

# TX-1919RGB20D180-001

## PRODUCT SPECIFICATION

### Features:

- ◆ Excellent transiting heat from LED chip operating under 360 mA.
- ◆ Mixing any two colors of light, there will be no partial color and color spots uneven phenomenon.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆ Red: AlGaInP
- ◆ Green: GaInN
- ◆ Blue: GaN

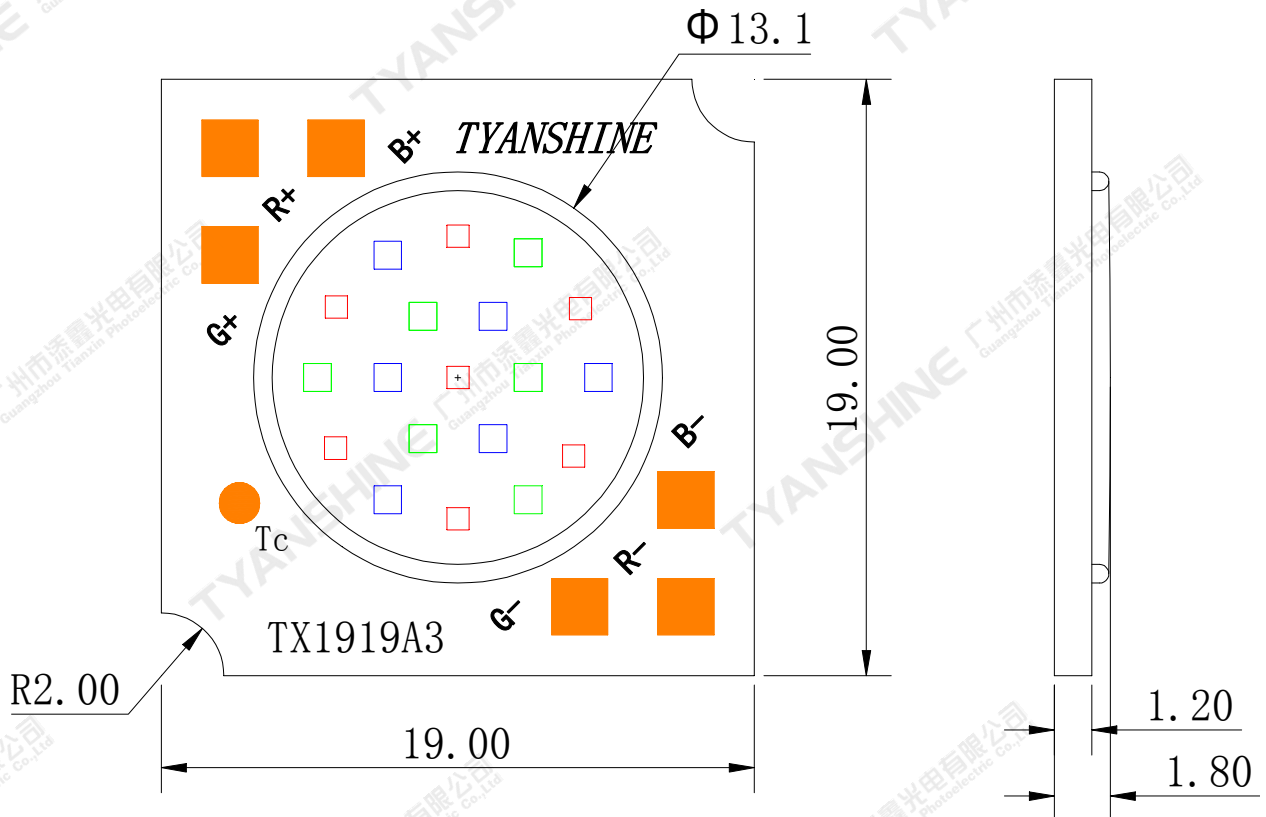
### Emitting Color:

- ◆ Red
- ◆ Green
- ◆ Blue

### Applications:

- ◆ Entertainment lighting
- ◆ Landscape lighting
- ◆ Commercial lighting

**Package Dimensions:**



**Notes:**

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

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

Parameter	Symbol	Ratings	Unit
Forward Current	IF	360	mA
Reverse Voltage	VR	Not designed for reverse operation	V
Power Dissipation	PD	R	6480
		G	6840
		B	6840
Junction Temperature	Tj	R	115
		G	150
		B	150
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	Tstg	-40~+70	°C
Operation Temperature	Topr	-30~+100	

**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)**

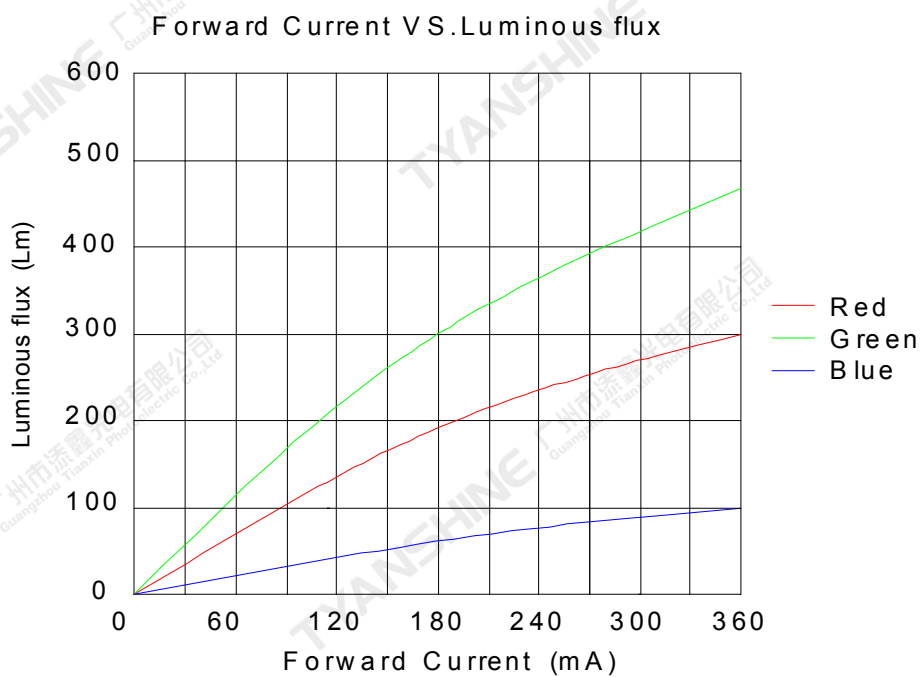
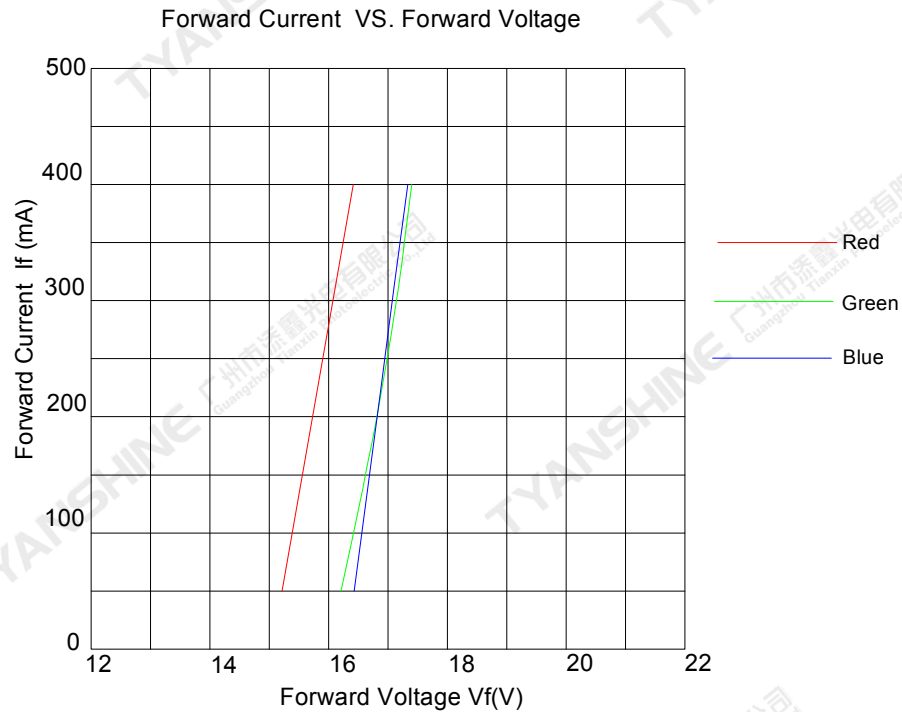
Parameter	Symbol	Condition	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=320mA	R	240	270	—	lm
			G	380	420	—	
			B	80	90	—	
Dominant Wavelength	$\lambda_d$		R	620	623	626	nm
			G	525	527	530	
			B	460	462	465	
Peak-emission Wavelength	$\lambda_p$		R	625	630	635	nm
			G	510	515	520	
			B	458	460	462	
Spectral Line Half-Width	$\Delta\lambda$		R	15	20	25	nm
		G	25	30	35		
		B	15	20	25		
Forward Voltage	$V_f$	R	14	16	18	V	
		G	15	17	19		
		B	15	17	19		
Viewing Angle at 50 % IV	$2\theta_{1/2}$	—	—	—	120	—	Deg
Thermal Resistance Junction to Case	$R\theta_{J-C}$	If=320mA	R	—	1.5	—	K/W
			G	—	1.5	—	
			B	—	1.5	—	
Temperature Coefficient of Voltage	$V\Delta F/T$		—	—	—	-2	—

**Notes:**

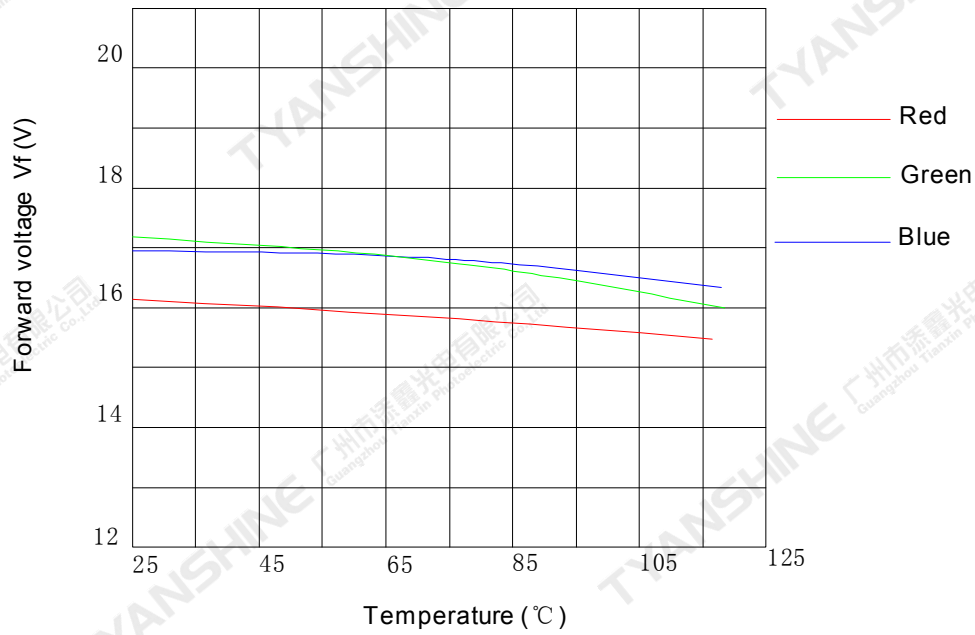
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.Luminous flux measurement tolerance:±15%.
- 4.Forward voltage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

# Typical Electrical/Optical Characteristics Curves

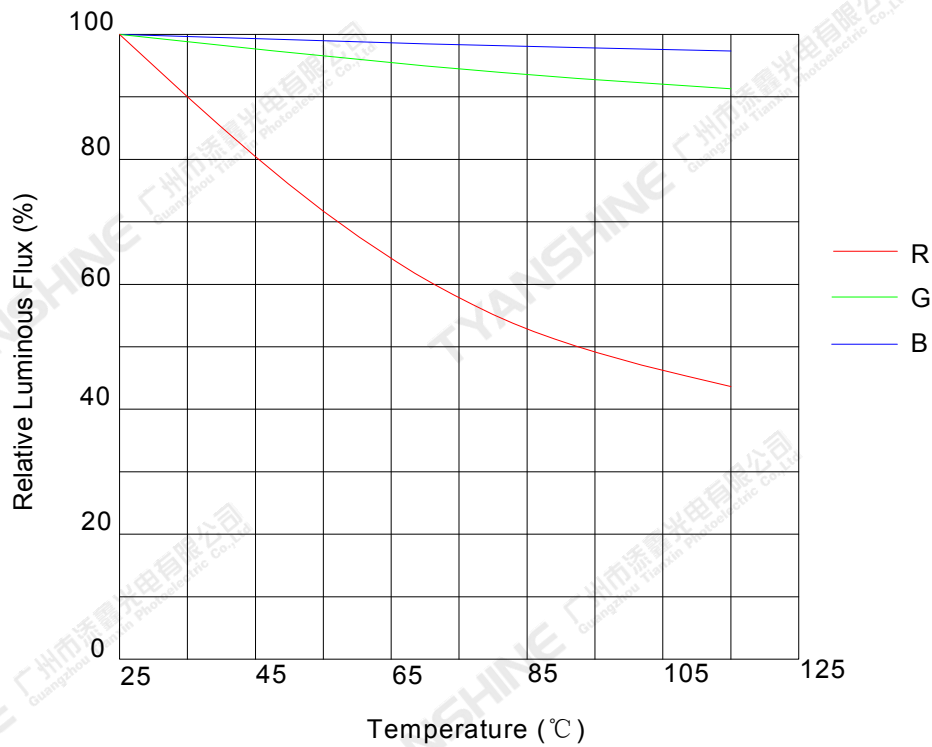
(25°C Ambient Temperature Unless Otherwise Noted)



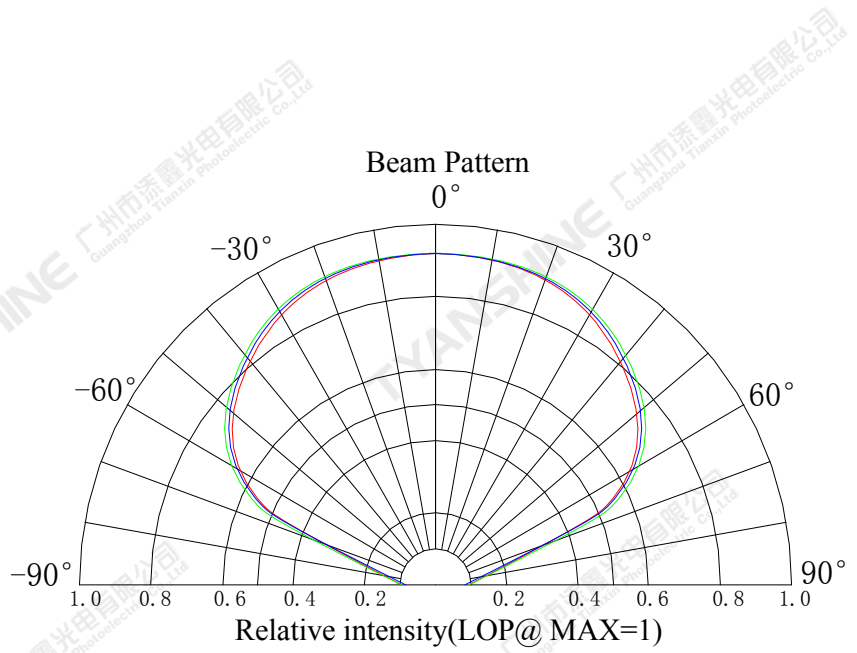
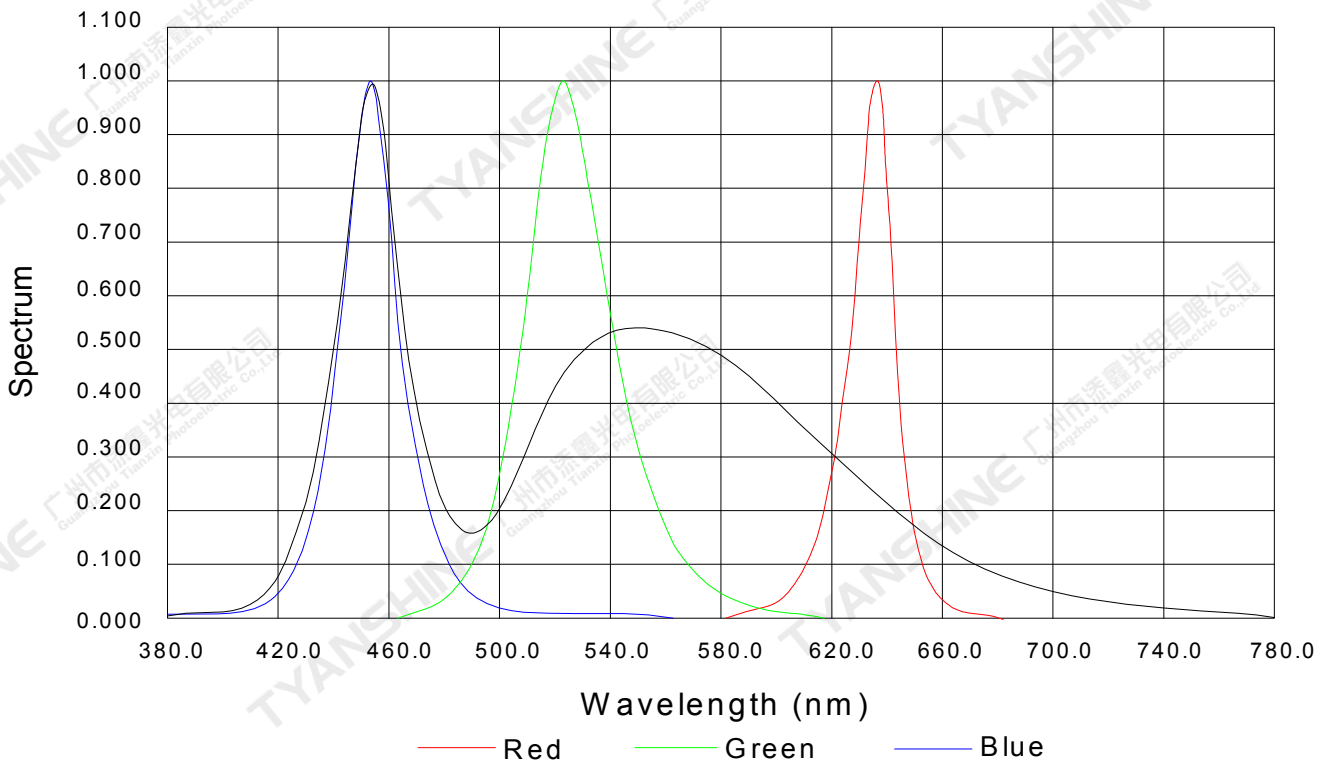
Temperature VS. Forward Voltage (IF=320mA)



Temperature VS. Relative Luminous Flux (IF=320mA)



**Relative Spectral Distribution**



**Notes:**

1. 2θ 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 ± 5°.

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