TX-BRWG2A120-101

PRODUCT SPECIFICATION

Approved by: Checked by: Prepared by:

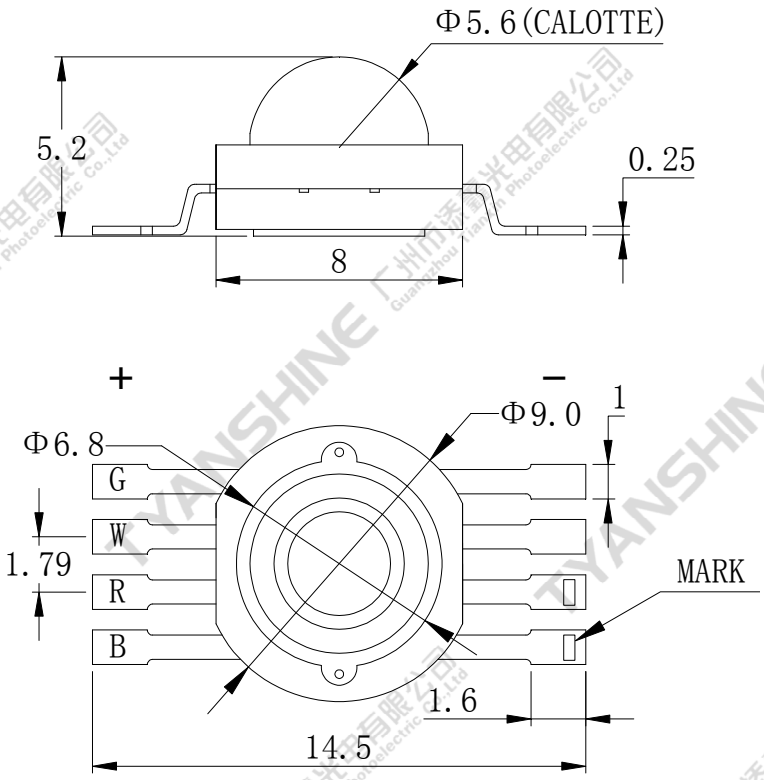
Features:

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

Typical purpose:

- Portable Flashlight
- Garden lighting
- General Lighting

Package Dimensions:



Notes:

1.All dimensions are in millimeters (inches).

2. Tolerance is ±0.25 mm (0.01”) unless otherwise noted.

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

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol		MAX.	Unit
LED Junction Temperature	Tj		150	℃
Power Dissipation	P_D	B	1800	mW
		R	1300	
		W	1800	
		G	1800	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I_{FP}		1000	mA
Continuous Forward Current	IF		500	mA
Reverse Voltage	V_R		5	V
Electrostatic Discharge Threshold (ESD)	ESD		2000	V
Operating Temperature Range	T_{opr}		-40 to +70	℃
Storage Temperature Range	T_{spr}		-40 to +100	
Lead Soldering Temperature	Tsol		Hand Soldering: 350℃ for 8 sec.	

Notes:

1. Specifications are subject to change without notice.
2. Under the stipulated Characteristics parameters above, the life span of the LED is more than 50,000hours.
3. The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
4. 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.

Characteristics at If=500mA ,Vr=5V (Ta=25°C)：

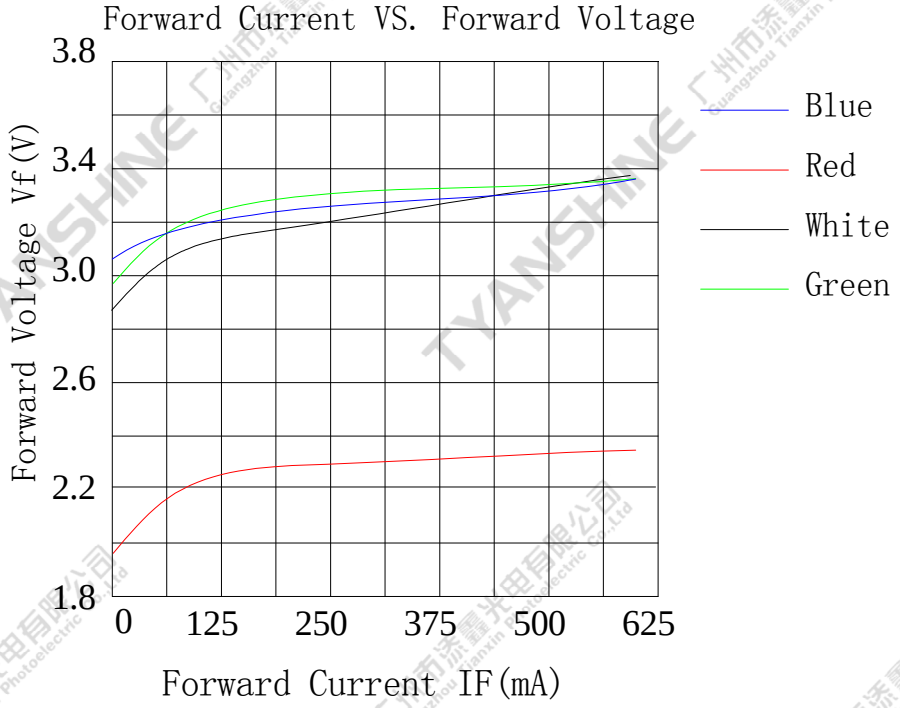
Parameter	Symbol	Emitting Color	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	φ_V	B	20	40	—	lm
		R	70	105	—	
		W	130	170	—	
		G	125	160	—	
Viewing Angle at 50％IV	$2\theta_{1/2}$	B	—	120	—	Deg
		R	—	120	—	
		W	—	120	—	
		G	—	120	—	
Peak Emission Wavelength	λp	B	450	455	460	nm
		R	627	632	637	
		G	510	515	520	
Dominant Wavelength	λd	B	455	460	465	nm
		R	618	623	628	
		G	518	522	528	
Correlated Colour Temperature	CCT	W	6000	7000	8000	K
Spectral Line Half-Width	△λ	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	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	1.5	—	K/W
Temperature Coefficient of Forward Voltage	V△F/T	—	—	-2	—	mV/℃

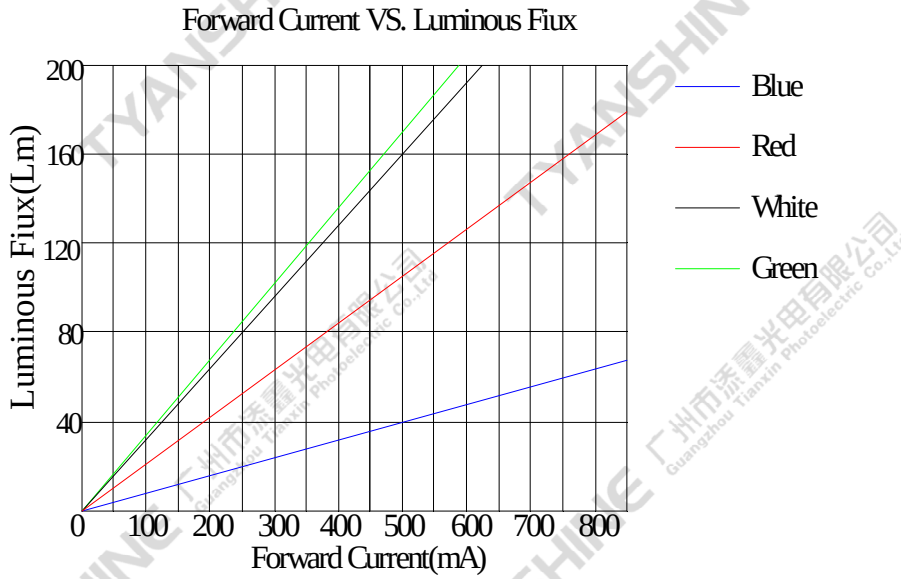
Notes:

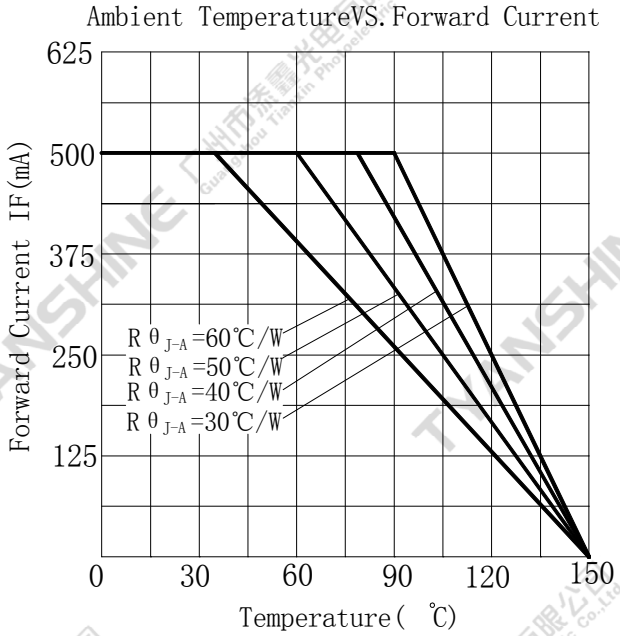
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity
3. The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
4. Flux is measured with an accuracy of ±15%.
5. Forward voltage is measured with an accuracy of ±0.15V.

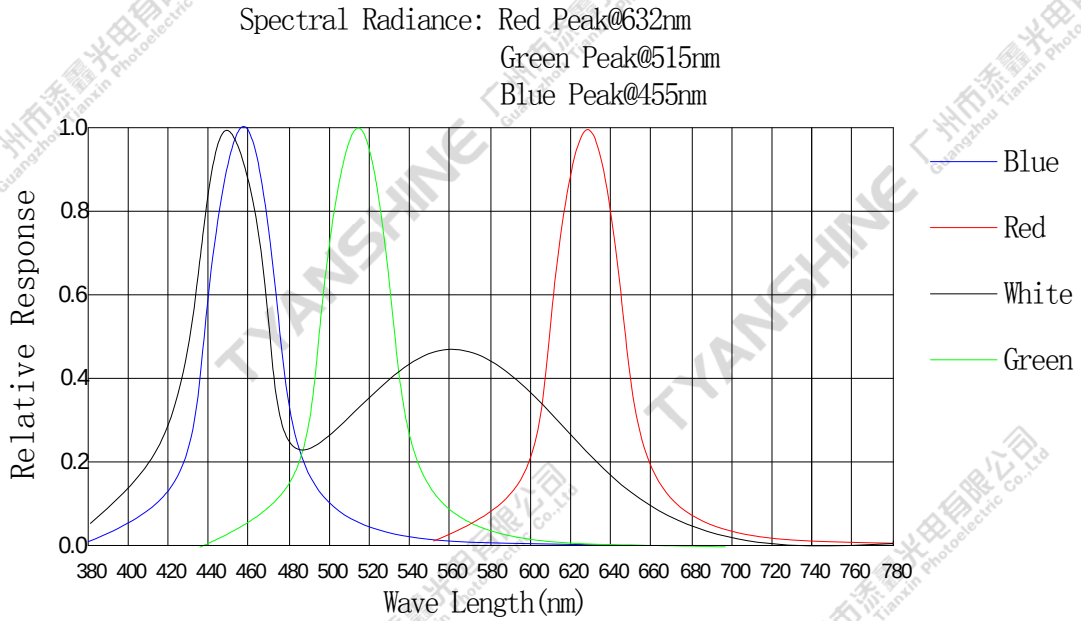
Typical Electrical / Optical Characteristics Curves

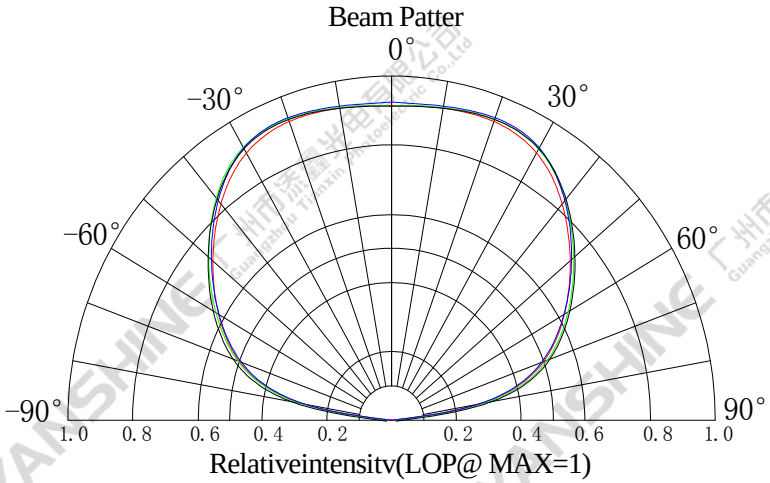
(25℃ Ambient Temperature Unless Otherwise Noted)






Ambient TemperatureVS.Forward Current
Forward Current IF(mA)
625
500
375
250
125
0
30
60
90
120
150
Temperature(℃)
R θ J-A =60℃/W
R θ J-A =50℃/W
R θ J-A =40℃/W
R θ J-A =30℃/W


Spectral Radiance: Red Peak@632nm
Green Peak@515nm
Blue Peak@455nm
Relative Response
1.0
0.8
0.6
0.4
0.2
0.0
380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780
Wave Length(nm)
Blue
Red
White
Green



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°.

PRECAUTION IN USE

Storage

Recommended storage environment

Temperature: 5℃ ~ 30℃ (41oF ~ 86oF)

Humidity: 60% RH Max.

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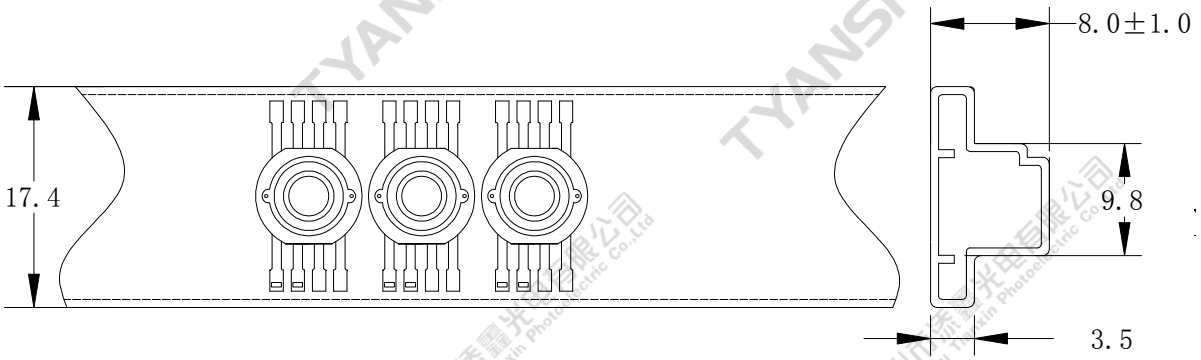
Soldering

Hand Soldering	
Temperature	350℃ 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.