TX-5050RGBS20FC120-NGVCND34-02AH80

PRODUCT SPECIFICATION

Features:

◆Excellent transiting heat from LED chip operating under R：1200 GBS:1500 mA
◆High luminous output
◆No UV
◆Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

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

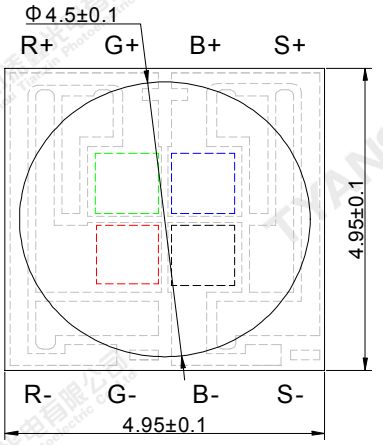
Emitting Color:

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

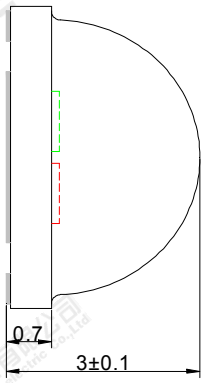
Applications:

◆Auxiliary lighting
◆Ambient lighting
◆Architectural lighting

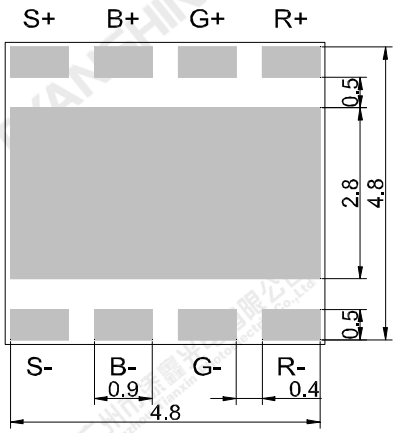
Package Dimensions:



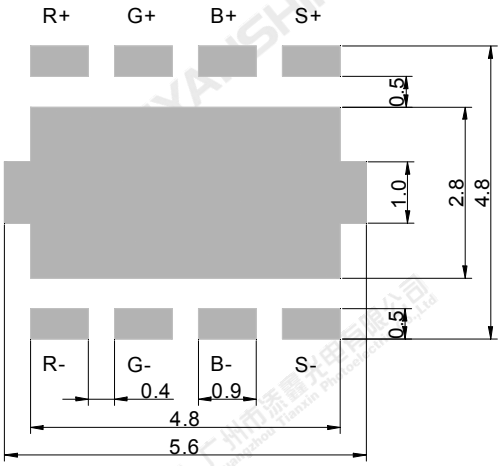
Top view



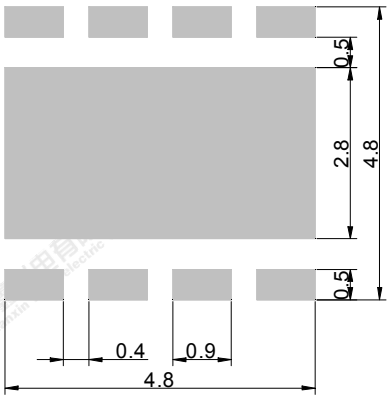
Side view



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		Max Ratings	Unit
Forward Current	IF	R	1200	mA
		G	1500	
		B	1500	
		S	1500	
Reverse Voltage	V_R		Not designed for reverse operation	V
Power Dissipation	P_D	R	3240	mW
		G	6000	
		B	5850	
		S	5850	
Junction Temperature	Tj	R	150	℃
		G	150	
		B	150	
		S	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:

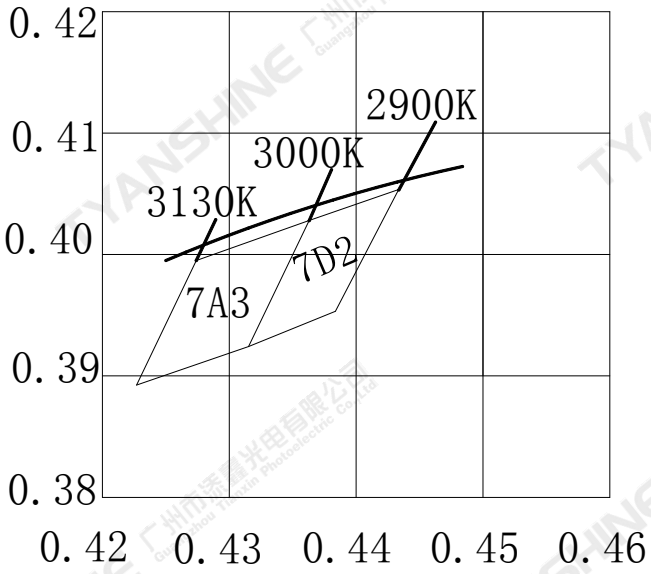
STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

4.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 ℃.

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

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	R	105	120	140	lm
		G	185	207	230	
		B	30	35	45	
		S	195	215	235	
Dominant Wavelength	λd	R	618	623	628	nm
		G	519	524	529	
		B	450	455	460	
Correlated Colour Temperature	CCT	S	2900	3040	3130	K
Color Rendering Index	Ra	S	80	82.5	—	—
Peak-emission Wavelength	λp	R	629	634	639	nm
		G	513	518	523	
		B	445	450	455	
Spectral Line Half-Width	△λ	R	10	15	20	nm
		G	30	35	40	
		B	15	20	25	
		S	117	122	127	
Forward Voltage	V_f	R	2.0	2.3	2.6	V
		G	3.0	3.3	3.6	
		B	2.8	3.1	3.5	
		S	2.8	3.1	3.5	
Reverse Current	I_R	V_R=5V	—	—	2	μA
Viewing Angle at 50％IV	$2\theta_{1/2}$	—	—	120	—	Deg
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	1.0	—	K/W
Temperature Coefficient of Voltage	V△F/T	R	—	-2	—	mV/℃
		G	—	-3.5	—	
		B	—	-2	—	
		S	—	-3	—	

White light Color coordinate filing (IF=0.7A)



Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
7D2	2900K	3000K	0.4384	0.3953	0.4315	0.3924	0.4363	0.4028	0.4434	0.4054
7A3	3000K	3130K	0.4315	0.3924	0.4227	0.3892	0.4274	0.3995	0.4363	0.4028

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.

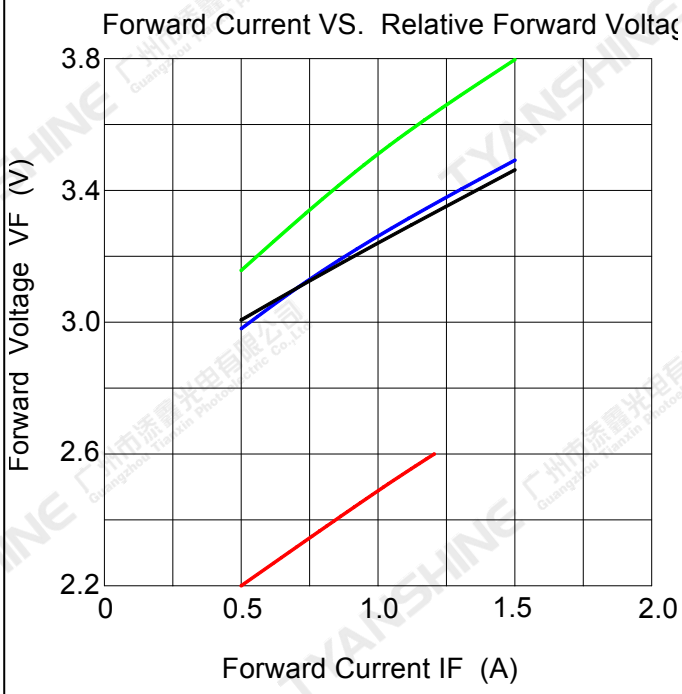
3.Luminous flux measurement tolerance:±15%.

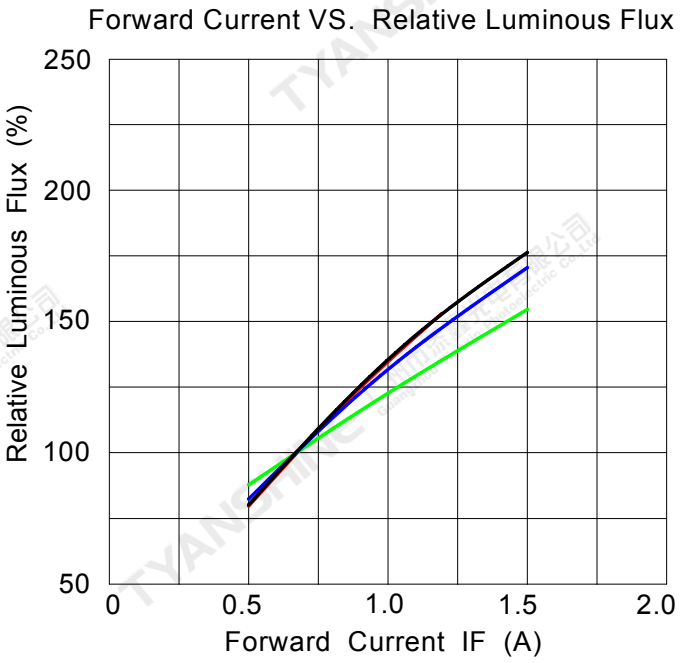
4.Forward voltage measurement tolerance:±15%V.

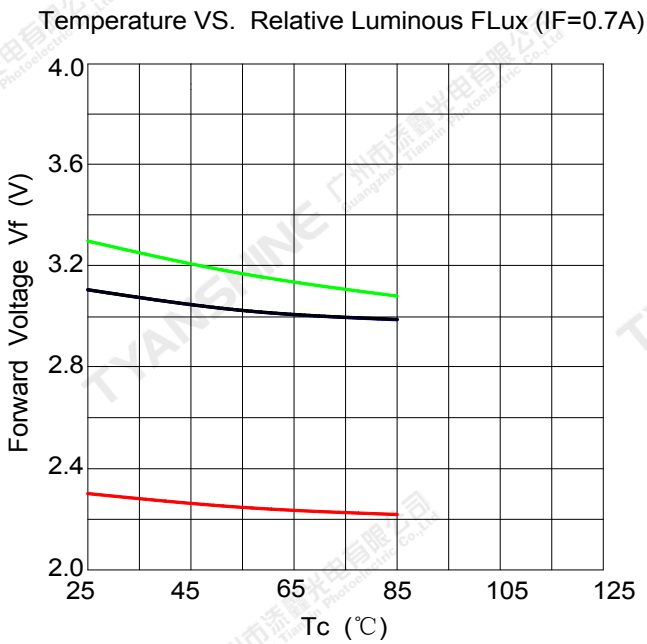
5.Ra measurement tolerance:±2.

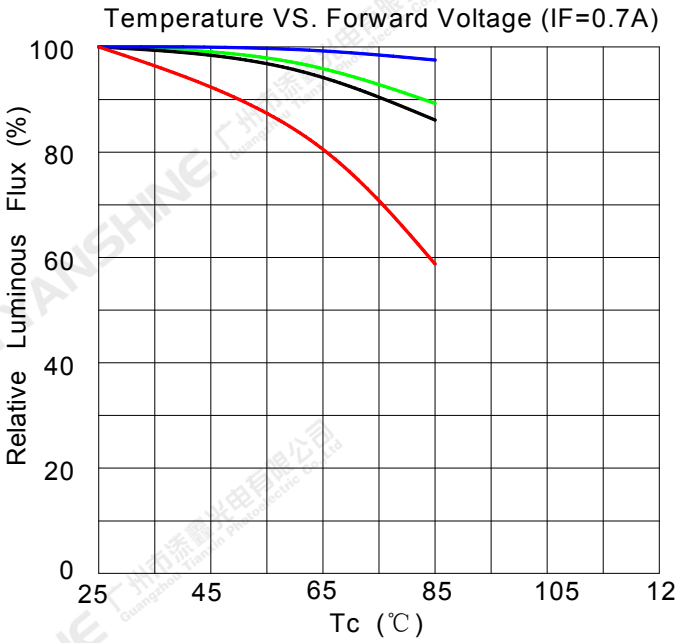
Typical Electrical/Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

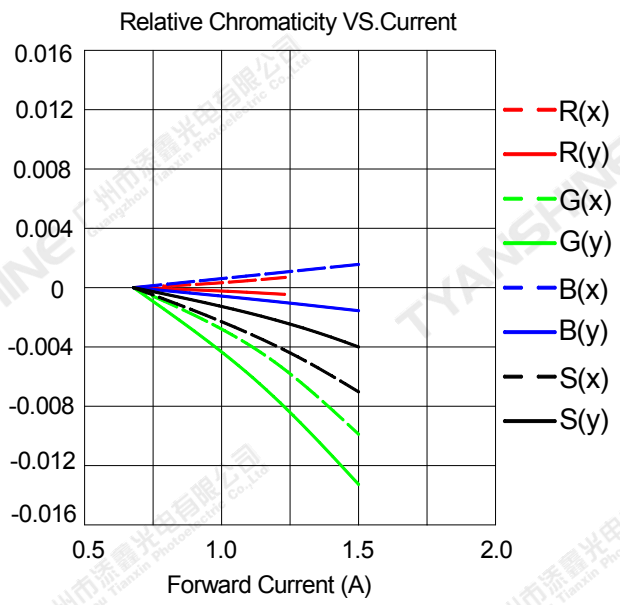


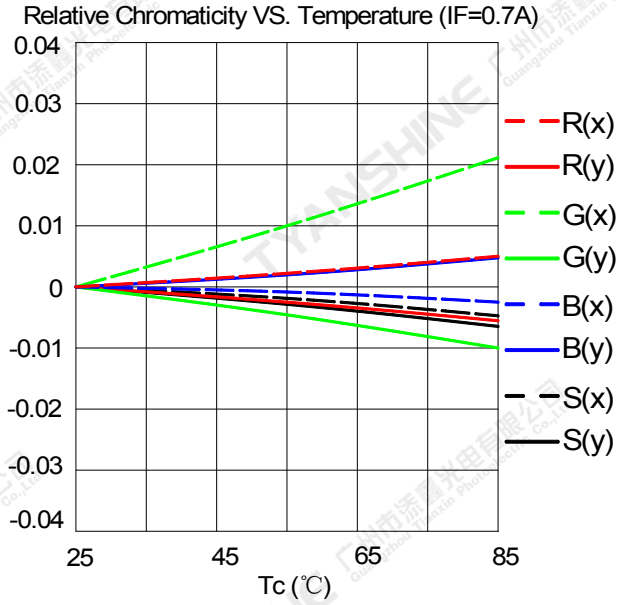


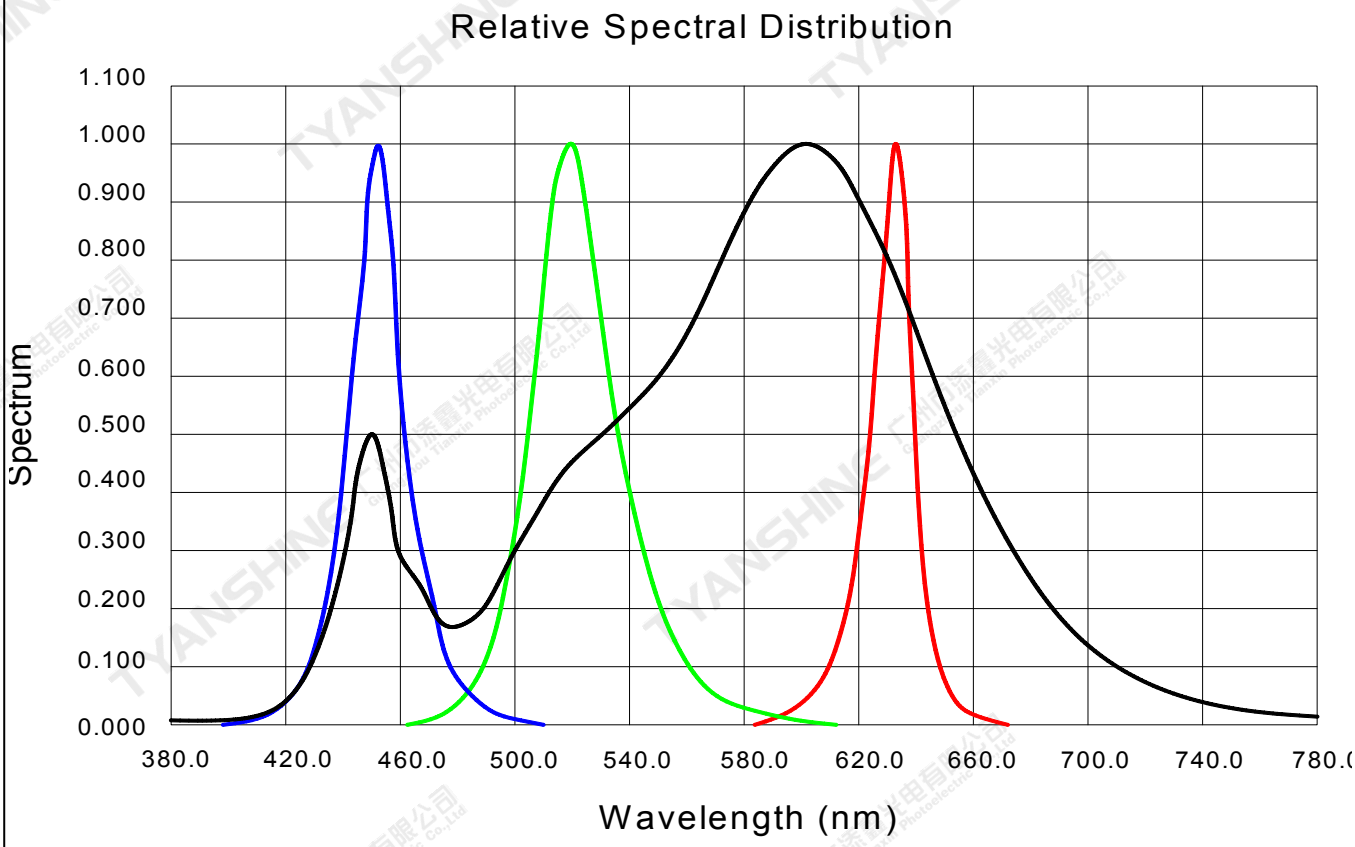




Notes: Red (R); Green (G); Blue (B); Warm white (S);







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

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

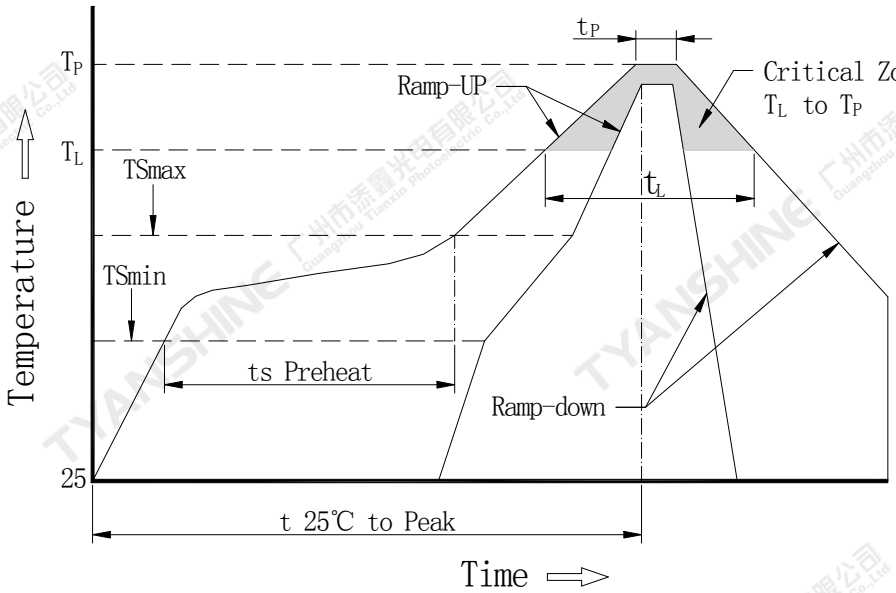
Storage Environment Condition

Temperature: 5℃ ~ 30℃ (41℉ ~ 86℉)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



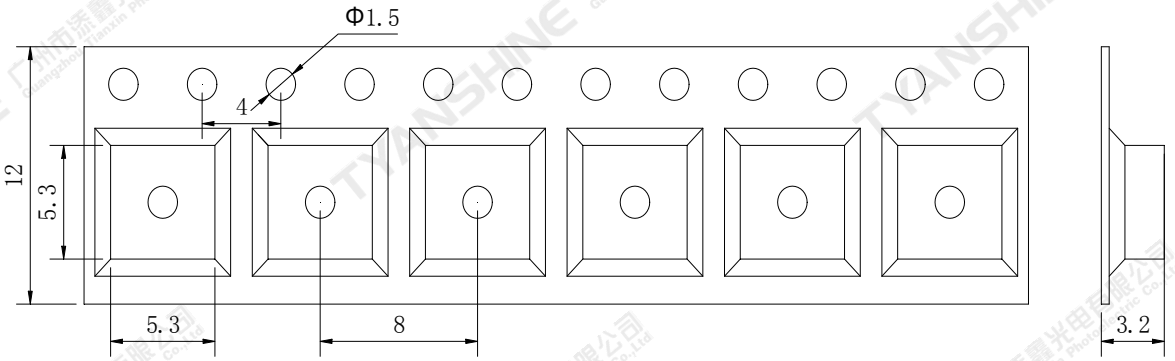
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (Ts_{max} to T_p)	3℃/second max.
Preheat: Temperature Min (Ts_{min})	100℃
Preheat: Temperature Max (Ts_{max})	150℃
Preheat: Time (Ts_{min} to Ts_{max})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183℃
Time Maintained Above: Time (T_L)	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.

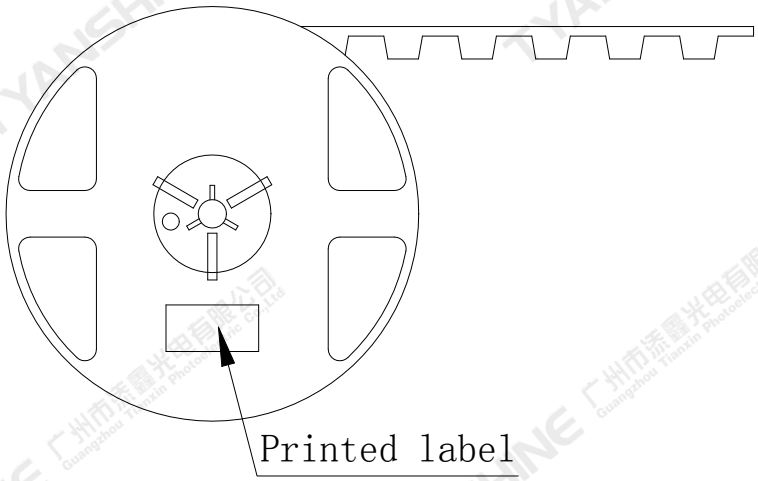
Note:

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, Irresponsible of the Company.