TX-3535RGBW2MCD1-0G4DB-01H80

PRODUCT SPECIFICATION

Features:

◆Excellent transiting heat from LED chip operating under RGB:200mA W:400mA
◆High luminous output
◆No UV

Moisture Proof Grade:

◆LEVEL1

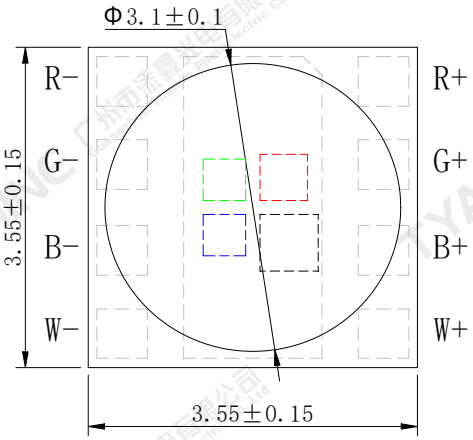
Emitting Color:

◆Red（R）
◆Green（G）
◆Blue（B）
◆White（W）

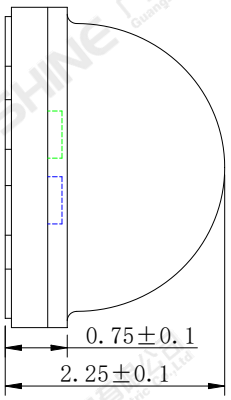
Applications:

◆Portable flashlight
◆Garden lighting
◆General lighting

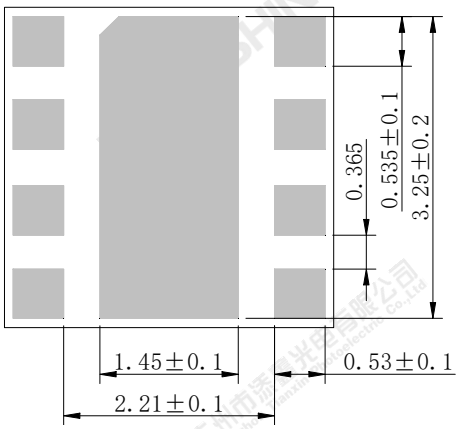
Package Dimensions:



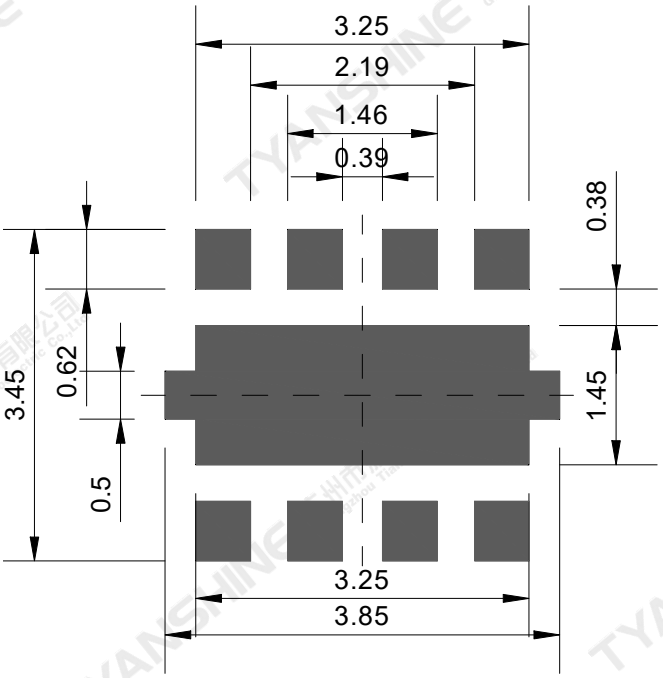
Top view



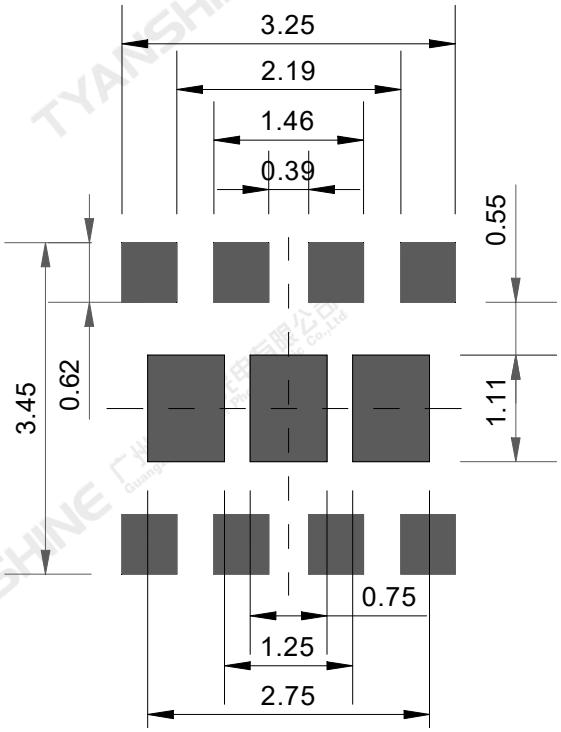
Side view



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	RGB	200	mA
		W	400	
Reverse Voltage	V_R		7	V
Power Dissipation	P_D	R	440	mW
		G	580	
		B	620	
		W	1200	
Junction Temperature	Tj	R	125	℃
		G	130	
		B	130	
		W	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:

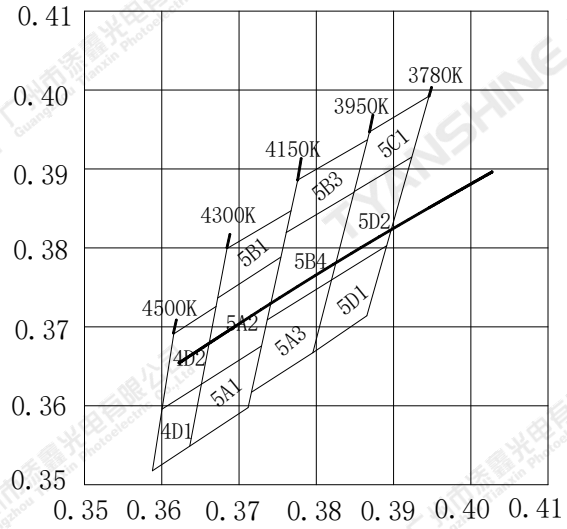
STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

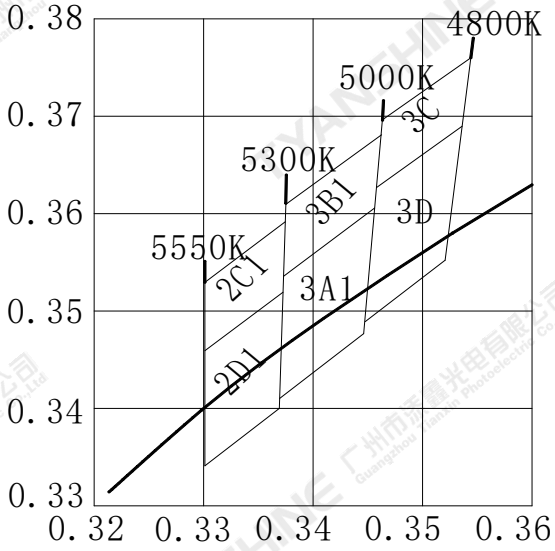
4.Temperature on the side of the ceramic substrate near the heat sink.

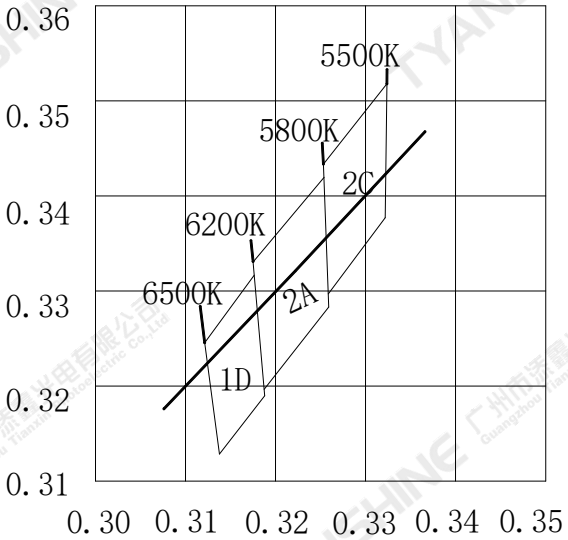
Electrical Optical Characteristics (Tc=25°C)

Parameter	Symbol	Condition	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	If=150mA	R	18	24	30	lm
			G	35	40	45	
			B	8	10	13	
			$W_{(4000K)}$	40	47	55	
			$W_{(6000K/5000K)}$	50	55	60	
Dominant Wavelength	λd		R	619	622	625	nm
			G	520	525	530	
			B	465	470	475	
Correlated Colour Temperature	CCT		W	3780	4000	4500	K
				5500	6000	6500	
				4800	5150	5550	
Color Rendering Index	Ra		W	80	82.5	85	—
Peak-emission Wavelength	λp		R	626	629	632	nm
			G	515	520	525	
			B	462	467	472	
Spectral Line Half-Width	△λ		R	15	17.5	20	nm
			G	25	30	35	
			B	15	20	25	
			W	120	130	140	
Forward Voltage	V_f		R	2.0	2.2	2.4	V
			G	2.8	2.9	3.1	
			B	2.9	3.1	3.3	
			W	2.8	2.9	3.2	
Reverse Current	I_R	V_R=7V	R	—	—	5	μA
			G	—	—	5	
			B	—	—	5	
			W	—	—	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	—	
			W	—	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	—	
			W	—	-1.6	—	

White light Color coordinate filing (IF=150mA)







Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
5D1	3780K	3950K	0.3796	0.3667	0.3820	0.3759	0.3891	0.3803	0.3865	0.3714
5D2			0.3820	0.3759	0.3849	0.3871	0.3924	0.3915	0.3891	0.3803
5C1			0.3849	0.3871	0.3869	0.3947	0.3946	0.3992	0.3924	0.3915
5A3	3950K	4150K	0.3716	0.3617	0.3737	0.3709	0.3820	0.3759	0.3796	0.3667
5B4			0.3737	0.3709	0.3761	0.3820	0.3849	0.3870	0.3820	0.3759
5B3			0.3761	0.3820	0.3776	0.3886	0.3866	0.3937	0.3849	0.3870
5A1	4150K	4300K	0.3636	0.3549	0.3651	0.3627	0.3729	0.3676	0.3712	0.3598
5A2			0.3651	0.3627	0.3672	0.3737	0.3754	0.3788	0.3729	0.3676
5B1			0.3672	0.3737	0.3684	0.3799	0.3767	0.3847	0.3754	0.3788
4D1	4300K	4500K	0.3588	0.3518	0.3600	0.3596	0.3651	0.3627	0.3636	0.3549
4D2			0.3600	0.3596	0.3616	0.3691	0.3670	0.3726	0.3651	0.3627
3D	4800K	5000K	0.3447	0.3489	0.3458	0.3627	0.3536	0.3690	0.3521	0.3552
3C			0.3458	0.3627	0.3463	0.3696	0.3544	0.3760	0.3536	0.3690
3A1	5000K	5300K	0.3369	0.3410	0.3373	0.3536	0.3456	0.3606	0.3446	0.3477
3B1			0.3373	0.3536	0.3375	0.3610	0.3462	0.3681	0.3456	0.3606
2D1	5300K	5550K	0.3301	0.3341	0.3301	0.3459	0.3373	0.3519	0.3369	0.3400
2C1			0.3301	0.3459	0.3301	0.3529	0.3375	0.3592	0.3373	0.3519
2C	5500K	5800K	0.3259	0.3297	0.3253	0.3433	0.3324	0.3518	0.3322	0.3377
2A	5800K	6200K	0.3187	0.3197	0.3175	0.3330	0.3254	0.3419	0.3259	0.3283
1D	6200K	6500K	0.3138	0.3128	0.3121	0.3246	0.3176	0.33167	0.3188	0.3190

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.

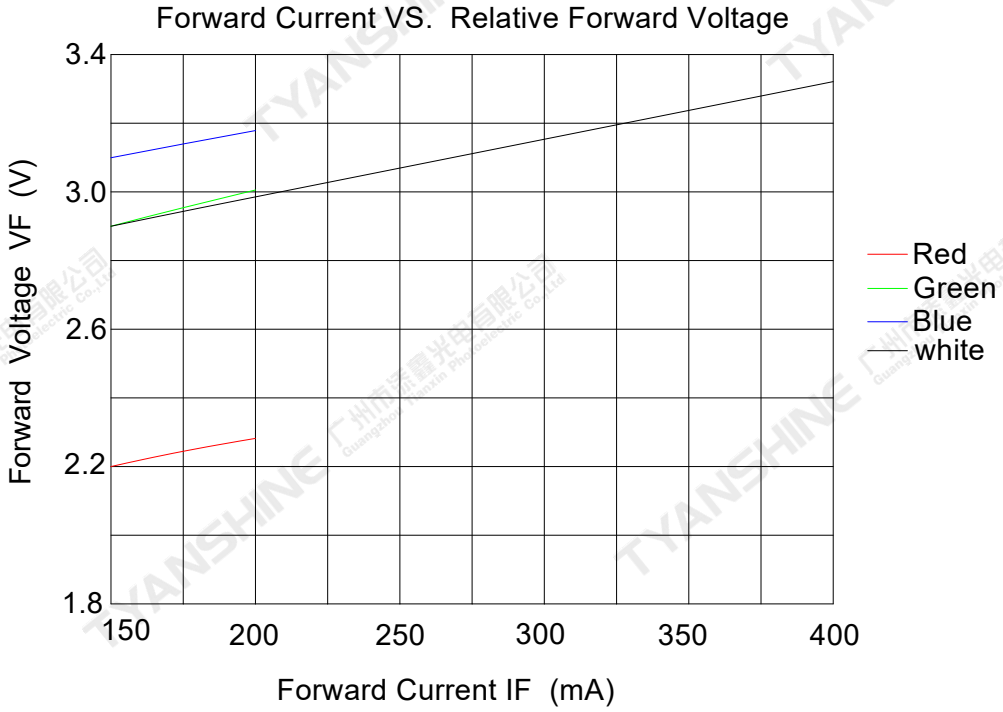
3.The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

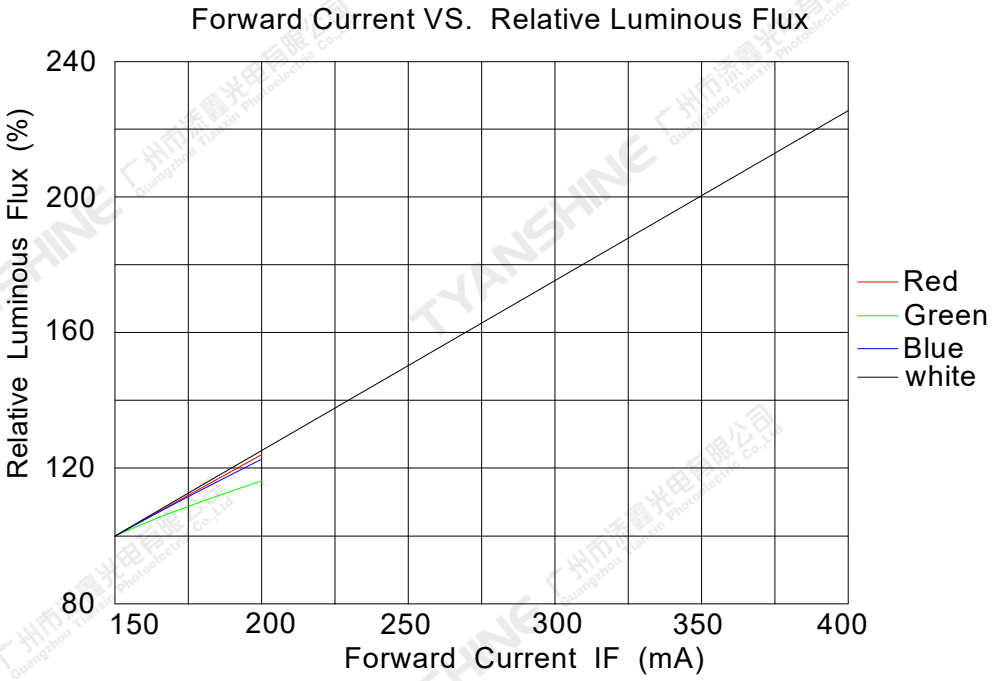
4.Luminous flux measurement tolerance:±15%.

5.Forward voltage measurement tolerance:±0.15V.

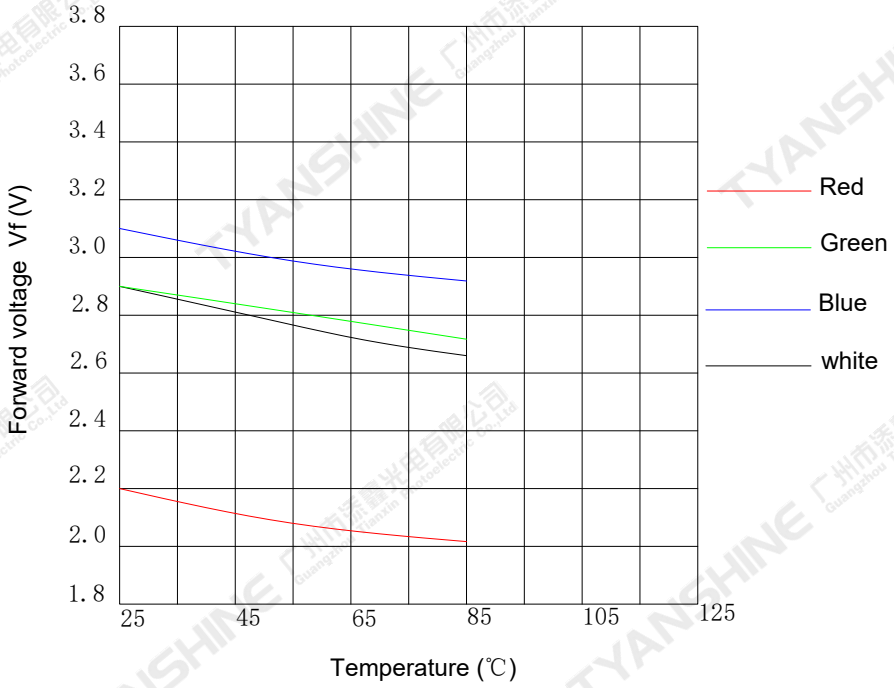
Typical Electrical/Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

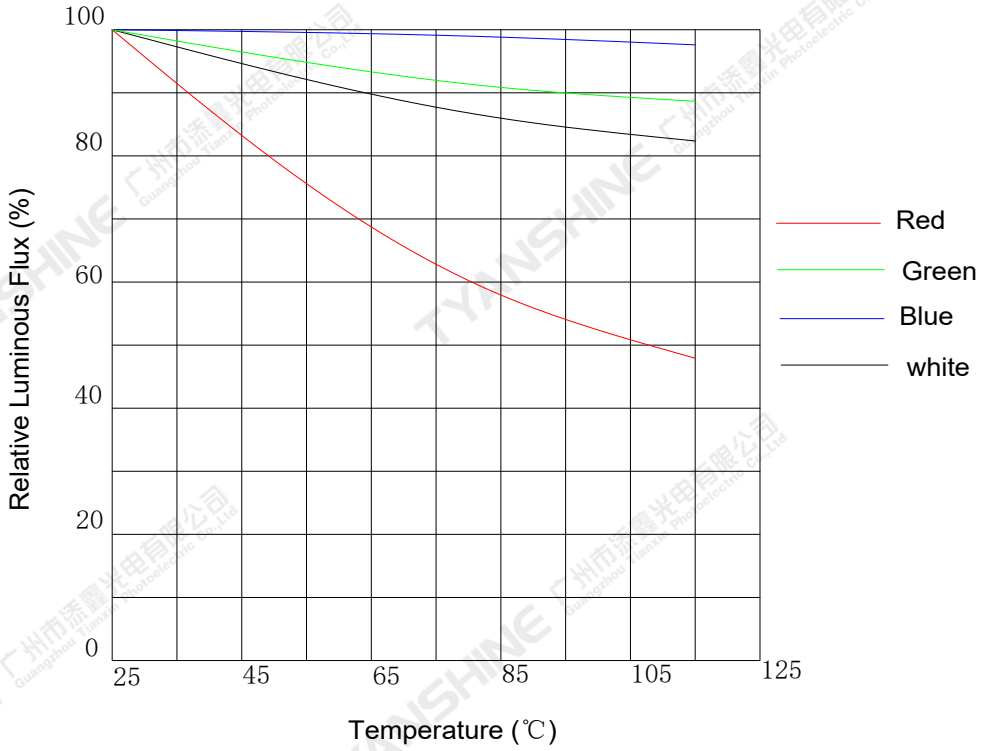


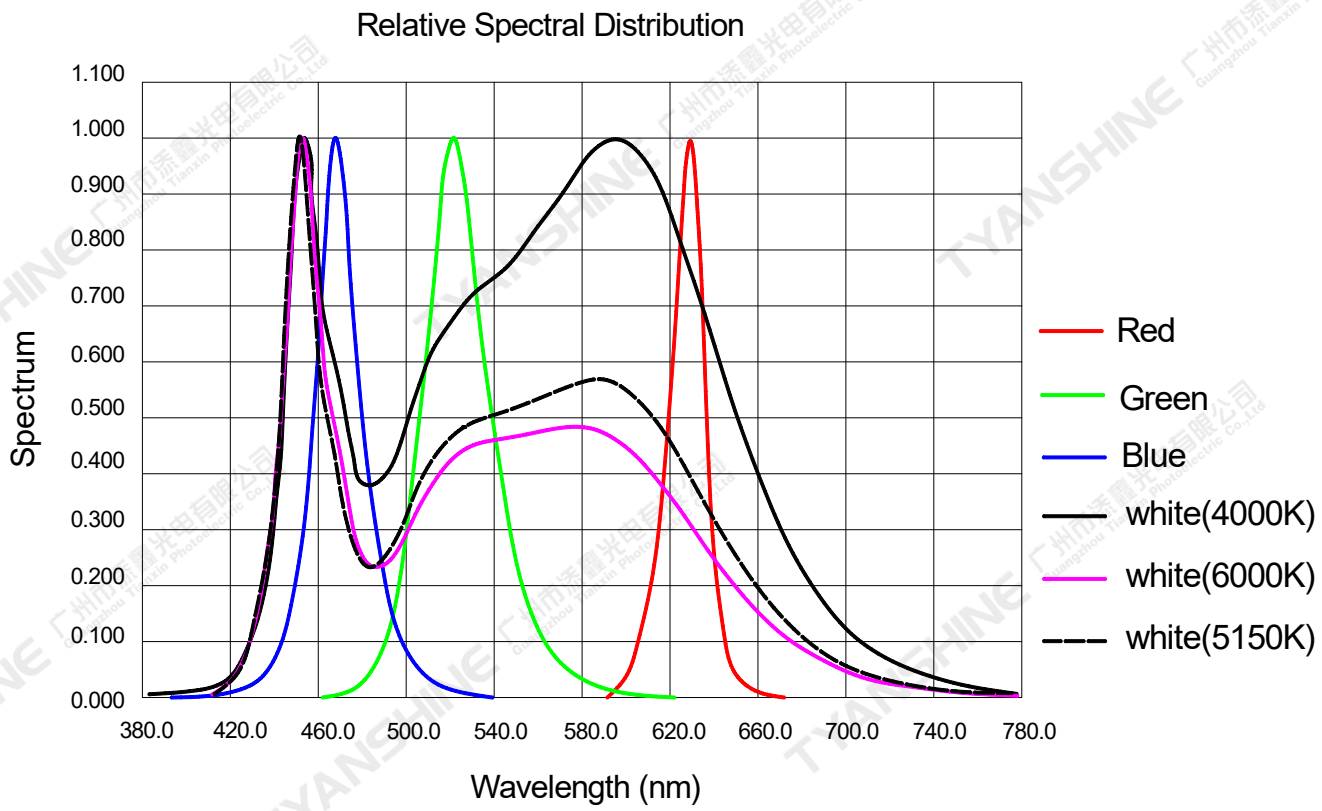


Temperature VS. Forward Voltage (IF=150mA)



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

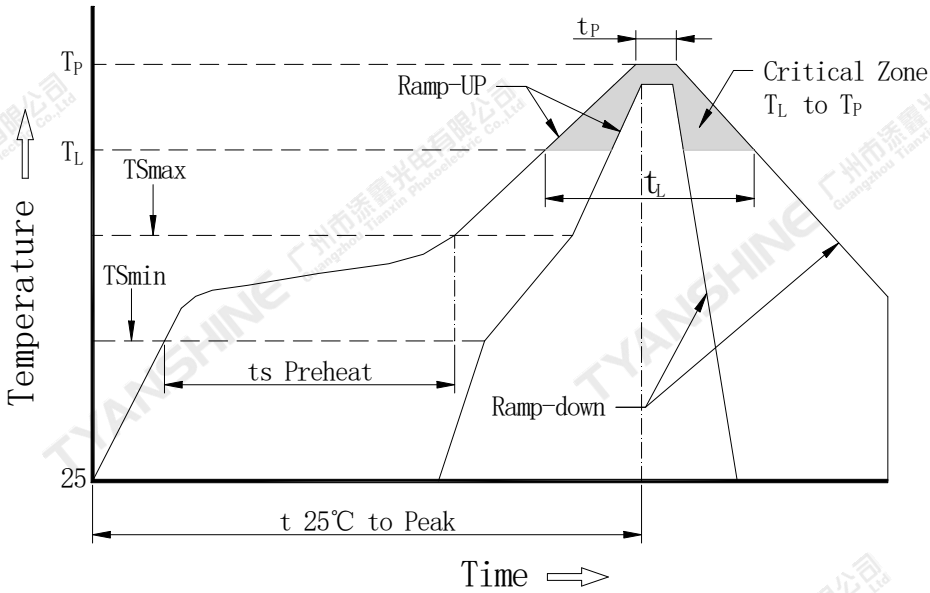
Storage Environment Condition

Temperature: 5℃ ~ 30℃ (41℉ ~ 86℉)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



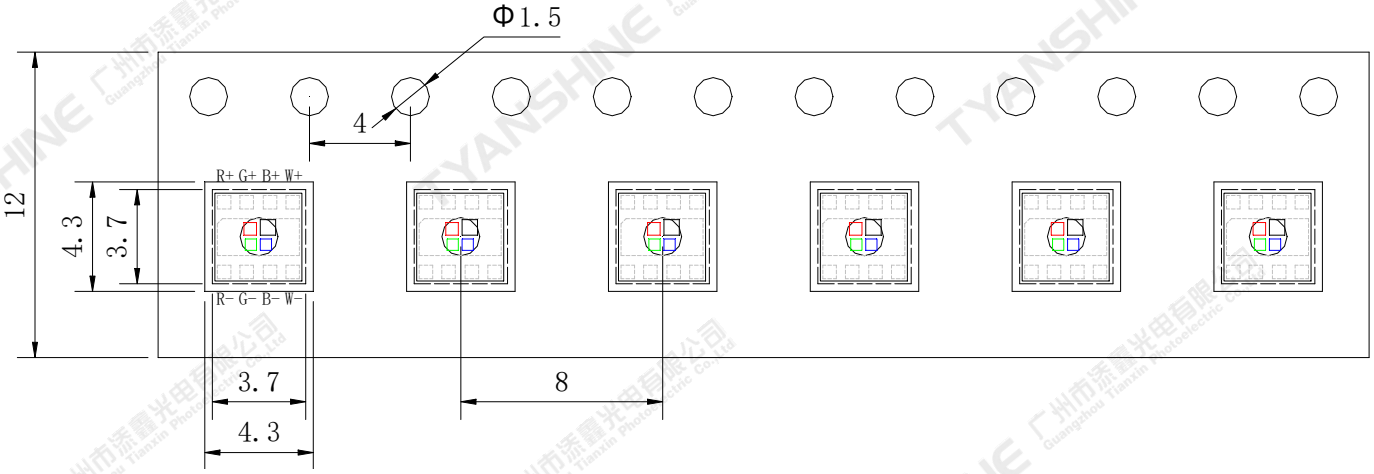
Profile Feature	Lead-Free Solder
Average Ramp-Up Rate (Ts_{max} to T_p)	1.2℃/second
Preheat: Temperature Min (Ts_{min})	120℃
Preheat: Temperature Max (Ts_{max})	170℃
Preheat: Time (Ts_{min} to Ts_{max})	65-150 seconds
Time Maintained Above: Temperature (T_L)	217℃
Time Maintained Above: Time (T_L)	45-90 seconds
Peak/Classification Temperature (T_P)	235-245℃
Time Within 5℃ of Actual Peak Temperature (T_P)	20-40 seconds
Ramp-Down Rate	1-6℃/second
Time 25℃ to Peak Temperature	4 minutes max.

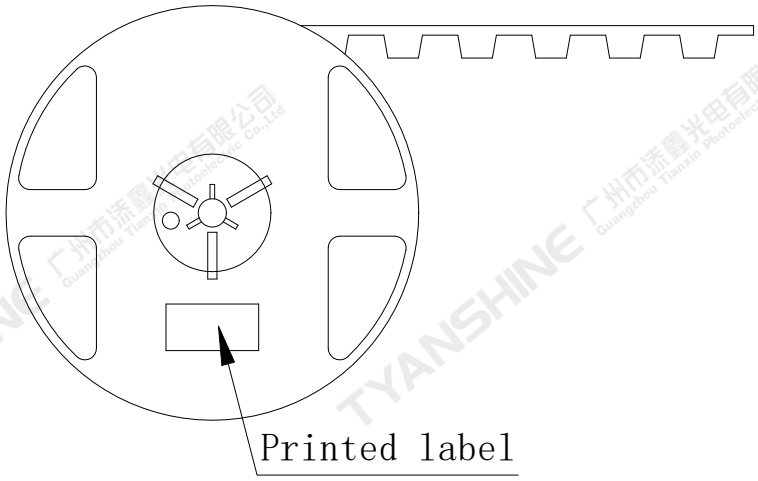
Note:

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)	2023.12.25
1.1	-	外形更正为3.55*3.55±0.15mm 底部备注公差更正为±0.15mm	2023.12.25
1.1	Chip Material:	Moisture Proof Grade:	2023.12.25
1.1	W(4000K)光通量范围40-50	W(4000K)光通量范围40-55	2023.12.25
1.2	-	W光最大电流400mA	2024.04.11
1.3	-	新增色温5150K标准,3A1为中心	2024.06.13
1.4	-	分光图及其相关参数更新更新	2025.11.19