TX-5050WS30FC180-NUVENG-03AH95

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:

◆GaN

Emitting Color:

◆White（W1/W2）

◆Warm white（S1/S2）

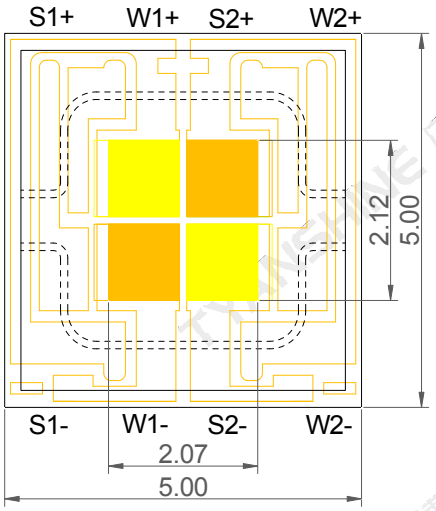
Applications:

◆Auxiliary lighting

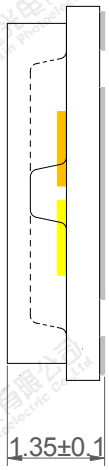
◆Ambient lighting

◆Architectural lighting

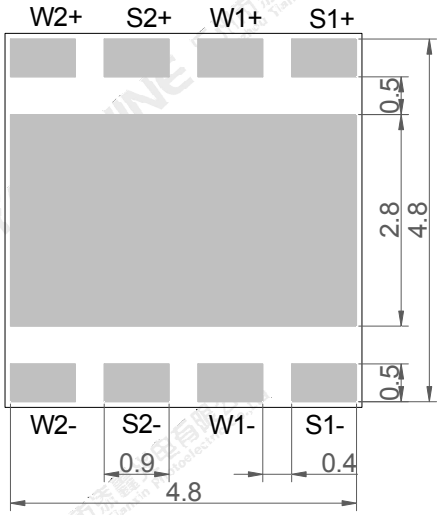
Package Dimensions:



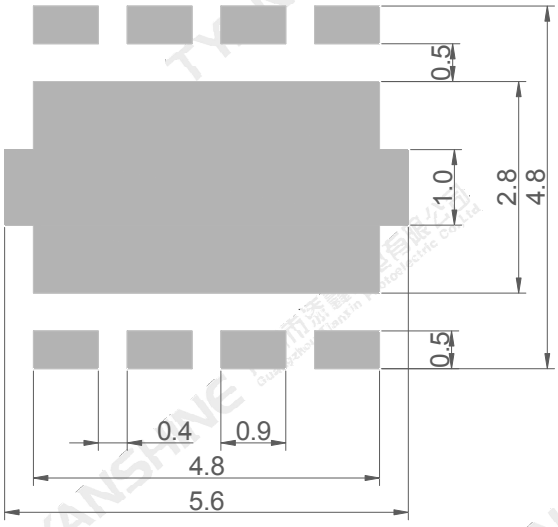
Top view



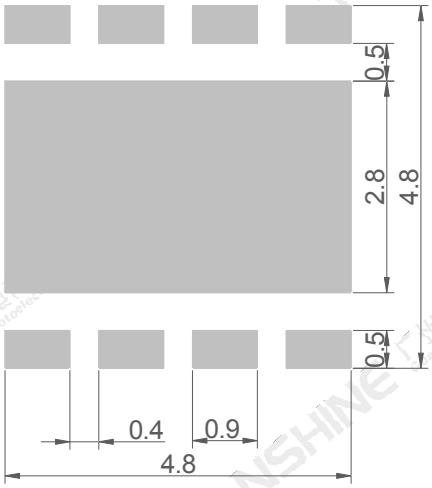
Side view



Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

1.All dimensions are in millimeters .

2.Tolerances unless otherwise mentioned are ±0.1mm .

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol		Ratings	Unit
Forward Current	IF	W1	2.5	A
		S1	2.0	
		W2	2.5	
		S2	2.0	
Reverse Voltage	V_R		Not designed for reverse operation	V
Power Dissipation	P_D	W1	9.8	W
		S1	7.8	
		W2	9.8	
		S2	7.8	
Junction Temperature	Tj	W1/W2	150	℃
		S1/S2	150	
Electrostatic Discharge Threshold (ESD)	ESD		2000	V
Storage Temperature	T_{stg}		-40~+70	℃
Operation Temperature	T_{opr}		-30~+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.

Electrical Optical Characteristics (Tc=25°C,IF=0.5A)

Parameter	Symbol	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	W1	100	—	125	lm
		S1	80	—	95	
		W2	100	—	125	
		S2	80	—	95	
Forward Voltage	V_f	W1	2.9	3.3	3.6	V
		S1	2.9	3.2	3.6	
		W2	2.9	3.3	3.6	
		S2	2.9	3.2	3.6	
Correlated Colour Temperature	CCT	W1/W2	5000	—	5700	K
		S1/S2	2590	—	2780	
Color Rendering Index	Ra	W1/W2	95	96	—	—
		S1/S2	95	96	—	
Viewing Angle at 50％IV	$2\theta_{1/2}$	—	—	120	—	Deg
			—	120	—	
Reverse Current	I_R	V_R=5V	—	—	5	μA
			—	—	5	
Thermal Resistance Junction to Case	$R\theta_{J-C}$	W1+W2	—	1.8	—	K/W
		S1+S2	—	1.8	—	

Notes:

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

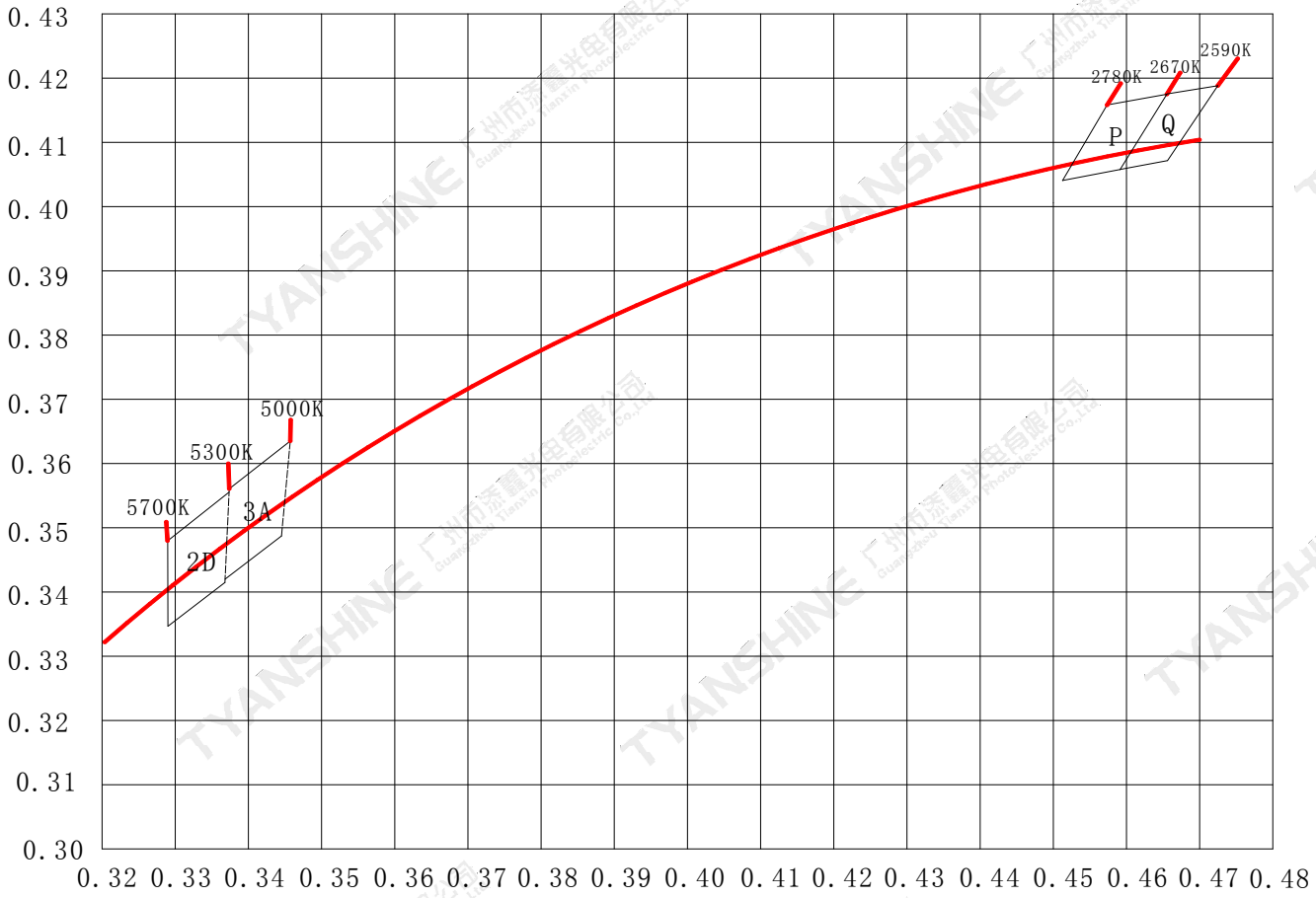
2.$\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3.Luminous flux measurement tolerance:±10%.

4.Forward voltage measurement tolerance:±0.3V.

5.Ra measurement tolerance:±2.

White light Color coordinate filing IF=0.5A

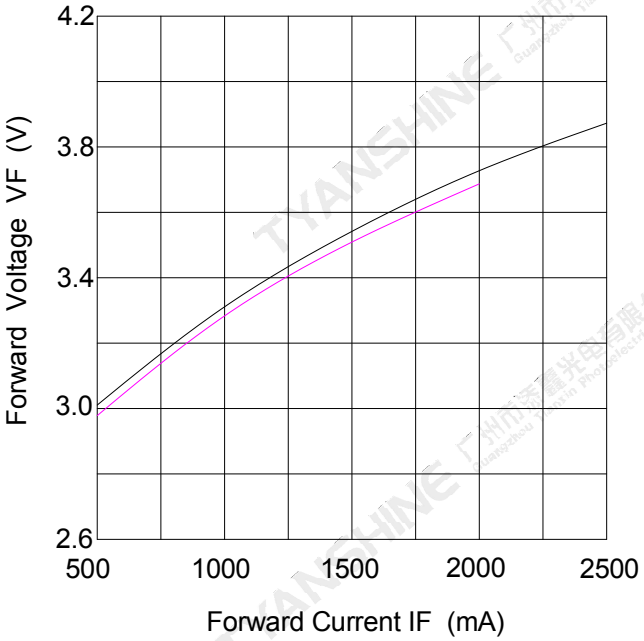


Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
Q	2590K	2670K	0.47247	0.41882	0.46561	0.40716	0.46552	0.41749	0.45909	0.40578
P	2670K	2780K	0.45909	0.40578	0.46552	0.41749	0.45735	0.41583	0.45126	0.40406
3A	5000K	5300K	0.34452	0.34873	0.34572	0.3635	0.33738	0.35606	0.33681	0.342
2D	5300K	5700K	0.33679	0.34148	0.33736	0.35555	0.32897	0.34798	0.329	0.33468

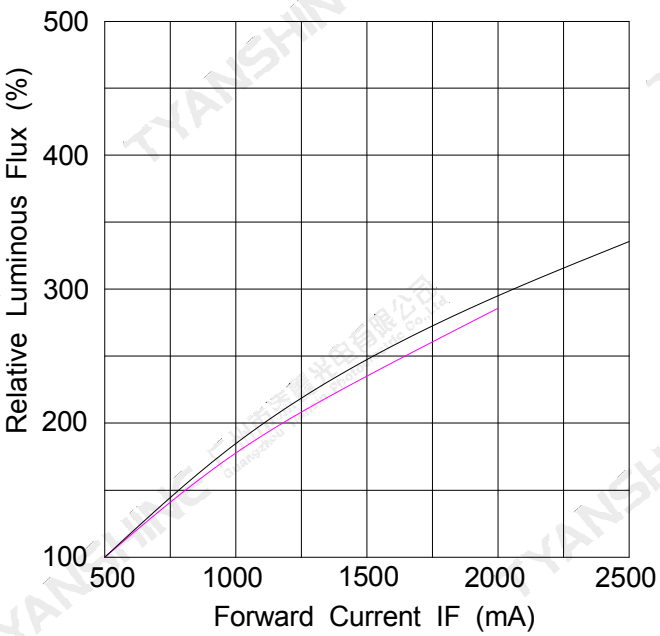
Typical Electrical/Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

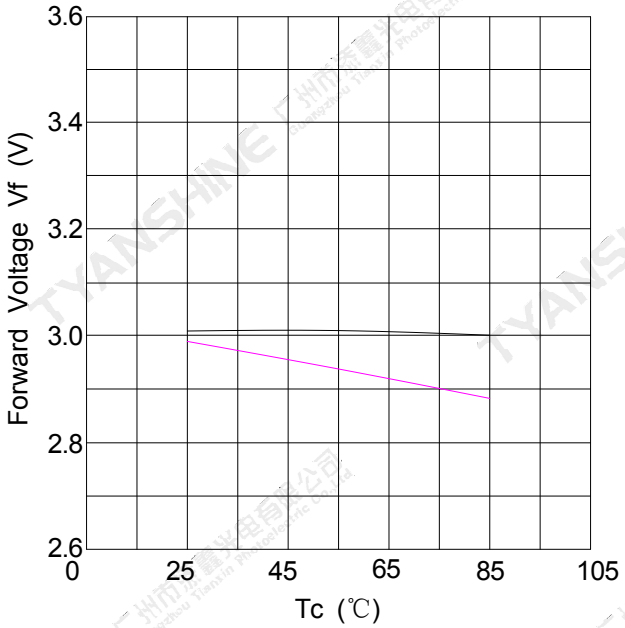
Forward Current VS. Relative Forward Voltage



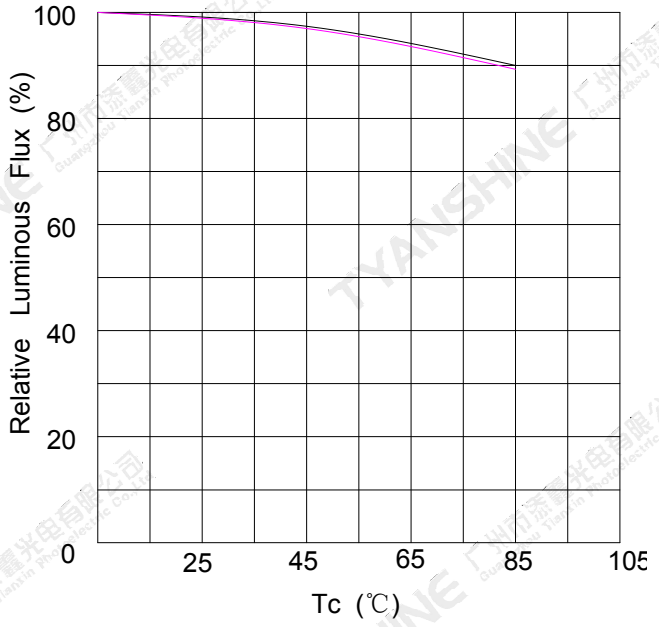
Forward Current VS. Relative Luminous Flux



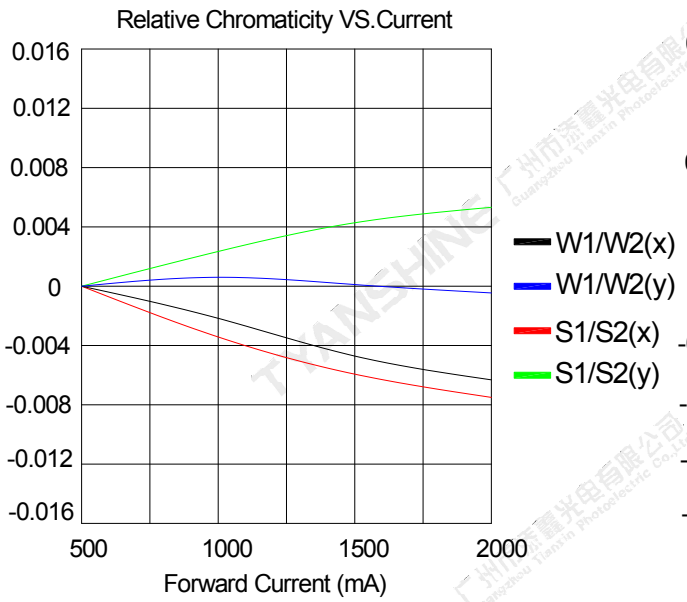
Temperature VS. Relative Luminous FLux (IF=0.5A)

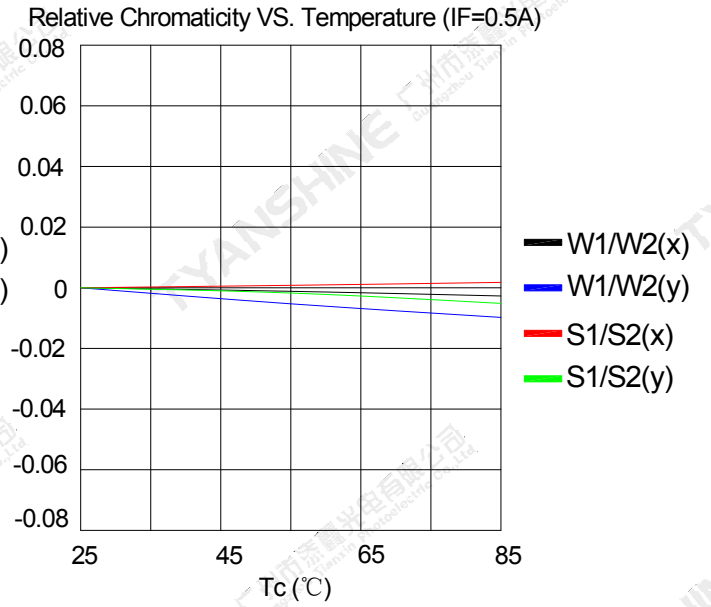


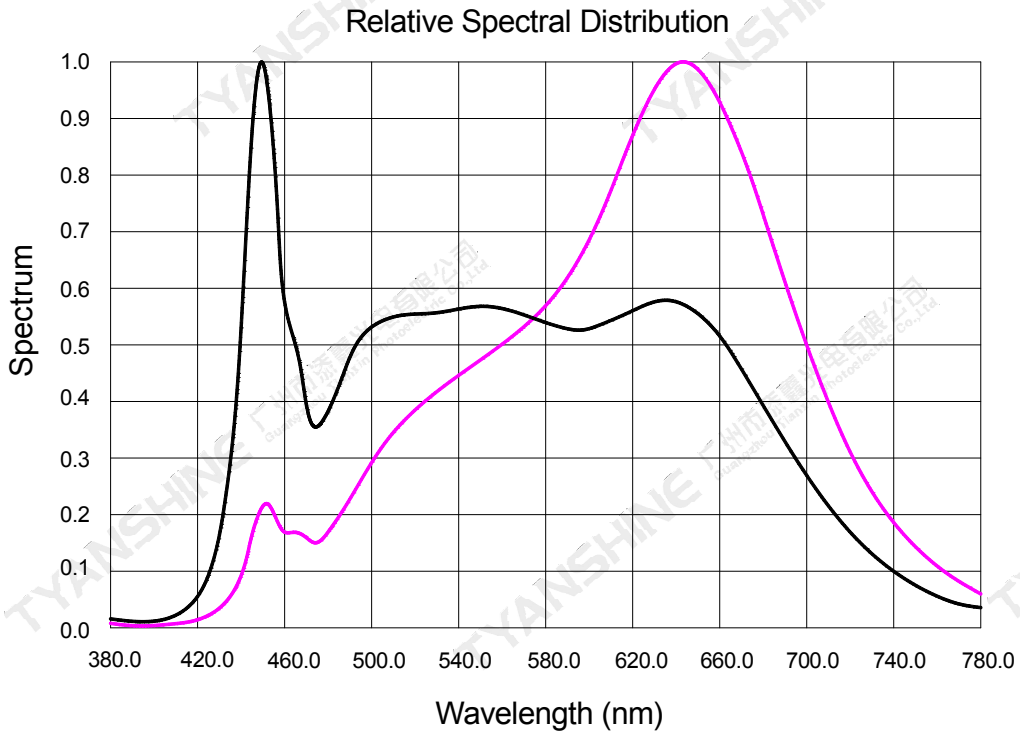
Temperature VS. Forward Voltage (IF=0.5A)



Notes: White（W1/W2）; Warm white（S1/S2）;







Notes: White（W1/W2）; Warm white（S1/S2）;

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

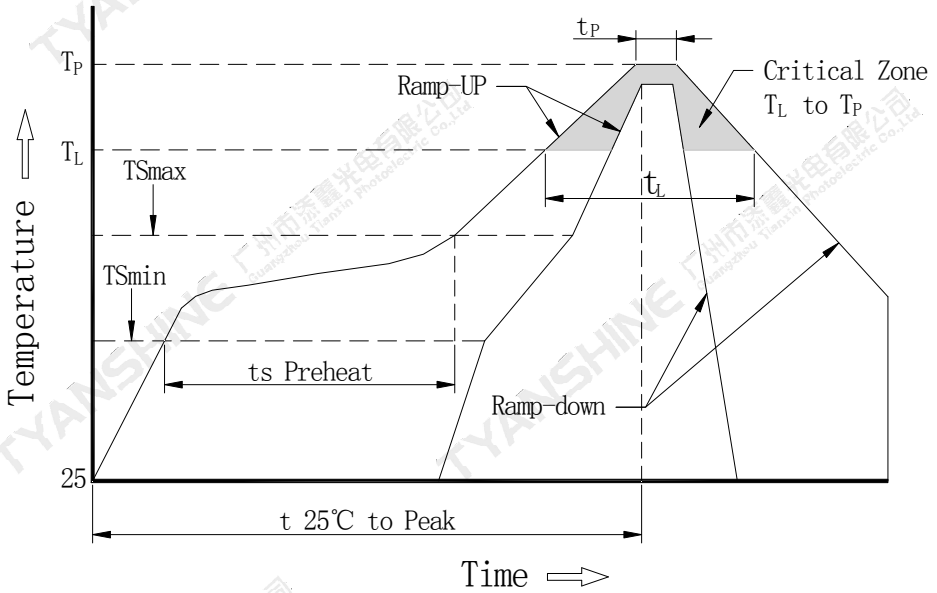
Storage Environment Condition

Temperature: 5℃ ~ 30℃ (41℉ ~ 86℉)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



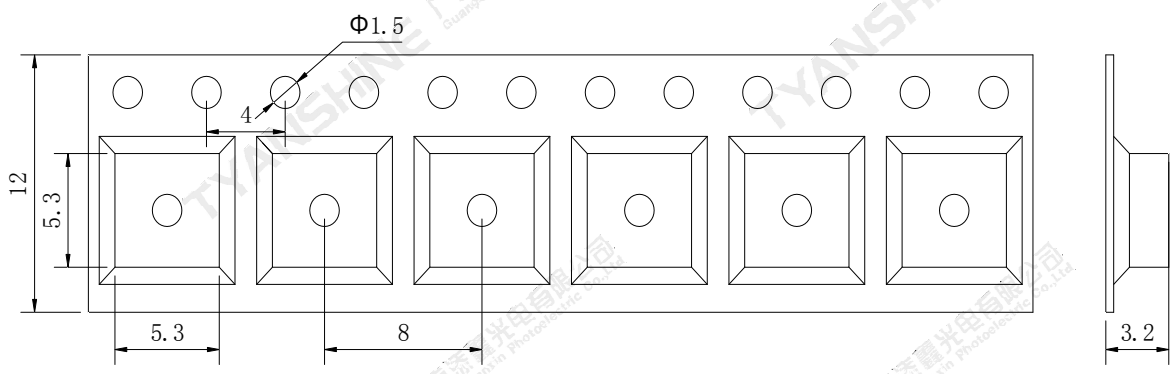
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (Ts_{max} to T_p)	3℃/second max.
Preheat: Temperature Min (Ts_{min})	100℃
Preheat: Temperature Max (Ts_{max})	150℃
Preheat: Time (Ts_{min} to Ts_{max})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183℃
Time Maintained Above: Time (T_L)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

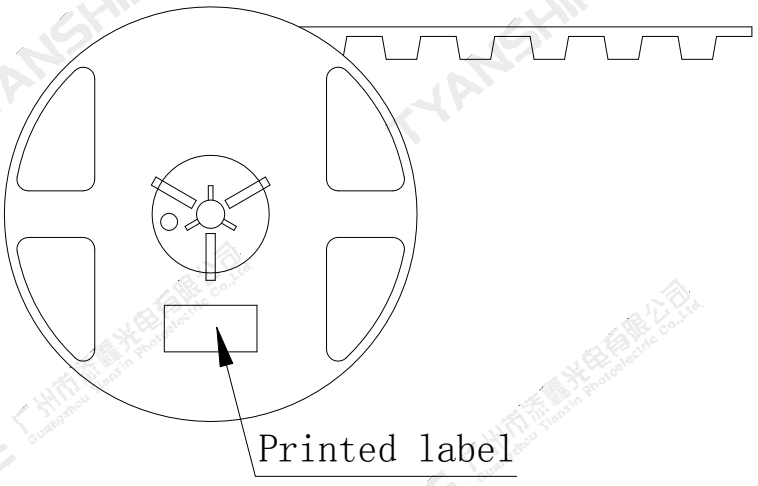
Note:

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, Irre sponsible of the Company.