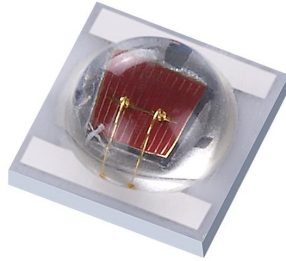


Color GT-P35-XX



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

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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	730		940
Power Dissipation PD	W		1/3	
Operating Temperature Top	°C	-20		+65
Storage Temperature Tst	°C	0		+40
Testing Point (LED) Tc	°C			60
Thermal Resistance Rj-c	°C/W		12	
ESD (HBM)	V			2000
Reflow Soldering(Lead-Free) ST	°C			260

Coding Rules

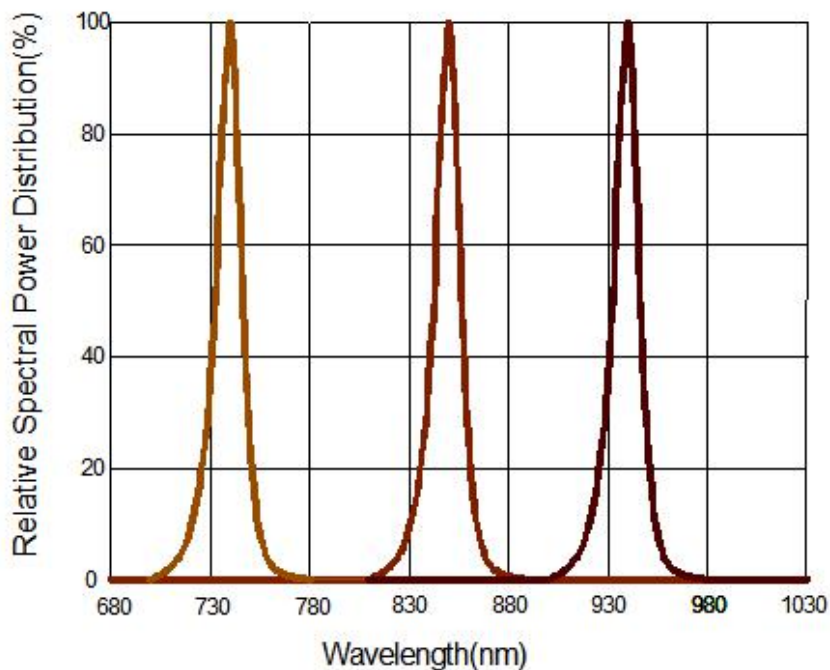
Model	GT	P	35	X	X
Code	GT	P	Type	Emitting Color	Wavelength
Meaning	Getian	High Power Series	35: 3535 package	IR:IR	740:740 850:850 940:940

Specifications (Tc = 25°C)

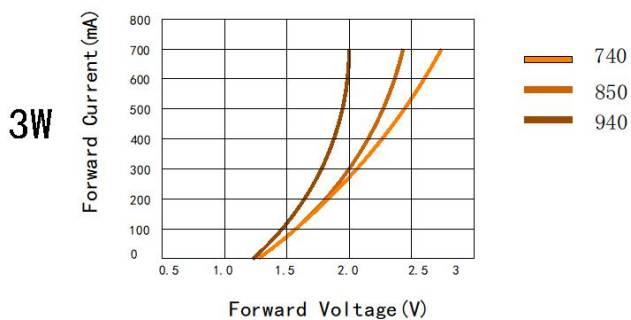
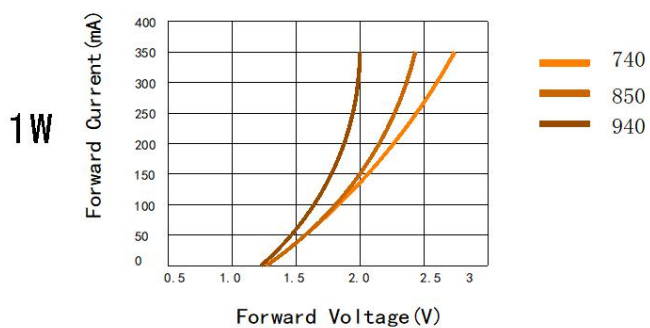
Color	Wavelength (nm)	Radiant Power (mW)	VF (v)	IF (mA)	Part Number	
IR	730-750	270-320	2.0-2.6	350	GT-P35IR740	
		400-500	2.0-2.6	700		
	850	150-200	2.0-2.4	350	GT-P35IR850	
		300-400	2.0-2.4	700		
	940-945	/		1.7-2.0	350	GT-P35IR940
				1.7-2.0	700	

Notes: Machine Tolerance $\pm 3\%$ on luminous flux; $\pm 2\text{nm}$ on wavelength.

Spectral Features (Tc = 25°C)

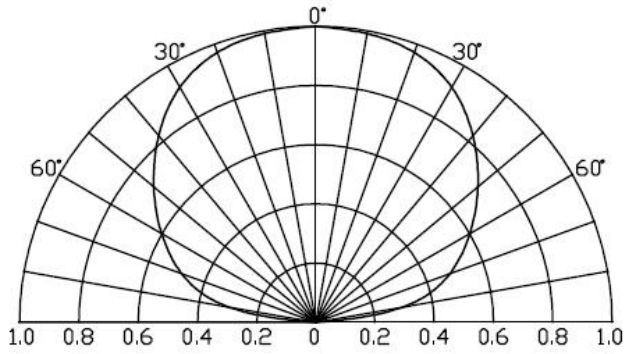


Electrical Features (Tc = 25°C)

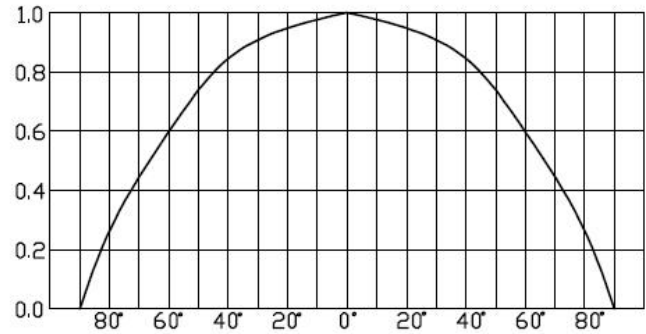


Typical Spatial Distribution (Tc = 25°C)

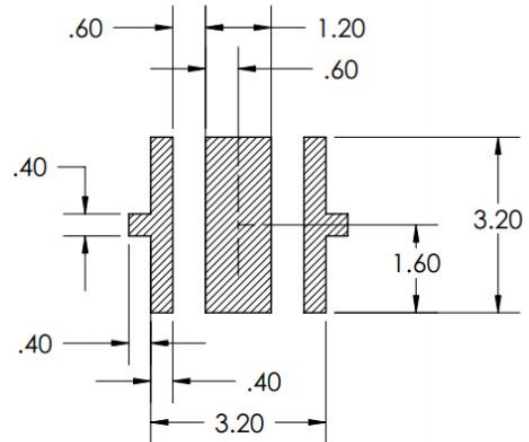
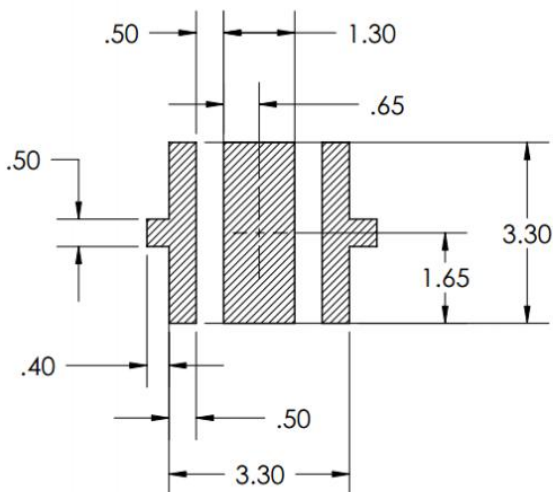
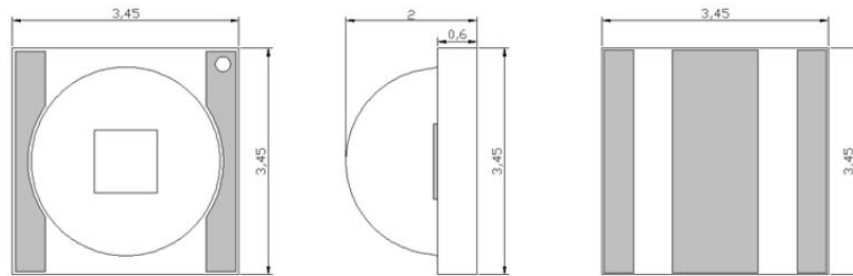
Intensity Distribution Diagram

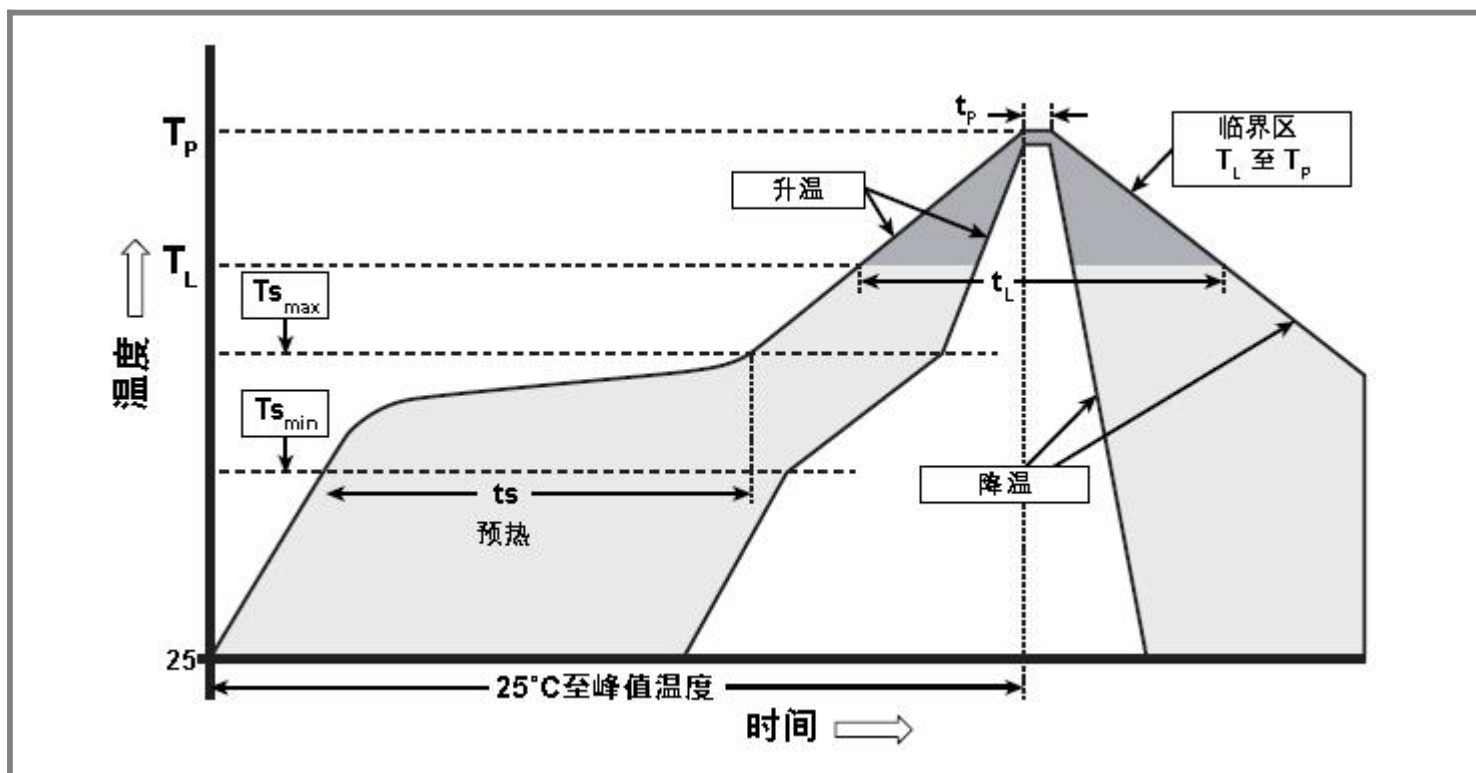


Intensity Distribution Curve



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



Reflow Soldering


Reflow Soldering Characteristics	Duration (Lead-free)
Average Ramp Up ($T_{s_{max}}$ to T_p)	3 °C/ seconds max
Preheat ($T_{s_{min}}$)	150 °C
Preheat ($T_{s_{max}}$)	200 °C
Preheat ($t_{s_{min}}$ to $t_{s_{max}}$)	60 - 180 seconds
Temp Maintenance: (T_L)	217 °C
Time Maintenance: (T_L)	60 - 150 seconds
Peak Temp (T_p)	260 °C
(5°C before Reach 220 °C)(t_p)	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. Please 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=350/700MA Ta=25°C×1000hrs	22	0/1
	IF=350/700MA 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=350/700MA 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)

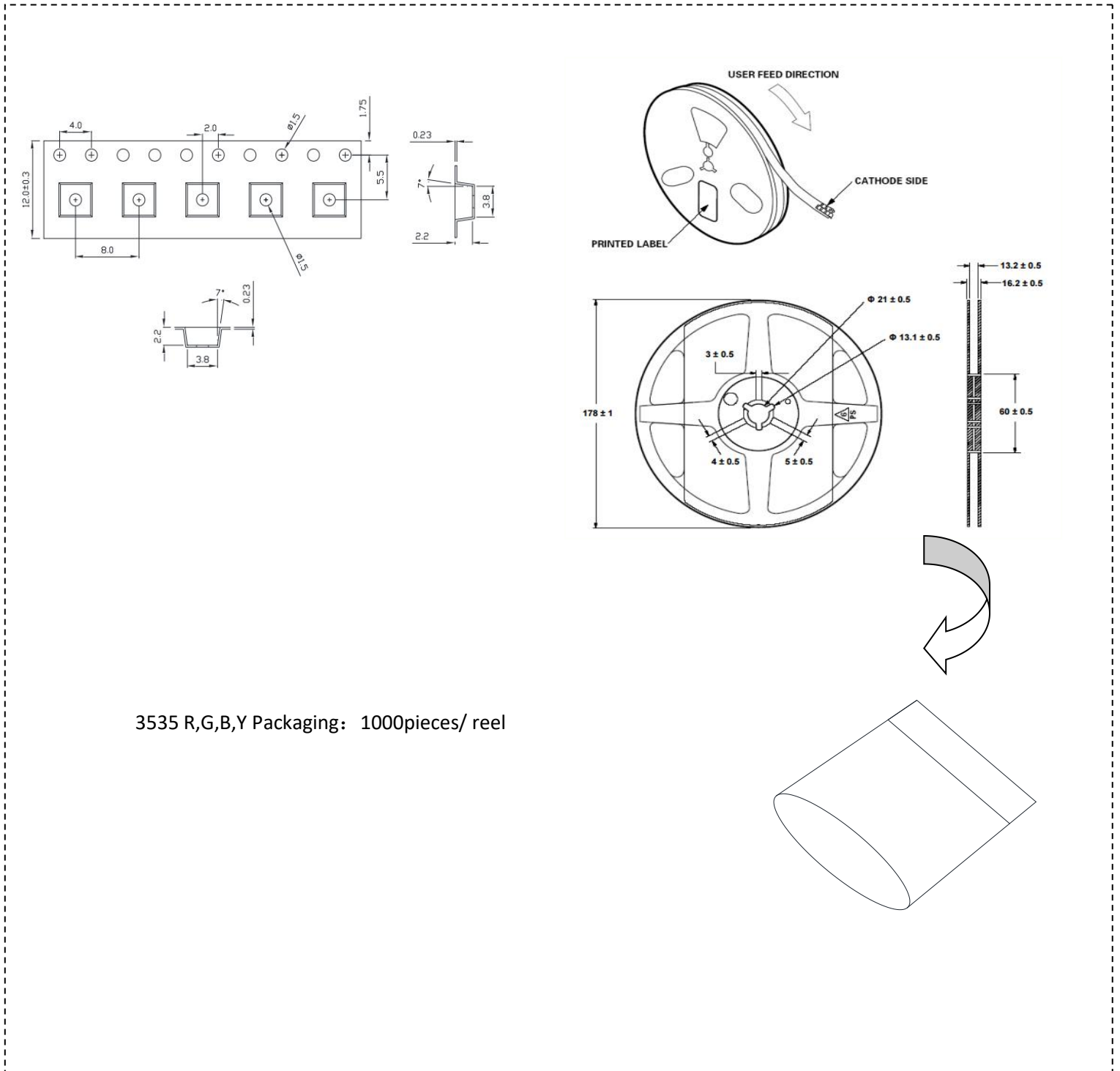
Items	Symbol	Test Conditions	Criteria for Judging LED Failure
Forward Voltage	VF	IF=350MA	>U × 1.1
Reverse Current	IR	VR=5V	IR≥10μA
Lumen	φv	IF=350MA	<S × 0.7

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

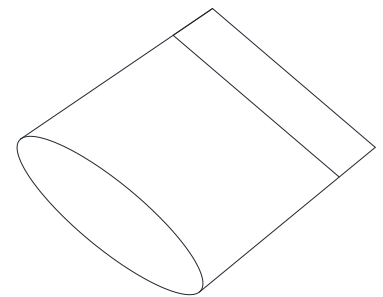
Notes: Judging criteria based on Tc=25°C.

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 $220\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$ (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.