

TX-3535RGBW2MCD1-0G4DE-01H80

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under 160mA
- ◆High luminous output
- ◆No UV

Chip Material:

- ◆Red: AlGaInP
- ◆Green: GaInN
- ◆Blue: GaInN
- ◆White: GaInN

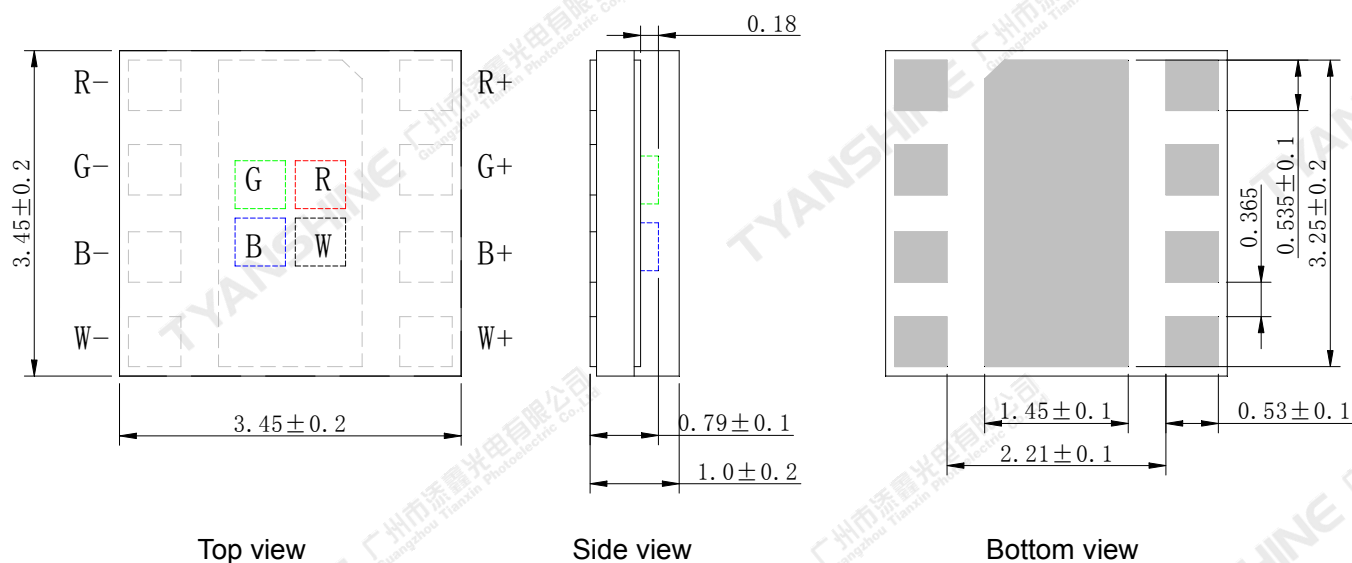
Emitting Color:

- ◆Red
- ◆Green
- ◆Blue
- ◆White

Applications:

- ◆Portable flashlight
- ◆Garden lighting
- ◆General lighting

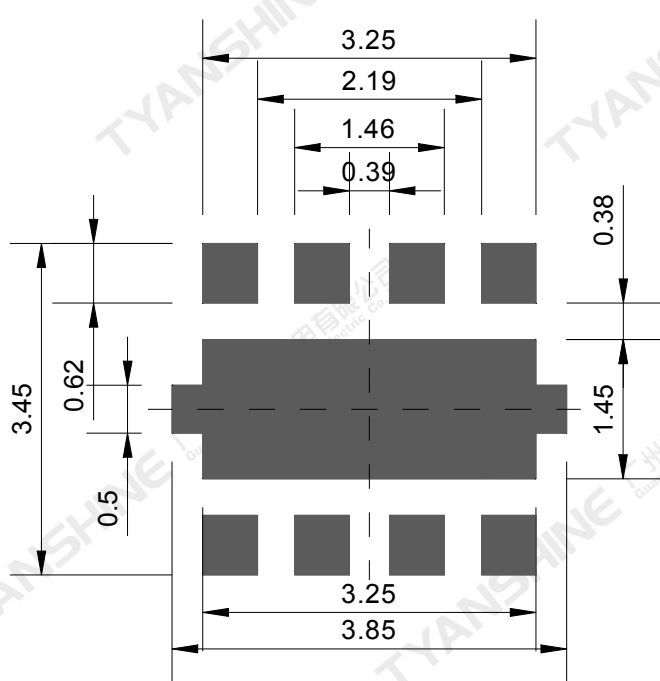
Package Dimensions:



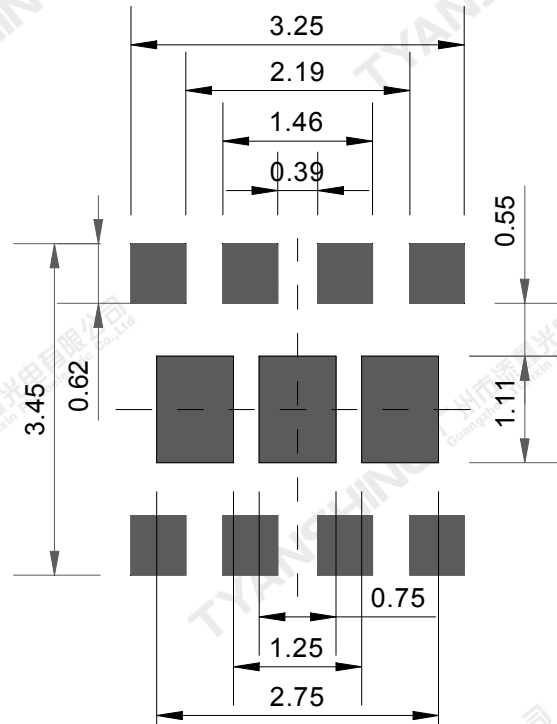
Top view

Side view

Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

1. All dimensions are in millimeters .
2. Tolerances unless otherwise mentioned are ± 0.1 mm .

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol	Max Ratings	Unit
Forward Current	IF	160	mA
Reverse Voltage	V _R	Not designed for reverse operation	V
Power Dissipation	P _D	R	375
		G	510
		B	510
		W	510
Junction Temperature	T _j	R	115
		G	150
		B	150
		W	150
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	T _{stg}	-40~70	℃
Operation Temperature	T _{opr}	-30~85	

Notes:

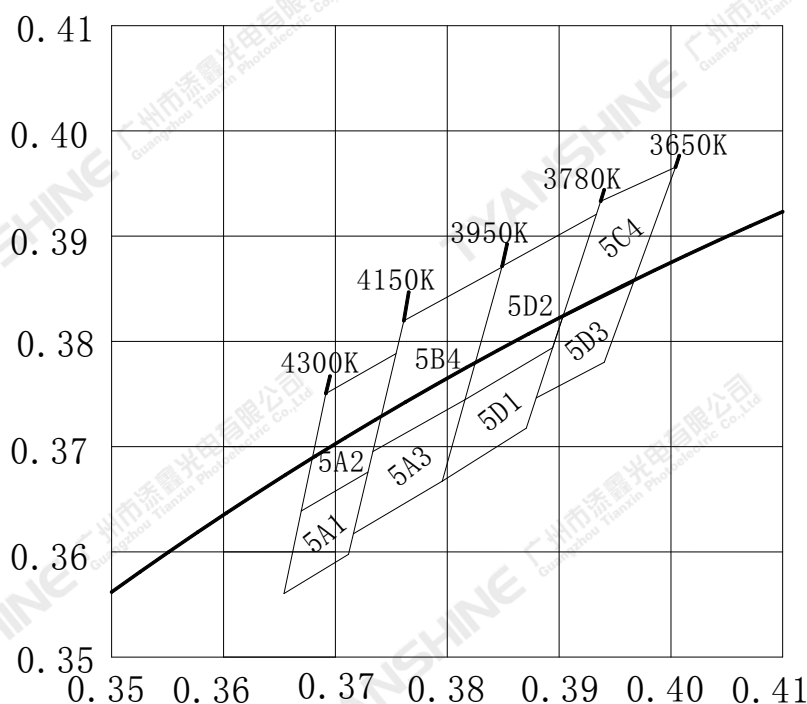
- Specifications are subject to change without notice.
- The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
- Precautions for ESD:
STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
- The temperature of PCB copper foil within 3mm from the lamp bead shall not exceed 105 ℃. If the input power reaches more than 80% of the maximum input power, the temperature of copper foil within this range shall be controlled within 85 ℃.

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Electrical Optical Characteristics (Tc=25°C)

Parameter	Symbol	Condition	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	If=150mA	R	13	17	21	lm
			G	15	20	25	
			B	5	7	10	
			W	20	25	30	
Dominant Wavelength	λ_d		R	617	622	627	nm
			G	518	523	528	
			B	462	467	472	
Correlated Colour Temperature	CCT		W	3650	4050	4300	K
Color Rendering Index	Ra		W	80	82	—	—
Peak-emission Wavelength	λ_p		R	628	633	638	nm
			G	514	519	524	
			B	458	463	468	
Spectral Line Half-Width	$\triangle\lambda$		R	15	20	25	nm
			G	30	35	40	
			B	20	25	30	
			W	20	25	30	
Forward Voltage	V_f		R	1.9	2.2	2.5	V
			G	2.8	3.1	3.4	
			B	2.8	3.1	3.4	
			W	2.8	3.1	3.4	
Reverse Current	I_R	$V_R=5V$	R	—	—	2	μA
			G	—	—	2	
			B	—	—	2	
			W	—	—	2	
Viewing Angle at 50 % IV	$2\theta_{1/2}$	—	—	—	120	—	Deg
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	—	11.0	—	K/W
Temperature Coefficient of Voltage	$V\triangle F/T$	—	R	—	-2.0	—	mV/°C
			G	—	-5.8	—	
			B	—	-1.6	—	
			W	—	-1.6	—	

White Color coordinate filing (IF=150mA)



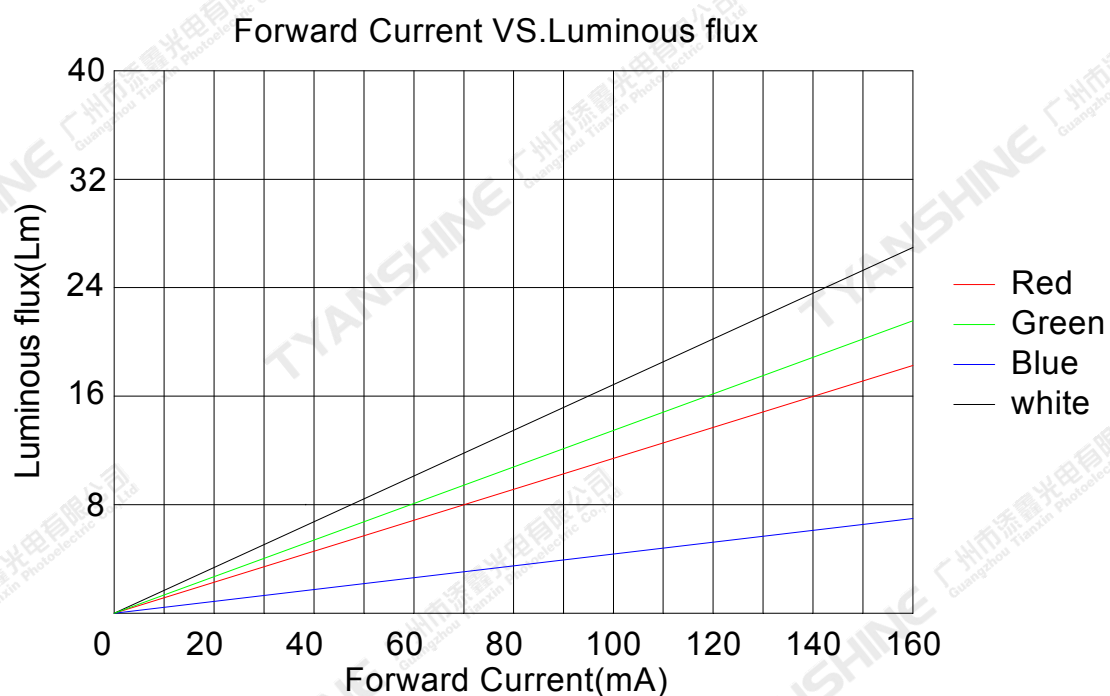
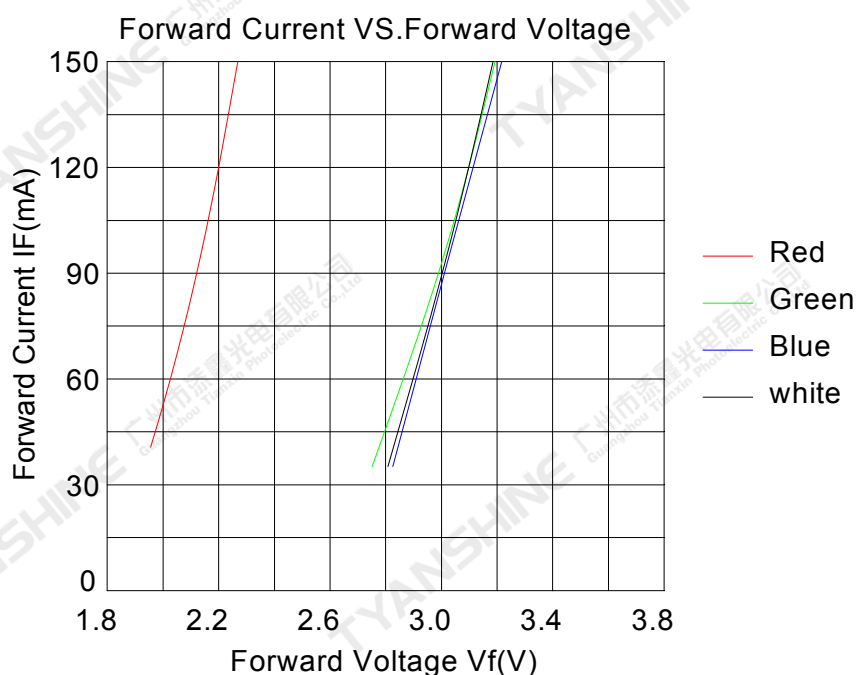
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
5D3	3650K	3780K	0.3940	0.3780	0.3879	0.3746	0.3903	0.3823	0.3966	0.3956
5C4			0.3966	0.3956	0.3903	0.3823	0.3937	0.3933	0.4004	0.3965
5D1	3780K	3950K	0.3871	0.3718	0.3796	0.3667	0.3811	0.3725	0.3888	0.3775
5D2			0.3888	0.3775	0.3811	0.3725	0.3843	0.3852	0.3927	0.3902
5A3	3950K	4150K	0.3796	0.3667	0.3716	0.3617	0.3729	0.3676	0.3811	0.3725
5B4			0.3811	0.3725	0.3729	0.3676	0.3757	0.3800	0.3843	0.3851
5A1	4150K	4300K	0.3712	0.3598	0.3654	0.3560	0.3669	0.3639	0.3729	0.3676
5A2			0.3729	0.3676	0.3669	0.3639	0.3691	0.3750	0.3754	0.3788

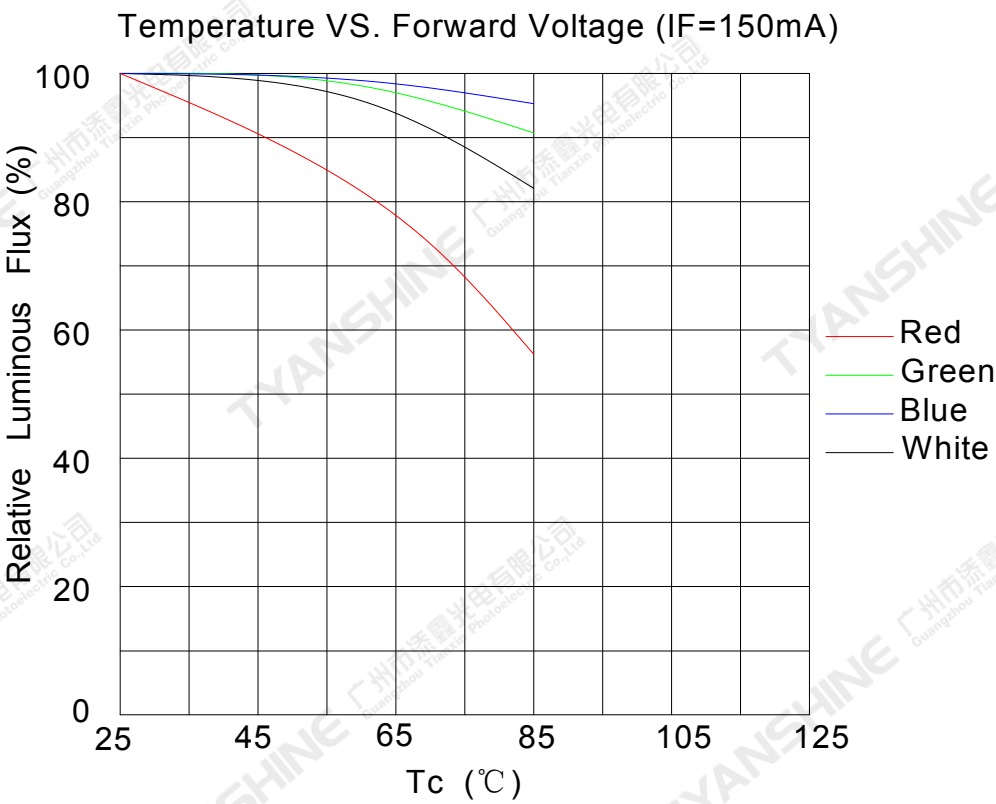
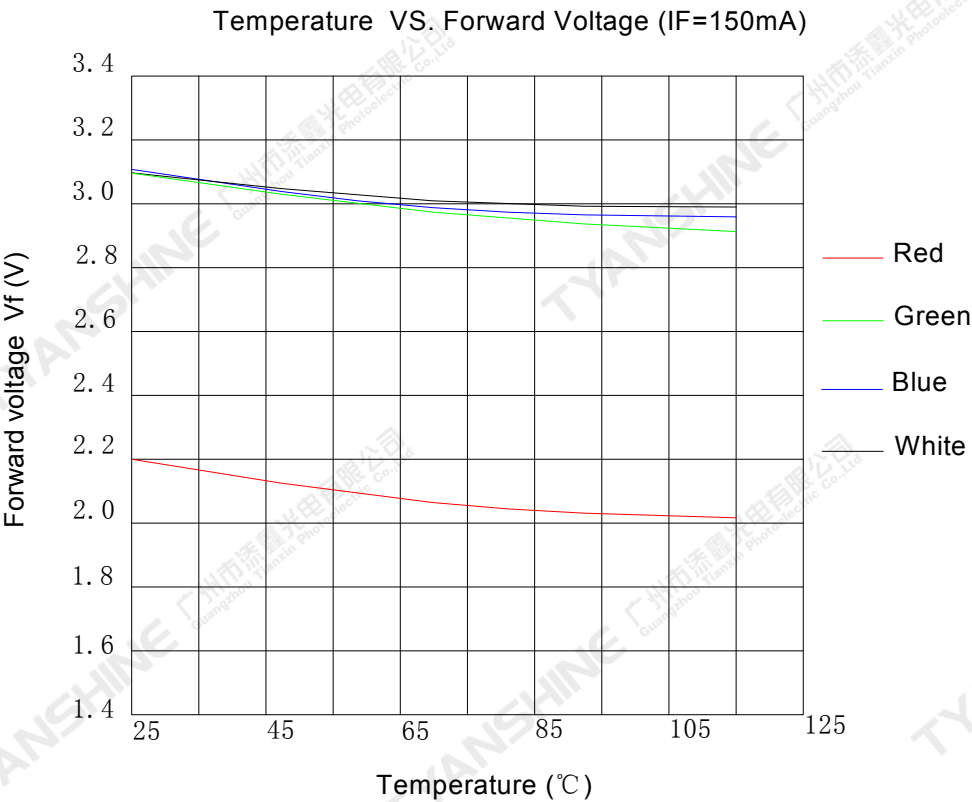
Notes:

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 (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
4. Luminous flux measurement tolerance: $\pm 15\%$.
5. Forward voltage measurement tolerance: $\pm 0.15V$.

Typical Electrical/Optical Characteristics Curves

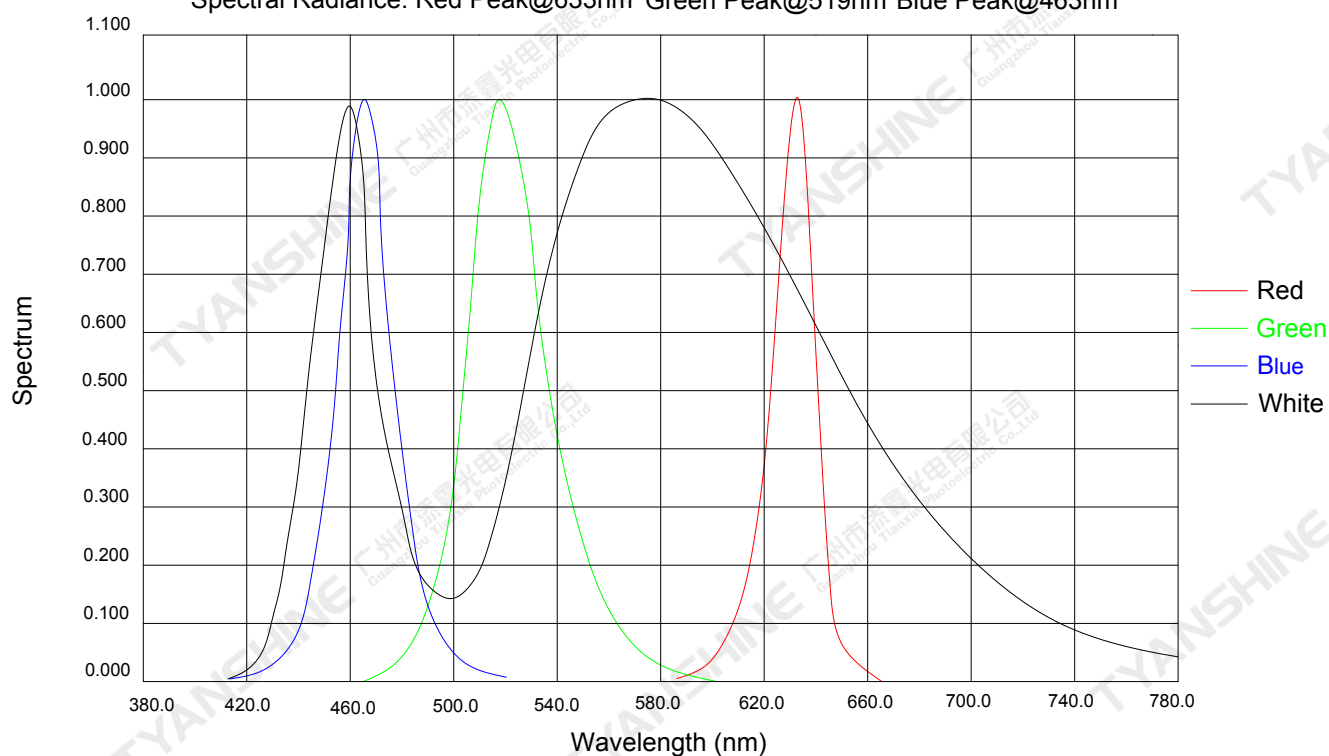
(25°C Ambient Temperature Unless Otherwise Noted)



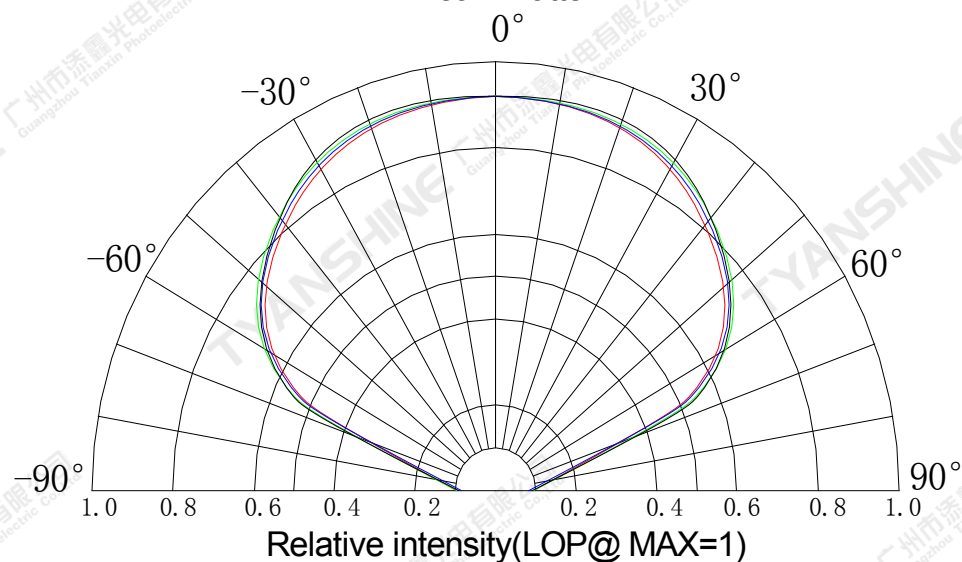


Relative Spectral Distribution

Spectral Radiance: Red Peak@633nm Green Peak@519nm Blue Peak@463nm



Beam Pattern



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

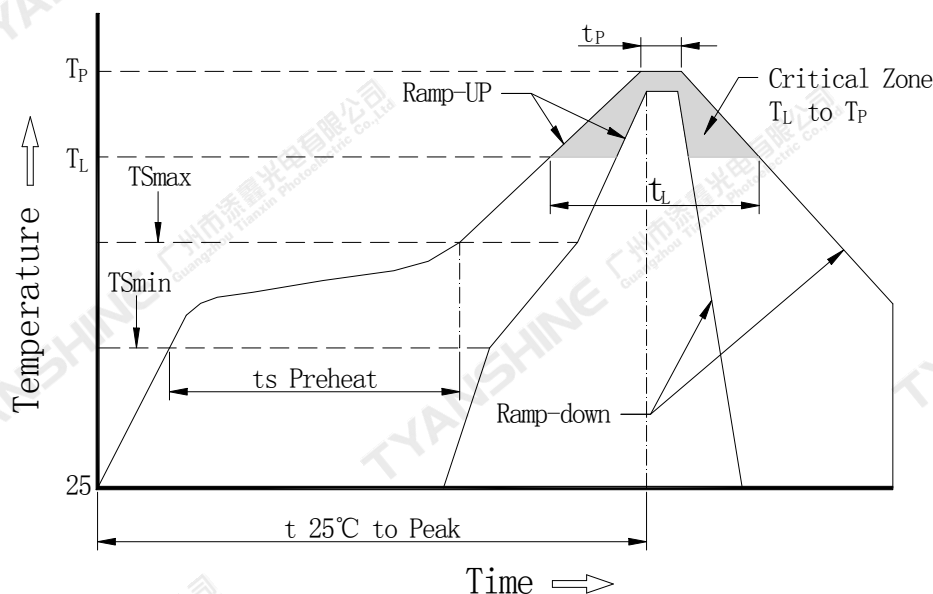
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.

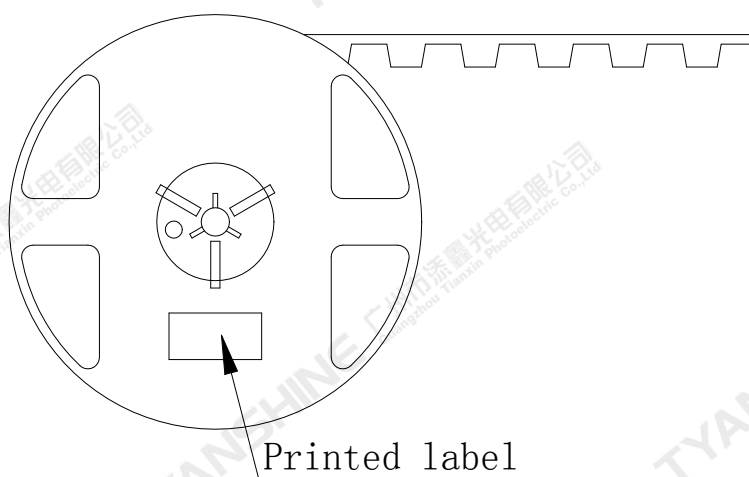


Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.
Preheat: Temperature Min (T_{Smin})	100°C
Preheat: Temperature Max (T_{Smax})	150°C
Preheat: Time (T_{Smin} to T_{Smax})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183°C
Time Maintained Above: Time (T_L)	60-150 seconds
Peak/Classification Temperature (T_P)	225°C
Time Within 5°C of Actual Peak Temperature (T_P)	10-30 seconds
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.

Note:

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

Technical drawing of a 1x12 array of square LEDs. The array is 12 units high. The first LED on the left has a square footprint of 4.3 by 3.7 units. The center-to-center distance between the first and second LEDs is 4 units. The center-to-center distance between the second and third LEDs is 8 units. The diameter of the LED chip is $\Phi 1.5$. The drawing includes a dashed square outline for each LED and a solid square outline for the first LED.



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.