

# TX-4045W12VCA1-NP3CD-02H95

## PRODUCT SPECIFICATION

### Features:

- ◆ Excellent transiting heat from LED chip operating under 4.5A.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆ ThinGaN

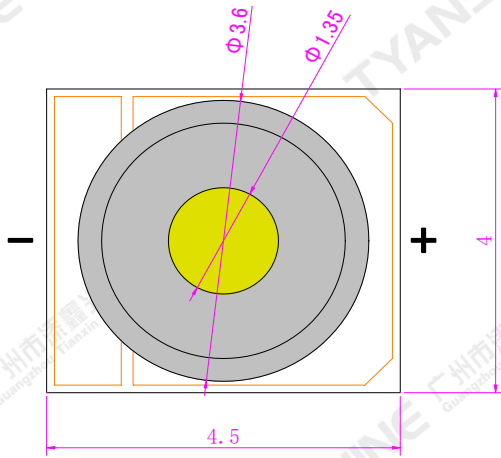
### Emitting Color:

- ◆ White (W)

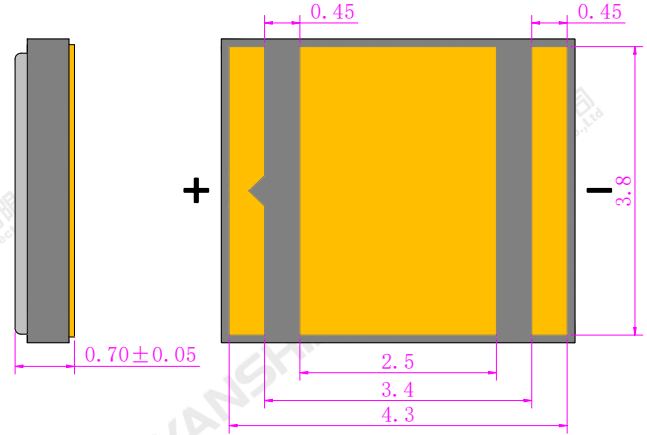
### Applications:

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

**Package Dimensions:**

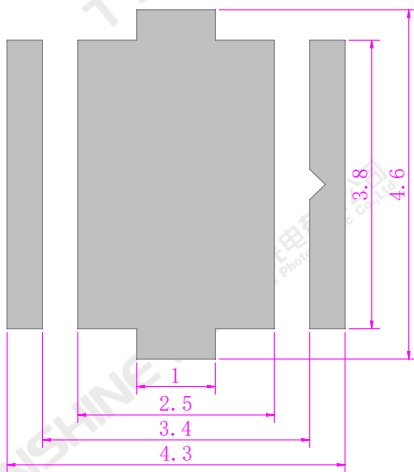


Top view

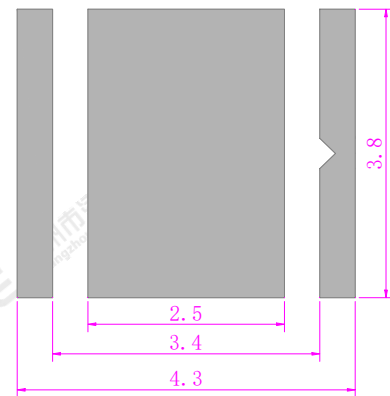


Side view

Bottom view



Recommended solder pad



Recommended stencil pattern

**Notes:**

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

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

Parameter	Symbol	Ratings	Unit
Forward Current	IF	4.5	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	14	W
Junction Temperature	Tj	130	°C
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	Tstg	-40~+70	°C
Operation Temperature	Topr	-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**

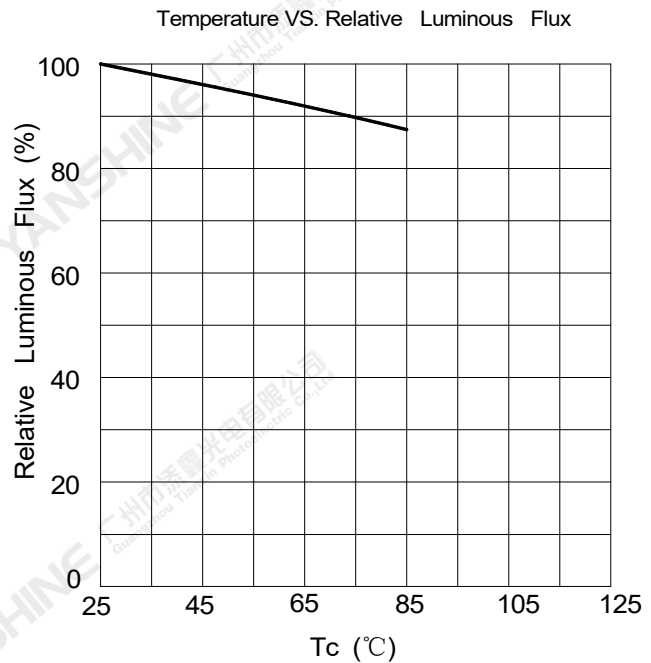
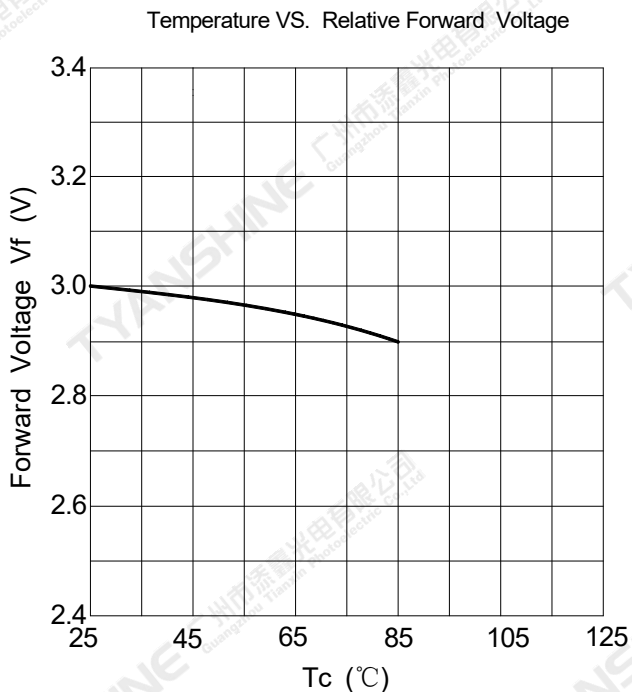
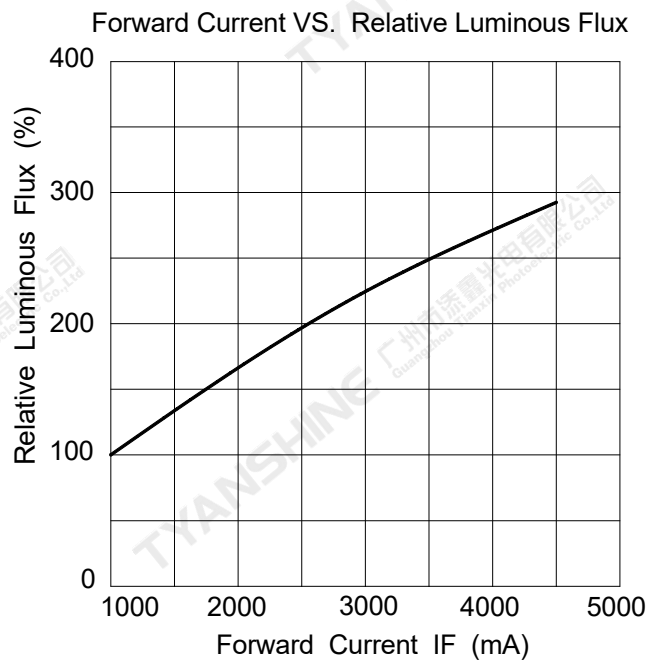
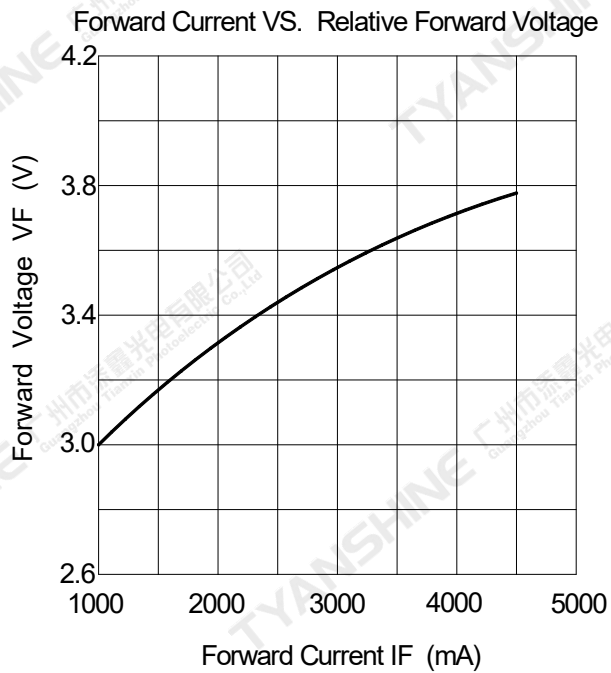
Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=1A Tc=25°C	230	260	290	lm
Forward Voltage	$V_f$		2.8	3.0	3.2	V
Correlated Colour Temperature	CCT		5450	5975	6650	K
Spectral Line Half-Width	$\Delta\lambda$		26	25	31	nm
Luminous Flux	$\phi_v$	If=4A Tc=85°C	—	610	—	lm
Correlated Colour Temperature	CCT		—	6650	—	K
Color Rendering Index	Ra		97	—	—	—
	R9		95.5	—	—	—
Viewing Angle at 50% IV	$2\theta_{1/2}$	—	—	120	—	Deg
Reverse Current	$I_R$	$V_R=-5V$	—	—	2	$\mu A$
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	2.7	—	K/W
Temperature Coefficient of Voltage	$V\Delta F/T$	If=1A Tc=25°C	—	-3.3	—	mV/°C

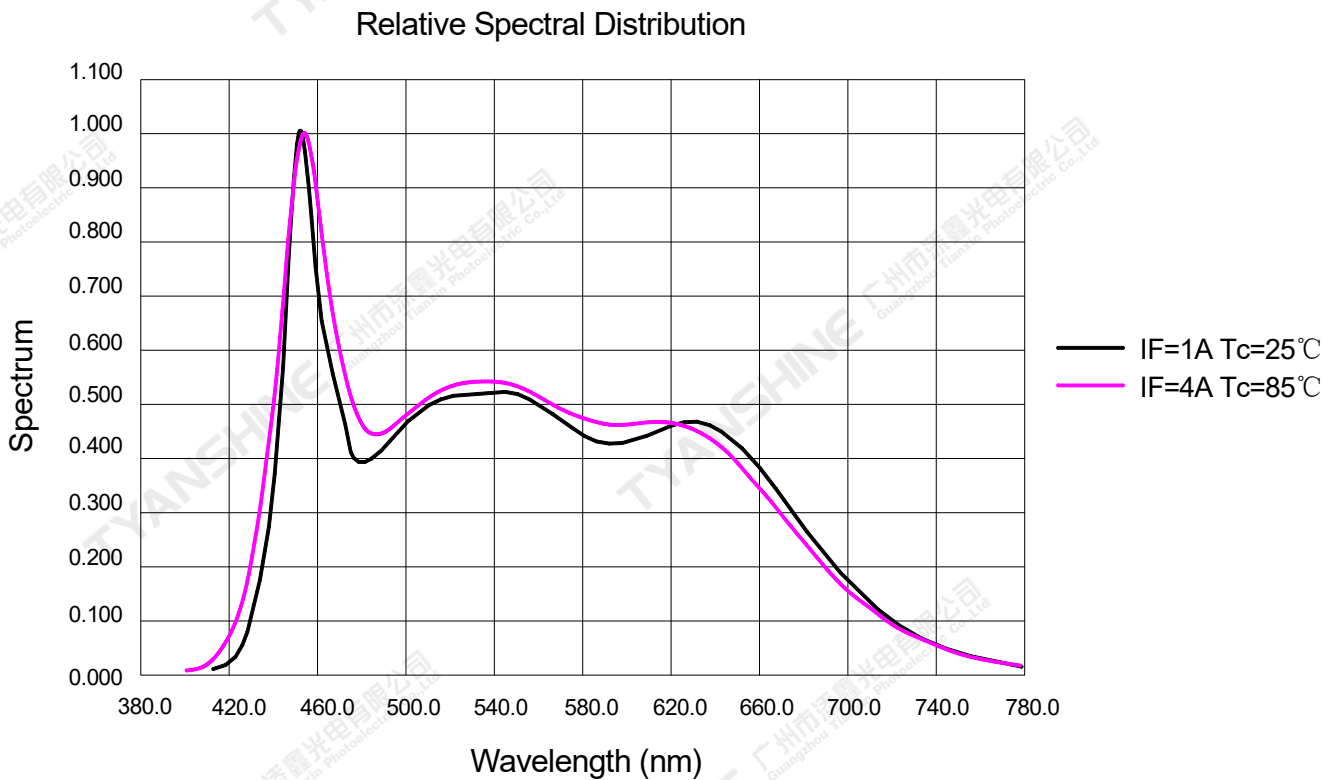
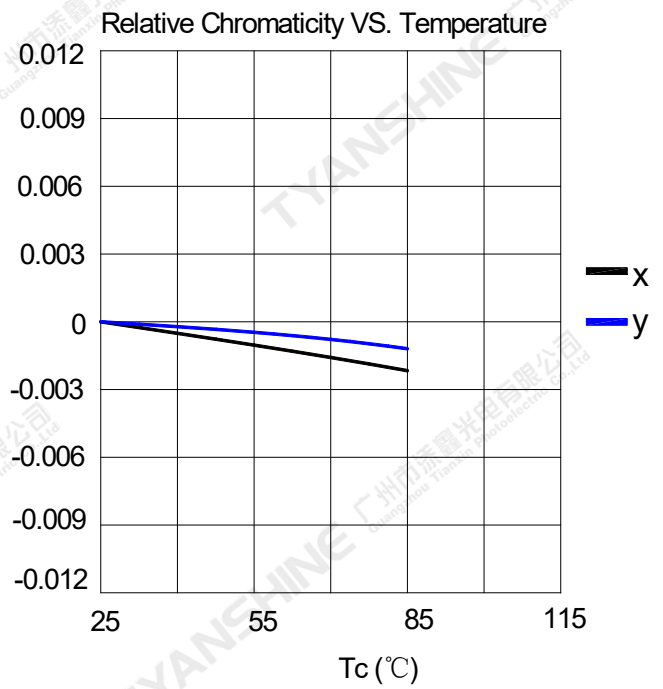
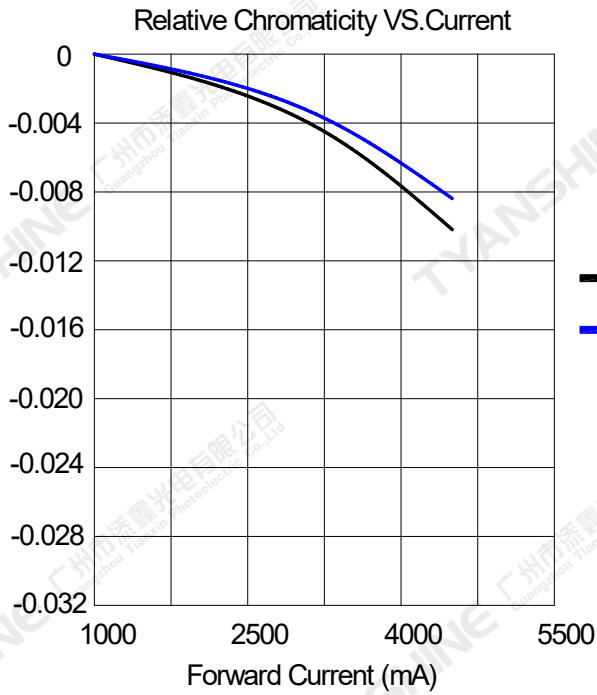
**Notes:**

- 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:±0.15V.

**Typical Electrical/Optical Characteristics Curves(IF=1A)**

(25°C Ambient Temperature Unless Otherwise Noted)





**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

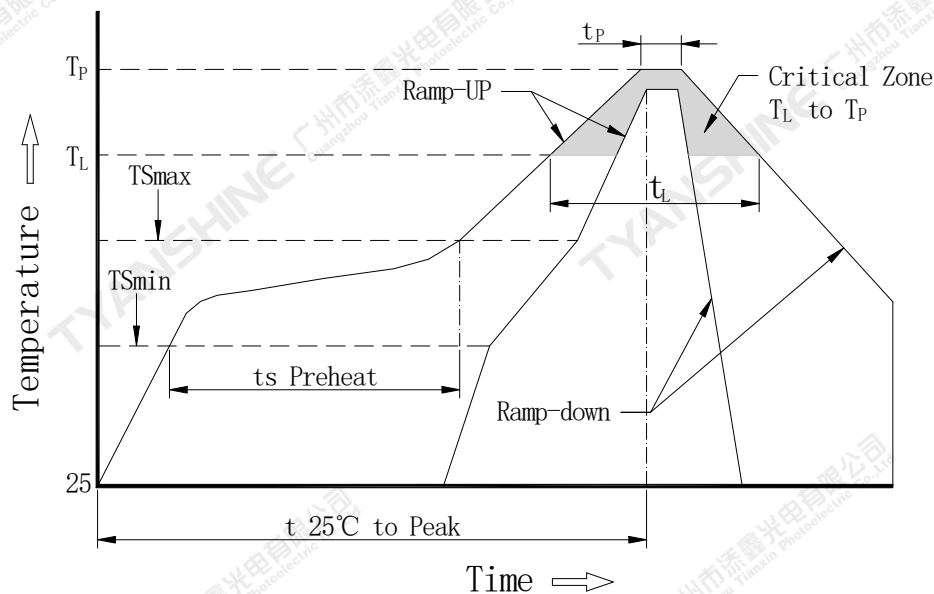
### Storage Environment Condition

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	Lead-Based Solder
Average Ramp-Up Rate ( $T_{Smax}$ to $T_P$ )	3°C/second max.
Preheat: Temperature Min ( $T_{Smin}$ )	130°C
Preheat: Temperature Max ( $T_{Smax}$ )	190°C
Preheat: Time ( $T_{Smin}$ to $T_{Smax}$ )	120-180 seconds
Time Maintained Above: Temperature ( $T_L$ )	230°C
Time Maintained Above: Time ( $T_L$ )	60-150 seconds
Peak/Classification Temperature ( $T_P$ )	255°C
Time Within 5°C of Actual Peak Temperature ( $T_P$ )	10-35seconds
Ramp-Down Rate	5°C/second max.
Time 25°C to Peak Temperature	7 minutes max.

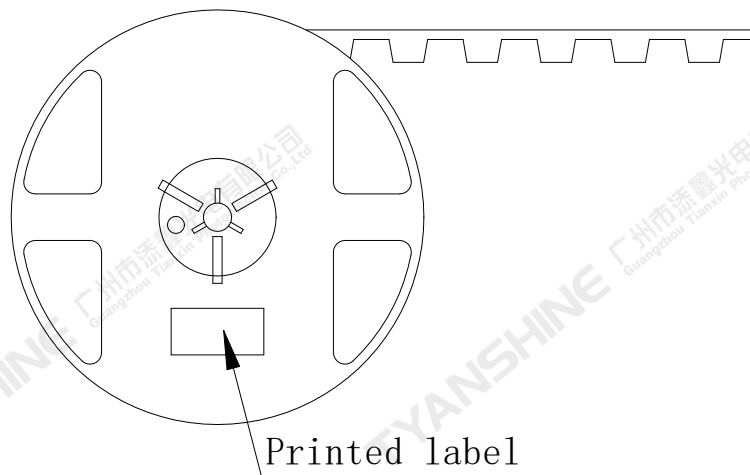
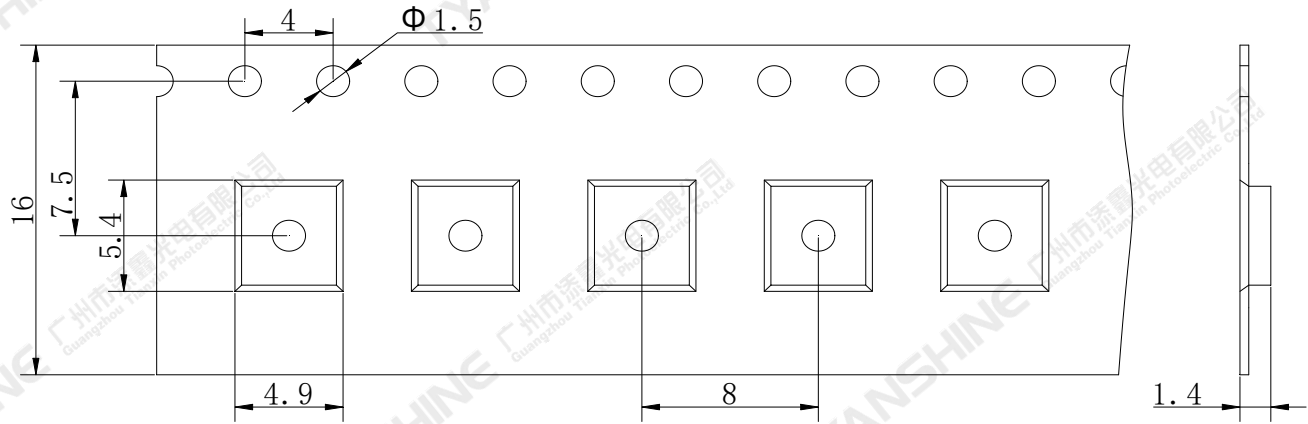
### Note:

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

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**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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