteria for Judging LED Failure (Tc=25°C)

Items	Symbol	Test Conditions	Criteria for Judging LED Failure
Forward Voltage	VF	9WRed/IF=1200mA 9W Green/IF=1050mA 9W Blue/IF=1050mA 9W RGB/IF=400/350/350mA	>U × 1.1
Luminous Flux	φv	9WRed/IF=1200mA 9W Green/IF=1050mA 9W Blue/IF=1050mA 9W RGB/IF=400/350/350mA	<S × 0.7

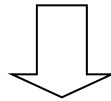
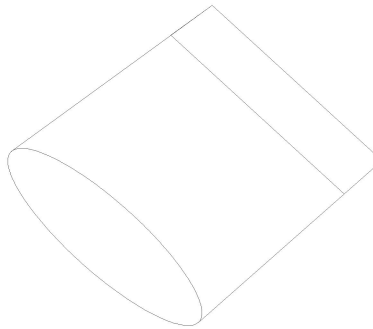
U refers to max value; S refers to initial value.

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

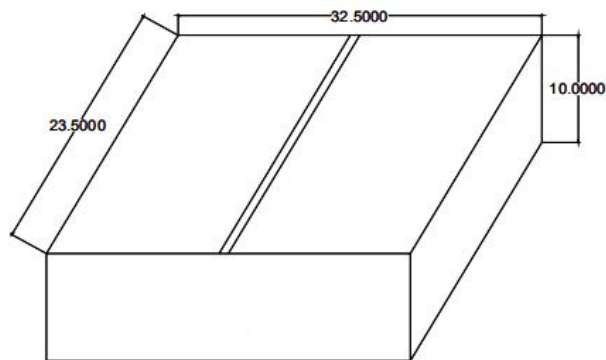
Packaging (Unit:mm)



①



②



Packaging Details

Tray:10pcs/Tray

Notes

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.