TX-5050RGBW20VCD1-NG4AA-01

PRODUCT SPECIFICATION

Features:

◆Excellent transiting heat from LED chip operating under RGB: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:

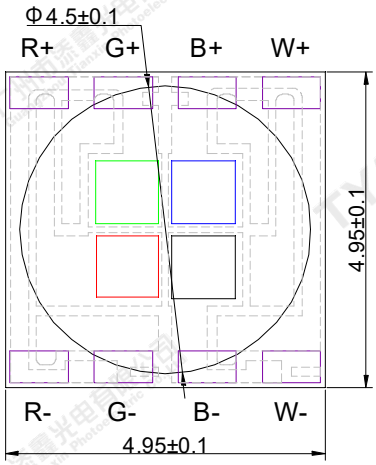
◆Auxiliary lighting

◆Ambient lighting

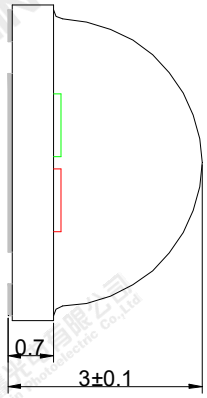
◆Architectural lighting

◆Entertainment lighting

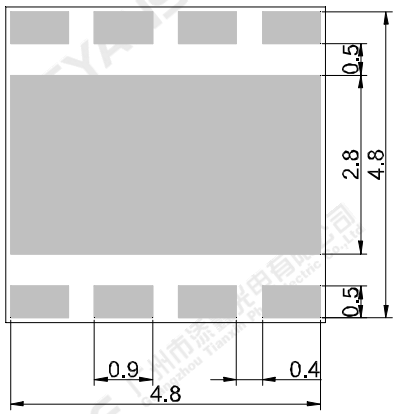
Package Dimensions:



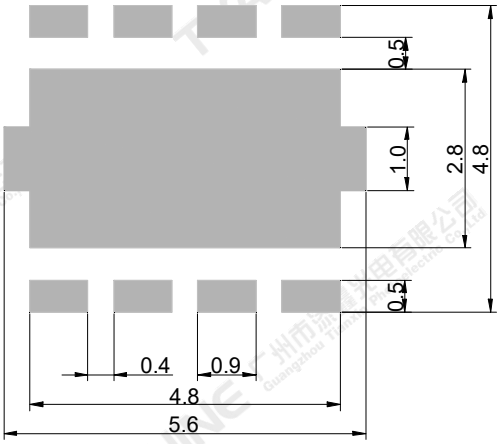
Top view



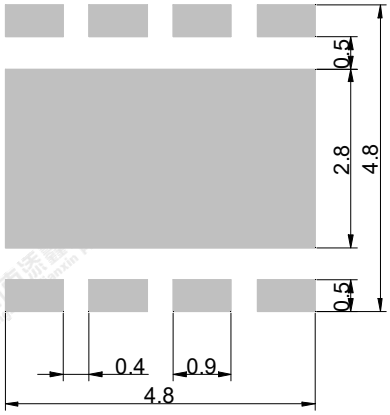
Side view



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		Max Ratings	Unit
Forward Current	IF	R	1.5	A
		G	1.5	
		B	1.5	
		W	2.0	
Reverse Voltage	V_R		5	V
Power Dissipation	P_D	R	4.95	W
		G	5.85	
		B	5.85	
		W	8.0	
Junction Temperature	Tj	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:

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=0.7A)

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	R	115	135	150	lm
		G	205	225	245	
		B	35	40	45	
		W	250	275	300	
Dominant Wavelength	λd	R	616	621	626	nm
		G	515	520	525	
		B	448	453	458	
Peak-emission Wavelength	λp	R	626	631	636	nm
		G	509	514	519	
		B	444	449	454	
Spectral Line Half-Width	△λ	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	2.7	V
		G	3.0	3.5	3.7	
		B	3.0	3.4	3.6	
		W	3.0	3.4	3.6	
Correlated Colour Temperature	CCT	W	5900	6050	6500	K
Reverse Current	I_R	VR=5V	—	—	2	μA
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△F/T	R	—	-1	—	mV/℃
		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.

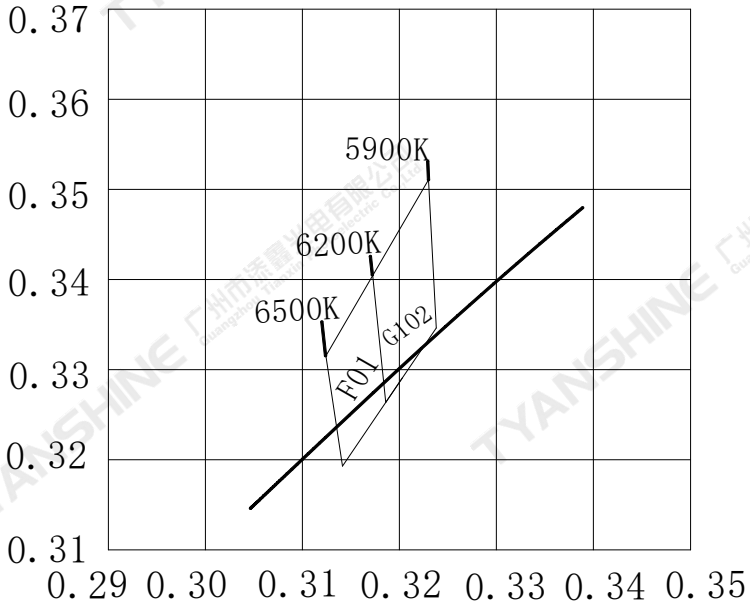
2.$\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3.Luminous flux measurement tolerance:±10%.

4.Forward voltage measurement tolerance:±10%V.

5.Ra measurement tolerance:±2.

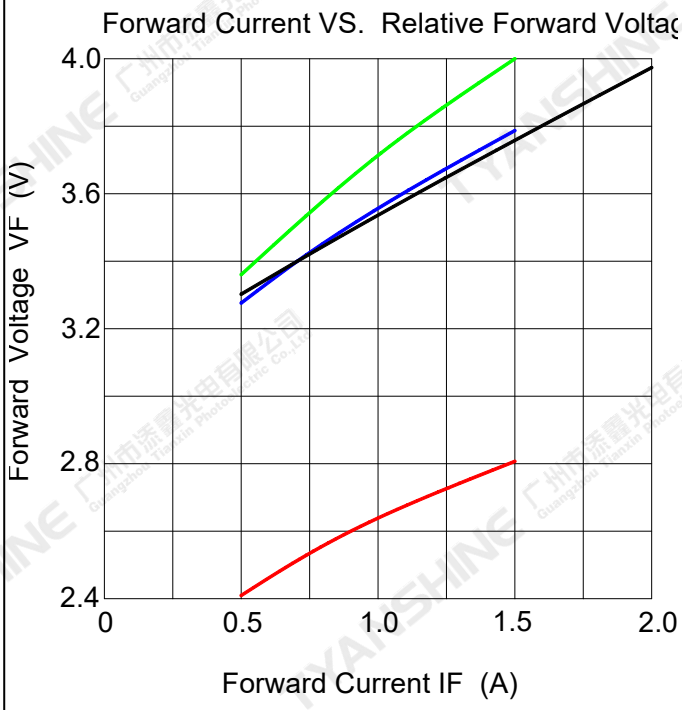
White light Color coordinate filing (IF=0.7A)

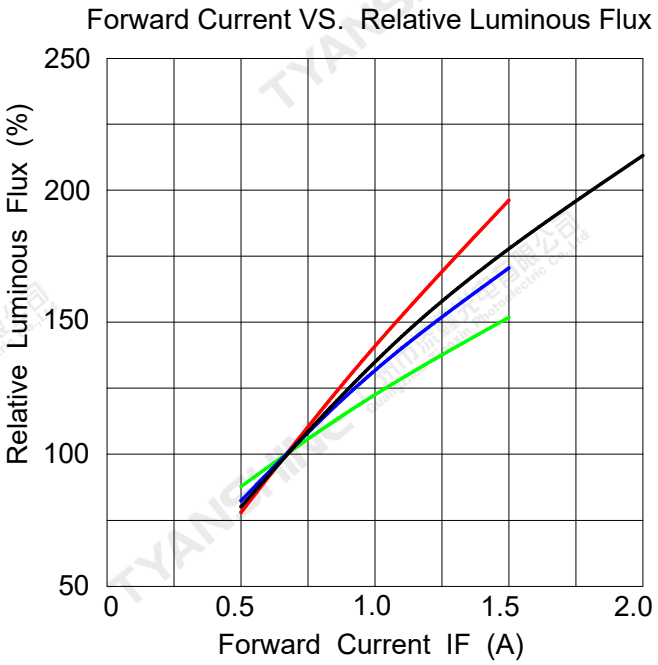


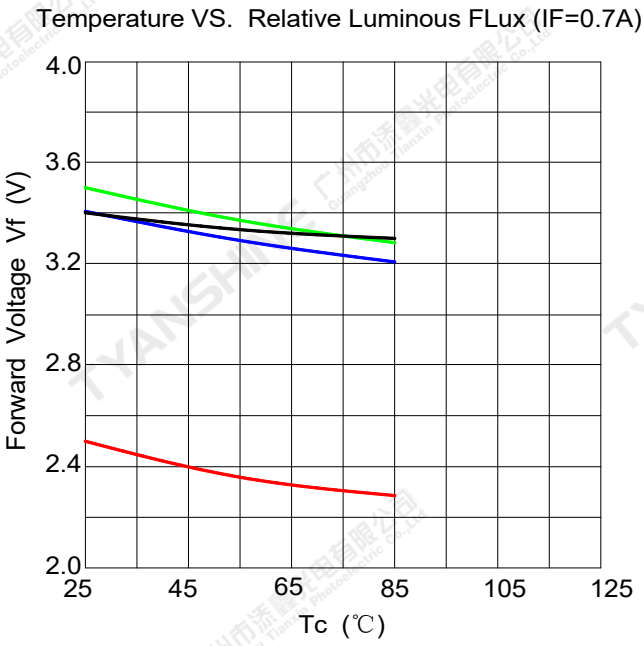
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
G102	5900K	6200K	0.3236	0.3346	0.3186	0.3264	0.3172	0.3404	0.3230	0.3511
F01	6200K	6500K	0.3186	0.3264	0.3141	0.3193	0.3124	0.3315	0.3172	0.3404

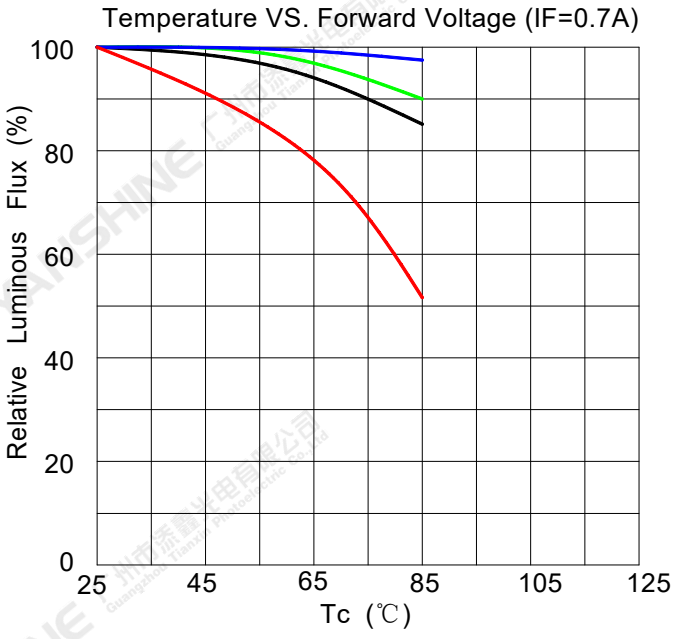
Typical Electrical/Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

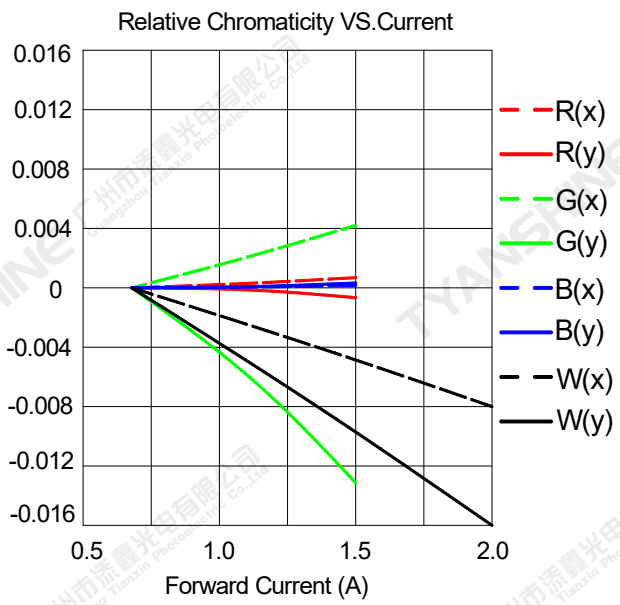


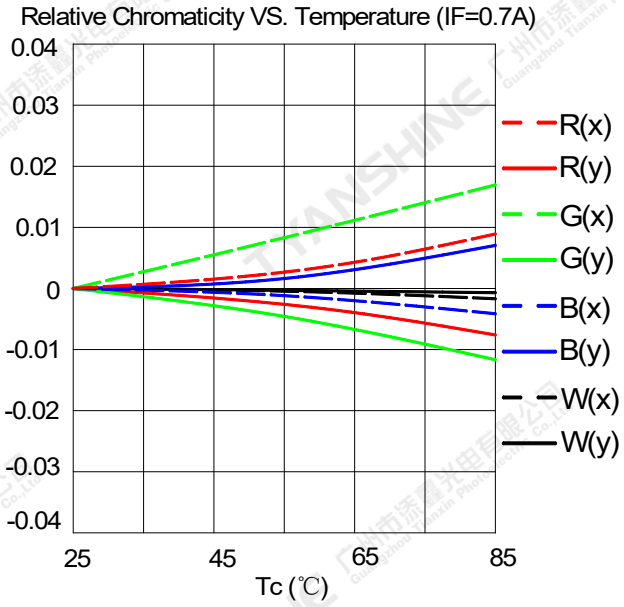




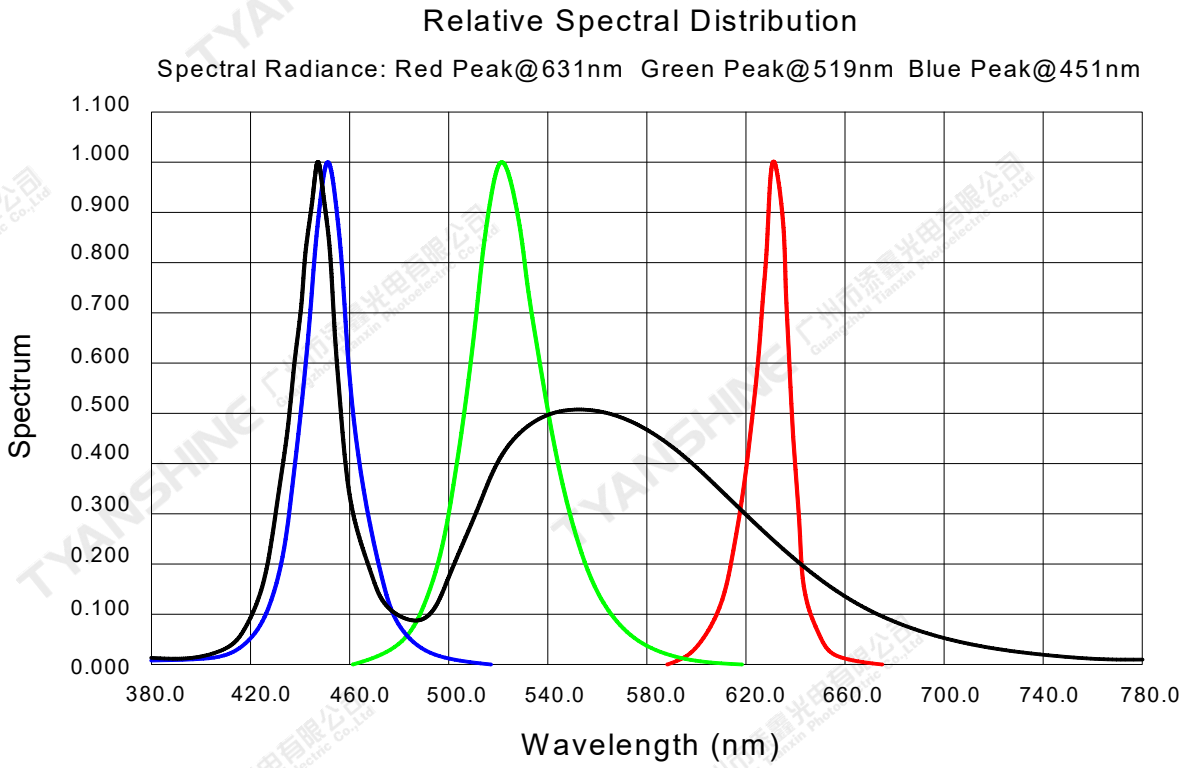


Notes: Red (R); Green (G); Blue (B); White (W);





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



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

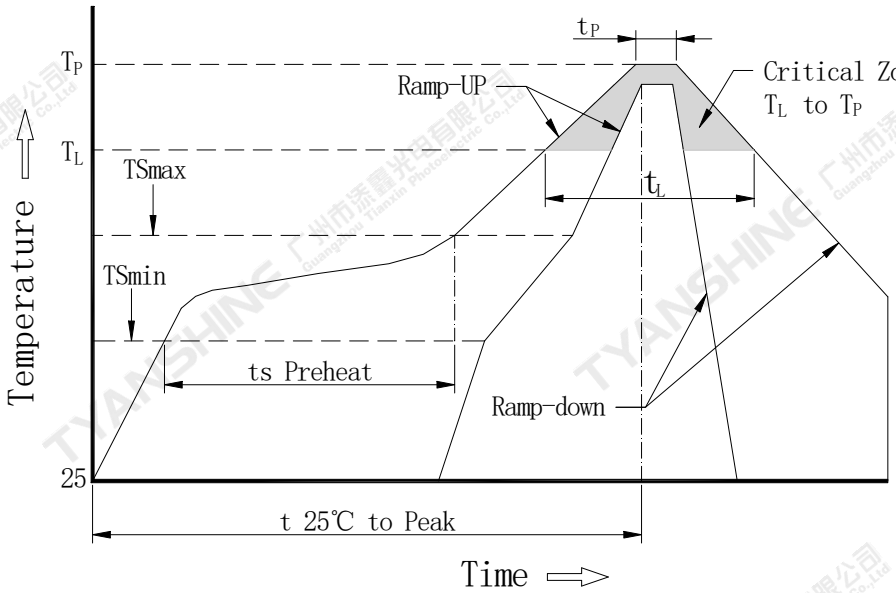
Storage Environment Condition

Temperature: 5℃ ~ 30℃ (41℉ ~ 86℉)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



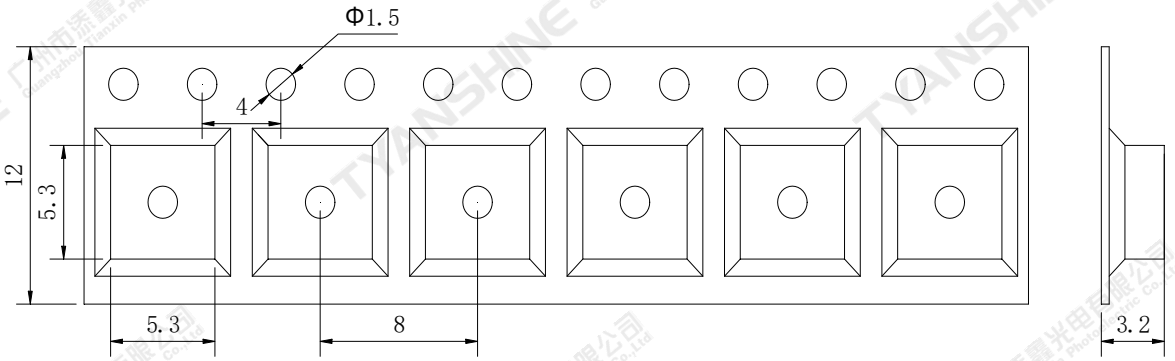
Profile Feature	Pb-Free Solderr(SnBi35Ag0.3)
Average Ramp-Up Rate (Ts_{max} to T_p)	3℃/second max.
Preheat: Temperature Min (Ts_{min})	130℃
Preheat: Temperature Max (Ts_{max})	190℃
Preheat: Time (Ts_{min} to Ts_{max})	120-180 seconds
Time Maintained Above: Temperature (T_L)	230℃
Time Maintained Above: Time (T_L)	60-150 seconds
Peak/Classification Temperature (T_P)	255℃
Time Within 5℃ of Actual Peak Temperature (T_P)	10-35seconds
Ramp-Down Rate	5℃/second max.
Time 25℃ to Peak Temperature	7 minutes max.

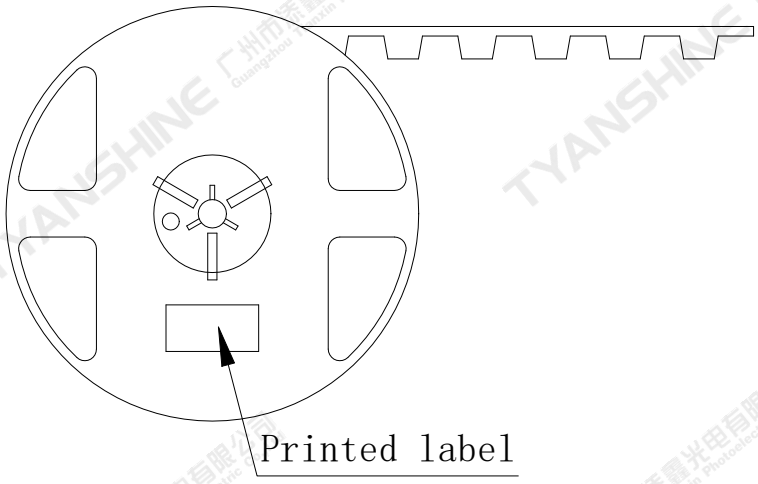
Note:

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.