

# TX-1445W10FC120-NUFEZW-B01E

## PRODUCT SPECIFICATION

### Features:

- ◆Excellent transiting heat from LED chip operating under 1200mA.
- ◆Ceramic eutectic package allows it to have minimal internal stress and excellent thermal path.
- ◆Flip chip coated with package, the output of lumen is stable.
- ◆High luminous output.
- ◆Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆InGaN

### Emitting Color:

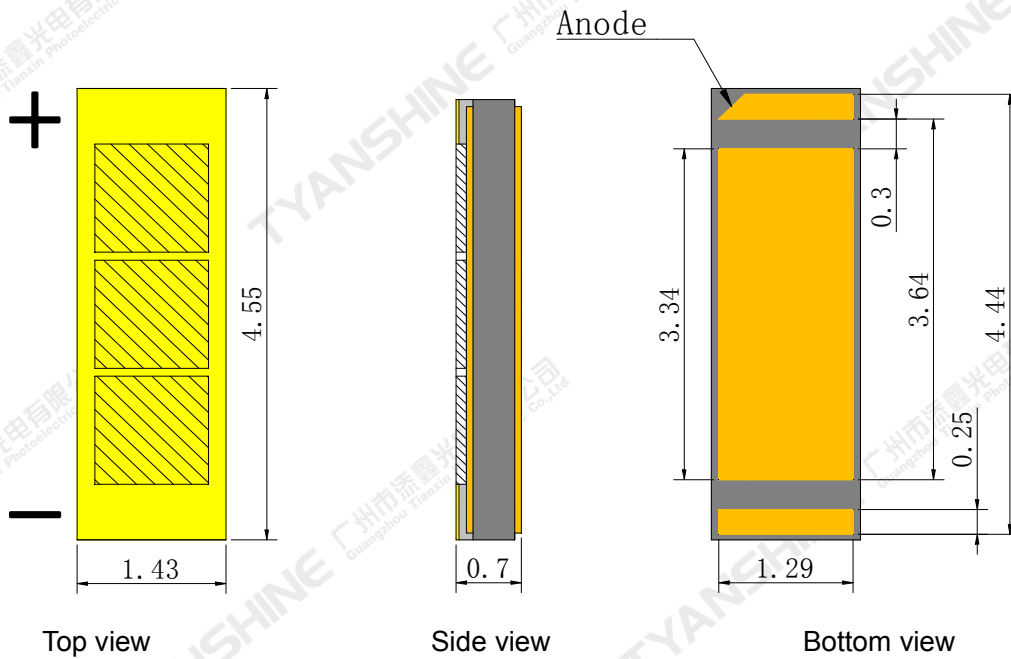
- ◆cold white

### Applications:

- ◆Automobile lighting

Part No.	TX-1445W10FC120-NUFEZW-B01E	Spec No.	WKF-BE0863	Page	1 of 9
----------	-----------------------------	----------	------------	------	--------

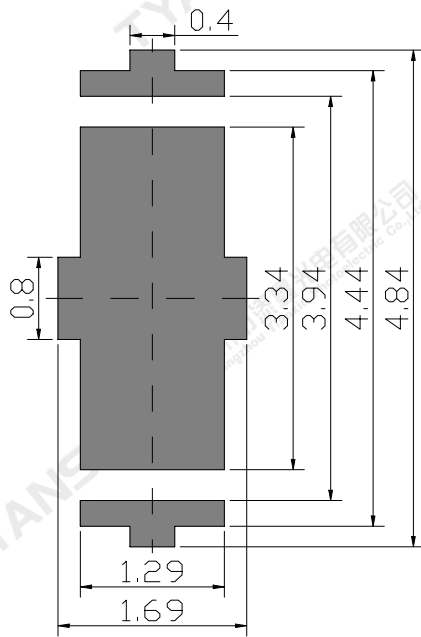
**Package Dimensions:**



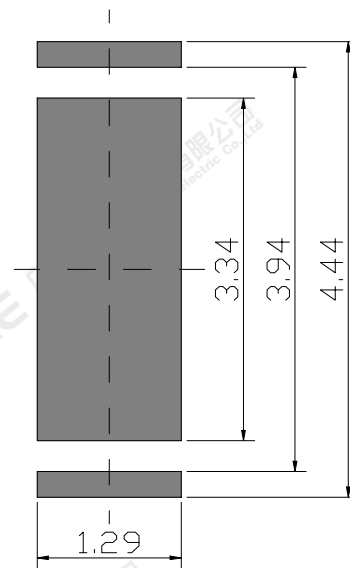
Top view

Side view

Bottom view



Recommended solder pad



recommended stencil pattern

**Notes:**

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

Part No.	TX-1445W10FC120-NUFEZW-B01E	Spec No.	WKF-BE0863	Page	2 of 9
----------	-----------------------------	----------	------------	------	--------

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

Parameter	Symbol	Ratings	Unit
Forward Current	IF	1200	mA
Reverse Voltage	VR	Not designed for reverse operation	V
Power Dissipation	PD	12	W
Junction Temperature	Tj	150	°C
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	T <sub>stg</sub>	-40~+70	°C
Operation Temperature	T <sub>opr</sub>	-30~+125	

**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	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=1000mA	880	980	1080	lm
Forward Voltage	$V_f$		8.8	9.2	9.8	V
Viewing Angle at 50 % IV	$2\theta_{1/2}$		—	120	—	Deg
Correlated Colour Temperature	CCT	If=1000mA	5600	6250	6900	K
Reverse Current	$I_R$	—	—	—	—	$\mu A$
Thermal Resistance Junction to Case	$R_{\theta_{J-C}}$	If=1000mA	—	1.42	—	K/W
Temperature Coefficient of Voltage	$V\Delta F/T$		—	-10.3	—	mV/°C

**White Color coordinate filing (IF=1000mA )**

Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
G10	5600	6000	0.3299	0.3454	0.3220	0.3371	0.3215	0.3509	0.3297	0.3592
F01	6000	6500	0.3221	0.3342	0.3133	0.3243	0.3115	0.3375	0.3216	0.3480
E11	6500	6900	0.3136	0.3215	0.3081	0.3159	0.3062	0.3262	0.3123	0.3322

**Notes:**

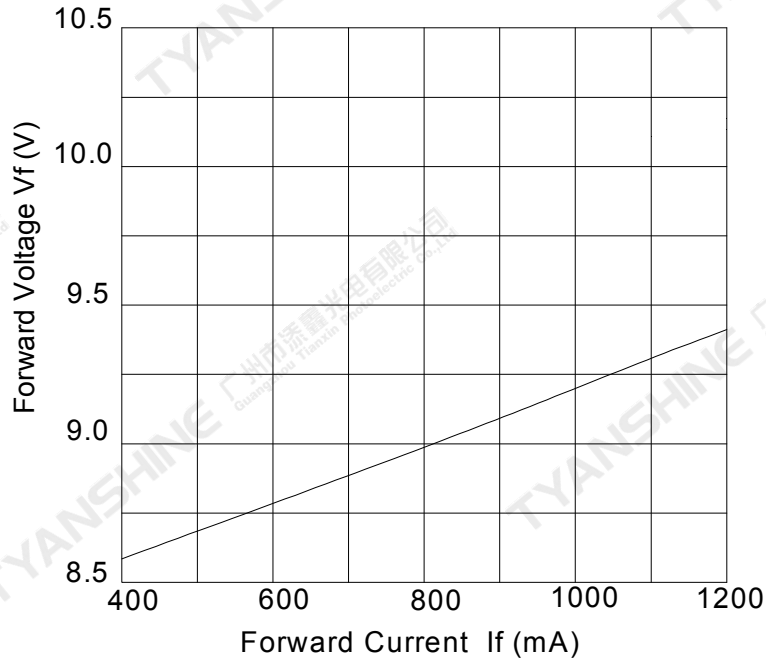
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength ( $\lambda_d$ ) is derived from the CIE 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.

Part No.	TX-1445W10FC120-NUFEZW-B01E	Spec No.	WKF-BE0863	Page	4 of 9
----------	-----------------------------	----------	------------	------	--------

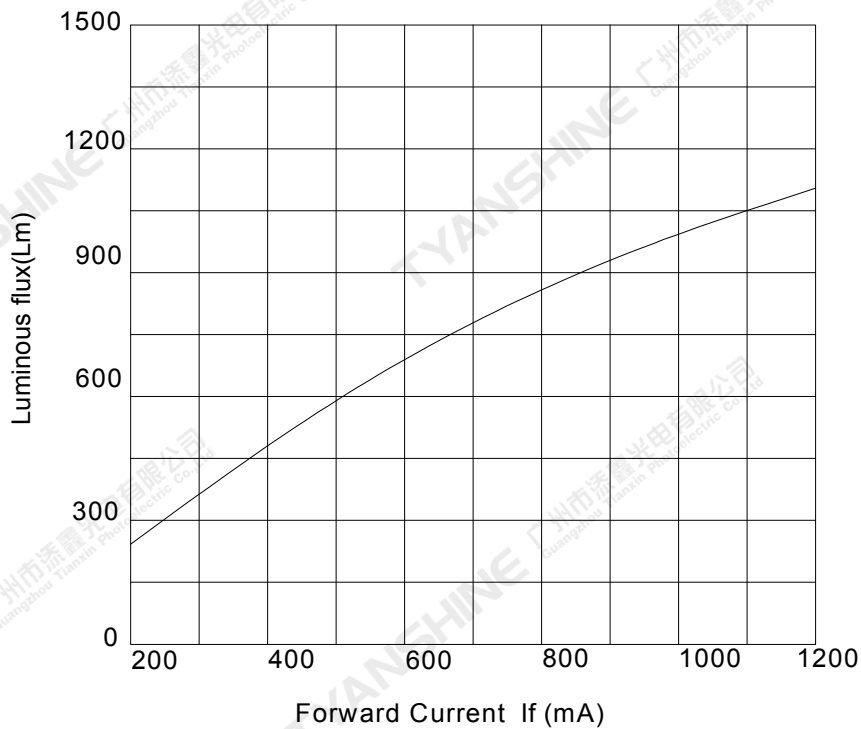
## Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

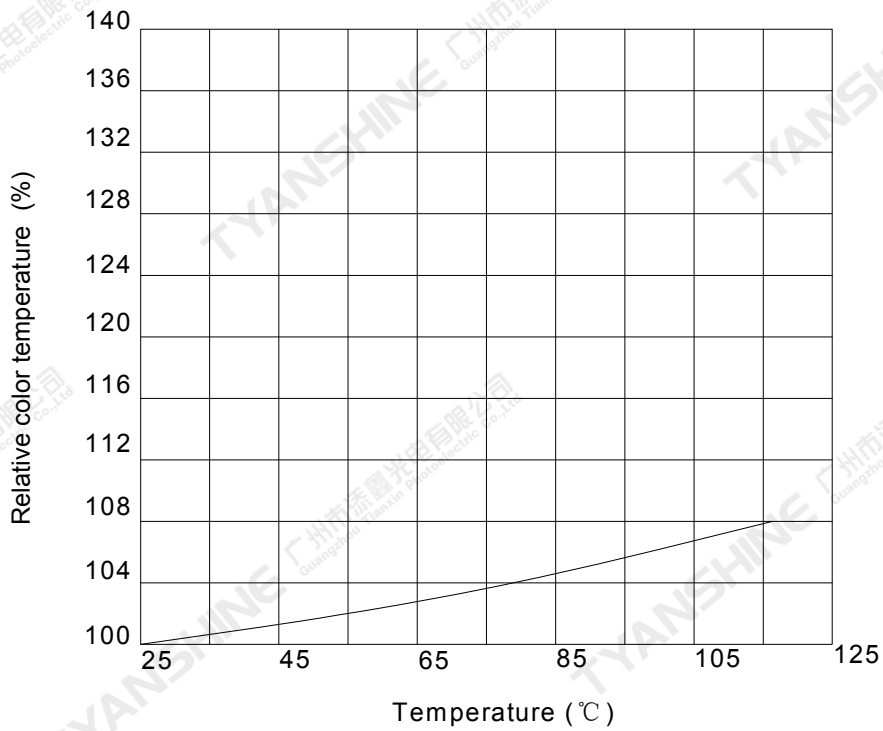
Forward Current VS. Forward Voltage



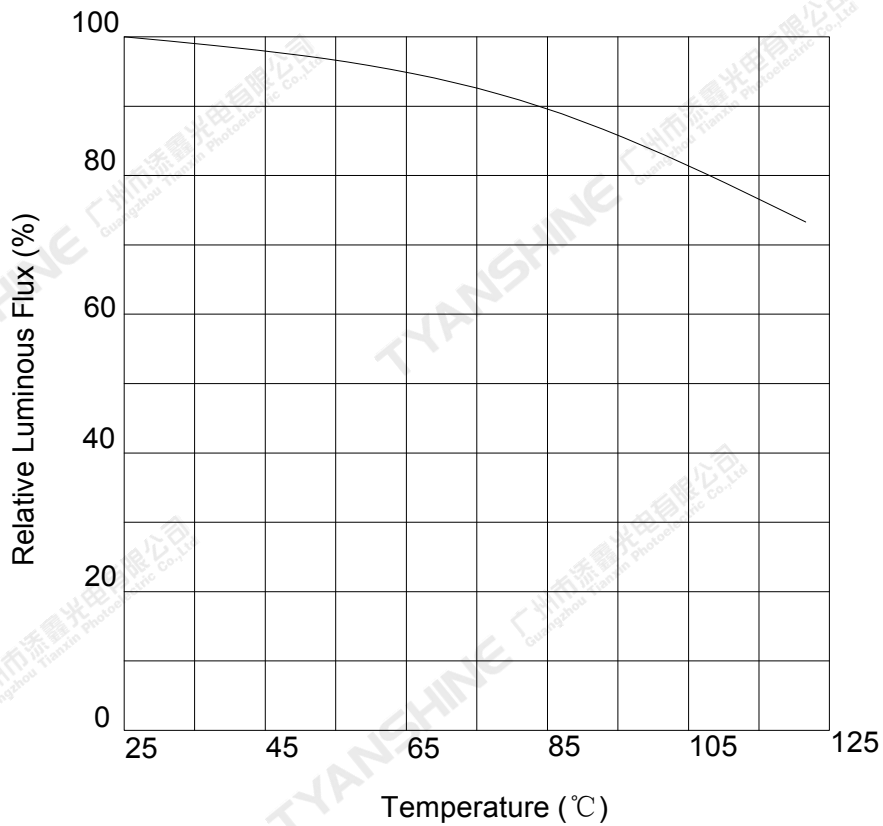
Forward Current VS. Luminous flux



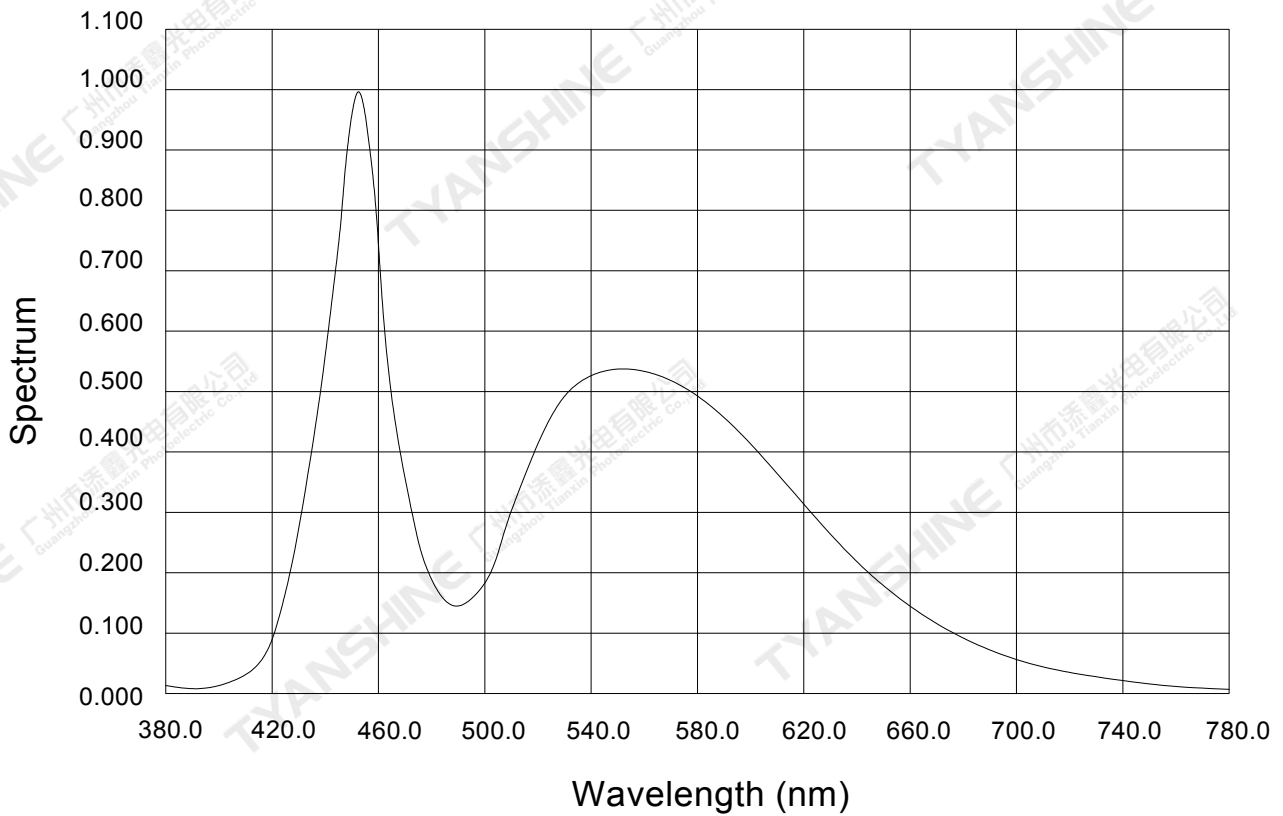
Temperature VS. Relative color temperature (IF=1000mA)



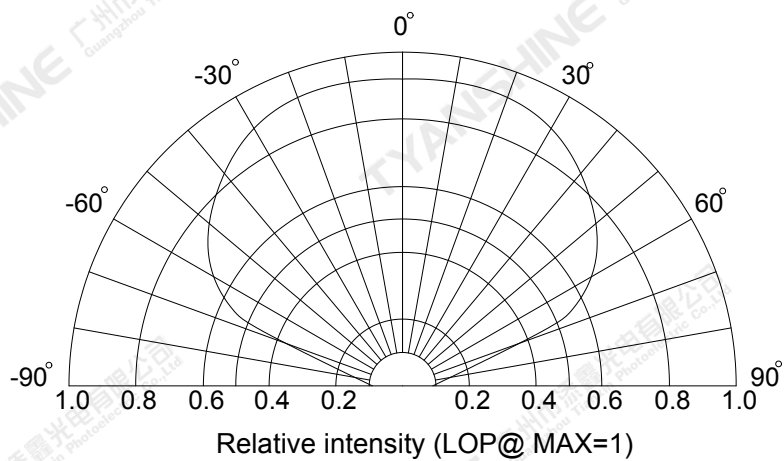
Temperature VS. Relative Luminous Flux (IF=1000mA)



**Relative Spectral Distribution**



**Beam Pattern**



**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  $\pm 5^\circ$ .

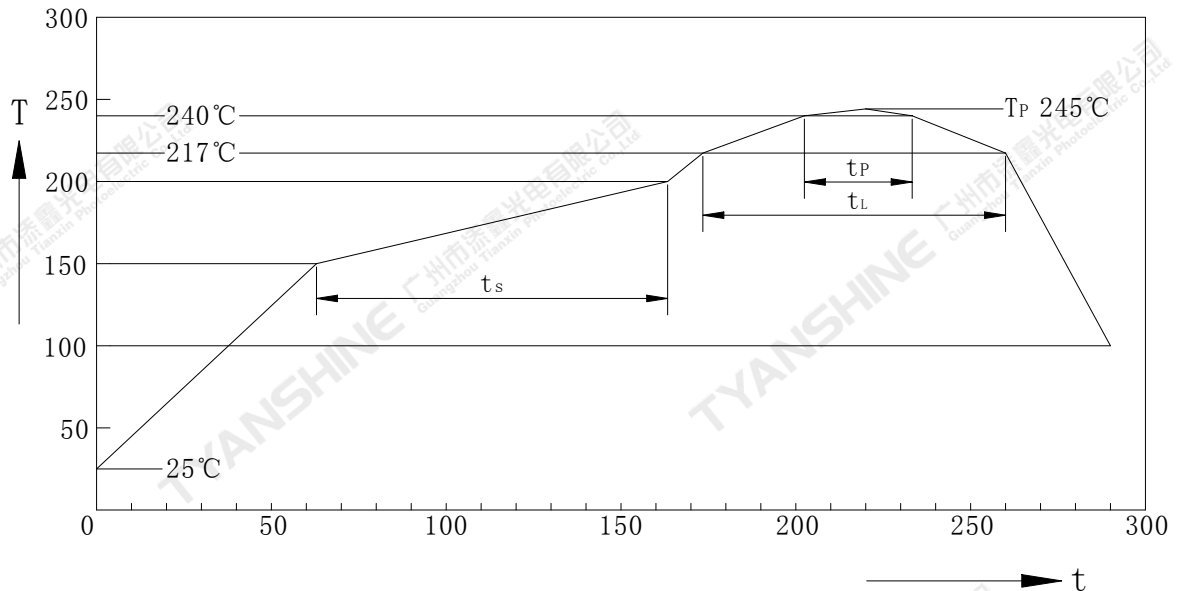
## Usage Precautions

### Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

### Soldering Condition



Profil-Charakteristik Profile Feature	Symbol	Pb-Free(SnAgCu)Assembly			Einheit Unit
		Minimum	Recommendation	Maximum	
Ramp-up Rate to Preheat 25°C to 150°C	-	-	2	3	K/s
Time $t_s$ $T_{Smin}$ to $T_{Smax}$	$t_s$	60	100	120	s
Ramp-up Rate to Peak $T_{Smax}$ to $T_p$	-	-	2	3	K/s
Liquidus Temperature	$T_L$	217			°C
Time above Liquidus temperature	$t_L$	-	80	100	s
Peak Temperature	$T_P$	-	245	260	°C
Time within 5°C of the specified peak temperature $T_p-5$ K	$t_p$	10	20	30	s
Ramp-down Rate $T_p$ to 100°C	-	-	3	6	K/s
Time 25°C to $T_p$	-	-	-	480	-

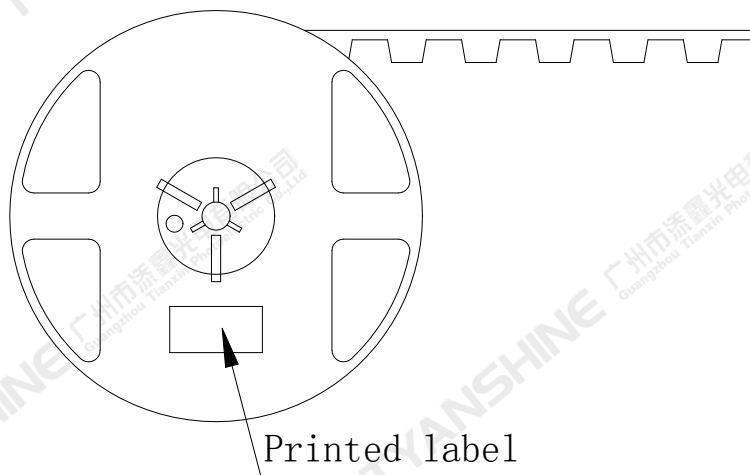
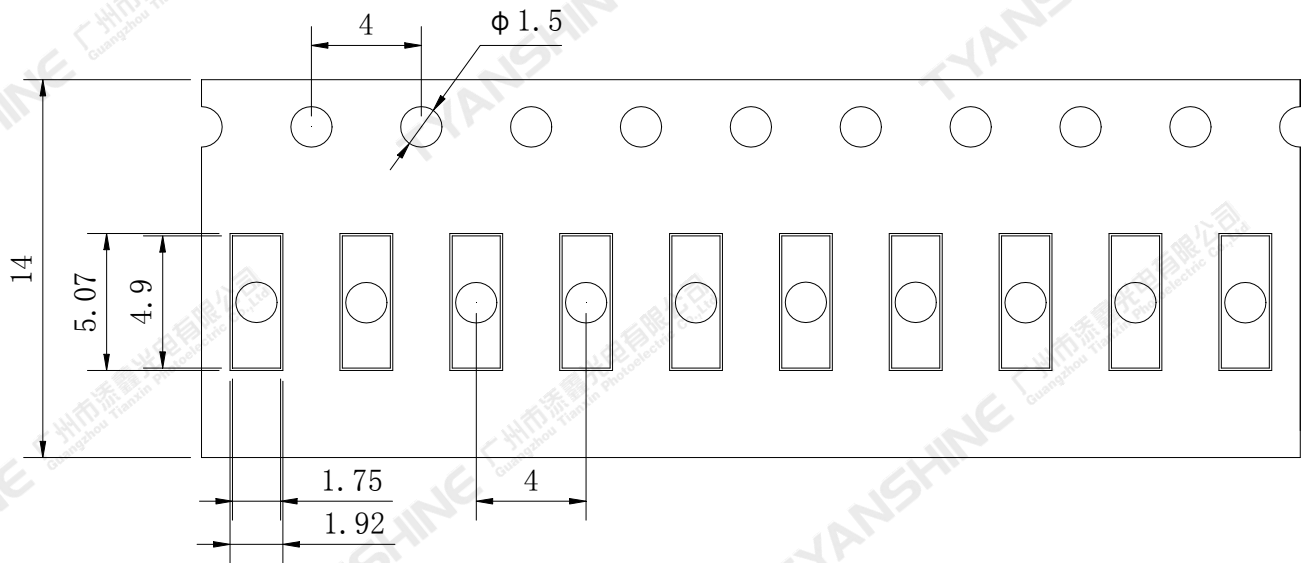
#### Note:

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



**Dimensions For Cannulation And Packaging**

**Quantity:3000 PCS**



**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.

Part No.	TX-1445W10FC120-NUFEZW-B01E	Spec No.	WKF-BE0863	Page	9 of 9
----------	-----------------------------	----------	------------	------	--------