TX-6070RGBYW40FC120-NUVENG-01

PRODUCT SPECIFICATION

Features:

◆Excellent transiting heat from LED chip operating under Y:0.7 R/G/B/W:1.0 A

◆High luminous output

◆Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

◆Red:AlInGaP

◆Green: GaInN

◆Blue:GaInN

◆ Yellow:AlInGaP

◆White:GaInN

Emitting Color:

◆Red

◆Green

◆Blue

◆Yellow

◆White

Applications:

◆Auxiliary lighting

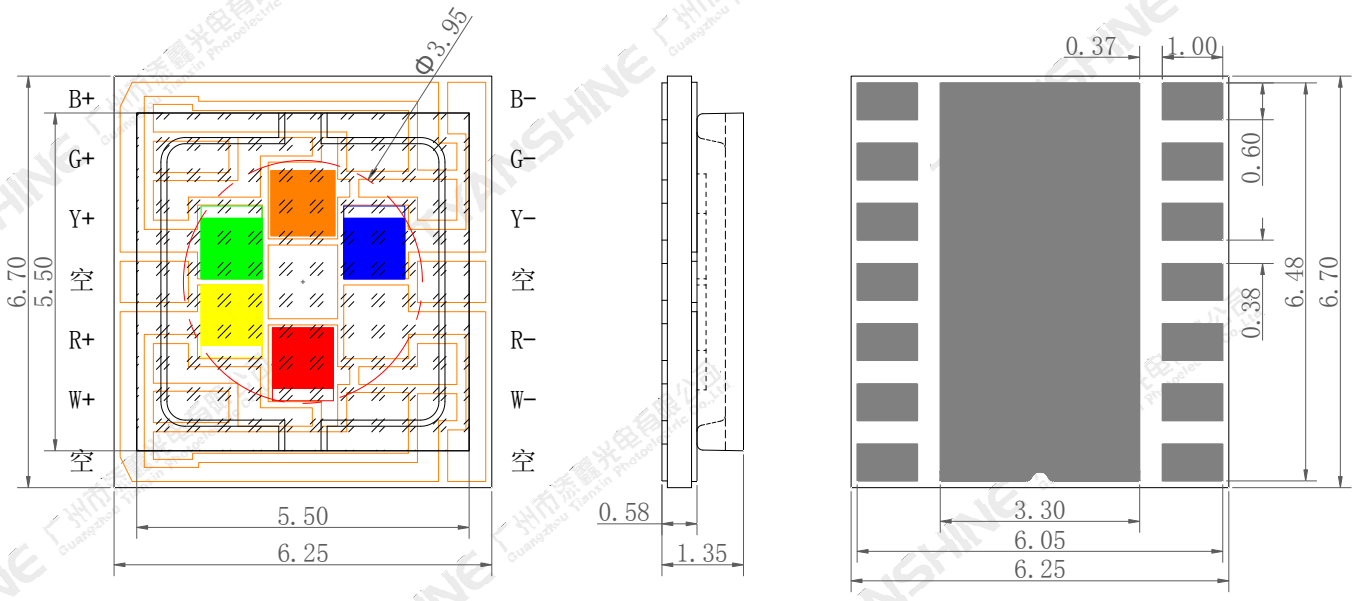
◆Ambient lighting

◆Architectural lighting

◆Entertainment lighting

◆Stage lighting

Package Dimensions:



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	1.8	A
		G	2.5	
		B	2.5	
		Y	0.7	
		W	2.0	
Reverse Voltage	V_R		Not designed for reverse operation	V
Power Dissipation	P_D	R	7.7	W
		G	11.4	
		B	11.7	
		Y	2.2	
		W	8	
Junction Temperature	Tj	R	115	℃
		G	150	
		B	150	
		Y	115	
		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)

Parameter	Symbol	Condition	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	φ_v	Y:If=0.7A R/G/B/W:If=1A	R	110	—	125	lm
			G	230	—	265	
			B	35	—	45	
			Y	55	—	80	
			W	260	—	300	
Dominant Wavelength	λd	Y:If=0.7A R/G/B/W:If=1A	R	618	—	623	nm
			G	527	—	532	
			B	450	—	455	
			Y	595	—	600	
Correlated Colour Temperature	CCT	If=1A	W	8000	8700	9600	K
Peak-emission Wavelength	λp	Y:If=0.7A R/G/B/W:If=1A	R	625	—	630	nm
			G	520	—	525	
			B	445	—	450	
			Y	600	—	610	
Spectral Line Half-Width	△λ	Y:If=0.7A R/G/B/W:If=1A	R	11	16	21	nm
			G	27	32	37	
			B	13	18	23	
			Y	10	15	20	
			W	15	20	25	
Forward Voltage	V_f	Y:If=0.7A R/G/B/W:If=1A	R	2.2	—	3.2	V
			G	3.0	—	4.0	
			B	3.0	—	4.0	
			Y	2.8	—	3.8	
			W	3.0	—	4.0	
Reverse Current	I_R	V_R=5V	—	—	—	—	μA
Viewing Angle at 50％IV	$2\theta_{1/2}$	—	—	—	120	—	Deg
Thermal Resistance Junction to Case	$R\theta_{J-C}$	Y:If=0.7A R/G/B/W:If=1A	R	—	-2.97	—	K/W
			G	—	-8.7	—	
			B	—	-4.8	—	
			Y	—	-2.1	—	
			W	—	1.13	—	
Temperature Coefficient of Voltage	V△F/T	Y:If=0.7A R/G/B/W:If=1A	R	—	4.0	—	mV/℃
			G	—	3.9	—	
			B	—	3.9	—	
			Y	—	5.3	—	
			W	—	3.9	—	

Notes:

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

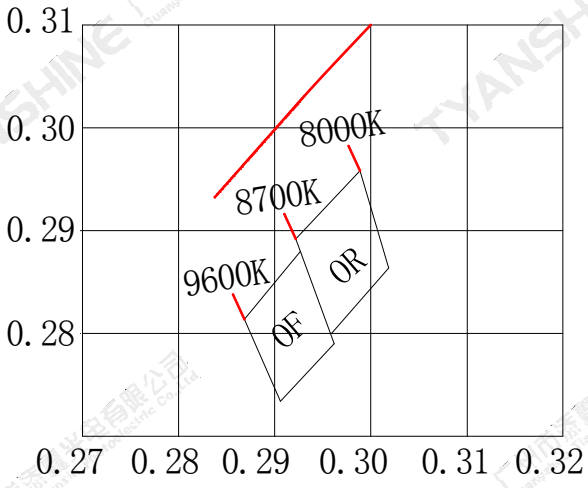
2.$\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3.The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

4.Luminous flux measurement tolerance:±15%.

5.Forward voltage measurement tolerance:±0.15V.

White light Color coordinate filing (Tc=25℃)

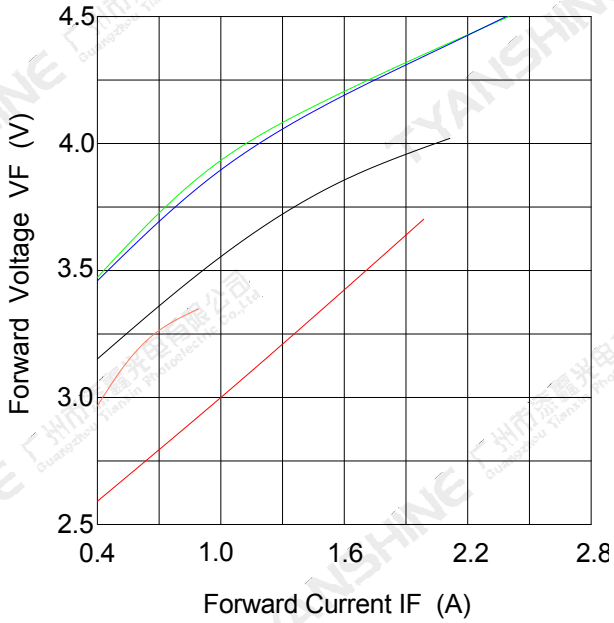


Grade	TC	P1		P2		P3		P4	
		X1	Y1	X2	Y2	X3	Y3	X4	Y4
OR	8000-8700K	0.2959	0.28	0.3019	0.2864	0.2989	0.2958	0.2922	0.2892
OF	8700-9600K	0.2906	0.2734	0.2962	0.279	0.2927	0.288	0.2869	0.2814

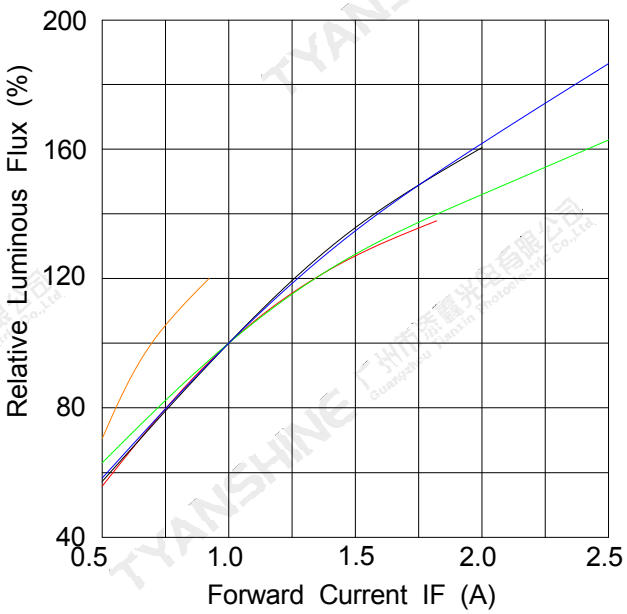
Typical Electrical/Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

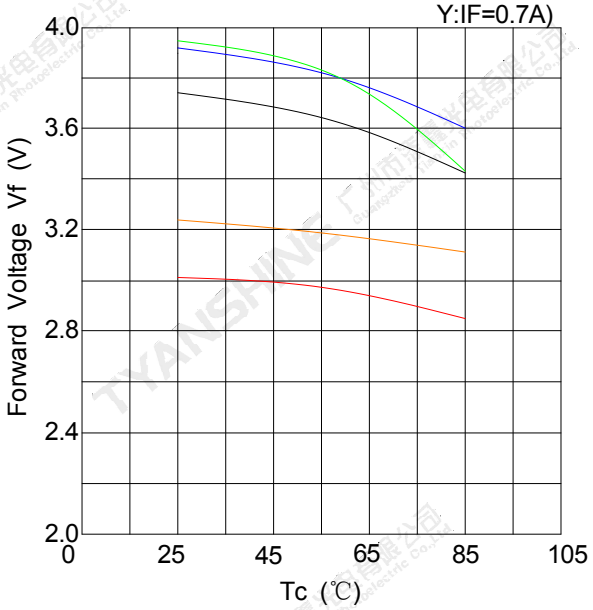
Forward Current VS. Relative Forward Voltage



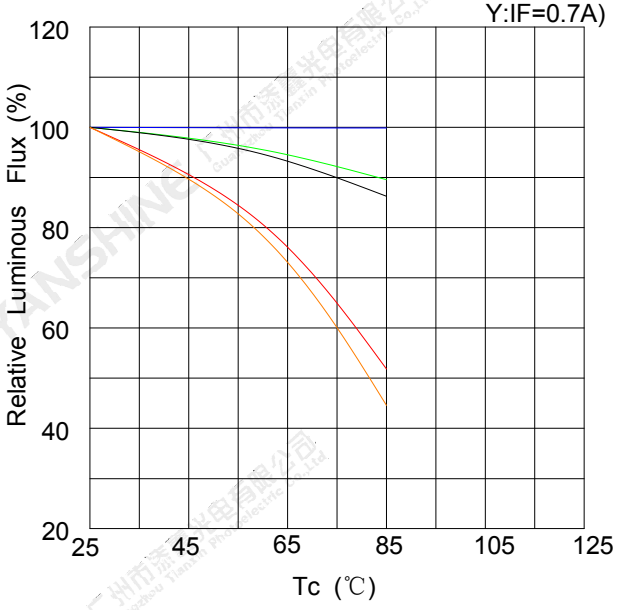
Forward Current VS. Relative Luminous Flux



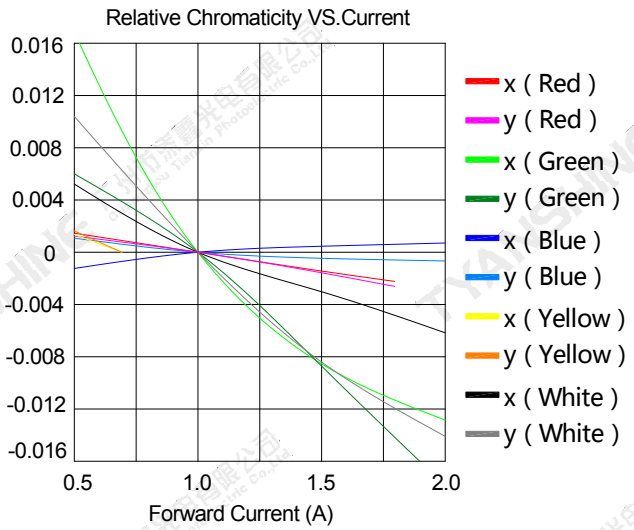
Temperature VS. Forward Voltage Vf (R/G/B/W:IF=1.0A Y:IF=0.7A)

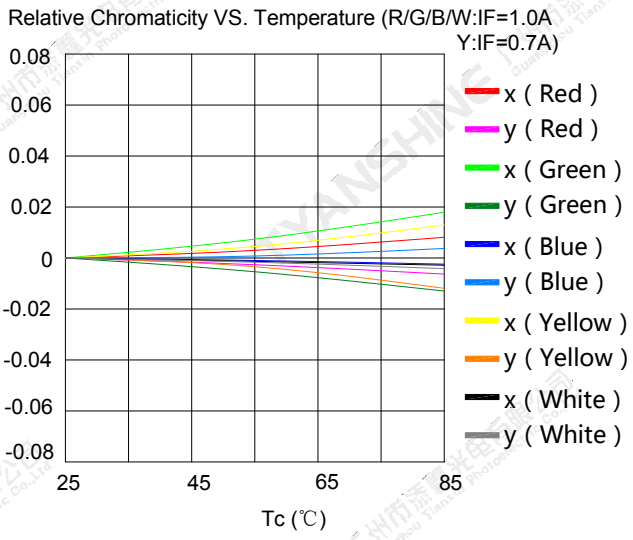


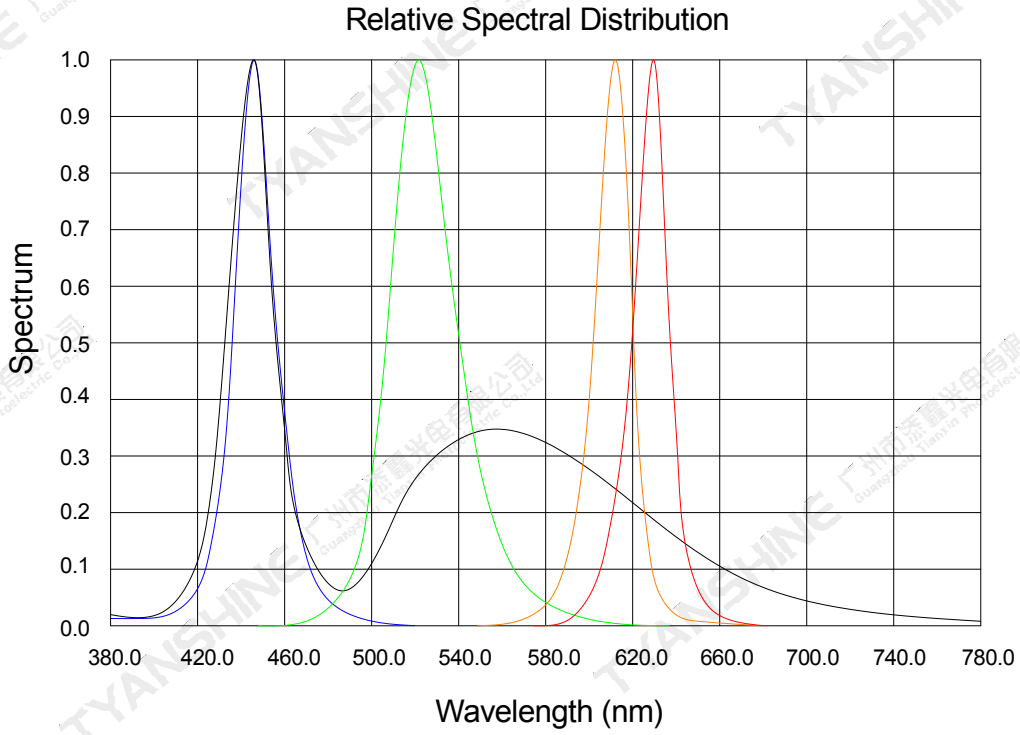
Temperature VS. Relative Luminous Flux(R/G/B/W:IF=1.0A Y:IF=0.7A)



Notes: Red; Green; Blue; Lime; Cyan PC Amber;


Relative Chromaticity VS.Current
0.016
0.012
0.008
0.004
0
-0.004
-0.008
-0.012
-0.016
0.5
1.0
1.5
2.0
Forward Current (A)
x (Red)
y (Red)
x (Green)
y (Green)
x (Blue)
y (Blue)
x (Yellow)
y (Yellow)
x (White)
y (White)


Relative Chromaticity VS. Temperature (R/G/B/W:IF=1.0A
Y:IF=0.7A)
0.08
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.08
25
45
65
85
Tc (℃)
x (Red)
y (Red)
x (Green)
y (Green)
x (Blue)
y (Blue)
x (Yellow)
y (Yellow)
x (White)
y (White)


Relative Spectral Distribution
Spectrum
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
380.0
420.0
460.0
500.0
540.0
580.0
620.0
660.0
700.0
740.0
780.0
Wavelength (nm)

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

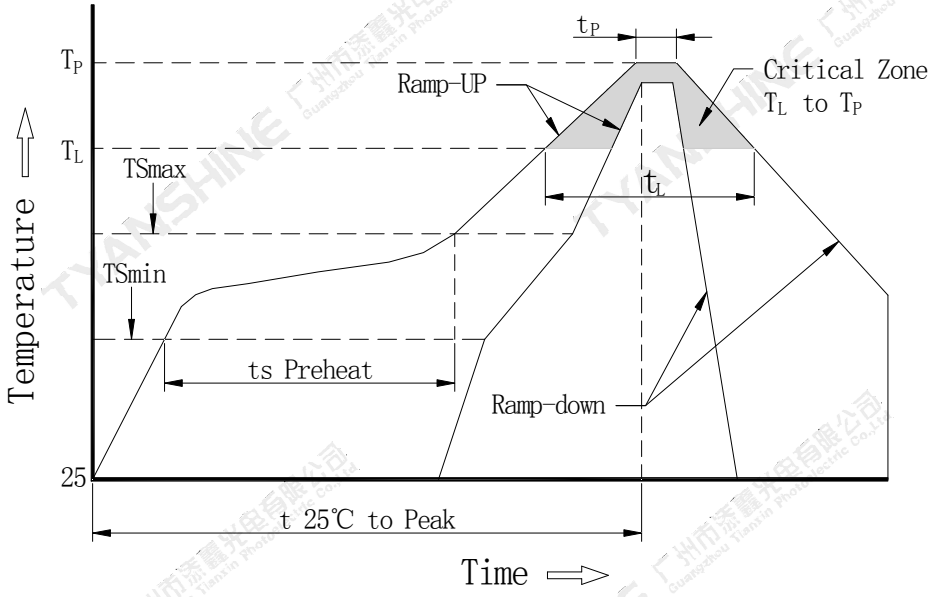
Storage Environment Condition

Temperature: 5℃ ~ 30℃ (41℉ ~ 86℉)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



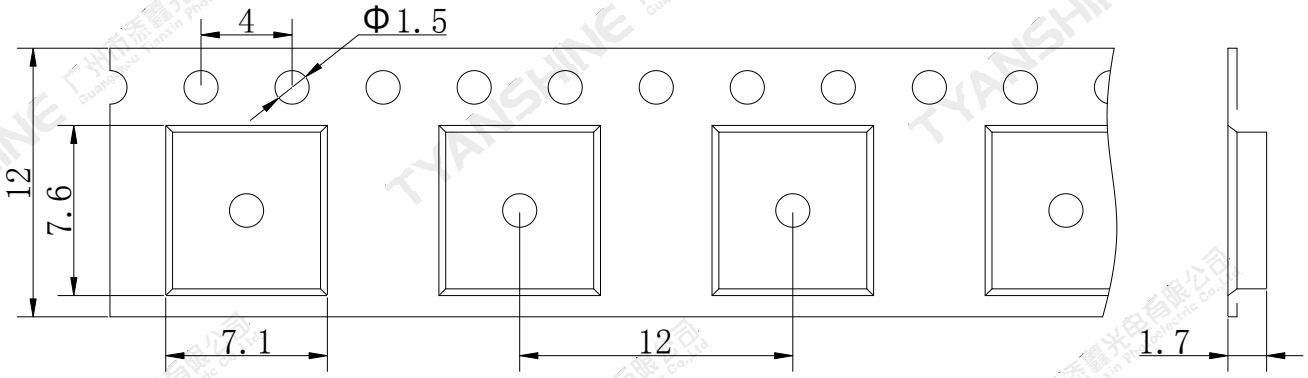
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (Ts_{max} to T_p)	3℃/second max.
Preheat: Temperature Min (Ts_{min})	100℃
Preheat: Temperature Max (Ts_{max})	150℃
Preheat: Time (Ts_{min} to Ts_{max})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183℃
Time Maintained Above: Time (T_L)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

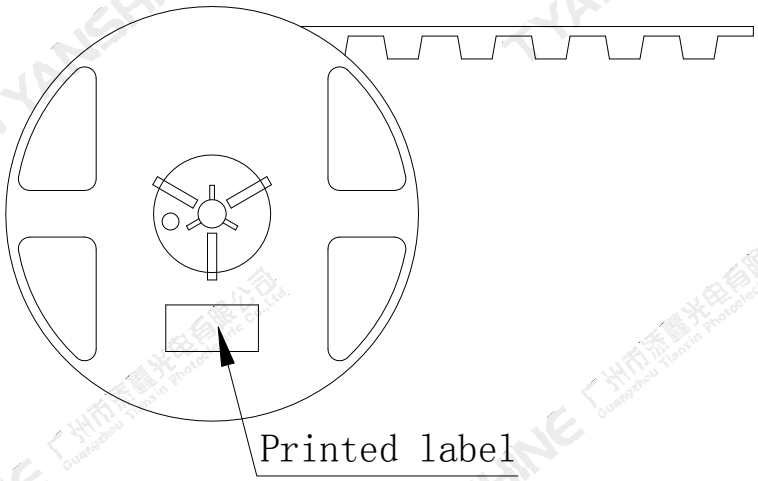
Note:

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

Dimensions For Cannulation And Packaging

Quantity: 220PCS





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.