TX-3535RGBS2MCD1-0G4DB-01H80

PRODUCT SPECIFICATION

Features:

◆Excellent transiting heat from LED chip operating under 200mA
◆High luminous output
◆No UV

Moisture Proof Grade:

◆LEVEL1

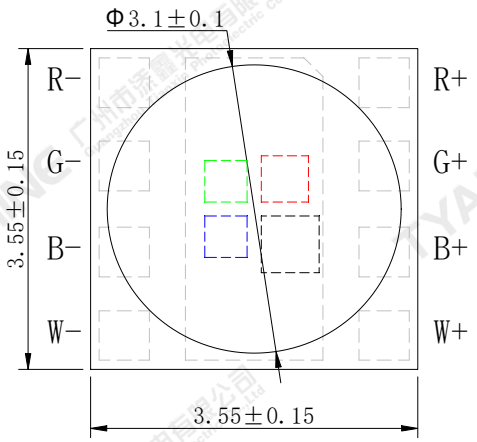
Emitting Color:

◆Red（R）
◆Green（G）
◆Blue（B）
◆Warm white（S）

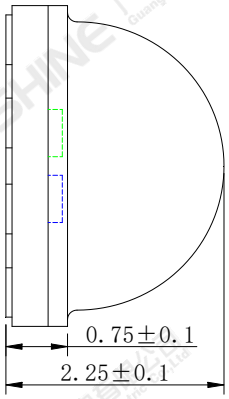
Applications:

◆Portable flashlight
◆Garden lighting
◆General lighting

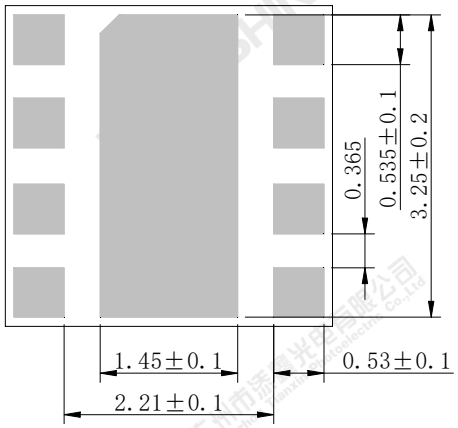
Package Dimensions:



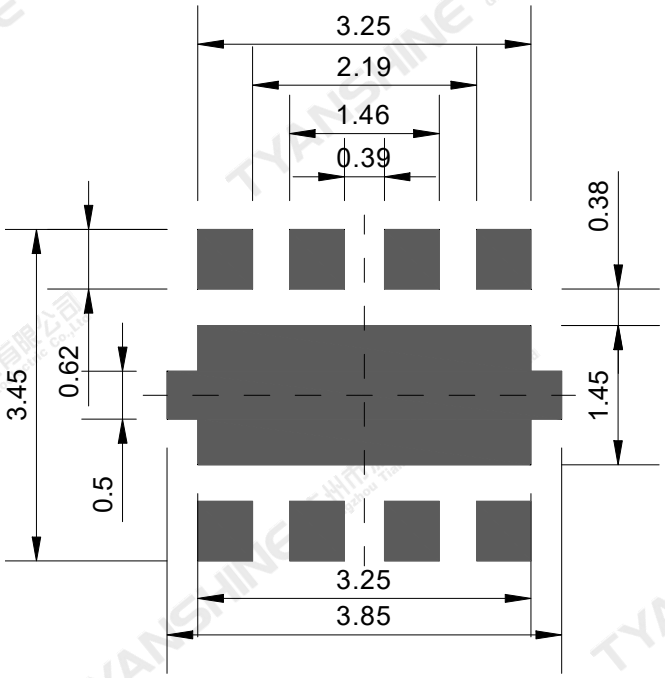
Top view



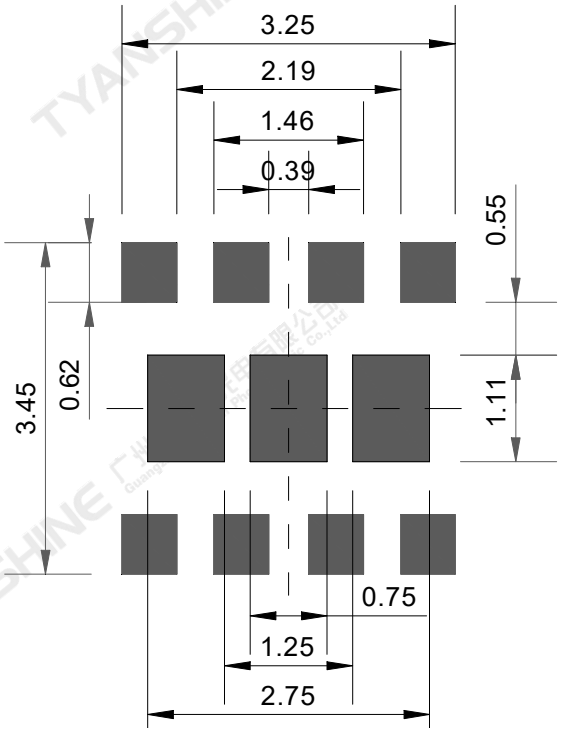
Side view



Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

1.All dimensions are in millimeters .

2.Tolerances unless otherwise mentioned are ±0.15mm .

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol		Max Ratings	Unit
Forward Current	IF		200	mA
Reverse Voltage	V_R		7	V
Power Dissipation	P_D	R	440	mW
		G	600	
		B	620	
		S	600	
Junction Temperature	Tj	R	125	℃
		G	130	
		B	130	
		S	150	
Electrostatic Discharge Threshold (ESD)	ESD		2000	V
Storage Temperature	T_{stg}		-40~70	℃
Operation Temperature	T_{opr}		-30~85	
Ceramic side temperature(notes 4)	T_{cs}		85	

Notes:

1.Specifications are subject to change without notice.

2.The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.

3.Precautions for ESD:

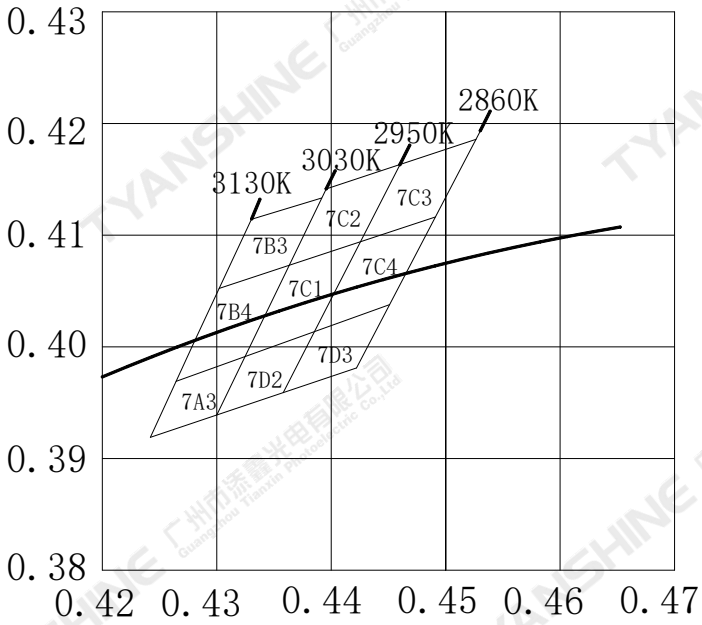
STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

4.Temperature on the side of the ceramic substrate near the heat sink.

Electrical Optical Characteristics (Tc=25°C)

Parameter	Symbol	Condition	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	If=150mA	R	16	23	30	lm
			G	32	39	45	
			B	8	12	16	
			S	35	44	50	
Dominant Wavelength	λd		R	617	622	627	nm
			G	522	527	532	
			B	466	471	476	
Correlated Colour Temperature	CCT		S	2860	3000	3130	K
Color Rendering Index	Ra		S	80	82.5	85	—
Peak-emission Wavelength	λp		R	624	629	634	nm
			G	517	522	527	
			B	463	468	473	
Spectral Line Half-Width	△λ		R	15	17.5	20	nm
			G	25	30	35	
			B	15	20	25	
			S	120	130	140	
Forward Voltage	V_f		R	1.9	2.2	2.5	V
			G	2.7	3.0	3.4	
			B	2.8	3.1	3.5	
			S	2.7	3.0	3.5	
Reverse Current	I_R	V_R=7V	R	—	—	5	μA
			G	—	—	5	
			B	—	—	5	
			S	—	—	5	
Viewing Angle at 50％IV	$2\theta_{1/2}$	—	—	—	120	—	Deg
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	R	—	14	—	K/W
			G	—	14	—	
			B	—	14	—	
			S	—	14	—	
			Total thermal resistance	—	7.5	—	
Temperature Coefficient of Voltage	V△F/T	If=150mA	R	—	-2.7	—	mV/℃
			G	—	-3.9	—	
			B	—	-1.6	—	
			S	—	-1.6	—	

White light Color coordinate filing (IF=150mA)



Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
7D3	2860K	2950K	0.4422	0.3981	0.4358	0.3959	0.4385	0.4014	0.4451	0.4038
7C4			0.4451	0.4038	0.4385	0.4014	0.4425	0.4094	0.4491	0.4116
7C3			0.4491	0.4116	0.4425	0.4094	0.4460	0.4163	0.4527	0.4186
7D2	2950K	3030K	0.4358	0.3959	0.4300	0.3939	0.4325	0.3991	0.4385	0.4014
7C1			0.4385	0.4014	0.4325	0.3991	0.4363	0.4073	0.4425	0.4094
7C2			0.4425	0.4094	0.4363	0.4073	0.4396	0.4141	0.4460	0.4163
7A3	3030K	3130K	0.4300	0.3939	0.4242	0.3919	0.4264	0.3969	0.4325	0.3991
7B4			0.4325	0.3991	0.4264	0.3969	0.4302	0.4052	0.4363	0.4073
7B3			0.4363	0.4073	0.4302	0.4052	0.4330	0.4115	0.4392	0.4133

Notes:

1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

2.$\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

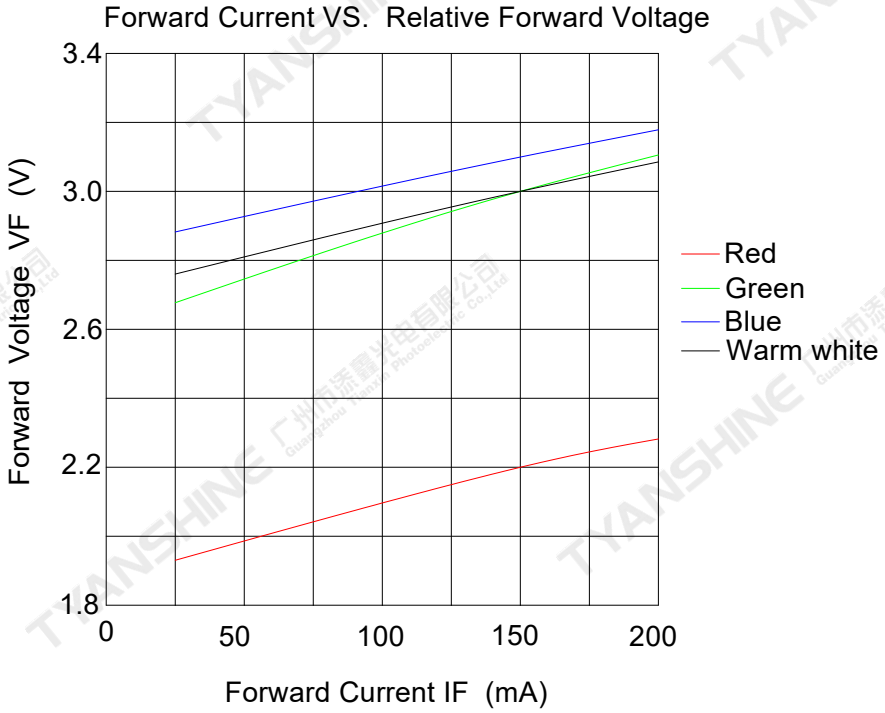
3.The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

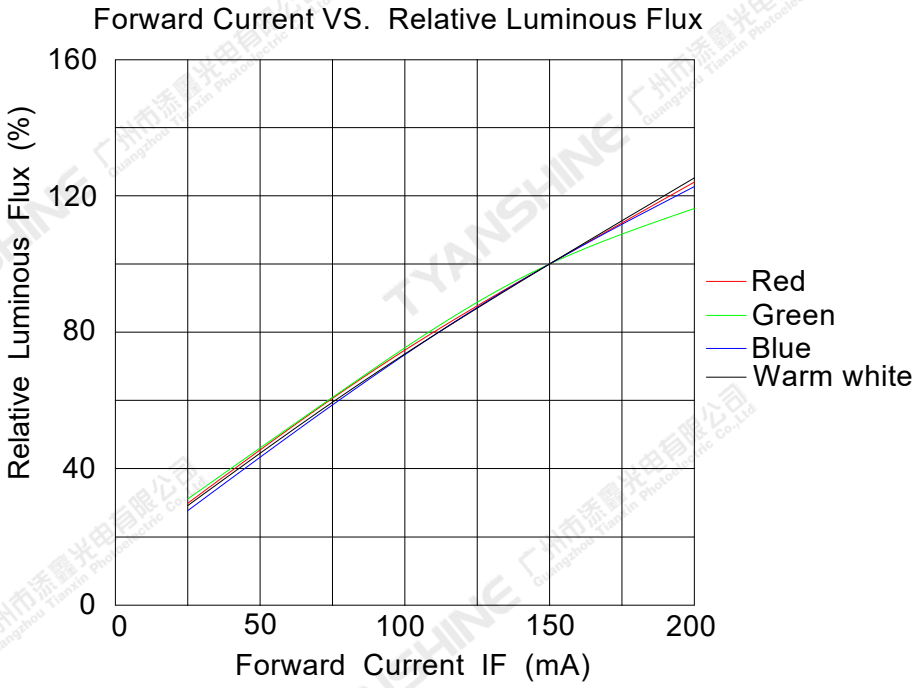
4.Luminous flux measurement tolerance:±15%.

5.Forward voltage measurement tolerance:±0.15V.

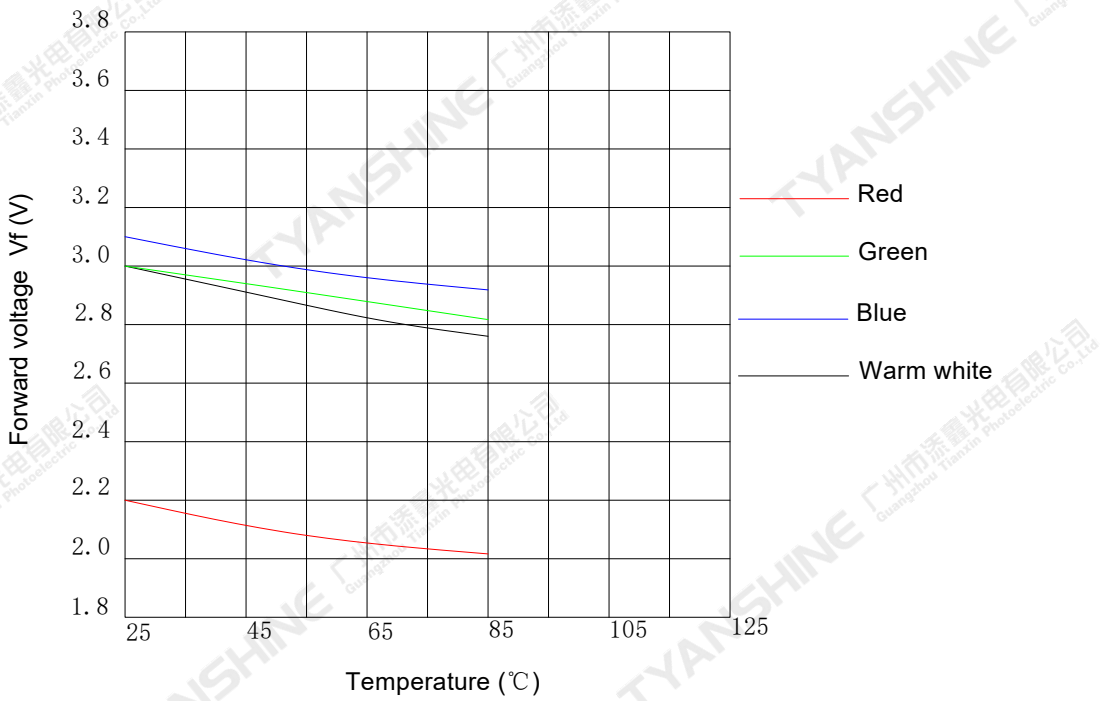
Typical Electrical/Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

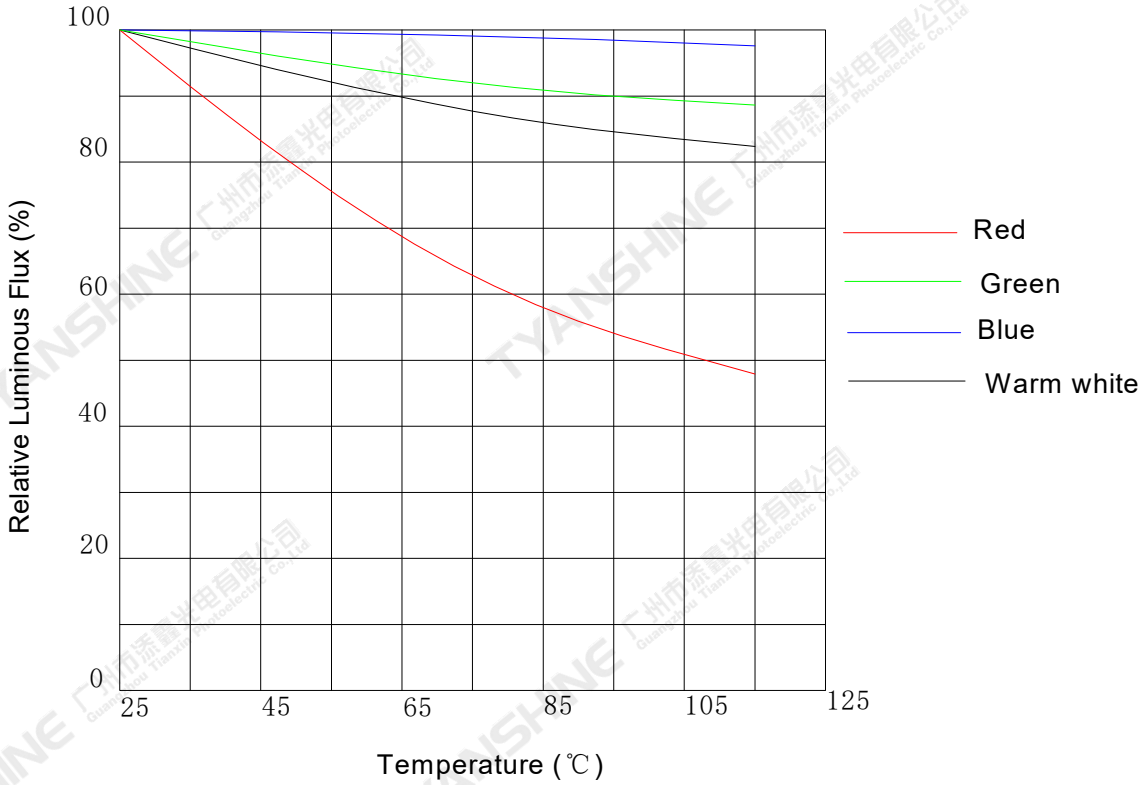


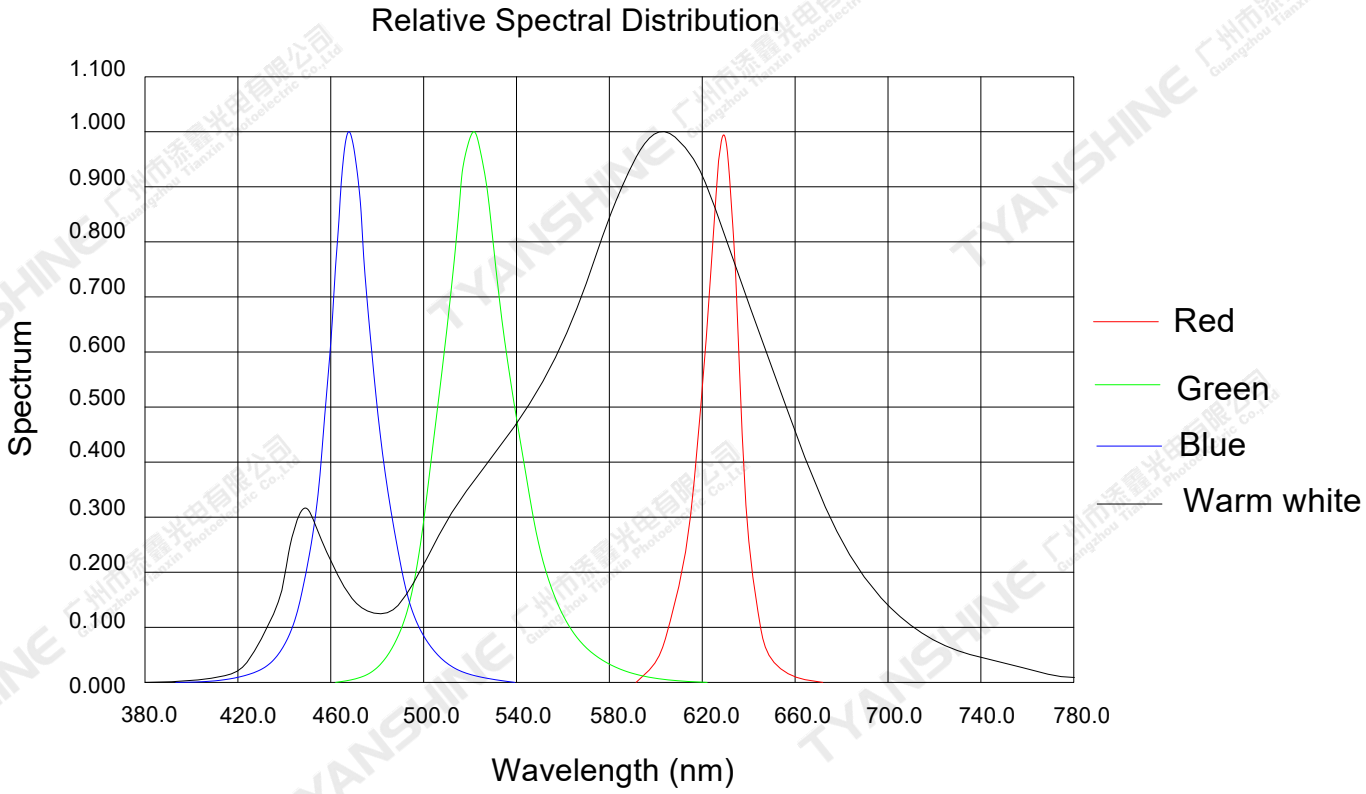


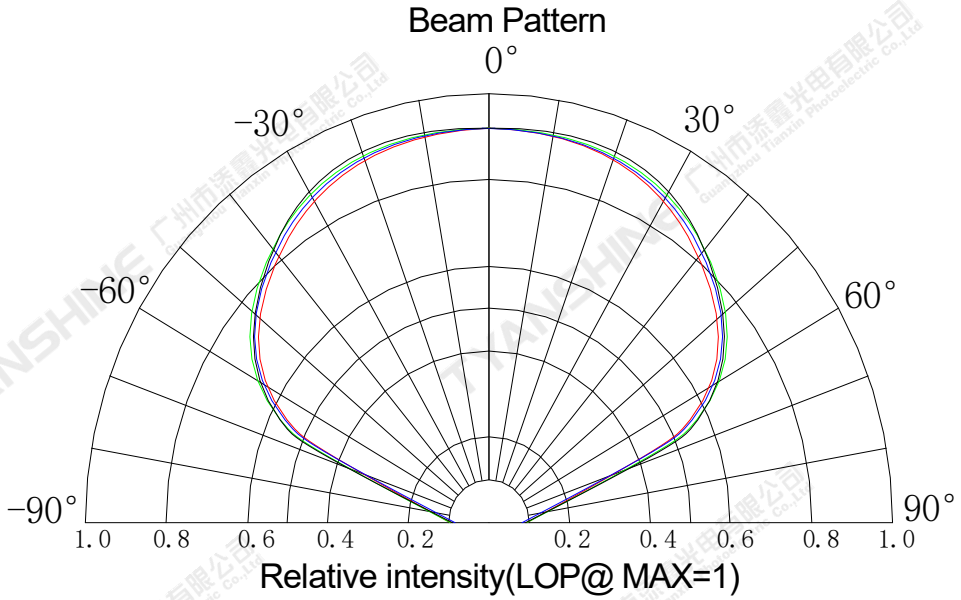
Temperature VS. Forward Voltage (IF=150mA)



Temperature VS. Relative Luminous Flux (IF=150mA)







Notes:

1. 2θ 1/2 is the off axis angle from lamp centerline where the luminous intensity is 1/2 of the peak value.
2. View angle tolerance is ± 5°.

Usage Precautions

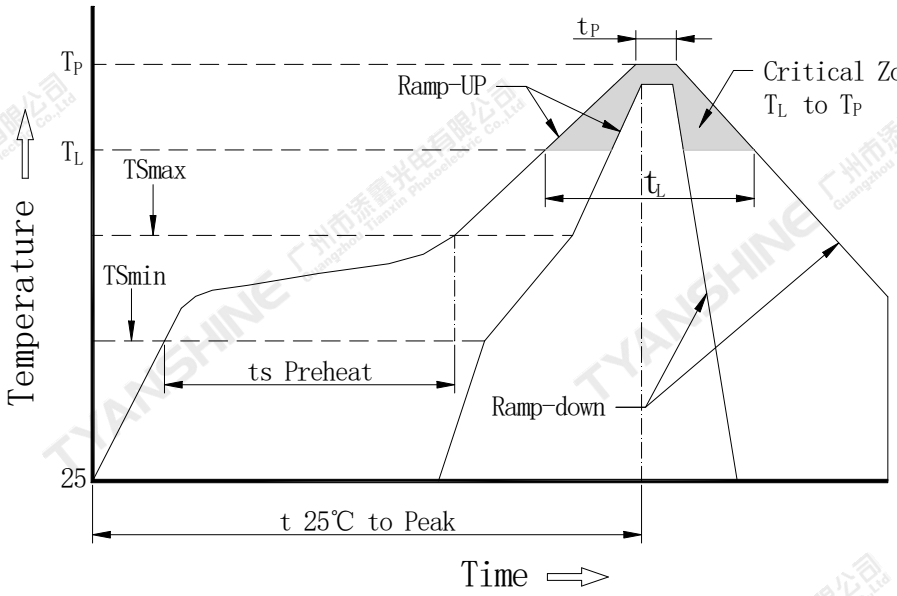
Storage Environment Condition

Temperature: 5℃ ~ 30℃ (41℉ ~ 86℉)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



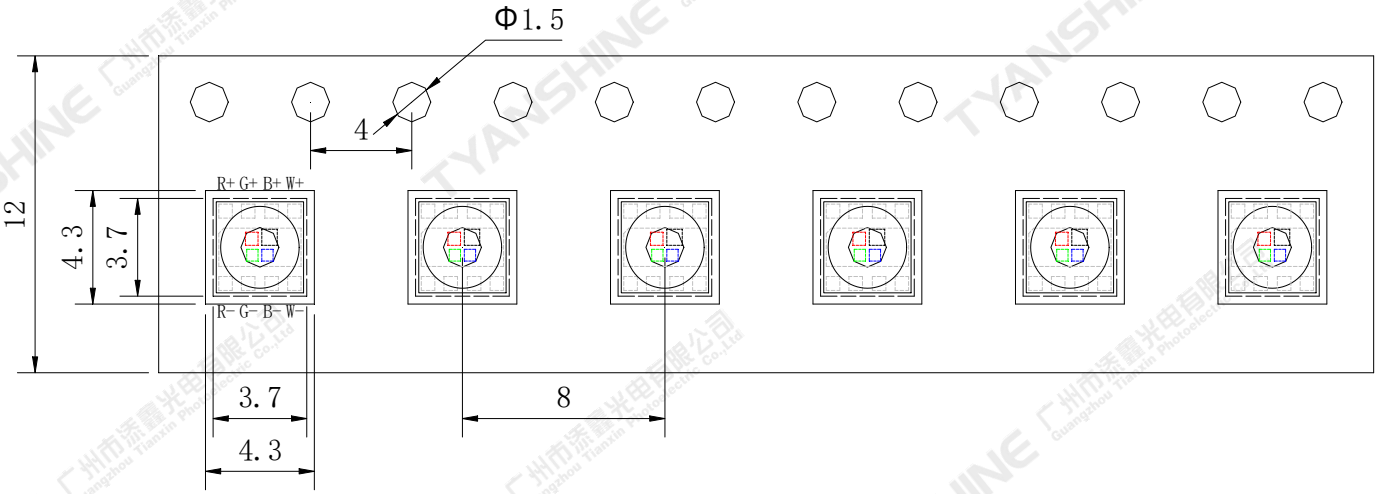
Profile Feature	Pb-Free Solderr(SnBi35Ag0.3)
Average Ramp-Up Rate (Ts_{max} to T_p)	3℃/second max.
Preheat: Temperature Min (Ts_{min})	130℃
Preheat: Temperature Max (Ts_{max})	190℃
Preheat: Time (Ts_{min} to Ts_{max})	120-180 seconds
Time Maintained Above: Temperature (T_L)	230℃
Time Maintained Above: Time (T_L)	60-150 seconds
Peak/Classification Temperature (T_P)	255℃
Time Within 5℃ of Actual Peak Temperature (T_P)	10-35seconds
Ramp-Down Rate	5℃/second max.
Time 25℃ to Peak Temperature	7 minutes max.

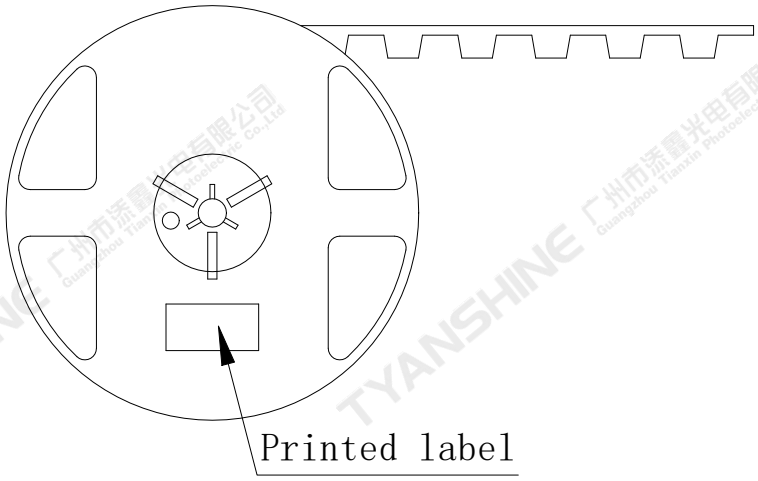
Note:

All temperatures refer to topside of the package, measured on the package body surface.

Dimensions For Cannulation And Packaging

Quantity: 1000PCS





Notes:

1. All dimensions are in millimeters.
2. Tolerances are ±2.0 mm unless otherwise noted.
3. The products are packaged together with silica gel, Transport, not to the weight of welding LED light-emitting area, As a result of the weight of LED light-emitting zone in the quality of, Irresponsible of the Company.

产品规格书变更履历表

版本	变更内容描述		生效日期
	变更前内容	变更后内容	
1.1	-	增加Ceramic side temperature(notes4)	2023.12.15
1.1	-	外形尺寸更正为3.55*3.55±0.15mm 底部备注公差更正为±0.15mm	2023.12.15
1.1	Chip Material:	Moisture Proof Grade:	2023.12.15
1.2	-	RG参数变动修改	2025.04.15