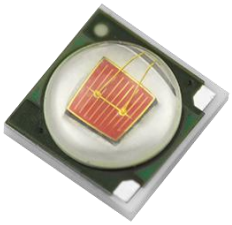
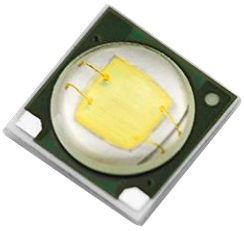
Color GT-P35-XX





Product Description

Getian ceramic-based 3535 color led series (with molding lens) covers a wide range of wavelengths with high heat conductivity and high light transmittance .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 and light output. It's optimized for stage lighting, landscape lighting, plant grow lighting and car light etc.

Features

· High Cost Performance
· Electrically Neutral Thermal Path
· RoHS Compliant
· > 30000Hrs
· SMT Reflow Soldering.

Application

· Landscape Lighting
· Plant grow Lighting
· Traffic Signal Lighting
· Stage Lighting

Table of Content

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Characteristics

Characteristics	Unit	Min.	Typical	Max.
Dimension L*W	mm		3.45*3.45	
Beam Angle θ	deg		120	
Wavelength WL	nm	450		660
Power Dissipation PD	W		1/3	
Operating Temperature Top	°C	-40		+60
Storage Temperature Tst	°C	-40		+85
Testing Point (LED) Tc	°C			60
Junction Temperature Tj	°C			120
Reverse Current (Vr=5V) Ir	uA			10
Thermal Resistance Rj-c	°C/W		12	
ESD (HBM)	V			2000
Reflow Soldering(Lead-Free) ST	°C			260

Coding Rules

Model	GT	P	35	X	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	35: 3535 package	B4:450-460nm B3:460-470nm G5:510-520nm G6:520-530nm Y2:585-595nm A1:600-610nm R1:620-630nm R6:640-660nm	3:30mil/32mil/35mil 4:42mil/45mil	1:1EA	0:110°/120°	1:1W	10:10-20 15:15-30 30:30-50 40:40-60 50:50-70 60:60-80 80:80-100 100:100-120 120:120-140

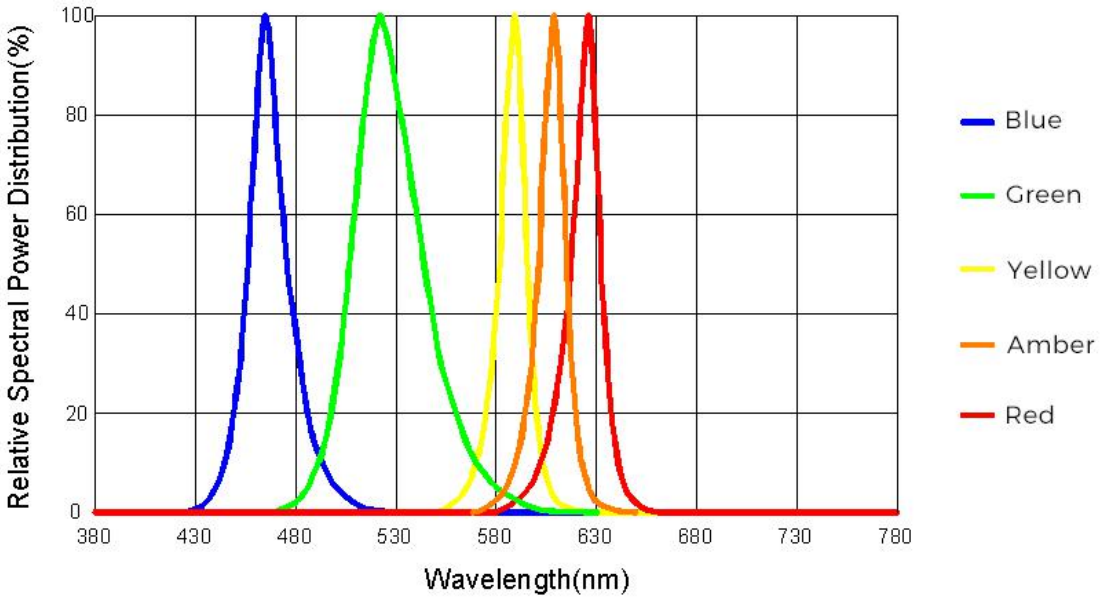
Specifications （Tc = 25°C)

Color	Wavelength （nm）	2.8-3.4V@350mA	3.2-3.8V @750mA	1W Part Number
		lm	lm	
Blue	450-460	10-20 15-30	/ 30-50	GT-P35B4310110 GT-P35B4410115
	460-470	10-20 15-30	/ 30-50	GT-P35B3310110 GT-P35B3410115
Green	510-520	80-100 100-120 120-140	/ 150-190 190-230	GT-P35G5310180 GT-P35G54101100 GT-P35G54101120
	520-530	80-100 100-120 120-140	/ 150-190 190-230	GT-P35G6310180 GT-P35G64101100 GT-P35G64101120

Color	Wavelength （nm）	2.0-2.6V@400mA	2.2-2.8V @800mA	1W Part Number
		lm	lm	
Yellow	585-595	30-50 50-70	/ 70-100	GT-P35Y2310130 GT-P35Y2410150
Amber	600-610	50-70	70-100	GT-P35A1410150
Red	620-630	40-60 50-70	/ 70-100	GT-P35R1310140 GT-P35R1410150
	640-660	10-20 15-30	/ 30-50	GT-P35R6310110 GT-P35R6410115

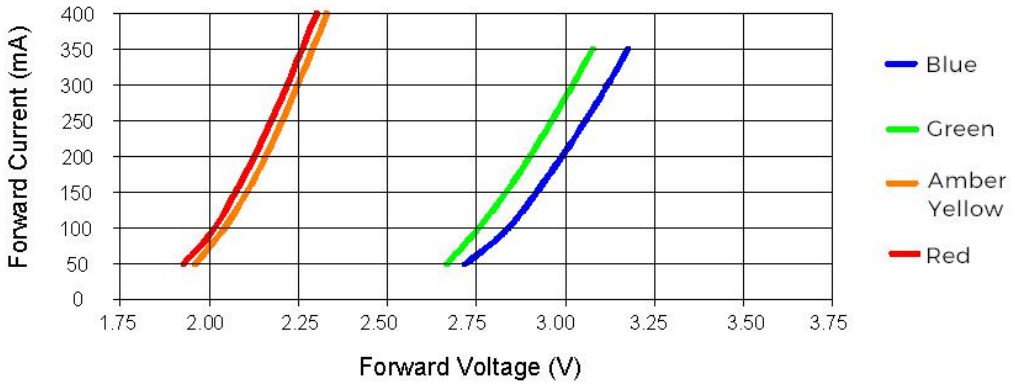
Notes: Machine Tolerance ±3% on luminous flux; ±2nm on wavelength.

Spectral Features (Tc = 25°C)

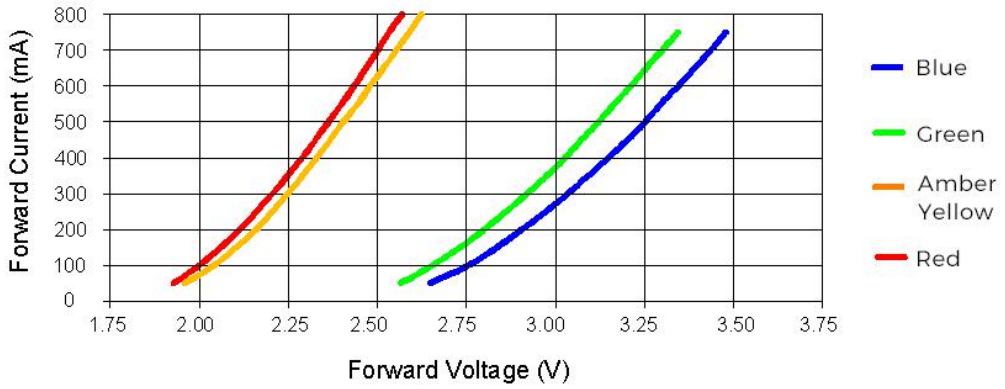


Electrical Features (Tc = 25°C)

1W

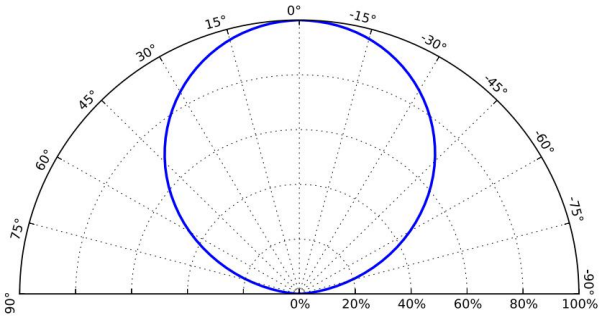


3W

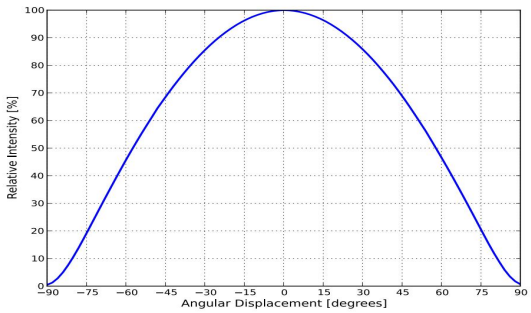


Typical Spatial Distribution (Tc = 25°C)

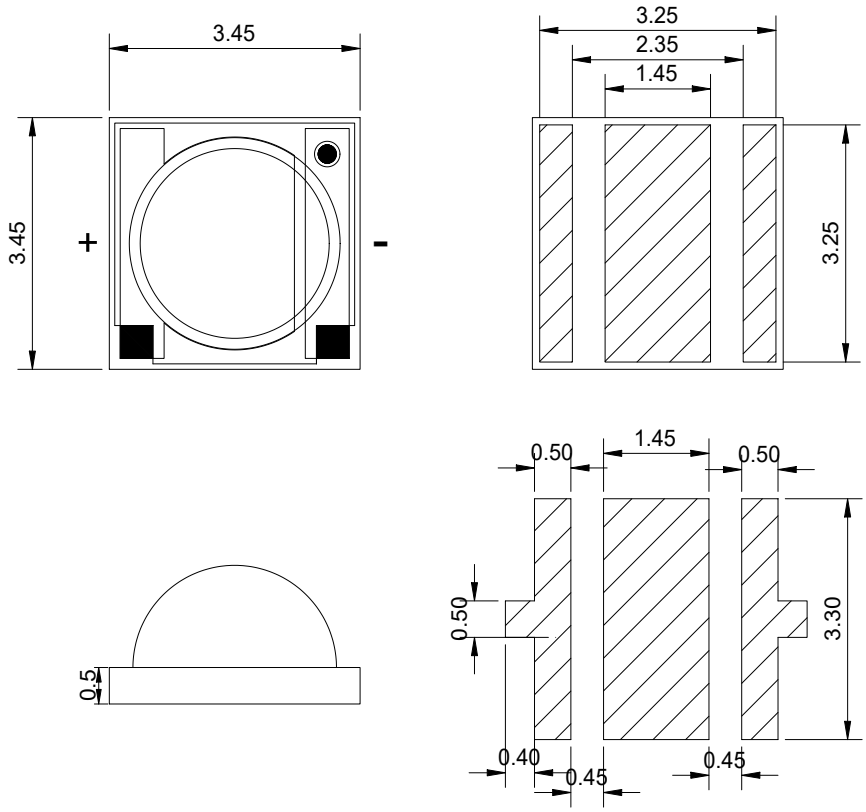
Intensity Distribution Diagram



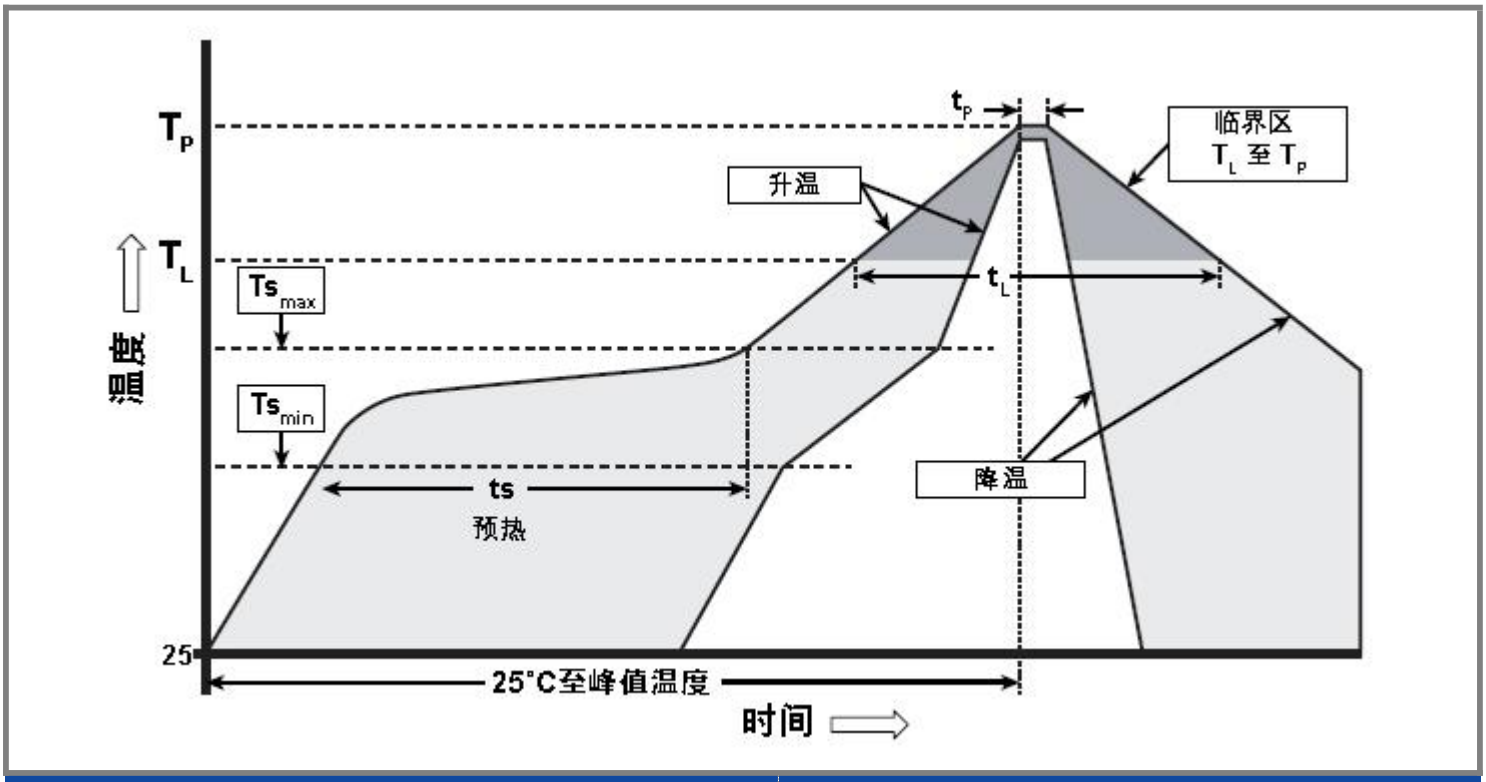
Intensity Distribution Curve



Dimensions (Unit: mm) Tolerance +/-0.2mm



Reflow Soldering



Reflow Soldering Characteristics	Duration (Lead-free)
Average Ramp Up (Ts max to Tp)	3 °C/ seconds max
Preheat (Tsmin)	150 °C
Preheat (Tsmax)	200 °C
Preheat (tsmin to tsmax)	60 - 180 seconds
Temp Maintenance: (TL)	217 °C
Time Maintenance: (TL)	60 - 150 seconds
Peak Temp (Tp)	260 °C
(5°C before Reach 220 °C)(tp)	20 - 40 seconds
Ramp Down	6 °C/seconds max
25°C(Time to Reach Peak Temp)	8 minutes max

Notes: The data in the document is just for reference. Pleases do the initial inspection in accordance with the reflow soldering characteristics in data sheet strictly (Tolerance should be considered). Do not proceed mass production before initial inspection in order to avoid unnecessary loss.

Reliability Tests

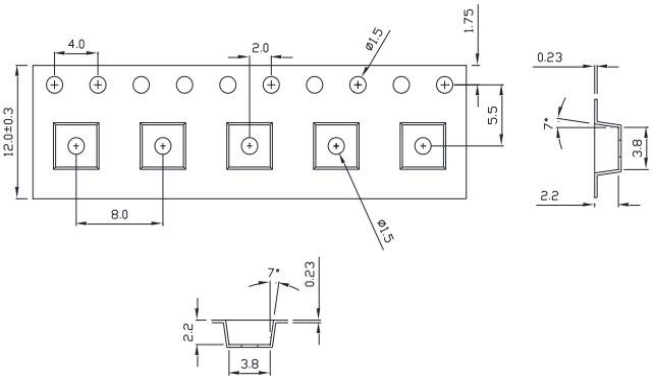
Test Items	Test Conditions	Sample Qty	Ac/Re
Aging Test	IF=350/400MA Ta=25°C×1000hrs	22	0/1
	IF=350/400MA Ta=85°C×1000hrs	22	0/1
High Temperature Storage	100°C × 1000 hours	22	0/1
Low Temperature Storage	-40°C × 1000 hours	22	0/1
High Temp & Humidity	IF=350/400MA 85°C, 85 %RH for 1000 hours	22	0/1
Temperature Shock	-40°C × 30 minutes – +100°C × 30 minutes, 100 cycle	22	0/1
ESD (HBM)	2000V HBM/ 1 Time	10	0/1

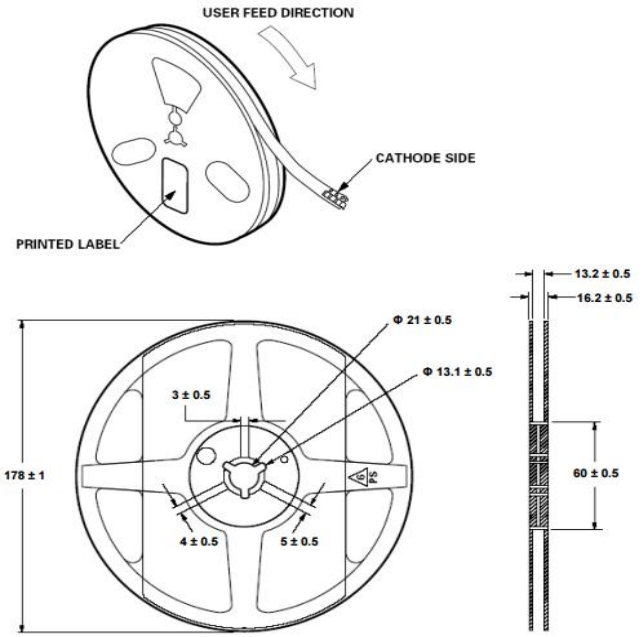
Criteria for Judging LED Failure (Tc = 25°C)

Items	Symbol	Test Conditions	Criteria for Judging LED Failure
Forward Voltage	VF	IF=350/400MA	>U × 1.1
Reverse Current	IR	VR=5V	IR≥10μA
Lumen	ϕv	IF=350/400MA	<S × 0.7

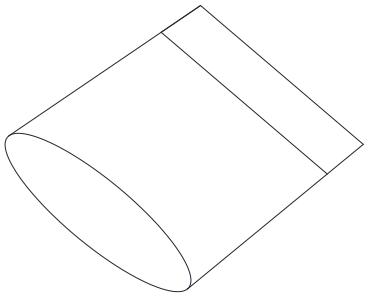
U refers to max value； S refers to initial value.
Notes： Judging criteria based on Tc=25°C.
Remarks: Test Current of Red, Amber, Yellow is 400mA, Test current for other colors is 350mA.

Packaging (Unit:mm)





3535 R,G,B,Y Packaging：1000pieces/ reel



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.)

Soldering

1. Middle temperature solder paste is recommended to lead-free reflow soldering. The maximum temperature set up to 220 ℃ ± 5 ℃ (the actual temperature of the tunnel furnace should be daily measured). The time of peak temperature must less than 45 seconds. Over-temperature, overtime will lead to lens off, deformation. Please do not put any pressure on the product during reflow soldering process. When the product cool to the room temperature, it can go to the following manufacturing process.
2. To protect the LED from damage, please don't impact or pile up the LEDs after reflow soldering.
3. Stencil thickness recommended 0.08mm.
4. Please don't use heating platform to solder the LEDs.

Shipment & Installation

1. Please don't multi-layer stacking, hit or drop the LEDs.
2. To avoid the led failure or deration of the lighting effects, do not burn the products' light-emitting layer by high temperature soldering iron.
3. Please don't press the silicon lens and prevent the external force to damage the LEDs.

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.

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.