

TX-2020B3VSA1-NG4DA-01

PRODUCT SPECIFICATION

Features:

- ◆ Excellent transiting heat from LED chip operating under 1000mA.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

- ◆ GaN

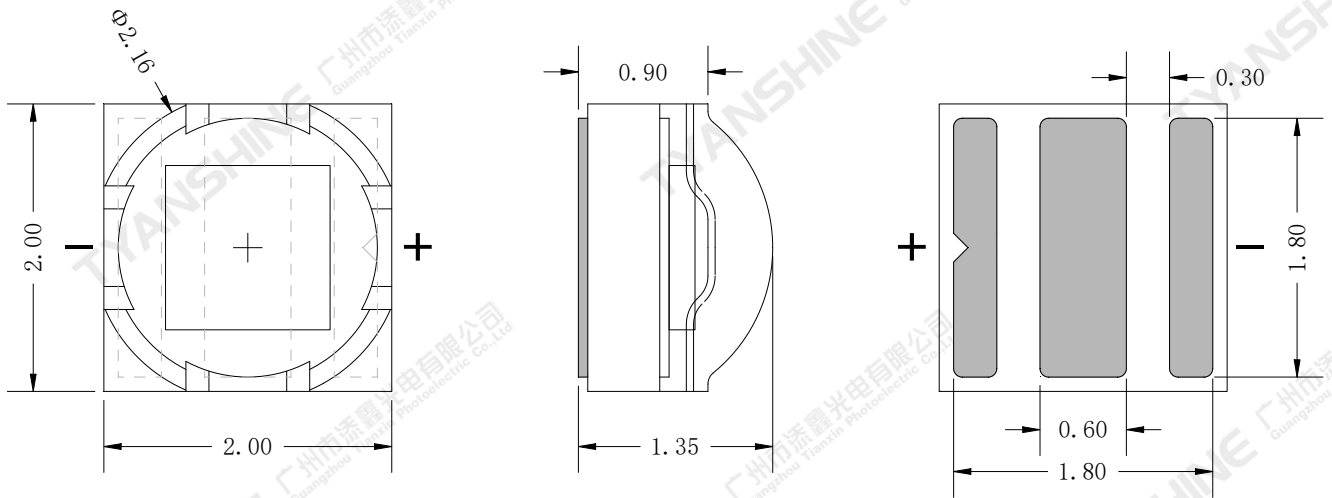
Emitting Color:

- ◆ Blue(B)

Applications:

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

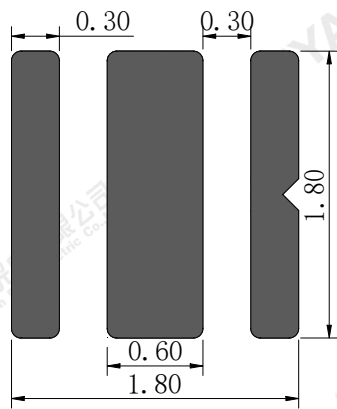
Package Dimensions:



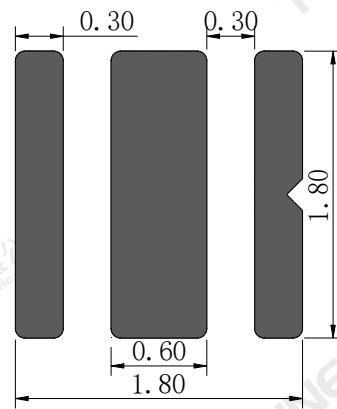
Top view

Side view

Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

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

Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	1000	mA
Peak Forward Current ^{Note 1}	I _{FP}	1500	
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	3.6	W
Junction Temperature	T _J	150	°C
Electrostatic Discharge Threshold (ESD)	ESD	ESD sensitive device	V
Storage Temperature	T _{stg}	-40~+70	°C
Operation Temperature	T _{opr}	-30~+85	

Note: 1.Pulse width ≤0.1 msec, duty ≤1/10.

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=0.35A)

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	Φ_v	B(Typ λ_d :455nm)	14	20	—	lm
		B(Typ λ_d :470nm)	30	36	—	
Forward Voltage	V_f	B	2.6	2.8	3.3	V
Peak Emission Wavelength	λ_p	B	445	450	458	nm
		B	460	465	470	
Dominant Wavelength	λ_d	B	450	455	463	nm
		B	465	470	475	
Spectral Line Half-Width	$\Delta\lambda$	—	21	24	27	nm
Viewing Angle at 50% IV	$2\theta_{1/2}$	—	—	160	—	Deg
Reverse Current	I_R	$V_R=5V$	—	—	1	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	8.0	—	K/W
Temperature Coefficient of Voltage	$V\Delta F/T$	—	—	-3.3	—	mV/°C

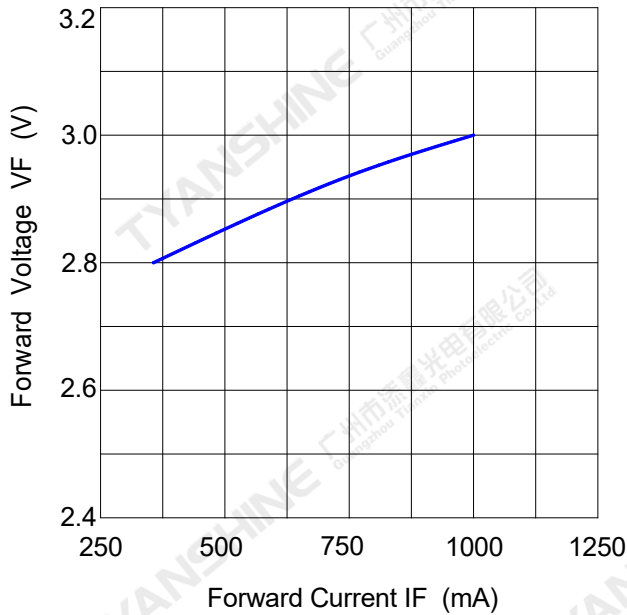
Notes:

- 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: $\pm 10\%$.
- Forward voltage measurement tolerance: $\pm 0.3V$.
- Ra measurement tolerance: ± 2 .

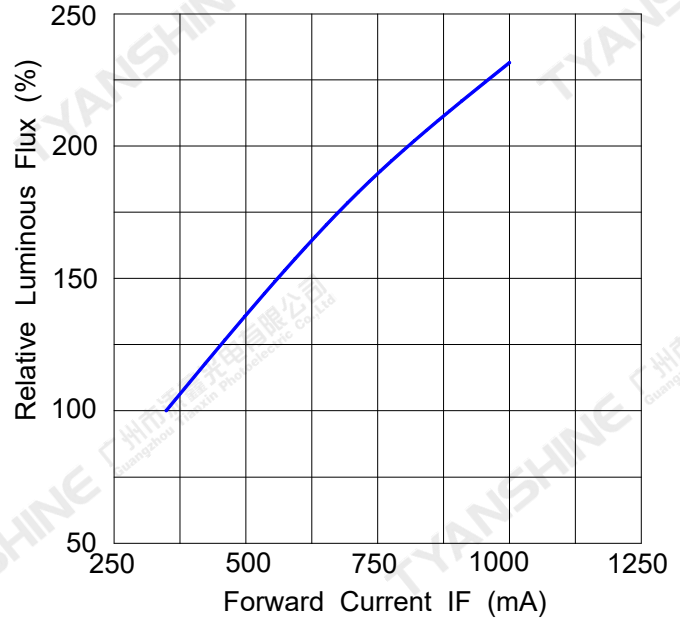
Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

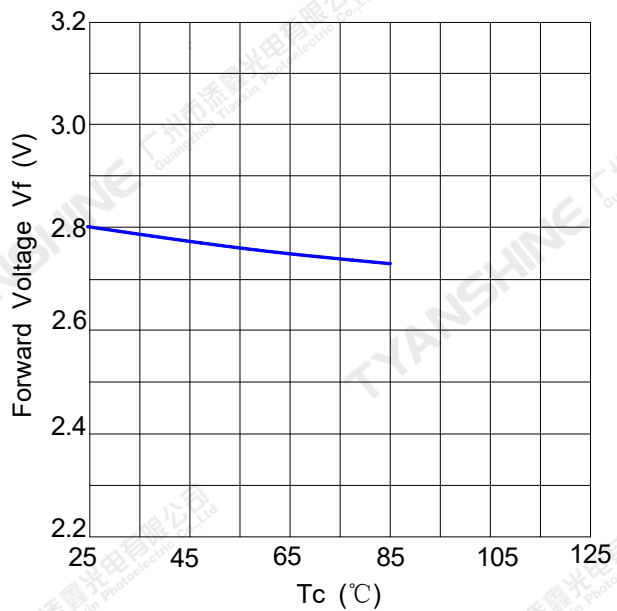
Forward Current VS. Relative Forward Voltage



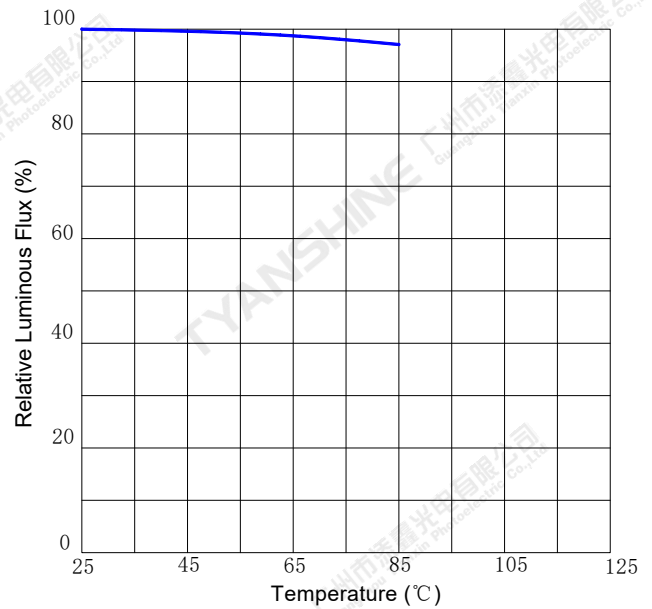
Forward Current VS. Relative Luminous Flux



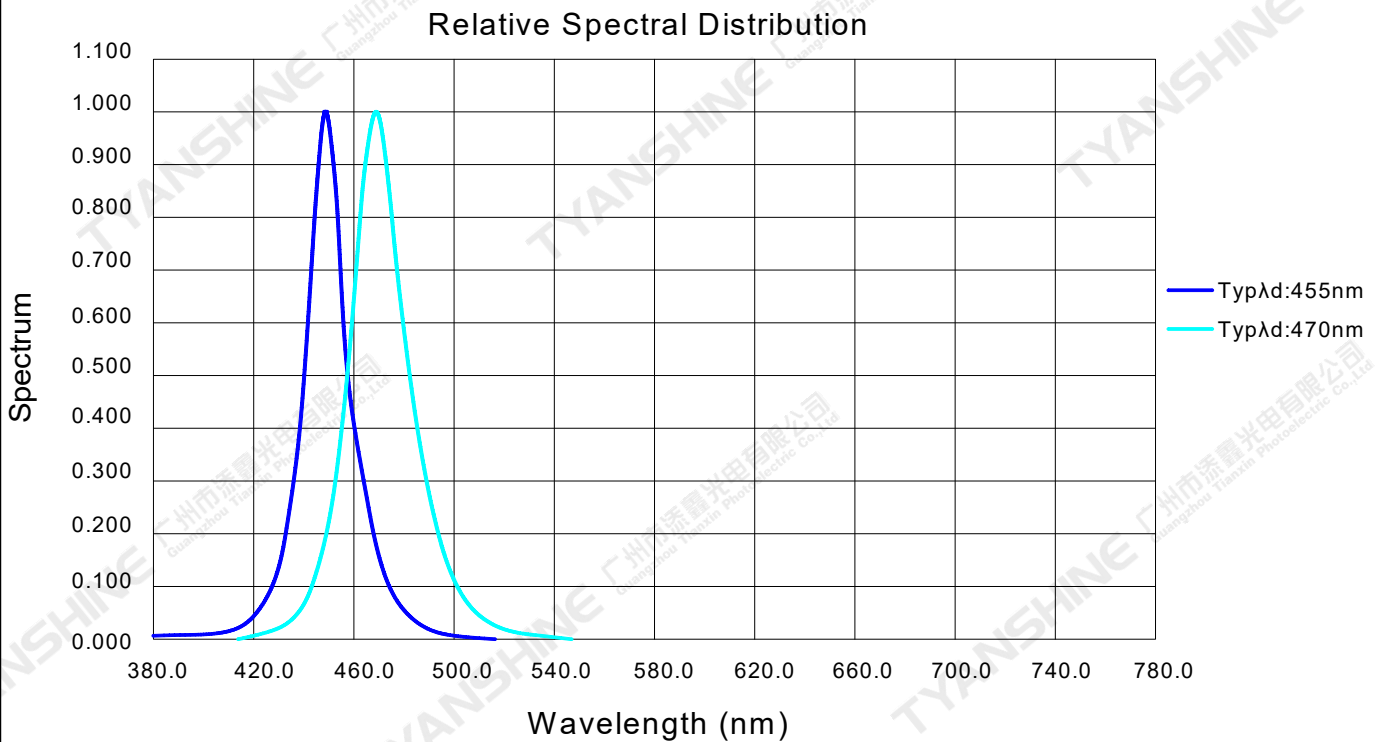
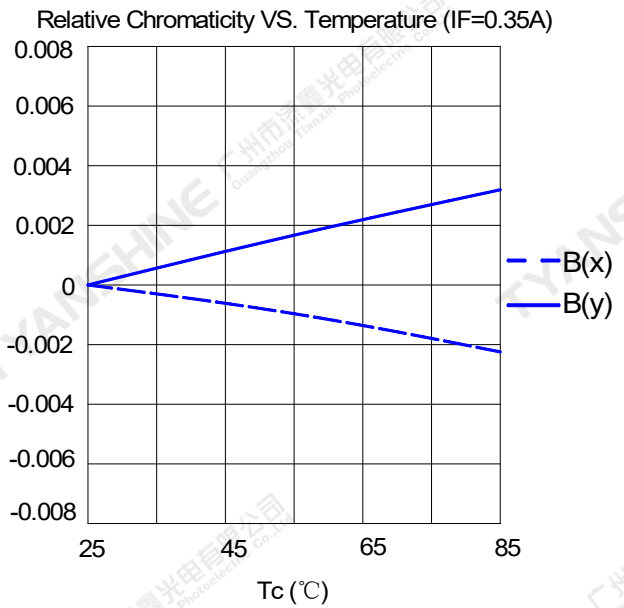
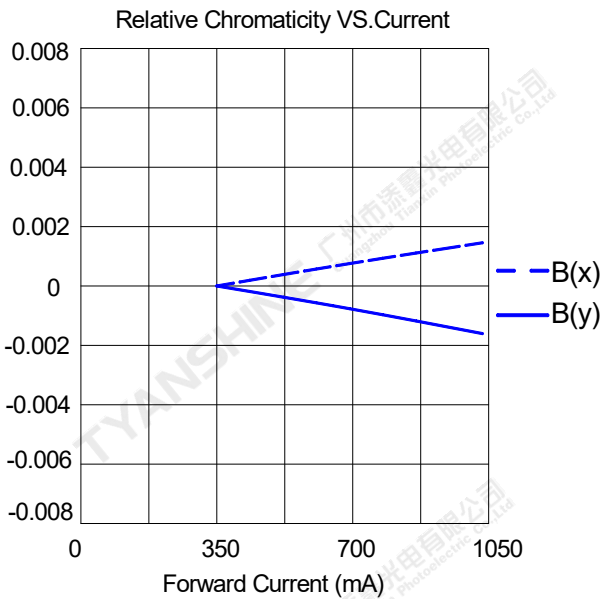
Temperature VS. Relative Luminous FLux (IF=0.35A)



Temperature VS. Relative Luminous Flux (IF=0.35A)



Notes: — Blue (B) ;



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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

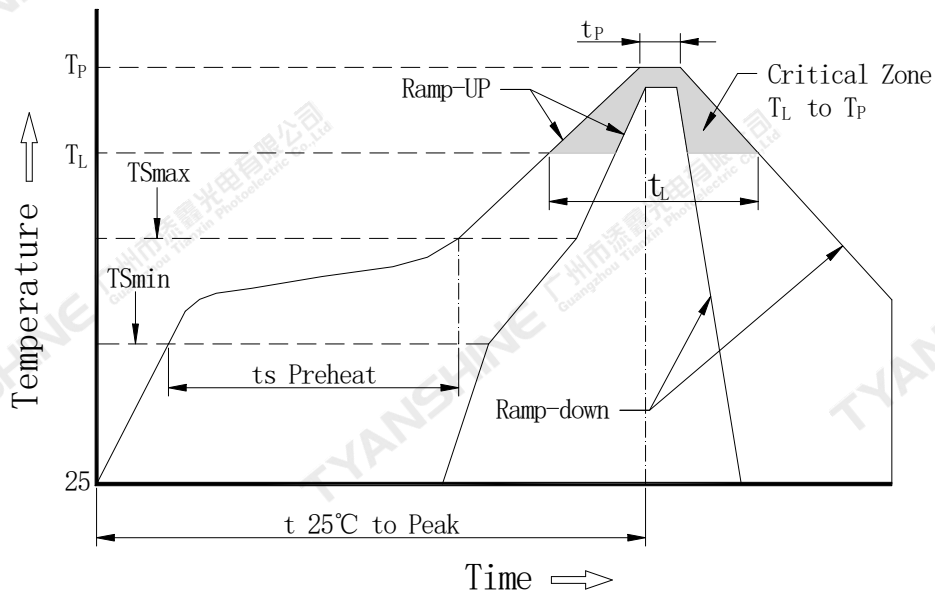
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



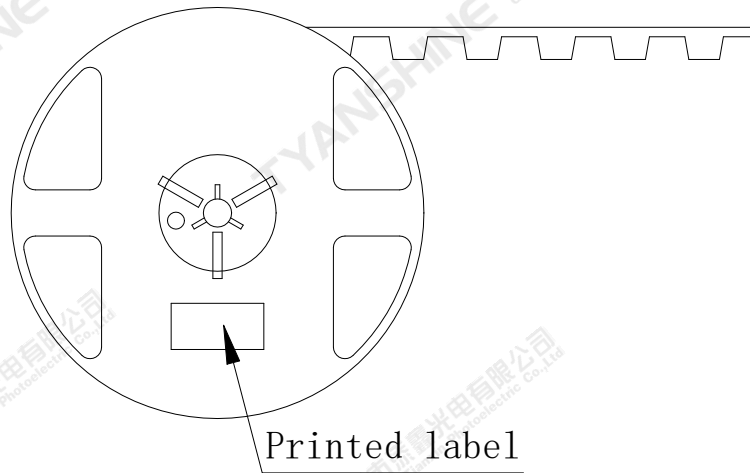
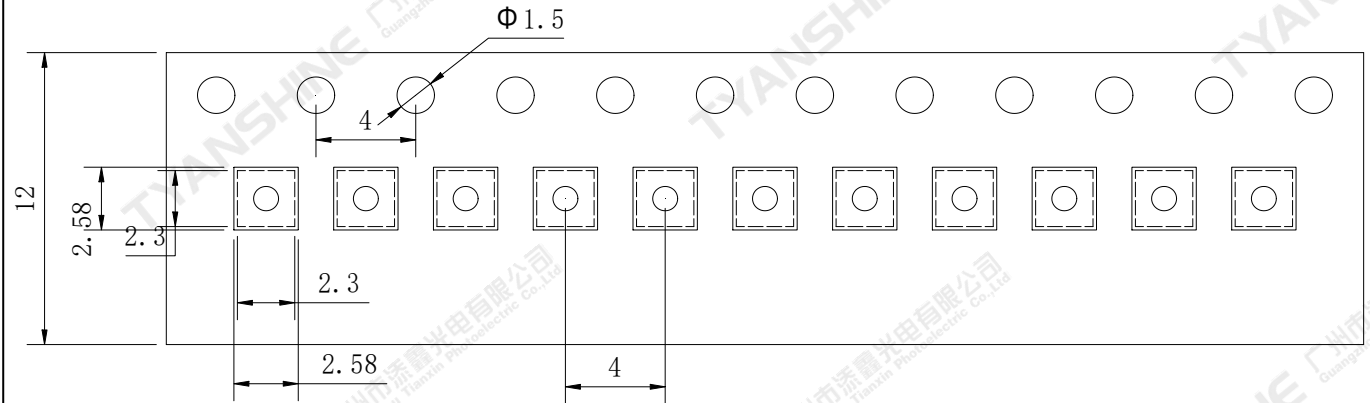
Profile Feature	Pb-Free Solder(SnBi35Ag0.3)
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.
Preheat: Temperature Min (T_{Smin})	100°C
Preheat: Temperature Max (T_{Smax})	150°C
Preheat: Time (T_{Smin} to T_{Smax})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183°C
Time Maintained Above: 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.

Dimensions For Cannulation And Packaging

Quantity:3000 PCS



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.

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