

# TX-BRWG2A120-101D

## PRODUCT SPECIFICATION

Approved by:

Checked by:

Prepared by:

<b>Part No.</b>	TX-BRWG2A120-101D	<b>Spec No.</b>	WKF-BA8003	<b>Page</b>	1 of 8
-----------------	-------------------	-----------------	------------	-------------	--------

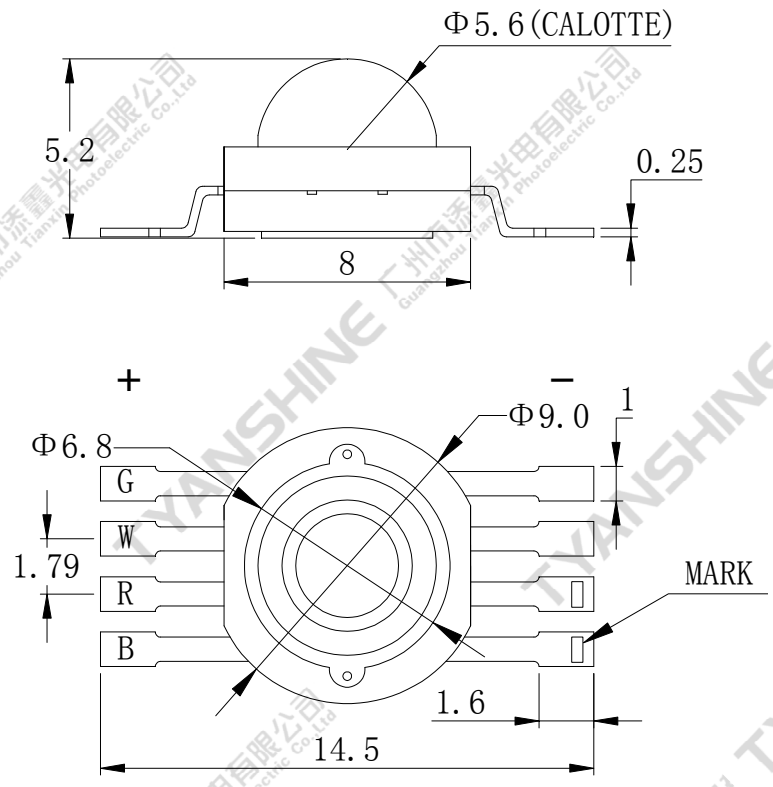
**Features:**

- ◆ Excellent Transiting Heat from LED Chip Operating under 500mA
- ◆ High Luminous Output
- ◆ No UV

**Typical purpose:**

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

**Package Dimensions:**



Part No.	TX-BRWG2A120-101D	Spec No.	WKF-BA8003	Page	2 of 8
----------	-------------------	----------	------------	------	--------

**Notes:**

- 1.All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$  mm (0.01") unless otherwise noted.

Part NO.	Chip Material				Lens Color	Source Color
	Blue GaInN	Red AlGaInP	White GaInN	Green GaInN		
TX-BRWG2A120-101D					Water Clear	Blue & True Redn & White & Gree

**Absolute Maximum Ratings at Ta=25°C**

Parameter	Symbol	MAX.	Unit
LED Junction Temperature	T <sub>j</sub>	150	°C
Power Dissipation	P <sub>D</sub>	B	1800
		R	1300
		W	1800
		G	1800
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I <sub>FP</sub>	1000	mA
Continuous Forward Current	I <sub>F</sub>	500	mA
Reverse Voltage	V <sub>R</sub>	5	V
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Operating Temperature Range	T <sub>opr</sub>	-30 to +70	°C
Storage Temperature Range	T <sub>spr</sub>	-40 to +100	
Lead Soldering Temperature	T <sub>sol</sub>	Hand Soldering: 350°C for 8 sec.	

**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.

<b>Part No.</b>	TX-BRWG2A120-101D	<b>Spec No.</b>	WKF-BA8003	<b>Page</b>	3 of 8
-----------------	-------------------	-----------------	------------	-------------	--------

**Characteristics at  $I_f=500mA$  ,  $V_r=5V$  ( $T_a=25^\circ C$ ):**

Parameter	Symbol	Emitting Color	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	$\Phi_v$	B	20	32	—	lm
		R	70	90	—	
		W	140	170	—	
		G	120	155	—	
Viewing Angle at 50% IV	$2\theta_{1/2}$	B	—	120	—	Deg
		R	—	120	—	
		W	—	120	—	
		G	—	120	—	
Peak Emission Wavelength	$\lambda_p$	B	443	448	453	nm
		R	618	632	628	
		G	512	519	526	
Dominant Wavelength	$\lambda_d$	B	450	455	460	nm
		R	618	623	628	
		G	515	520	532	
Correlated Colour Temperature	CCT	W	6000	7000	8000	K
Spectral Line Half-Width	$\Delta\lambda$	B	15	20	25	nm
		R	15	20	25	
		W	15	20	25	
		G	25	30	35	
Forward Voltage	$V_f$	B	3.0	3.3	3.6	V
		R	2.0	2.3	2.6	
		W	3.0	3.3	3.6	
		G	3.0	3.3	3.6	
Reverse Current	$I_R$	—	—	—	10	$\mu A$
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	8.3	—	K/W
Temperature Coefficient of Forward Voltage	$V\Delta F/T$	—	—	-2	—	mV/ $^\circ C$

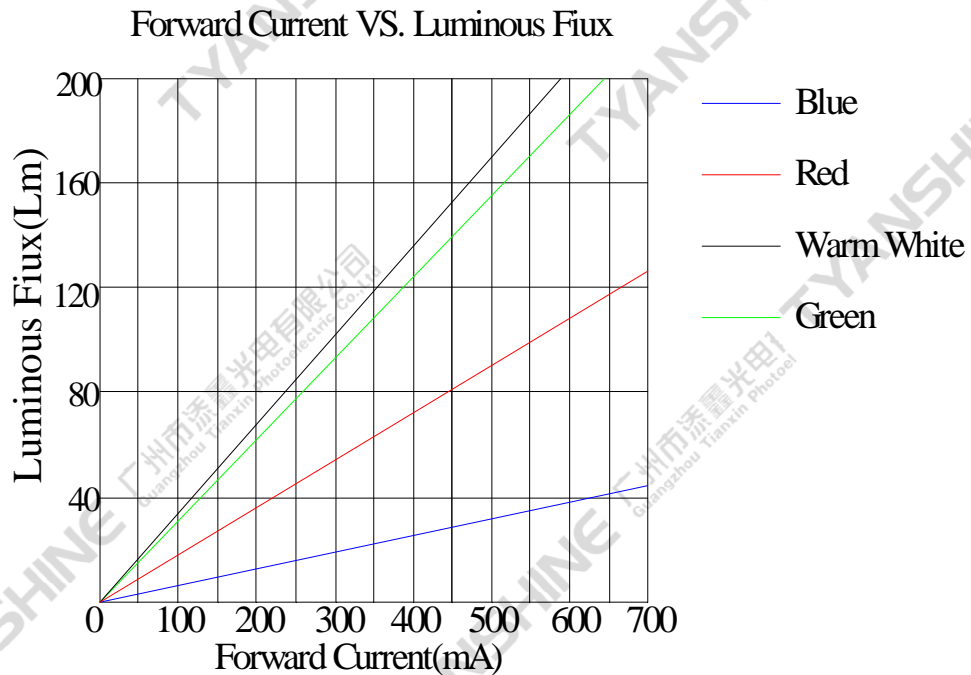
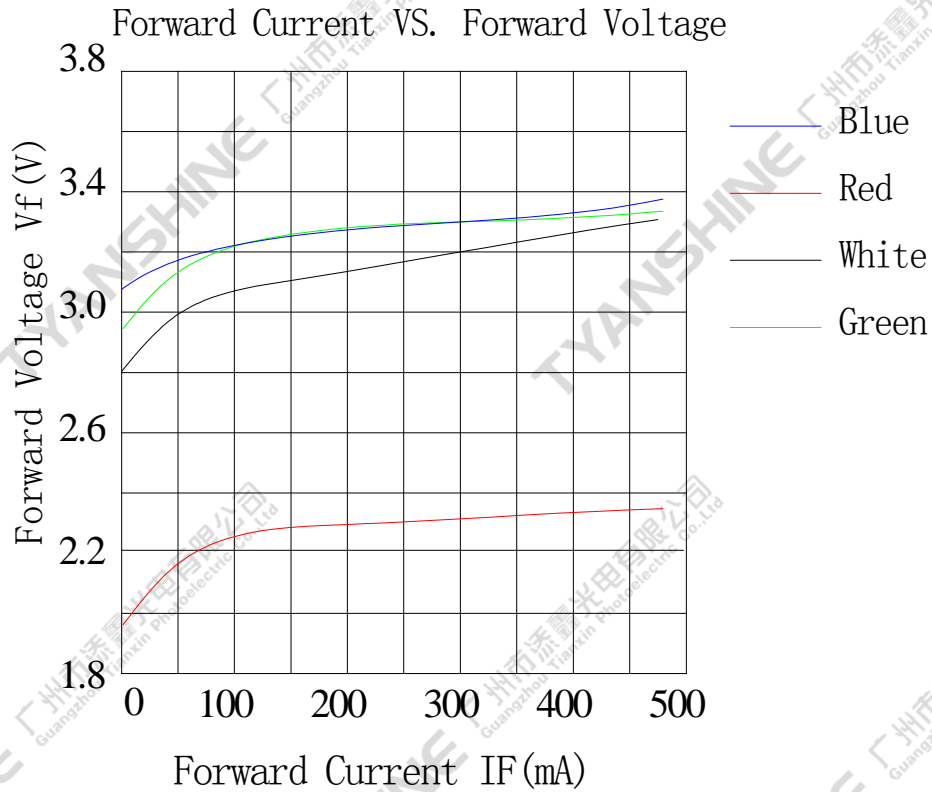
**Notes:**

- 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
- The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- Flux is measured with an accuracy of  $\pm 15\%$ .
- Forward voltage is measured with an accuracy of  $\pm 0.15V$ .

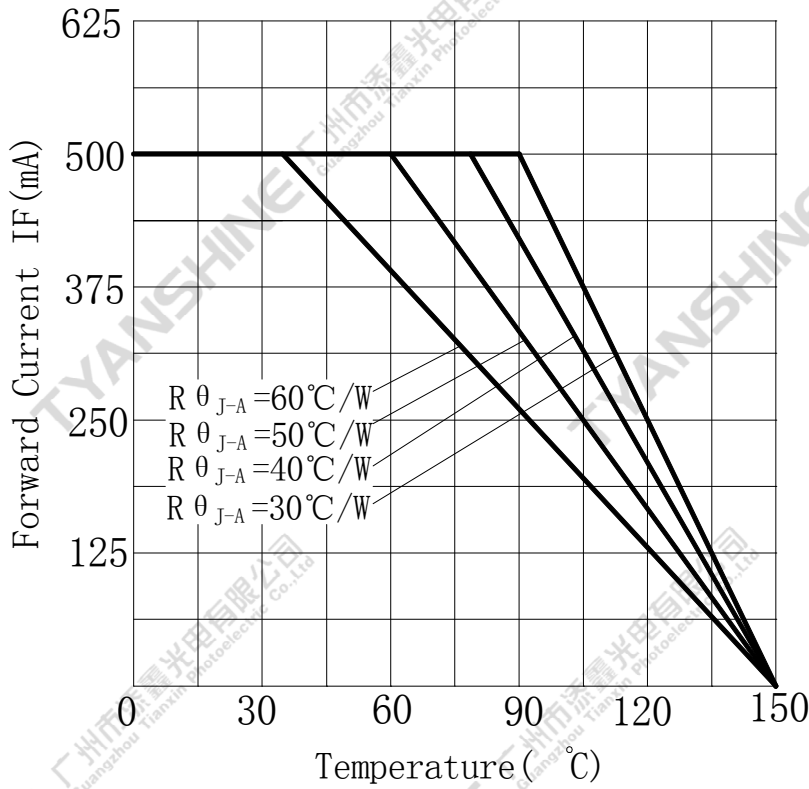
<b>Part No.</b>	TX-BRWG2A120-101D	<b>Spec No.</b>	WKF-BA8003	<b>Page</b>	4 of 8
-----------------	-------------------	-----------------	------------	-------------	--------

**Typical Electrical / Optical Characteristics Curves**

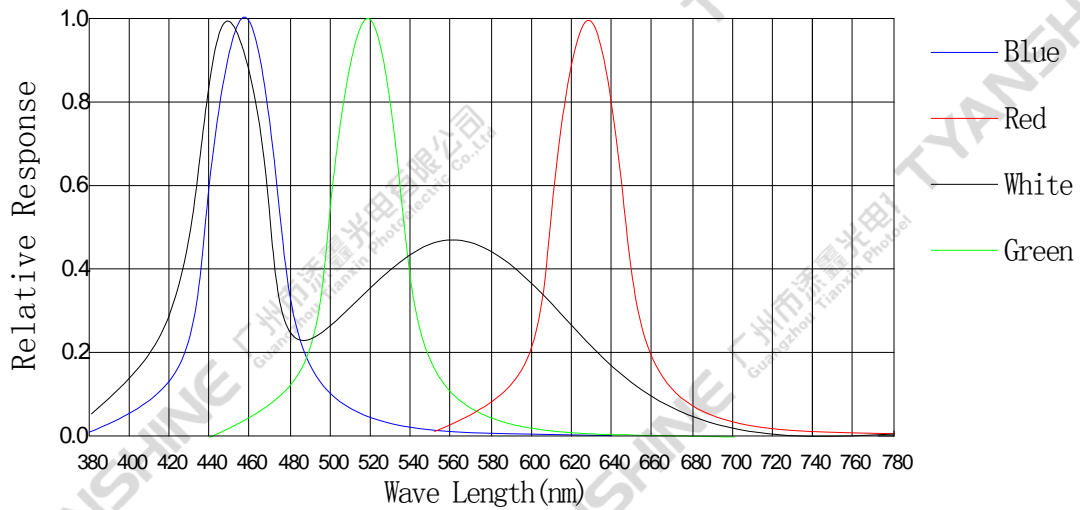
(25°C Ambient Temperature Unless Otherwise Noted)

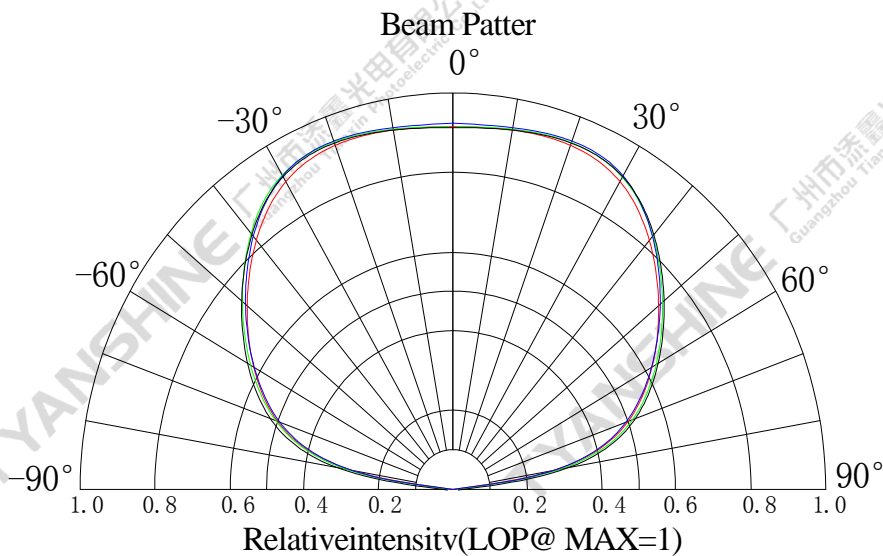


Ambient Temperature VS. Forward Current



Spectral Radiance: Red Peak@632nm  
Green Peak@519nm  
Blue Peak@455nm





**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  $\pm 5^\circ$ .

Part No.	TX-BRWG2A120-101D	Spec No.	WKF-BA8003	Page	7 of 8
----------	-------------------	----------	------------	------	--------

**PRECAUTION IN USE**

**Storage**

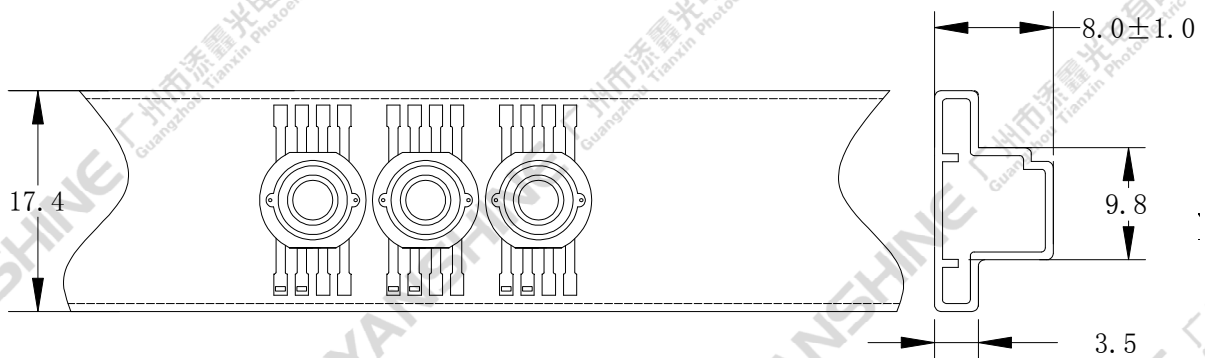
Recommended storage environment  
 Temperature: 5°C ~ 30°C (41oF ~ 86oF)  
 Humidity: 60% RH Max.

**Soldering**

Hand Soldering	
Temperature	350°C Max.
Soldering time	8sec. Max.

**Dimensions for Cannulation and Packaging**

**Quantity: 40PCS**



**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is ±2.0 mm (0.08") unless otherwise noted.
3. Product is packaged with silica gel to protect the light-emitting zone. Please avoid the light-emitting area from being pressed, stressed, rubbed, come into contact with sharp metal part which would damage the product.

Part No.	TX-BRWG2A120-101D	Spec No.	WKF-BA8003	Page	8 of 8
----------	-------------------	----------	------------	------	--------