

# GETIAN GT-P100-XX



## Product Description

Getian P100W white high power led series has been widely applied to down lights, flood lights and high bay lights, etc with ultimate cost performance and stability. Its light efficacy is up to 150LM/W. 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

- high luminous efficacy up to 150 lm/w.
- red copper base with high heat conductivity
- integrated circuit with wide viewing angle
- LM-80; RoHS Compliant.
- >30000Hrs

## Application

- Outdoor lighting;
- down lights, flood lights, high bay lights; street 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	
Color Temperature CCT	k	2900		6500
Luminous Efficacy $\eta$	lm/w	90		150
CRI	Ra	60	70	80
Power Dissipation PD	W		30/50/80/100	
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
Reflow Soldering (Lead-Free) HST	°C			360

## Naming Rules

Model	GT	P	XX	XX	X	X	X	X	XX
No.	1	2	3	4	5	6	7	8	9
Eg	GT	P	100W	W3	4	30	0	30	3A
Code	GT	P	Type	Emitting Color	Chip Size	Chip QTY	Beam Angle	Power	Brightness Grade
Meaning	Getian	High Power Series	100W:100W Holder	W3:2900-3200 W4:4000-4500 W5:5000-5500 W6:6000-6500	2:23*45mil 3:33*33mil 4:45*45mil	30:30EA 50:50EA 60:60EA 80:80EA 100:100EA	0:120°	30:30W 50:50W 80:80W 100:100W	3A:3000-3500 3B:3500-4000 4A:4000-4500 4B:4500-5000 5A:5000-5500 5B:5500-6000 10A:10000-11000 11A:11000-12000 12A:12000-13000 13A:13000-14000

**Specifications ( Tc = 25 °C )**

Current: 1050mA Voltage: 31V Power:30W Thermal Resistance: 0.4°C/W					
Color	Color Temperature (K)		CRI Ra	28-34V @1050mA	Part Number
	Min	Max		lm	
Warm White	2900	3200	/	1.2700-3000 2.3000-3300 3.3300-3600 4.3900-4200	1.GT-P100WW33300302B 2.GT-P100WW33300303A 3.GT-P100WW34300303A 4.GT-P100WW32600303B
			70	1.2400-2700 2.2700-3000 3.3000-3300 4.3600-3900	1.GT-P100WW33300302A 2.GT-P100WW33300302B 3.GT-P100WW34300303A 4.GT-P100WW32600303B
Neutral White	4000	4500	/	1.2700-3000 2.3000-3300 3.3300-3600 4.3600-3900 5.3900-4200 6.4200-4500	1.GT-P100WW43300302B 2.GT-P100WW43300303A 3.GT-P100WW44300303A 4.GT-P100WW44300303B 5.GT-P100WW42600303B 6.GT-P100WW42600304A
			70	1.2400-2700 2.2700-3000 3.3000-3300 4.3300-3600 5.3600-3900 6.3900-4200	1.GT-P100WW43300302A 2.GT-P100WW43300302B 3.GT-P100WW44300303A 4.GT-P100WW44300303A 5.GT-P100WW42600303B 6.GT-P100WW42600303B
White	5000	5500	/	1.3000-3300 2.3300-3600 3.3600-3900 4.3900-4200 5.4200-4500	1.GT-P100WW53300303A 2.GT-P100WW53300303A 3.GT-P100WW54300303B 4.GT-P100WW54300303B 5.GT-P100WW52600304A
			70	1.2700-3000 2.3000-3300 3.3300-3600 4.3600-3900 5.3900-4200	1.GT-P100WW53300302B 2.GT-P100WW53300303A 3.GT-P100WW54300303A 4.GT-P100WW54300303B 5.GT-P100WW52600303B
	5500	6000	70	1.3000-3300 2.3300-3600 3.3600-3900 4.3900-4200 5.4200-4500	1.GT-P100WW53300303A 2.GT-P100WW53300303A 3.GT-P100WW54300303B 4.GT-P100WW54300303B 5.GT-P100WW52600304A
Pure White	6000	6500	70	1.3000-3300 2.3300-3600 3.3600-3900 4.3900-4200 5.4200-4500	1.GT-P100WW63300303A 2.GT-P100WW63300303A 3.GT-P100WW64300303B 4.GT-P100WW64300303B 5.GT-P100WW62600304A

**Specifications ( Tc = 25 °C )**

Current: 1750mA Voltage: 31V Power:50W Thermal Resistance: 0.24°C/W					
Color	Color Temperature (K)		CRI Ra	28-34V @1750mA	Part Number
	Min	Max		lm	
Natural White	4000	4500	/	1.4500-5000 2.5000-5500 3.5500-6000 4.6000-6500 5.6500-7000 6.7000-7500	1.GT-P100WW43500504B 2.GT-P100WW43500505A 3.GT-P100WW44500505B 4.GT-P100WW44500506A 5.GT-P100WW421000506B 6.GT-P100WW421000507A
			70	1.4000-4500 2.4500-5000 3.5000-5500 4.5500-6000 5.6000-6500 6.6500-7000	1.GT-P100WW43500504A 2.GT-P100WW43500504B 3.GT-P100WW44500505A 4.GT-P100WW44500505B 5.GT-P100WW421000506A 6.GT-P100WW421000506B
Pure White	5000	5500	/	1.5000-5500 2.5500-6000 3.6000-6500 4.6500-7000 5.7000-7500	1.GT-P100WW53500505A 2.GT-P100WW53500505B 3.GT-P100WW54500506A 4.GT-P100WW54500506B 5.GT-P100WW521000507A
			70	1.4500-5000 2.5000-5500 3.5500-6000 4.6000-6500 5.6500-7000	1.GT-P100WW53500504B 2.GT-P100WW53500505A 3.GT-P100WW54500505B 4.GT-P100WW54500506A 5.GT-P100WW521000506B
	5500	6000	70	1.5000-5500 2.5500-6000 3.6000-6500 4.6500-7000 5.7000-7500	1.GT-P100WW53500505A 2.GT-P100WW53500505B 3.GT-P100WW54500506A 4.GT-P100WW54500506B 5.GT-P100WW521000507A
Cool White	6000	6500	70	1.5000-5500 2.5500-6000 3.6000-6500 4.6500-7000 5.7000-7500	1.GT-P100WW63500505A 2.GT-P100WW63500505B 3.GT-P100WW64500506A 4.GT-P100WW64500506B 5.GT-P100WW621000507A

Specifications ( Tc = 25 °C )

Current: 2800mA Voltage: 31V Power:80W Thermal Resistance: 0.15°C/W					
Color	Color Temperature (K)		CRI Ra	28-34V @1050mA	Part Number
	Min	Max		lm	
White	5000	5500	/	1.8000-8800 2.8800-9600 3.9600-10400 4.10400-11200	1.GT-P100WW53800808A 2.GT-P100WW53800808B 3.GT-P100WW54800809B 4.GT-P100WW548008010A
			70	1.7200-8000 2.8000-8800 3.8800-9600 4.9600-10400	1.GT-P100WW53800807A 2.GT-P100WW53800808A 3.GT-P100WW54800808B 4.GT-P100WW54800809B
	5500	6000	70	1.8000-8800 2.8800-9600 3.9600-10400 4.10400-11200	1.GT-P100WW53800808A 2.GT-P100WW53800808B 3.GT-P100WW54800809B 4.GT-P100WW548008010A
Pure White	6000	6500	70	1.8000-8800 2.8800-9600 3.9600-10400 4.10400-11200	1.GT-P100WW63800808A 2.GT-P100WW63800808B 3.GT-P100WW64800809B 4.GT-P100WW648008010A

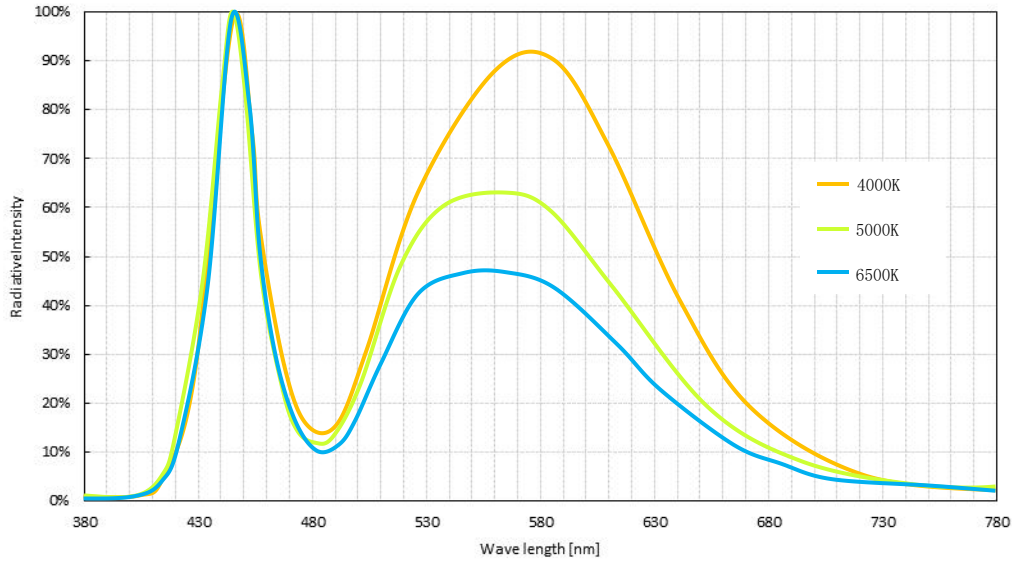
Current: 3500mA Voltage: 31V Power:100W Thermal Resistance: 0.12°C/W					
Color	Color Temperature (K)		CRI Ra	28-34V @1050mA	Part Number
	Min	Max		lm	
White	5000	5500	/	1.10000-11000 2.11000-12000 3.12000-13000 4.13000-14000	1.GT-P100WW53100010010A 2.GT-P100WW53100010011A 3.GT-P100WW54100010012A 4.GT-P100WW54100010013A
			70	1.9000-10000 2.10000-11000 3.11000-12000 4.12000-13000	1.GT-P100WW5310001009A 2.GT-P100WW53100010010A 3.GT-P100WW54100010011A 4.GT-P100WW54100010012A
	5500	6000	70	1.10000-11000 2.11000-12000 3.12000-13000 4.13000-14000	1.GT-P100WW533003010A 2.GT-P100WW533003011A 3.GT-P100WW543003012A 4.GT-P100WW543003013A
Pure White	6000	6500	70	1.10000-11000 2.11000-12000 3.12000-13000 4.13000-14000	1.GT-P100WW633003010A 2.GT-P100WW633003011A 3.GT-P100WW643003012A 4.GT-P100WW643003013A

Notes:

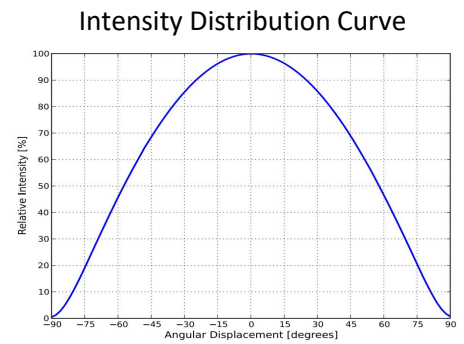
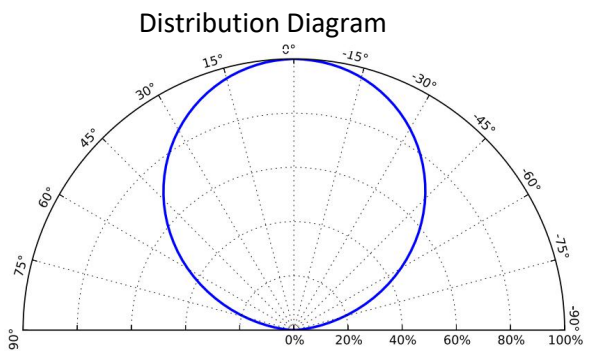
Above charts include the most regular specs for COB leds for reference. Please consult sales representative for specs that are not listed or please visit [www.getiangroup.com](http://www.getiangroup.com). Machine Tolerance ±3% on luminous flux.

Spectral Features (Tc = 25°C)

CRI(Ra) 70Min

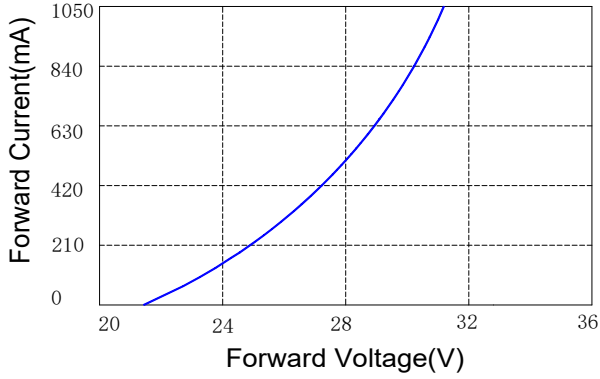


Spectral Features (Tc = 25°C)

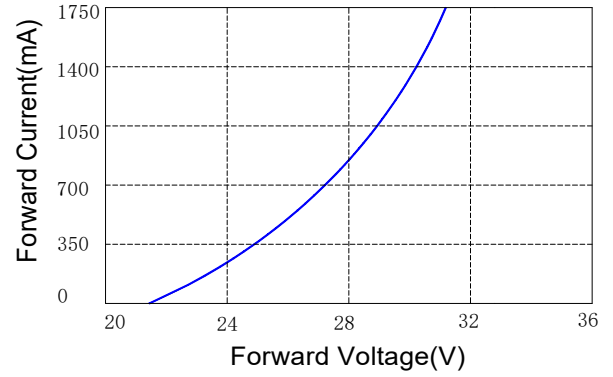


Electrical Features (Tc = 25°C)

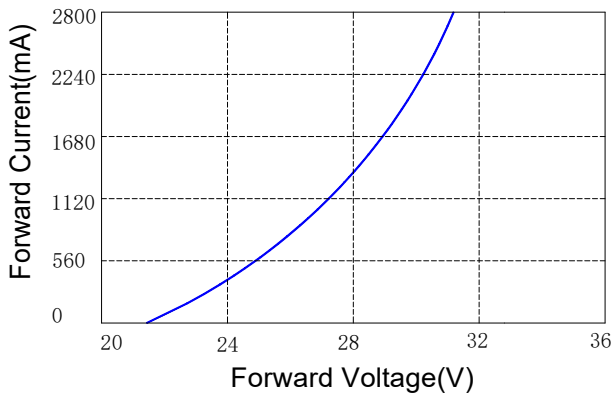
Power: 30W



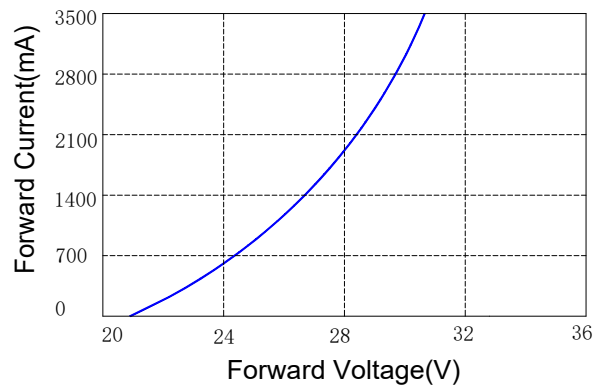
Power: 50W



Power: 80W

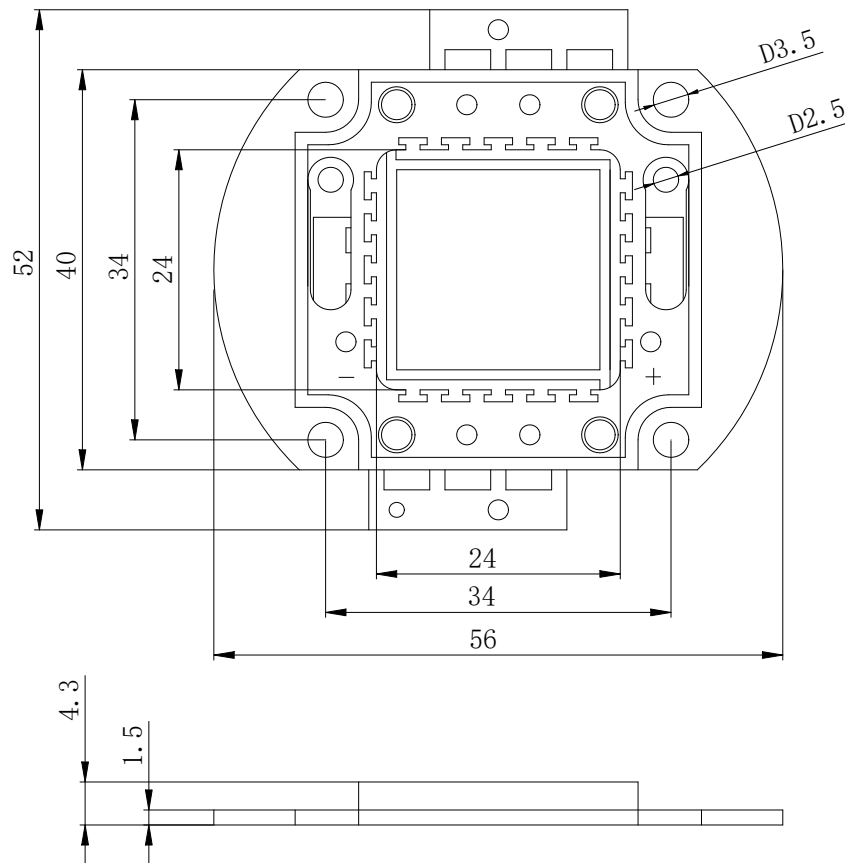


Power: 100W



Mechanical Dimension(Unit:mm)

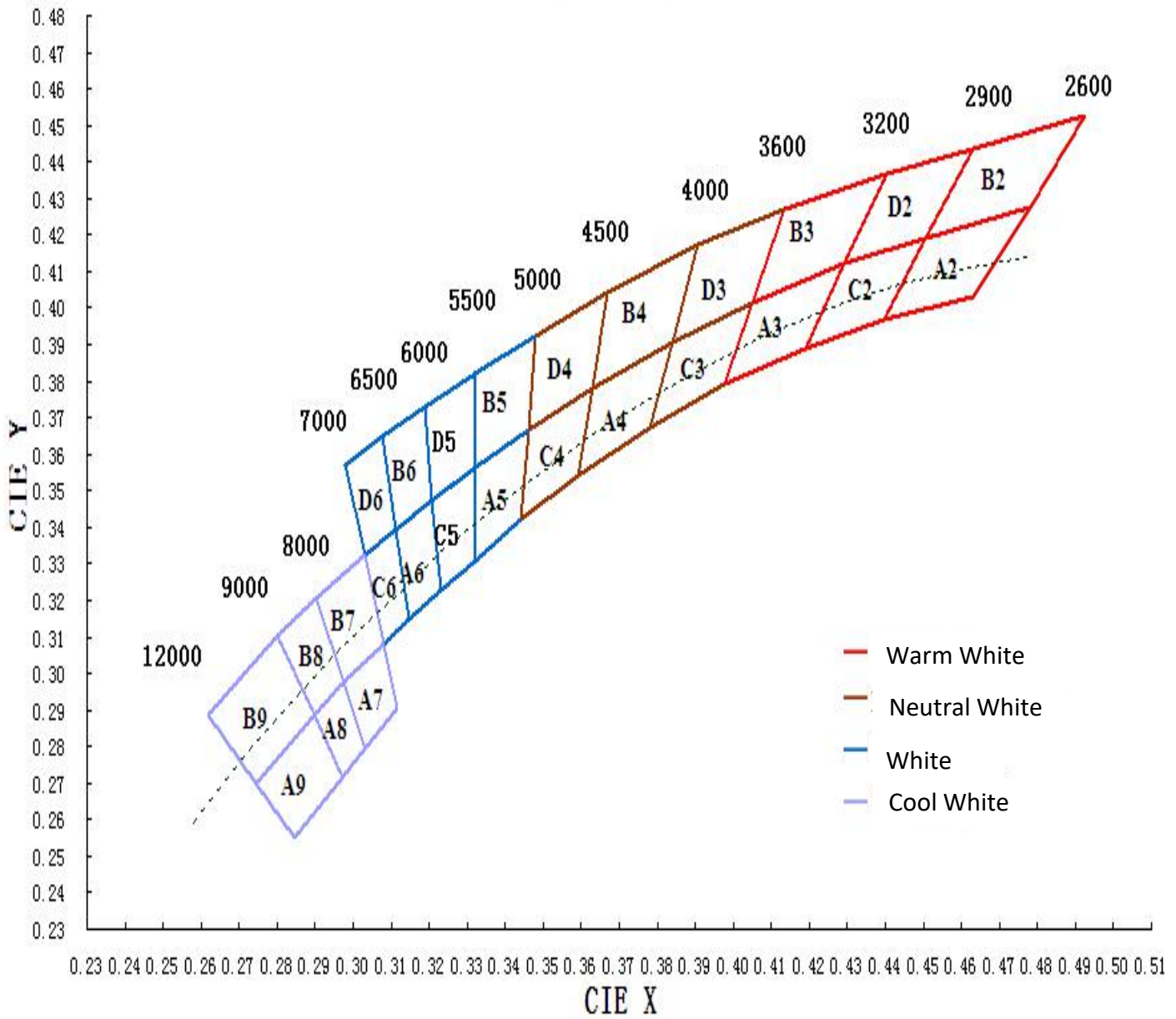
Tolerance +/-0.5mm





White Binning Information (1931CIE)

White Binning Information



**Reliability Tests**


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## Reliability Tests

Test Items	Test Conditions
Aging Test	30W/IF=1050mA 50W/IF=1750mA 80W/IF=2800mA 100W/IF=3500mA Ta=25°C × 1000hrs
	30W/IF=1050mA 50W/IF=1750mA 80W/IF=2800mA 100W/IF=3500mA Ta=85°C × 1000hrs
High Temperature Storage	100°C × 1000 hours
Low Temperature Storage	-40°C × 1000 hours
High Temp & Humidity	30W/IF=1050mA 50W/IF=1750mA 80W/IF=2800mA 100W/IF=3500mA 85°C, 85 %RH for 1000 hours
Temperature Shock	-40°C × 30 minutes - +100°C × 30 minutes, 100 cycle
ESD (HBM)	2000V HBM/Time

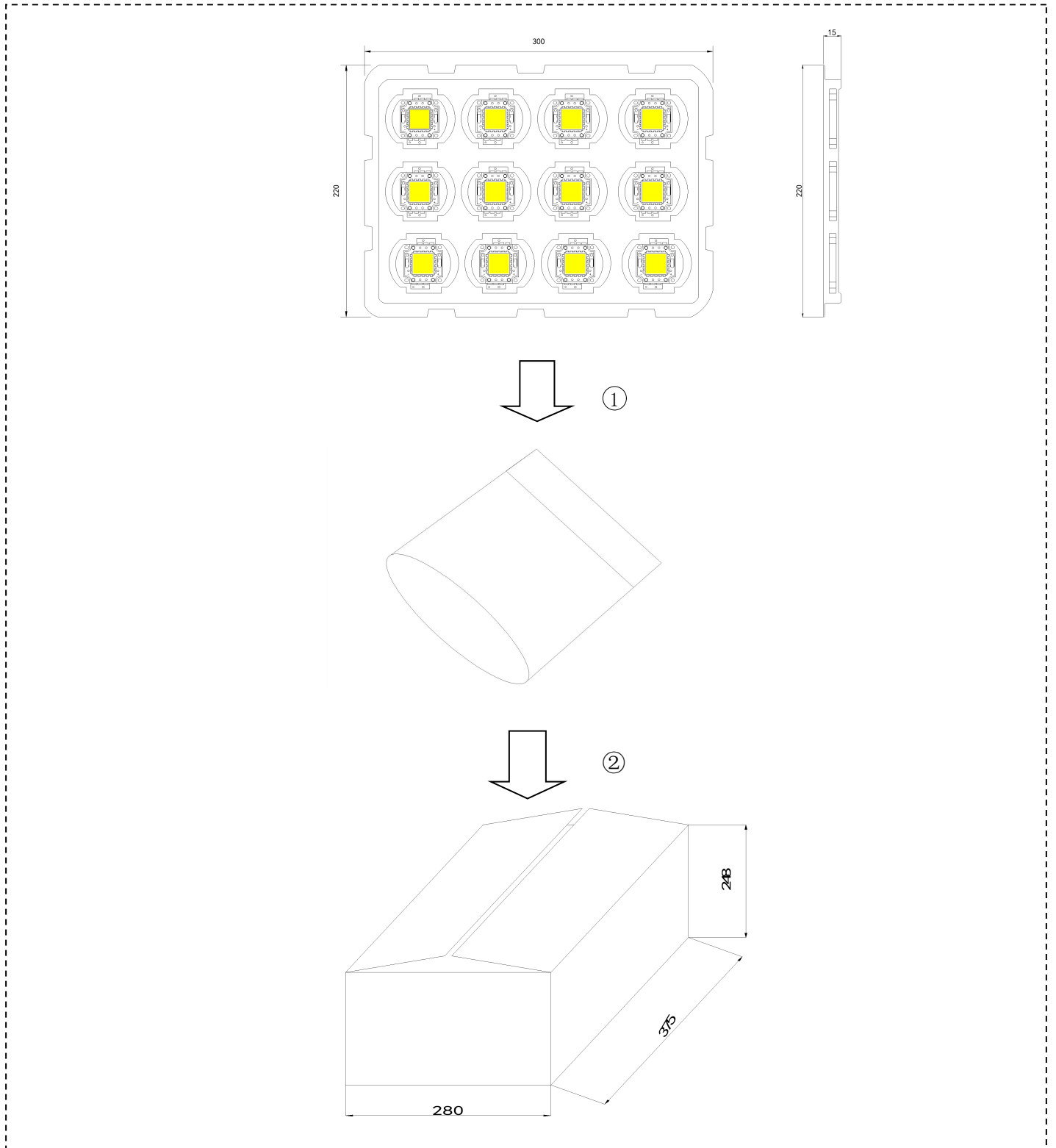
## Criteria for Judging LED Failure (Tc=25°C)

Items	Symbol	Test Conditions	Criteria for Judging LED Failure
Forward Voltage	VF	30W/IF=1050mA 50W/IF=1750mA 80W/IF=2800mA 100WIF=3500mA	>U × 1.1
Luminous Flux	φ v	30W/IF=1050mA 50W/IF=1750mA 80W/IF=2800mA 100WIF=3500mA	<S × 0.7

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

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

Packaging (Unit:mm)



## 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.