

# TX-2016G8VSA1-NP3CD-01

## PRODUCT SPECIFICATION

### Features:

- ◆ Excellent transiting heat from LED chip operating under 2500mA.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆ GaN

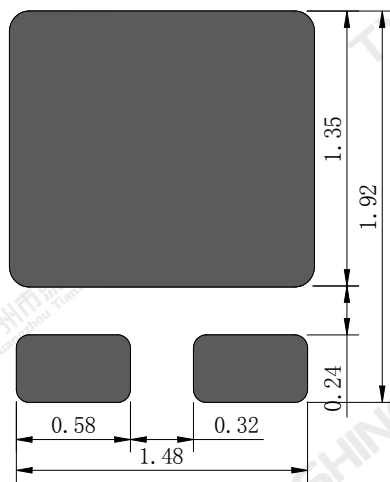
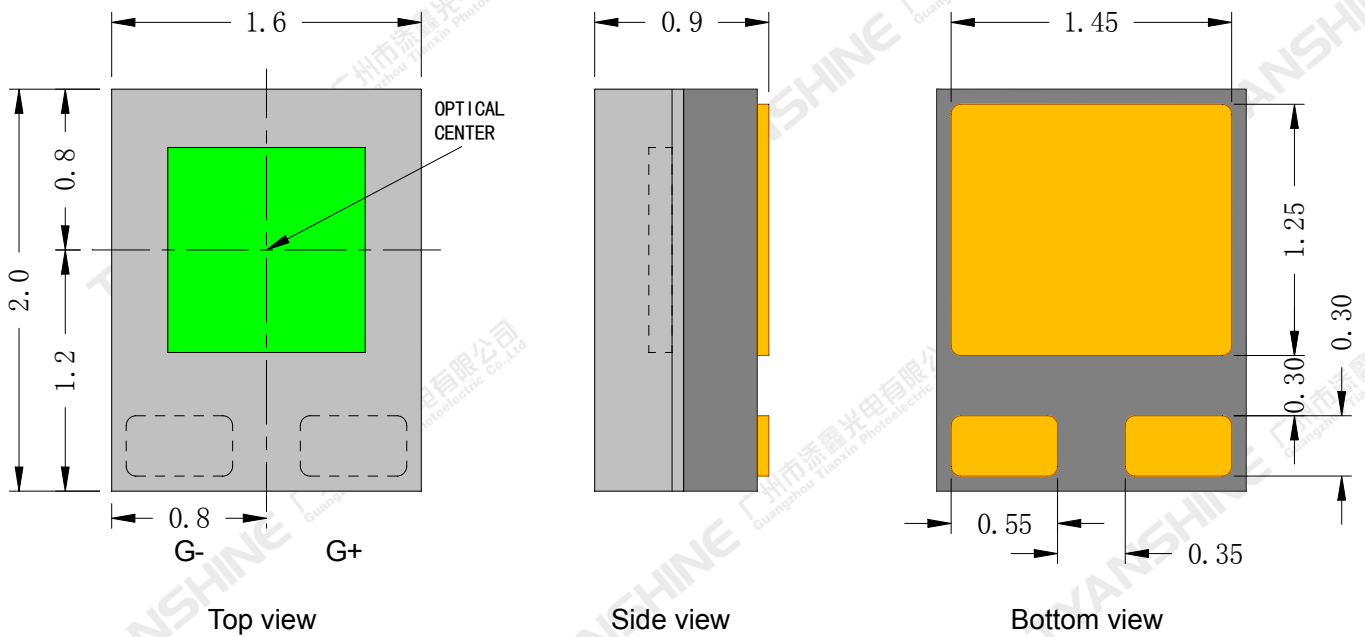
### Emitting Color:

- ◆ Green(G)

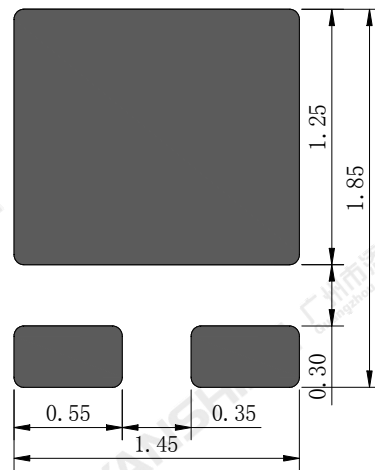
### Applications:

- ◆ Portable Flashlight
- ◆ Garden lighting
- ◆ General Lighting

**Package Dimensions:**



Recommended solder pad



Recommended stencil pattern

**Notes:**

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

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

Parameter	Symbol	Ratings	Unit
Forward Current	IF	2500	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	10.25	W
Junction Temperature	Tj	150	°C
Electrostatic Discharge Threshold (ESD)	ESD	ESD sensitive device	V
Storage Temperature	Tstg	-40~+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 , IF=1.0A)**

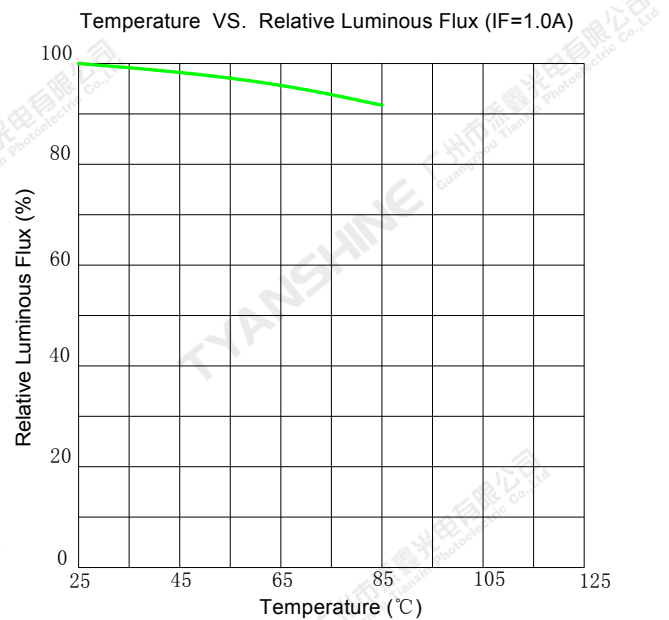
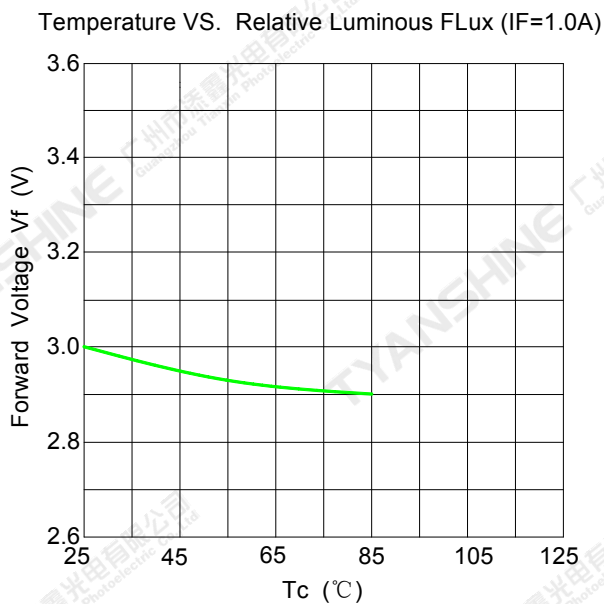
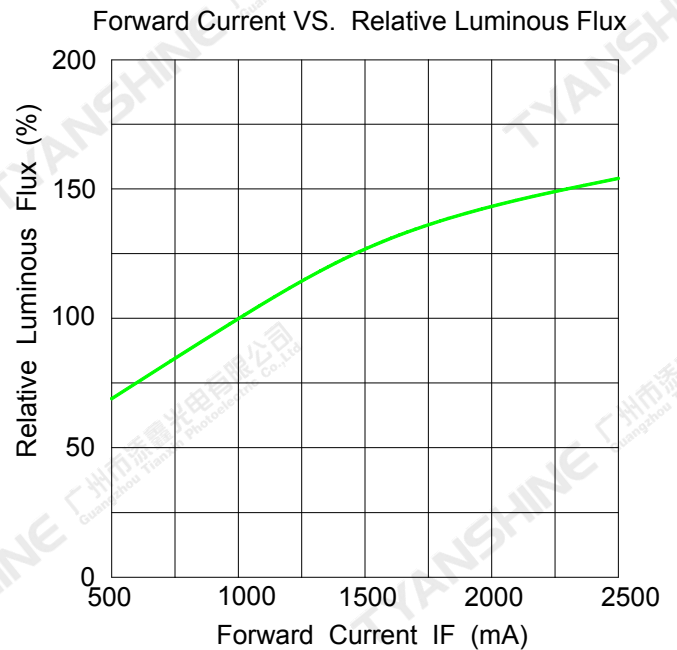
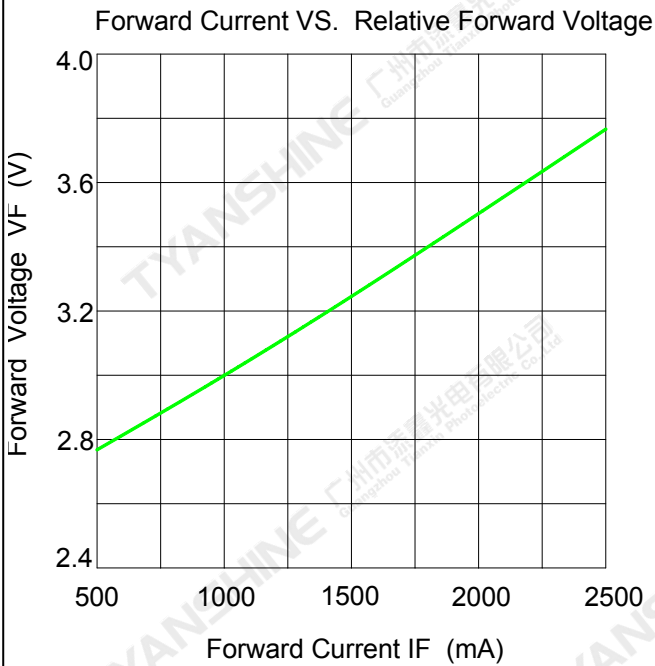
Parameter	Symbol	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	210	235	—	lm
Forward Voltage	$V_f$	2.8	3.0	3.5	V
Peak Emission Wavelength	$\lambda_p$	517	522	527	nm
Dominant Wavelength	$\lambda_d$	524	529	534	nm
Spectral Line Half-Width	$\Delta\lambda$	28	33	38	nm
Viewing Angle at 50% IV	$2\theta_{1/2}$	—	120	—	Deg
Reverse Current	$I_R$	—	—	2	$\mu A$
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	4.8	—	K/W
Temperature Coefficient of Voltage	$V\Delta F/T$	—	-3.3	—	mV/°C

**Notes:**

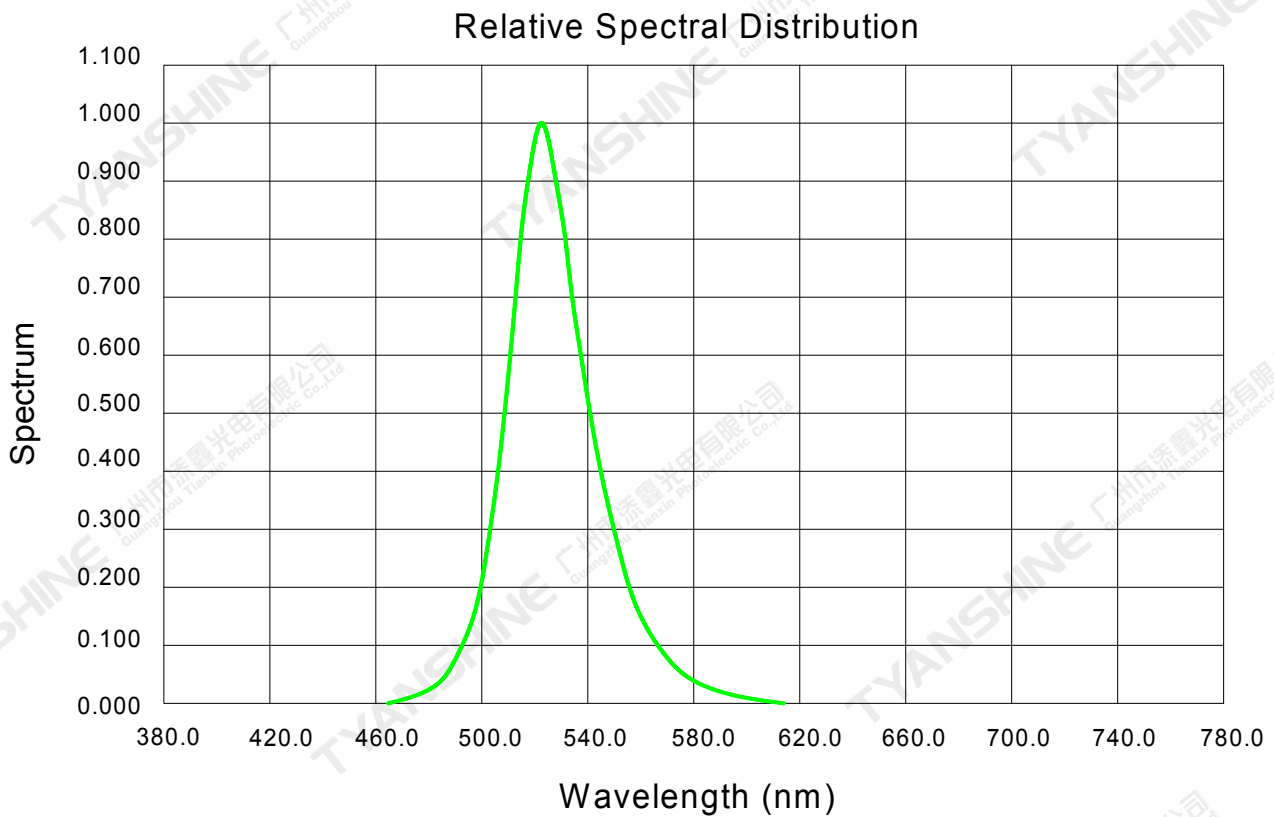
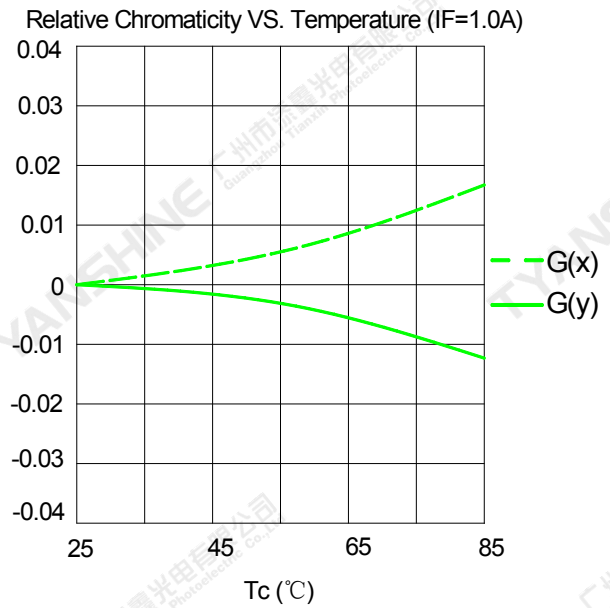
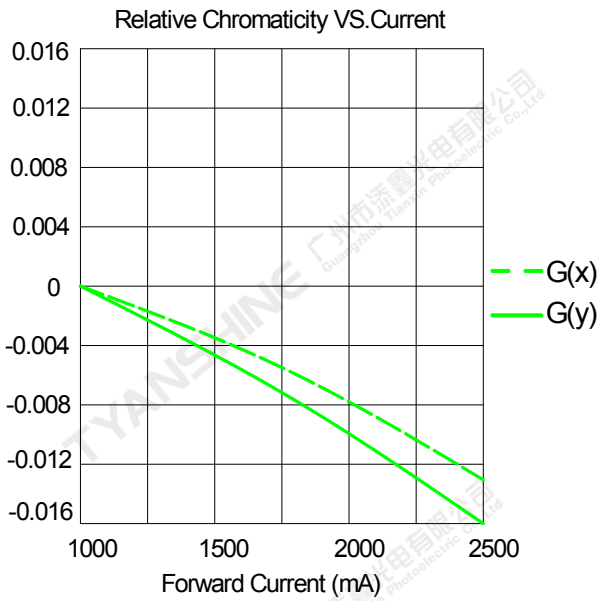
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.Luminous flux measurement tolerance: $\pm 10\%$ .
- 4.Forward voltage measurement tolerance: $\pm 0.3V$ .
- 5.Ra measurement tolerance: $\pm 2$ .

## Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



**Notes:** — Green (G) ;



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**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  $\pm 5^\circ$ .

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## Usage Precautions

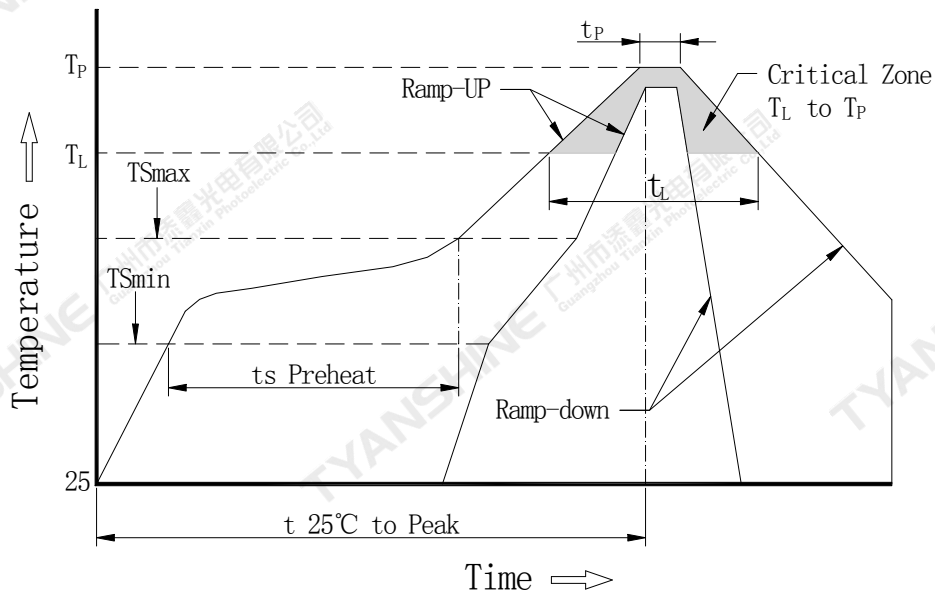
### Storage Environment Condition

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 Solder
Average Ramp-Up Rate ( $T_{Smax}$ to $T_P$ )	3°C/second max.
Preheat: Temperature Min ( $T_{Smin}$ )	100°C
Preheat: Temperature Max ( $T_{Smax}$ )	150°C
Preheat: Time ( $T_{Smin}$ to $T_{Smax}$ )	60-120 seconds
Time Maintained Above: Temperature ( $T_L$ )	183°C
Time Maintained Above: Time ( $T_L$ )	60-150 seconds
Peak/Classification Temperature ( $T_P$ )	225°C
Time Within 5°C of Actual Peak Temperature ( $T_P$ )	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.