

TX-5050RGBW20FC120-NGVCND34-02A

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under R:1.2 GB:1.5 W:2.0A
- ◆High luminous output
- ◆No UV
- ◆Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

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

Emitting Color:

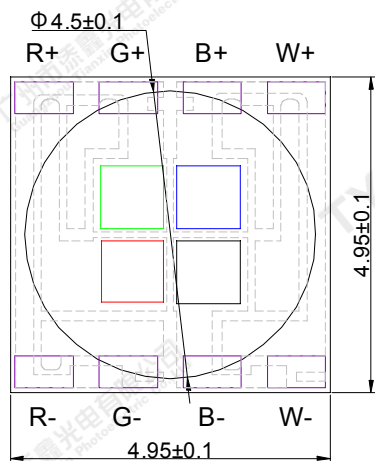
- ◆ Red(R)
- ◆ Green(G)
- ◆ Blue(B)
- ◆ White(W)

Applications:

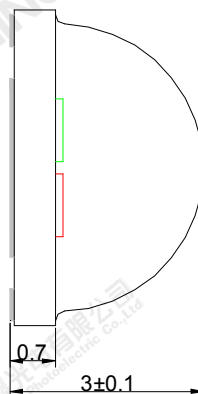
- ◆Auxiliary lighting
- ◆Ambient lighting
- ◆Architectural lighting
- ◆Entertainment lighting

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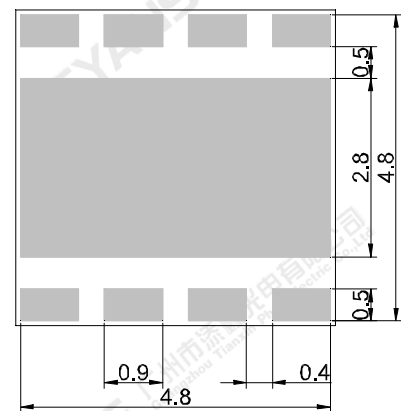
Package Dimensions:



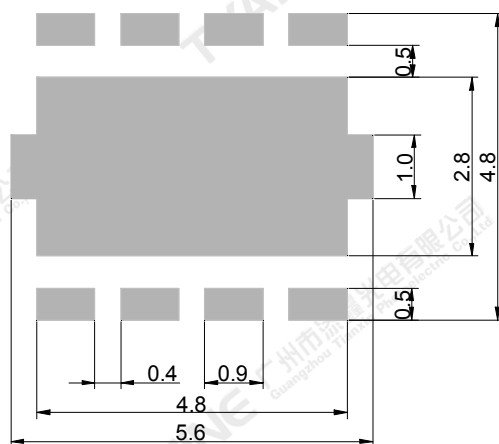
Top view



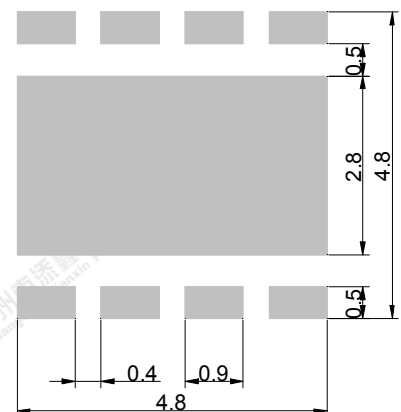
Side view



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	R	1.2	A
		G	1.5	
		B	1.5	
		W	2.0	
Reverse Voltage	VR		5	V
Power Dissipation	PD	R	3.36	W
		G	5.4	
		B	5.4	
		W	7.2	
Junction Temperature	Tj	R	150	℃
		G	150	
		B	150	
		W	150	
Electrostatic Discharge Threshold (ESD)	ESD		2000	V
Storage Temperature	Tstg		-40~70	℃
Operation Temperature	Topr		-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.

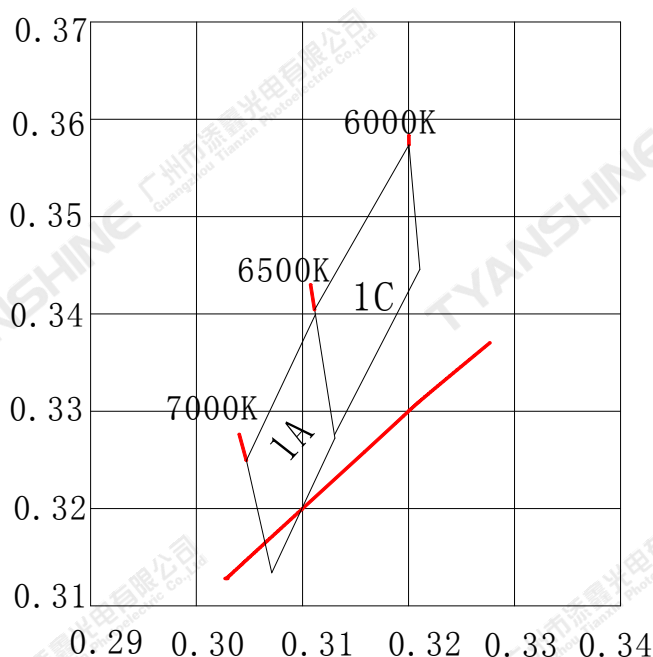
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Electrical Optical Characteristics (Tc=25°C, IF=0.7A)

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	Φ_v	R	120	130	140	lm
		G	205	225	245	
		B	35	40	45	
		W	250	265	290	
Dominant Wavelength	λ_d	R	618	623	628	nm
		G	522	527	532	
		B	449	454	459	
Peak-emission Wavelength	λ_p	R	628	633	638	nm
		G	517	522	527	
		B	445	450	455	
Spectral Line Half-Width	$\Delta\lambda$	R	13	16	19	nm
		G	29	34	39	
		B	21	26	31	
		W	20	24	28	
Forward Voltage	V_f	R	2.1	2.5	2.8	V
		G	3.0	3.3	3.6	
		B	3.0	3.3	3.6	
		W	3.0	3.3	3.6	
Correlated Colour Temperature	CCT	W	6000	6750	7000	K
Reverse Current	I_R	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	$R\theta_{J-C}$	R	—	3.8	—	K/W
		G	—	4.9	—	
		B	—	4.9	—	
		W	—	3.2	—	
		Total thermal resistance	—	0.8	—	
Temperature Coefficient of Voltage	$V\Delta F/T$	R	—	-1	—	mV/°C
		G	—	-4.9	—	
		B	—	-2.5	—	
		W	—	-1.9	—	

Notes:

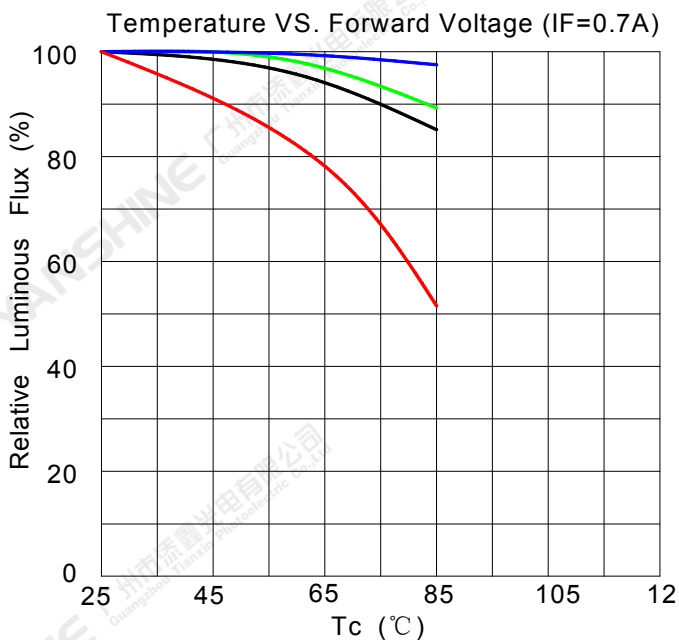
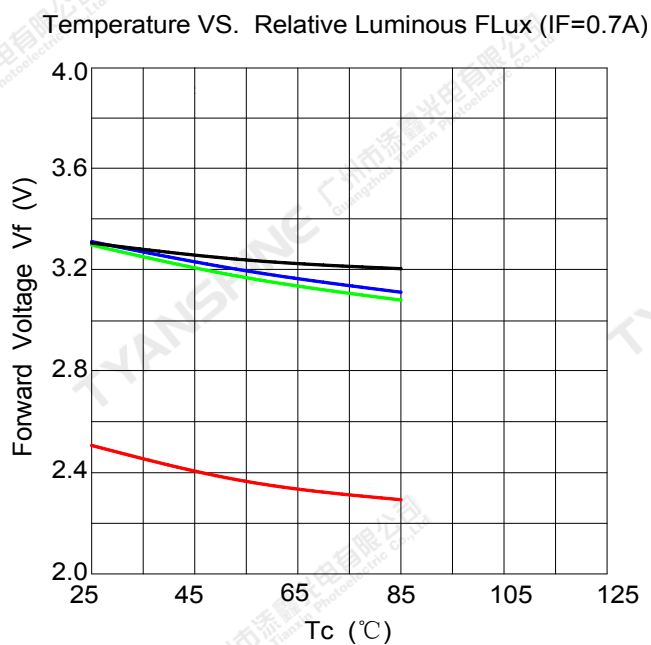
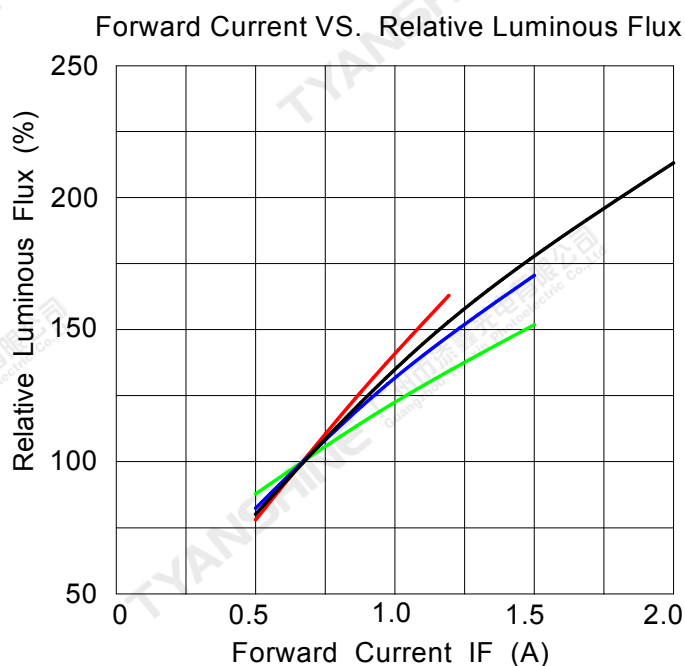
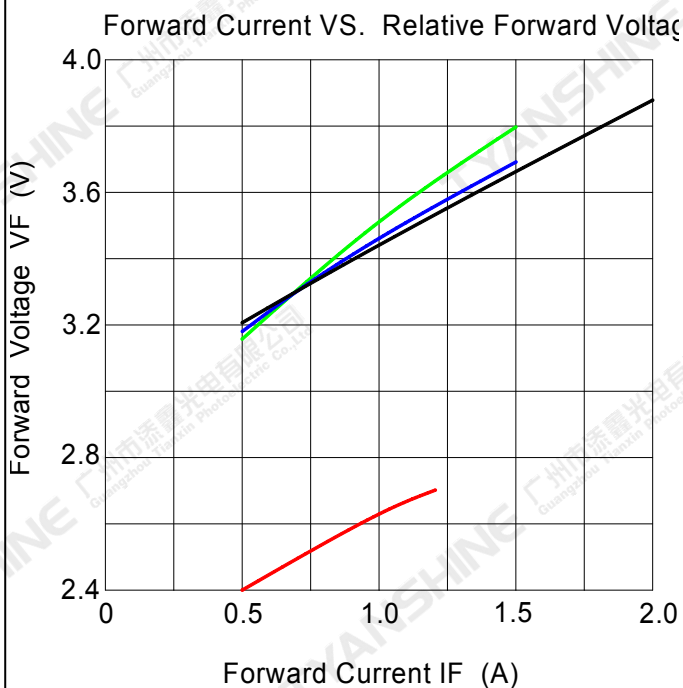
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. Luminous flux measurement tolerance: $\pm 10\%$.
4. Forward voltage measurement tolerance: $\pm 10\%V$.
5. Ra measurement tolerance: ± 2 .

White light Color coordinate filing (IF=0.7A)

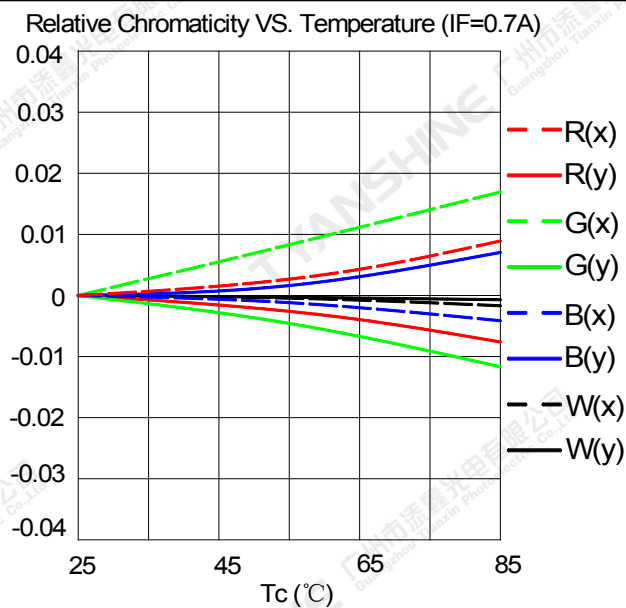
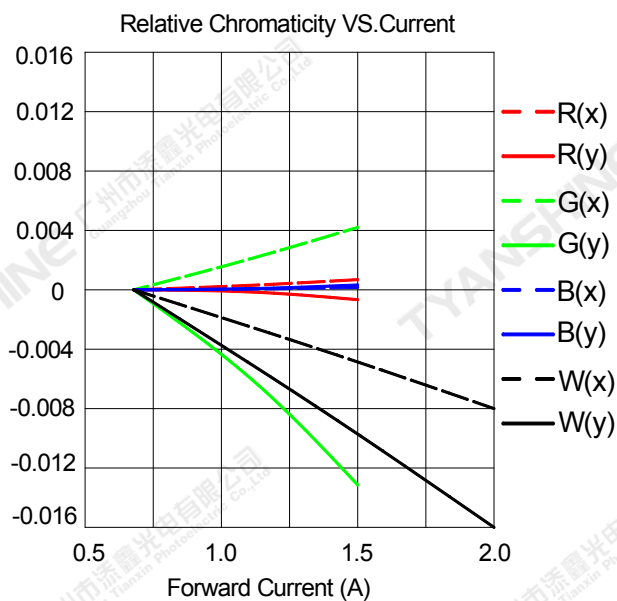
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
1C	6000K	6500K	0.5402	0.3814	0.5321	0.3644	0.5303	0.3773	0.5392	0.3942
1A	6500K	7000K	0.5322	0.3641	0.5262	0.3503	0.5238	0.3618	0.5303	0.3768

Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



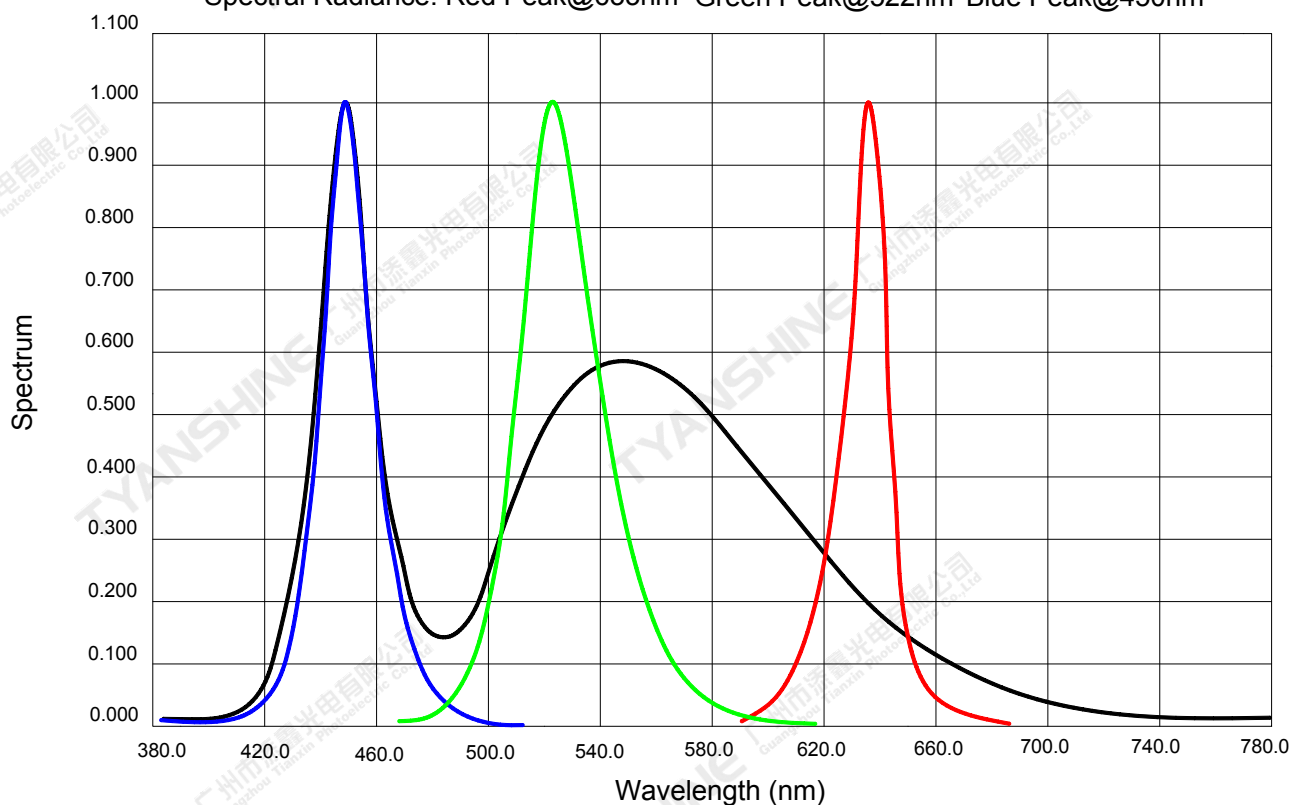
Notes: — Red (R) ; — Green (G) ; — Blue (B) ; — White (W) ;



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Relative Spectral Distribution

Spectral Radiance: Red Peak@633nm Green Peak@522nm Blue Peak@450nm



Notes:

1. $2\theta_{1/2}$ is the off axis angle from lamp centerline where the luminous intensity is 1/2 of the peak value.
2. View angle tolerance is $\pm 5^\circ$.

Usage Precautions

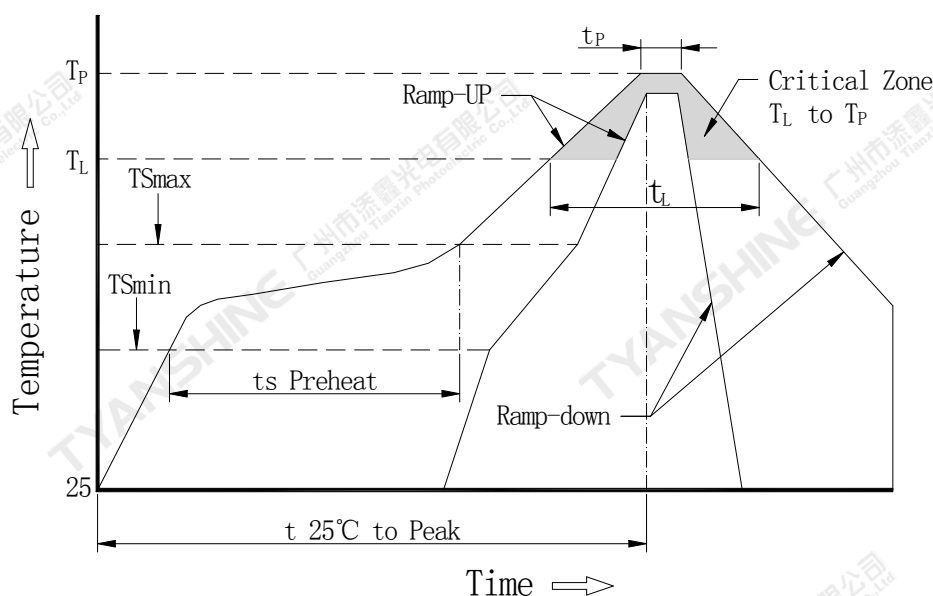
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



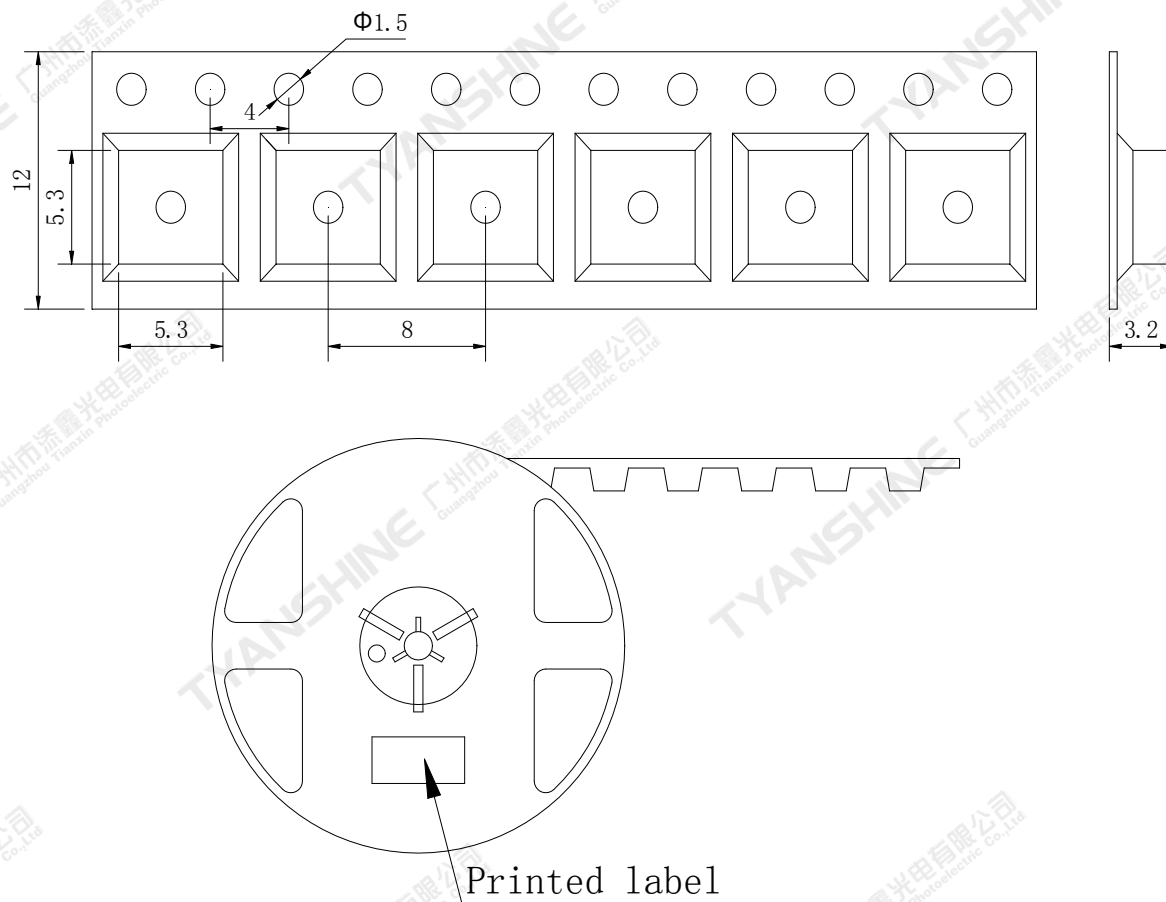
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.
Preheat: Temperature Min (T_{Smin})	100°C
Preheat: Temperature Max (T_{Smax})	150°C
Preheat: Time (T_{Smin} to T_{Smax})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183°C
Time Maintained Above: Time (T_L)	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.

Dimensions For Cannulation And Packaging

Quantity: 500PCS



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.