

TX-5050RGBWS20FC180-NUVCNG-01H80

PRODUCT SPECIFICATION

Features:

- ◆ Provide uniform cross distribution of positive white and warm white dual color scheme, mixed pure.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

- ◆ Red: AlInGaP
- ◆ Green: GaInN
- ◆ Blue: GaInN
- ◆ White: GaInN
- ◆ Warm white: GaInN

Emitting Color:

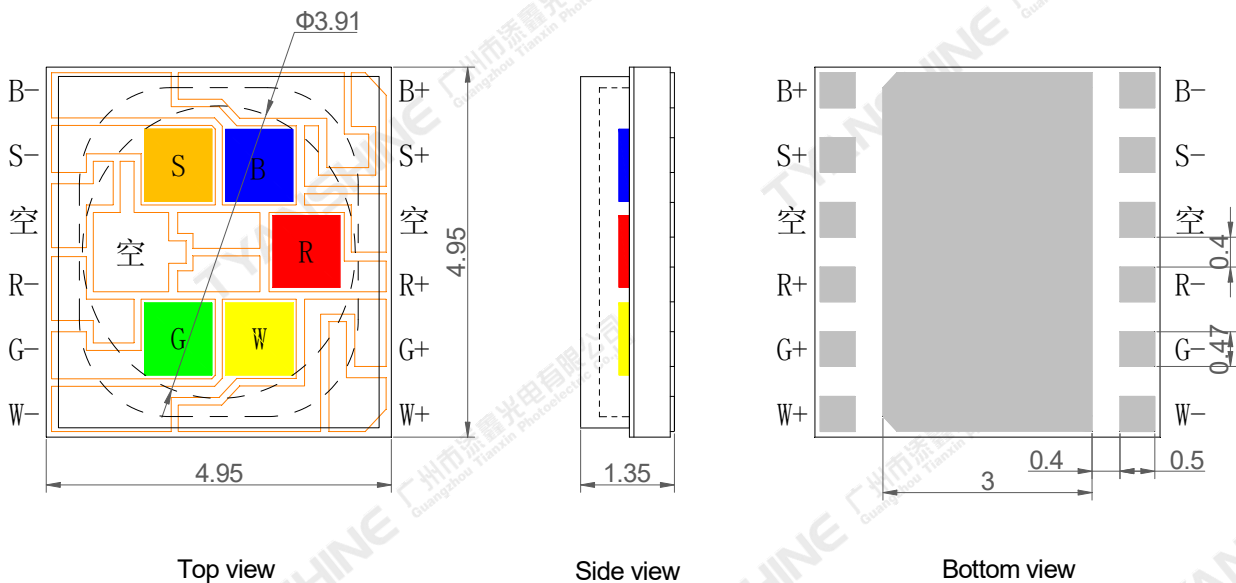
- ◆ Red (R)
- ◆ Green (G)
- ◆ Blue (B)
- ◆ White (W)
- ◆ Warm white (S)

Applications:

- ◆ Auxiliary lighting
- ◆ Ambient lighting
- ◆ Architectural lighting
- ◆ Entertainment lighting

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Package Dimensions:



Notes:

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

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol	Ratings	Unit
Forward Current	R	1.0	A
	G	1.2	
	B	1.2	
	W	1.2	
	S	1.2	
Reverse Voltage	V _R	Not designed for reverse operation	V
Power Dissipation	R	2.8	W
	G	4.4	
	B	4.4	
	W	4.4	
	S	4.4	
Junction Temperature	R	115	℃
	G	150	
	B	150	
	W	150	
	S	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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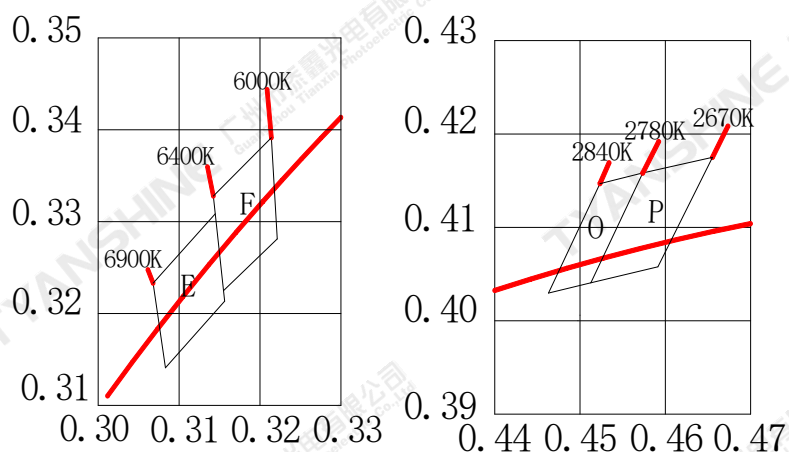
Electrical Optical Characteristics (Tc=25°C, If=0.7A)

Parameter	Symbol	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	ϕ_v	R	70	—	90	lm
		G	165	—	180	
		B	30	—	40	
		W	190	—	210	
		S	160	—	180	
Forward Voltage	V_f	R	2.0	2.4	2.8	V
		G	2.8	3.2	3.6	
		B	2.8	3.2	3.6	
		W	2.8	3.2	3.6	
		S	2.8	3.2	3.6	
Dominant Wavelength	λ_d	R	620	624	628	nm
		G	519	524	529	
		B	450	455	460	
Peak-emission Wavelength	λ_p	R	630	635	640	nm
		G	515	520	525	
		B	445	450	455	
Correlated Colour Temperature	CCT	W	6000	—	6900	K
		S	2670	—	2840	K
Color Rendering Index	Ra	W	80	83	—	—
		S	80	83	—	—
Viewing Angle at 50 % IV	$2\theta_{1/2}$	—	—	120	—	Deg
Reverse Current	$V_R=5V$	R	—	—	2	μA
		G	—	—	2	
		B	—	—	2	
	—	W	Not designed for reverse operation			
		S				
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	0.8	—	K/W

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. Luminous flux measurement tolerance: $\pm 10\%$.
4. Forward voltage measurement tolerance: $\pm 3\%$.
5. Ra measurement tolerance: ± 2 .

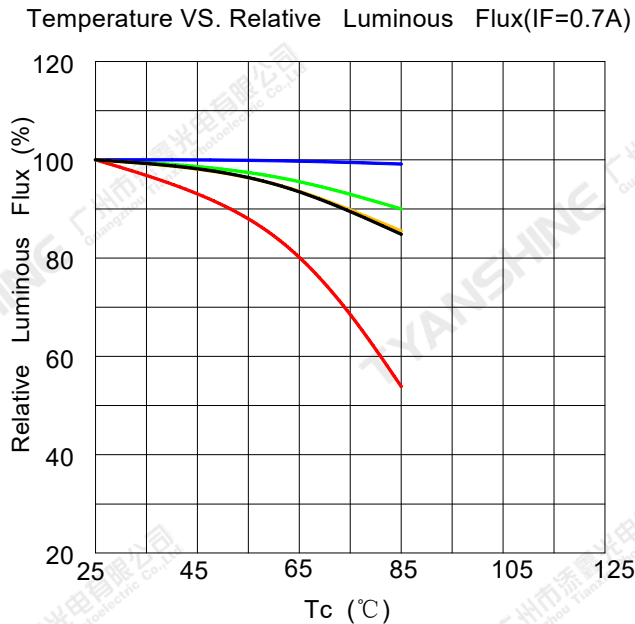
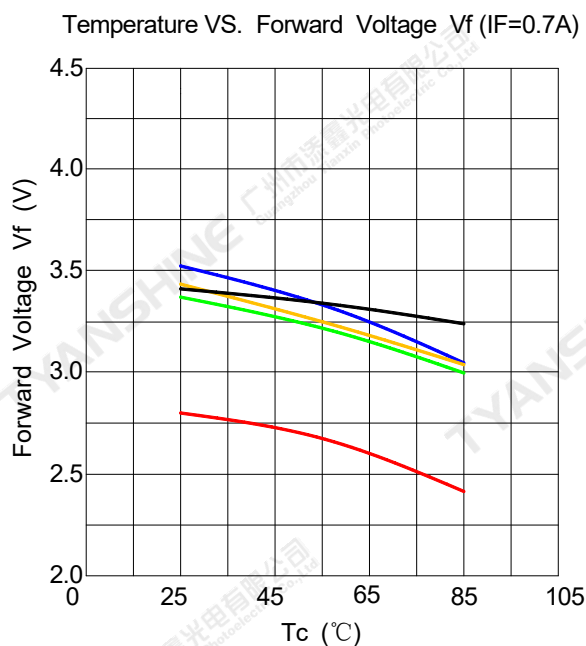
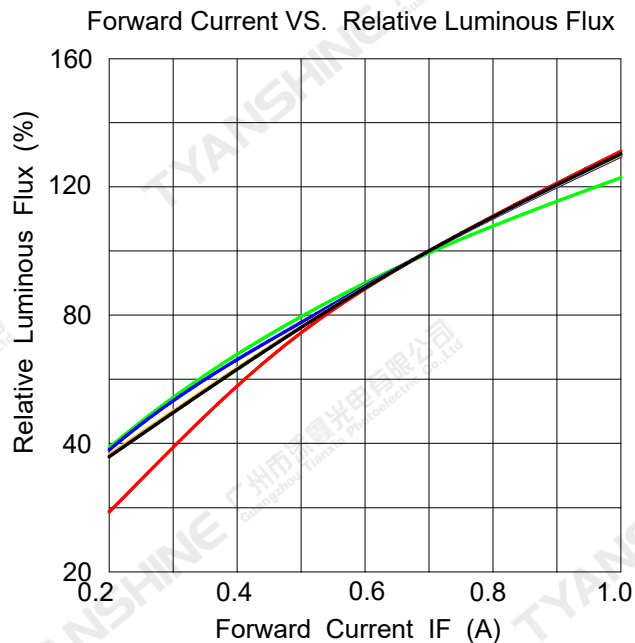
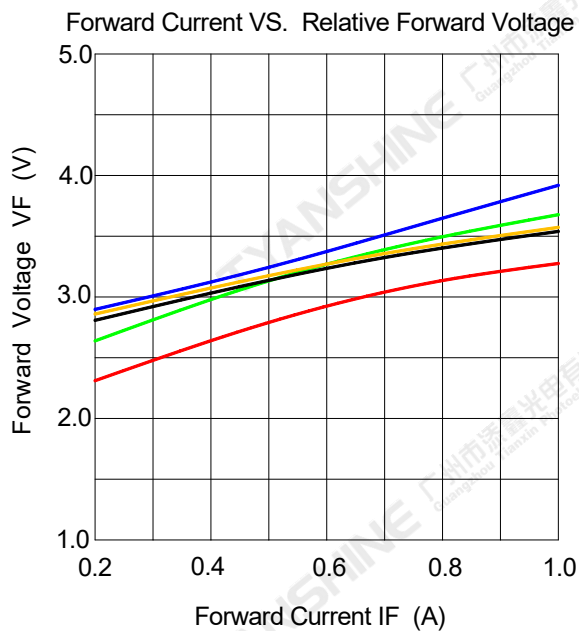
White light Color coordinate filing Tc=25°C, IF=0.7A



Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
P	2670K	2780K	0.4591	0.4058	0.4513	0.4041	0.4572	0.4158	0.4655	0.4175
O	2780K	2840K	0.4513	0.4041	0.4463	0.4030	0.4523	0.4147	0.4572	0.4158
F	6000K	6400K	0.3221	0.3281	0.3155	0.3225	0.3142	0.3328	0.3214	0.3391
E	6400K	6900K	0.3156	0.3213	0.3126	0.3192	0.3112	0.3285	0.3145	0.3308

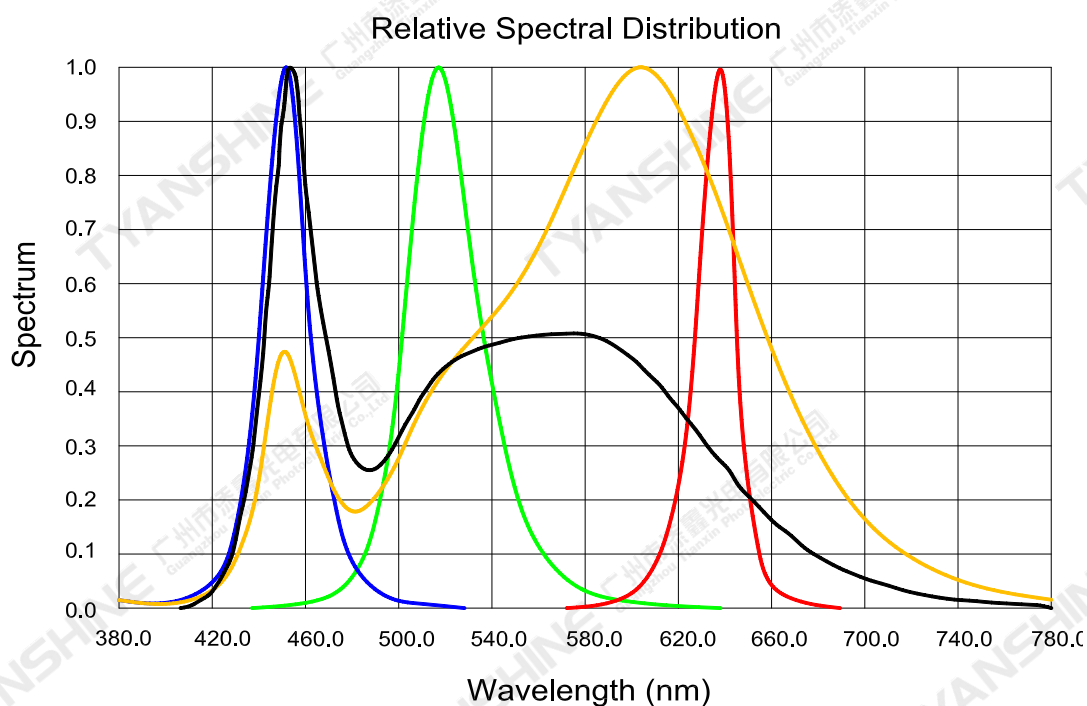
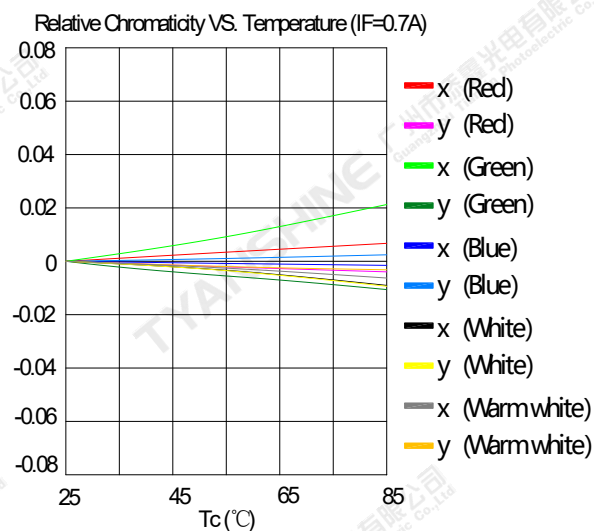
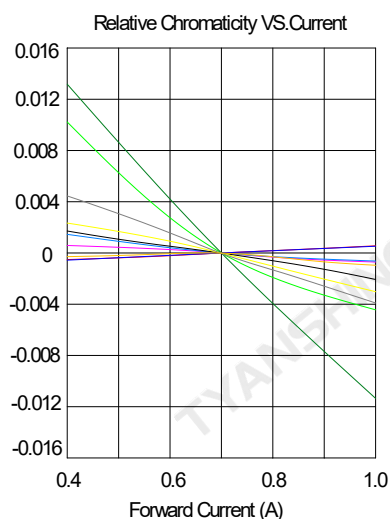
Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



Notes:

Red (R) ; Green (G) ; Blue (B) ; White (W) ; Warm white (S) ;



Notes: — Red (R) ; — Green (G) ; — Blue (B) ; — White (W) ; — Warm white (S) ;

Notes:

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

Usage Precautions

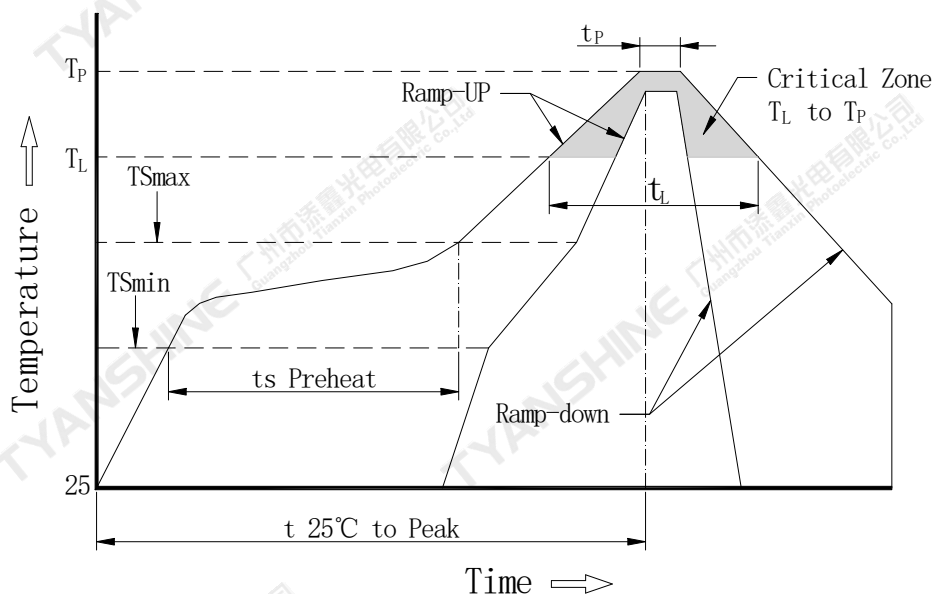
Storage Environment Condition

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	Pb-Free Solderr(SnBi35Ag0.3)
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.

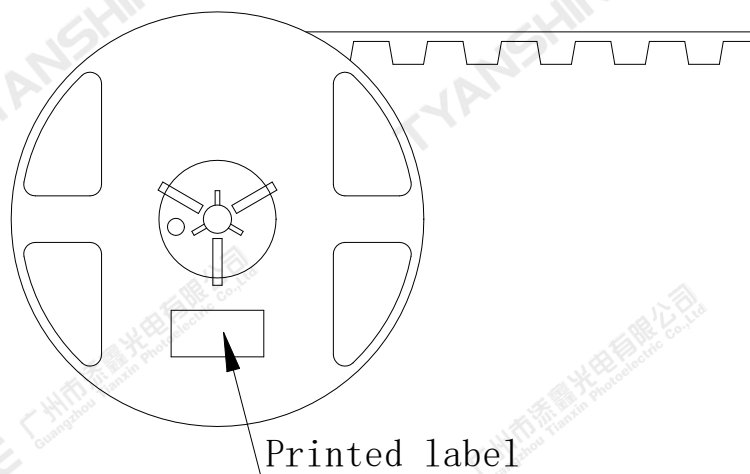
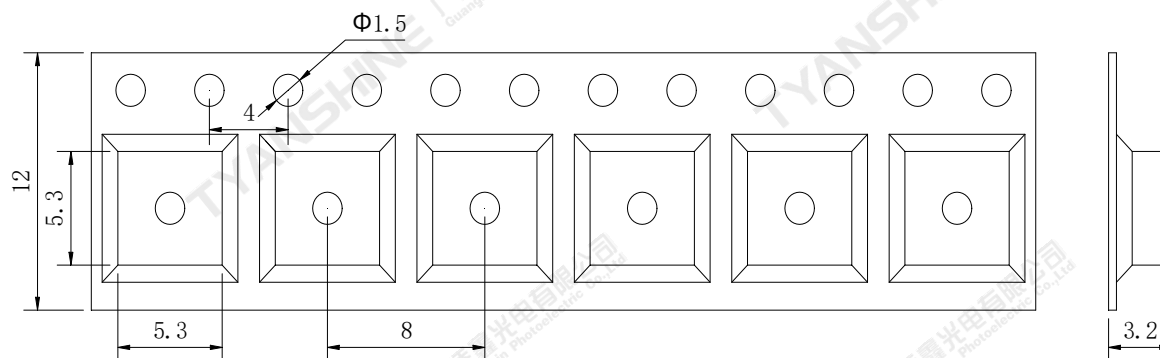
Note:

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

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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.