

# TX-7070W45FC120-NUVENG-B01

## PRODUCT SPECIFICATION

### Features:

- ◆ Excellent transiting heat from LED chip operating under 1.0A.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆ ThinGaN

### Emitting Color:

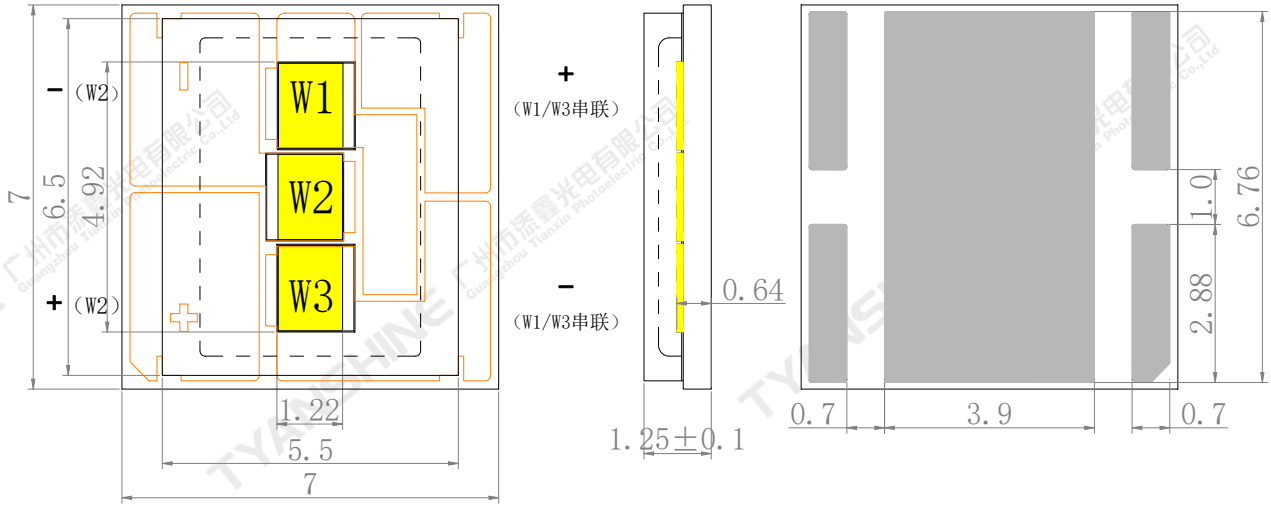
- ◆ White (W1/W2/W3)

### Applications:

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

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**Package Dimensions:**



**Notes:**

- 1.All dimensions are in millimeters .
- 2.Tolerances unless otherwise mentioned are  $\pm 0.1\text{mm}$  .

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**Absolute Maximum Ratings (Tc=25°C)**

Parameter	Symbol		Ratings	Unit
Forward Current	IF	W1/W3	5.0	A
		W2	5.0	
Reverse Voltage	VR		Not designed for reverse operation	V
Power Dissipation	PD	W1+W3	35	W
		W2	17.5	
Junction Temperature	Tj		150	°C
Electrostatic Discharge Threshold (ESD)	ESD		2000	V
Storage Temperature	Tstg		-20~+70	°C
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.

**Electrical Optical Characteristics (Tc=25°C)**

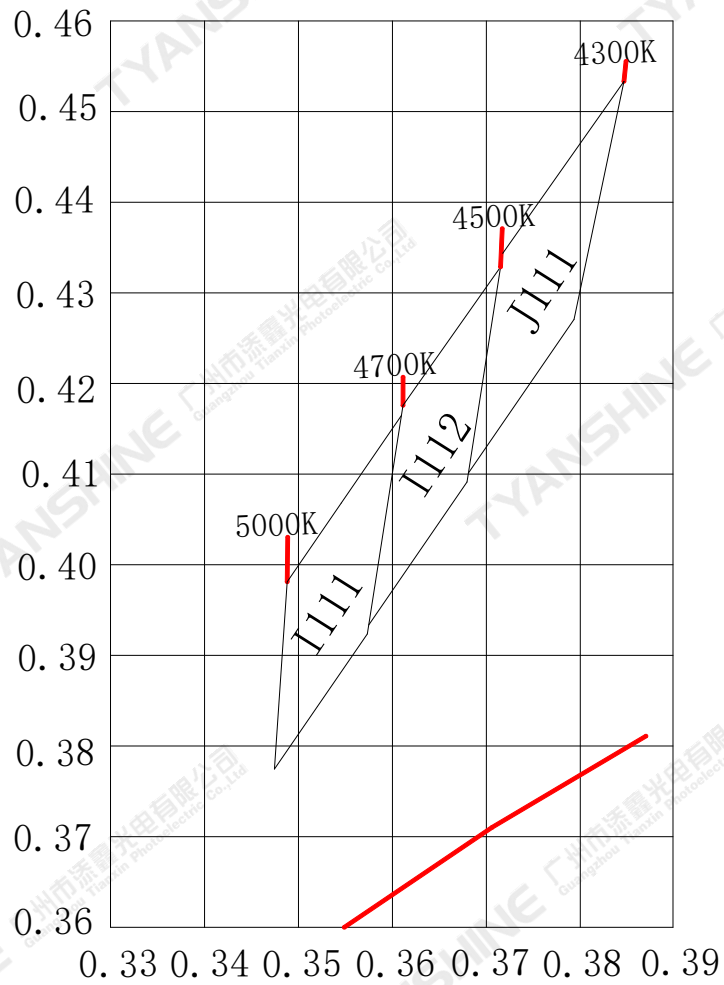
Parameter	Symbol	Condition	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=1.0A	W1+W3	820	900	980	lm
			W2	410	450	490	
		If=5.0A	W1+W3	2500	2800	3100	
			W2	1250	1400	1550	
Forward Voltage	$V_f$	If=1.0A	W1+W3	5.4	—	6.6	V
			W2	2.7	—	3.3	
		If=5.0A	W1+W3	6.8	—	8.0	
			W2	3.4	—	4.0	
Viewing Angle at 50% IV	$2\theta_{1/2}$	—	W	—	120	—	Deg
Correlated Colour Temperature	CCT	If=1.0A	W1/W2/W3	4300	—	5000	K
		If=5.0A	W1/W2/W3	4500	—	5300	
Reverse Current	$I_R$	—	W	—	—	—	$\mu A$
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	W	—	—	—	K/W
Temperature Coefficient of Voltage	$V\Delta F/T$	If=1.0A	W1+W3	—	-4.5	—	mV/°C
			W2	—	-2.25	—	
		If=5.0A	W1+W3	—	-3.21	—	
			W2	—	-1.6	—	

**Notes:**

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- Luminous flux measurement tolerance:  $\pm 15\%$ .
- Forward voltage measurement tolerance:  $\pm 0.15V$ .

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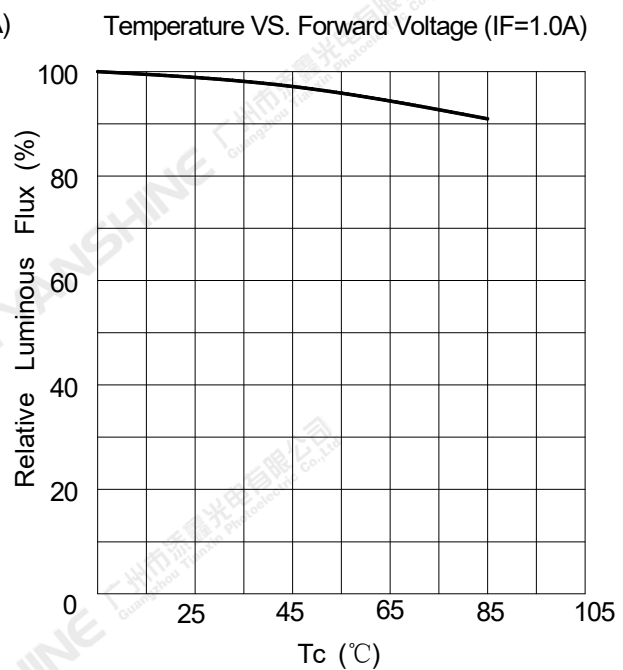
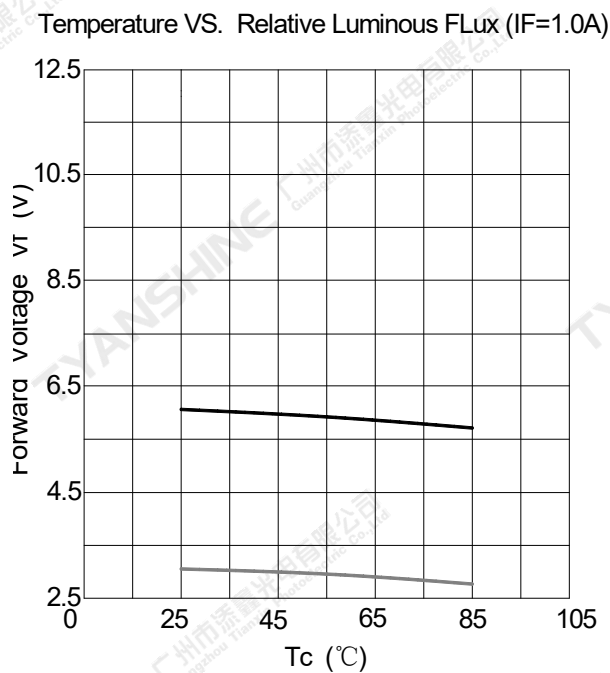
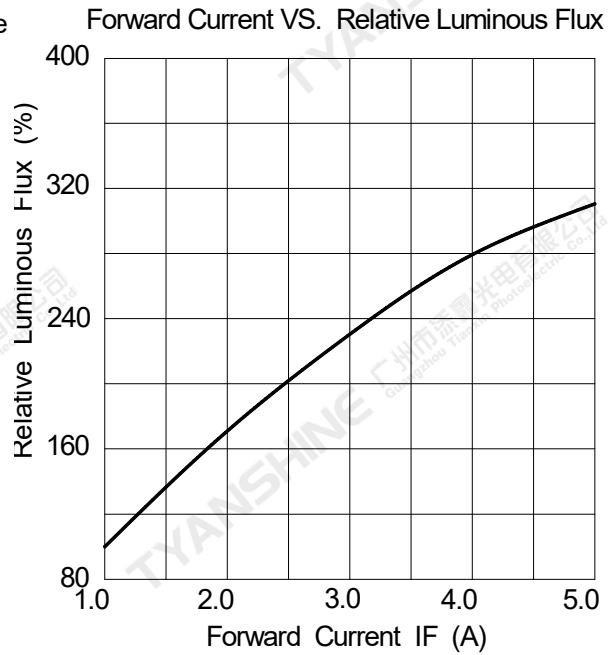
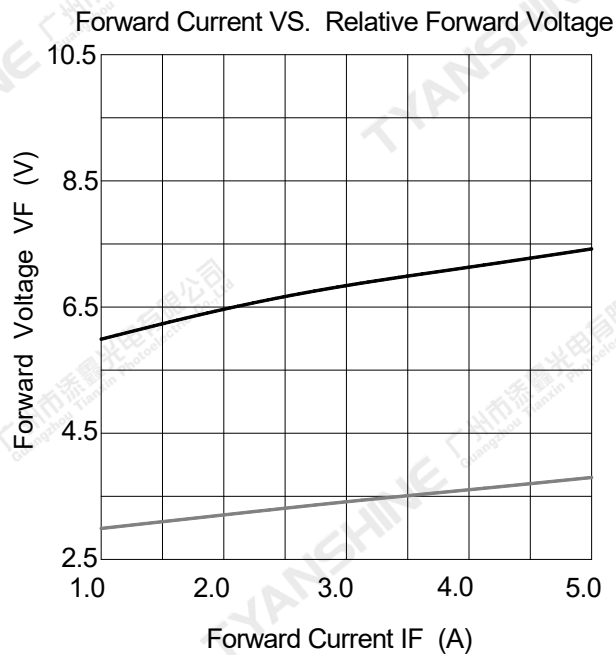
**White light Color coordinate filing (IF=1.0A,Tc=25°C )**



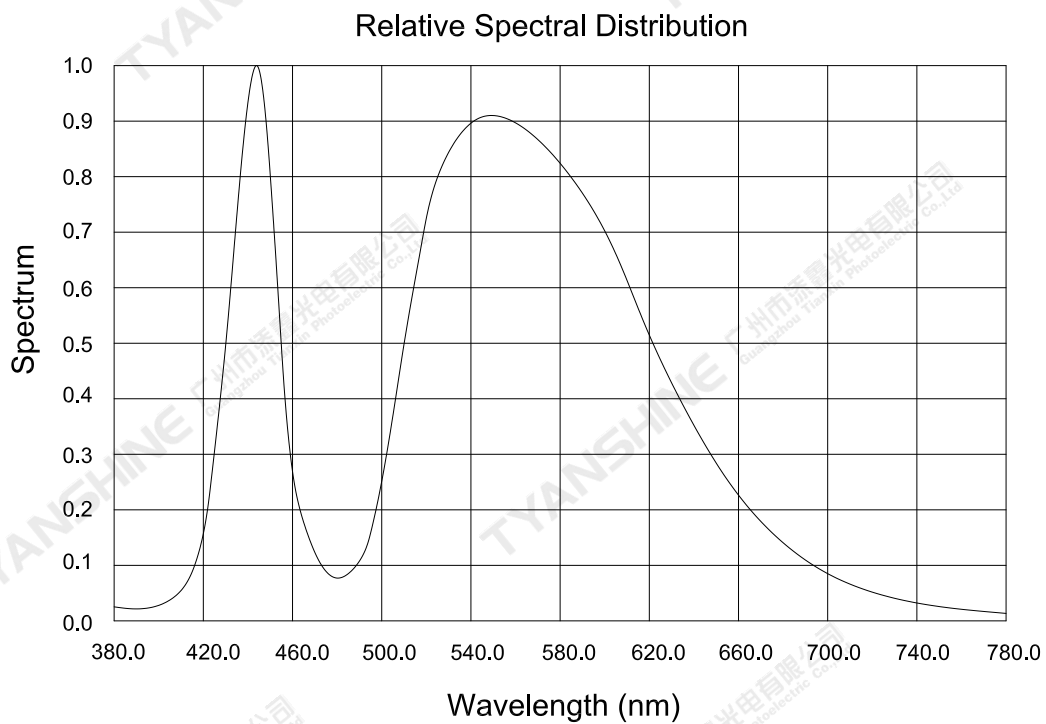
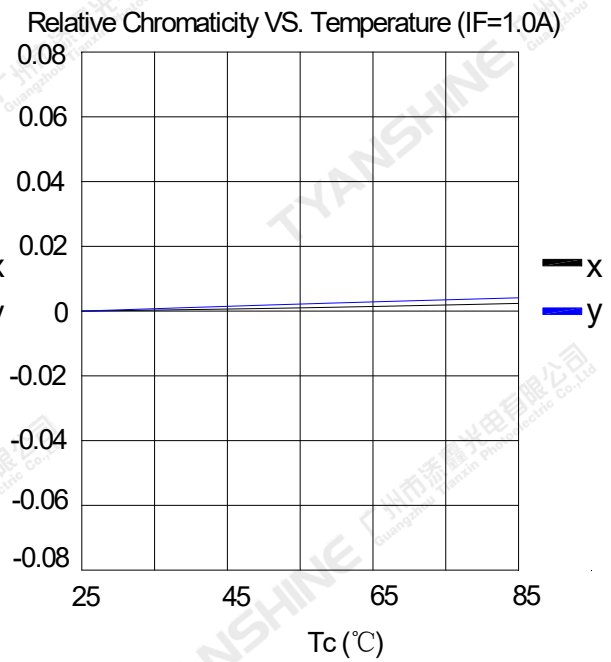
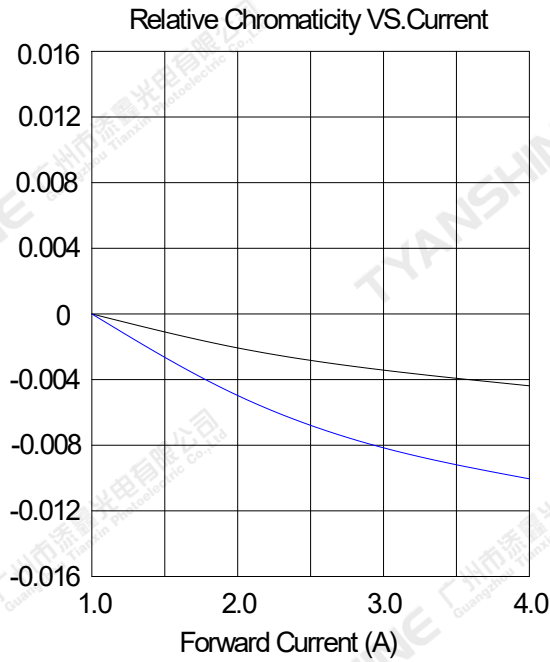
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
J111	4300K	4500K	0.3793	0.4271	0.3846	0.4533	0.3717	0.4343	0.3681	0.4101
I112	4500K	4700K	0.3679	0.4091	0.3715	0.4329	0.3611	0.4176	0.3575	0.3934
I111	4700K	5000K	0.3573	0.3924	0.3610	0.4165	0.3488	0.3981	0.3474	0.3775

## Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



**Notes:**  White (W1/W3) ;  White (W2) ;



**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

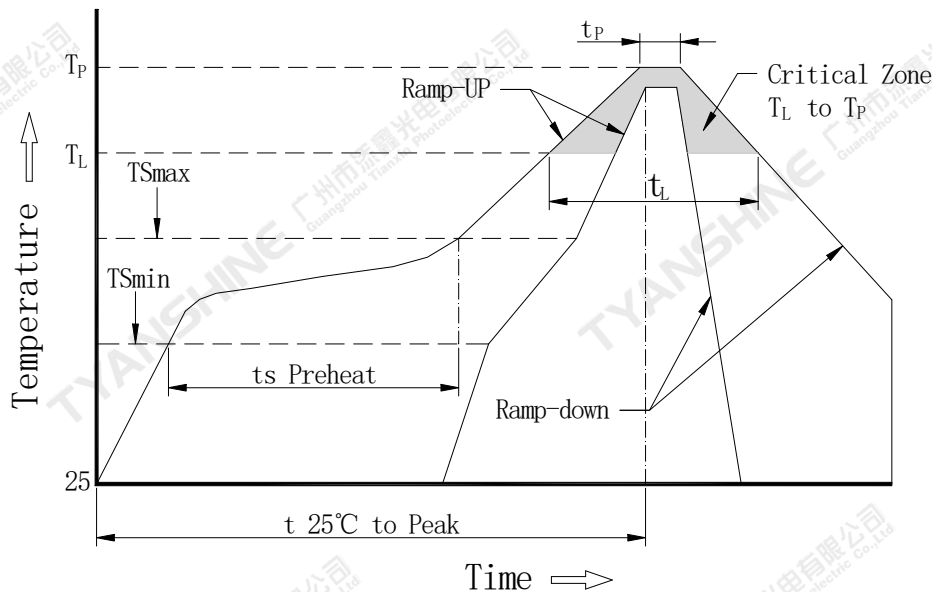
### Storage Environment Condition

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	Pb-Free Solderr(SnBi35Ag0.3)
Average Ramp-Up Rate (TS <sub>max</sub> to TP)	3°C/second max.
Preheat: Temperature Min (TS <sub>min</sub> )	100°C
Preheat: Temperature Max (TS <sub>max</sub> )	150°C
Preheat: Time (TS <sub>min</sub> to TS <sub>max</sub> )	60-120 seconds
Time Maintained Above: Temperature (TL)	183°C
Time Maintained Above: Time (TL)	60-150 seconds
Peak/Classification Temperature (TP)	225°C
Time Within 5°C of Actual Peak Temperature (TP)	10-30 seconds
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.

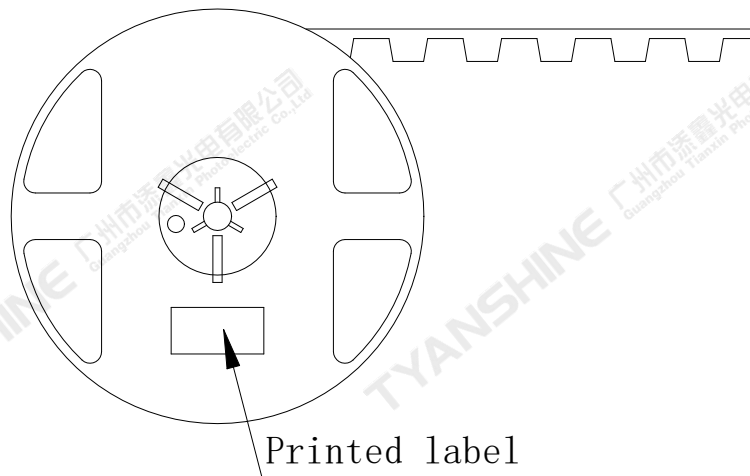
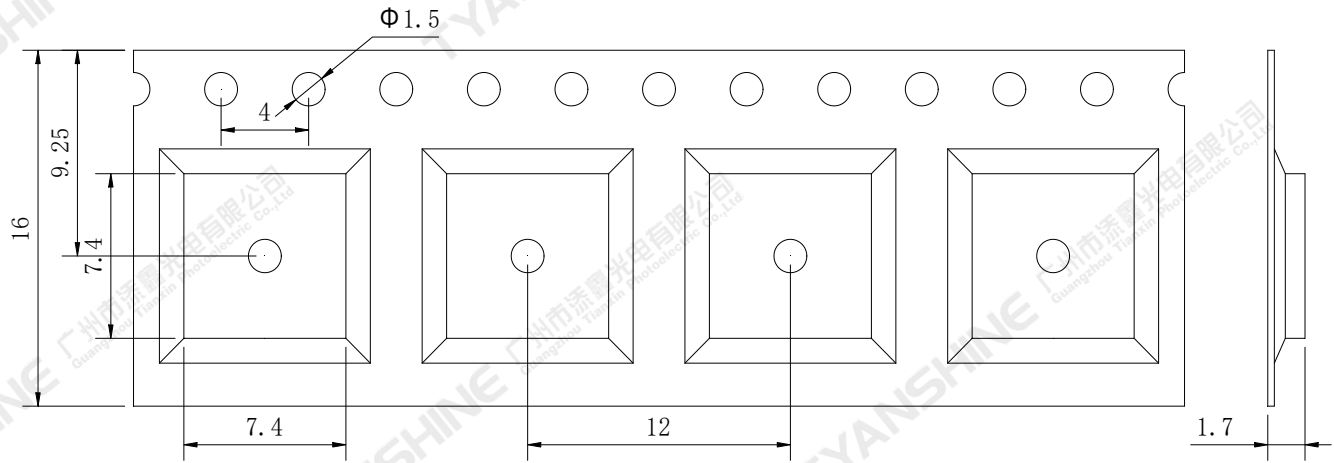
**Note:**

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



**Dimensions For Cannulation And Packaging**

**Quantity:1000PCS**



**Notes:**

1. All dimensions are in millimeters.
2. Tolerances are  $\pm 2.0$  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.

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