Preliminary

TX-BRWG1A120-101

DATA SHEET

Approved by: Checked by: Prepared by:

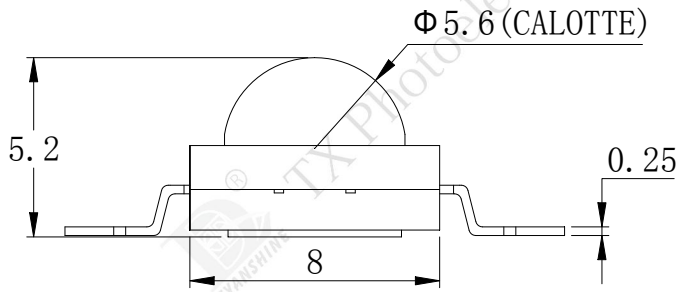
Features:

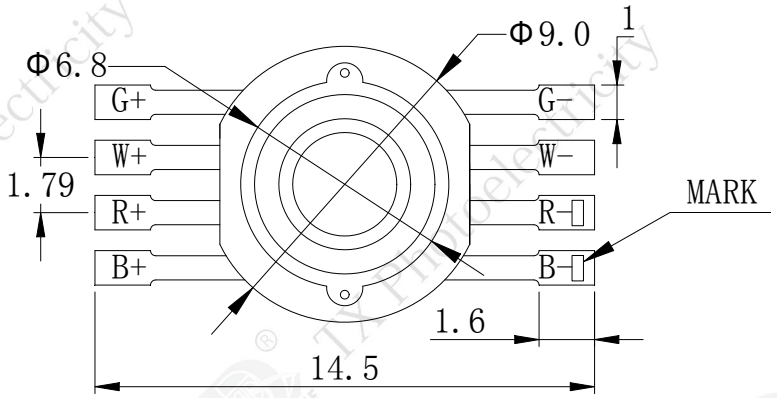
- Excellent Transiting Heat from LED Chip Operating under 300mA
- High Luminous Output
- No UV

Typical purpose:

- Portable Flashlight
- Garden lighting
- General Lighting

Package Dimensions:





Notes:

1.Thermoelectric integrated White chip packaged in this product.
2.All dimensions are in millimeters (inches).
3. Tolerance is ±0.25 mm (0.01") unless otherwise noted.

Part NO.	Chip Material				Lens Color	Source Color
	Blue	Red	White	Green		
TX-BRWG1A120-101	GaInN	AlGaInP	GaInN	GaInN	Water Clear	Blue & True Red &White & Green

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol		MAX.	Unit
LED Junction Temperature	Tj		150	℃
Power Dissipation	P_D	B	960	mW
		R	720	
		W	1020	
		G	960	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I_{FP}		1000	mA
Continuous Forward Current	IF		300	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=300mA ,Vr=5V (Ta=25°C):

Parameter	Symbol	Emitting Color	Values Min.	Values Typ.	Values Max.	Units
Luminous Flux	ϕ_V	B	15	20	—	lm
		R	35	45	—	
		W	75	80	—	
		G	70	75	—	
Viewing Angle at 50％IV	$2\theta_{1/2}$	B	—	140	—	Deg
		R	—	140	—	
		W	—	140	—	
		G	—	140	—	
Peak Emission Wavelength	λp	B	450	455	460	nm
		R	627	631	635	
		G	515	520	525	
Dominant Wavelength	λd	B	455	460	465	nm
		R	615	620	625	
		G	525	528	530	
Correlated Colour Temperature	CCT	W	5500	6500	7500	K
Spectral Line Half-Width	△λ	B	15	20	25	nm
		R	10	15	20	
		W	20	25	30	
		G	30	35	40	
Forward Voltage	V_f	B	2.8	3.0	3.2	V
		R	2.0	2.2	2.4	
		W	3.0	3.2	3.4	
		G	2.8	3.0	3.2	
Reverse Current	I_R	—	—	—	10	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	2.5	—	K/W
Temperature Coefficient of Forward Voltage	V△F/T	—	—	-2	—	mV/℃

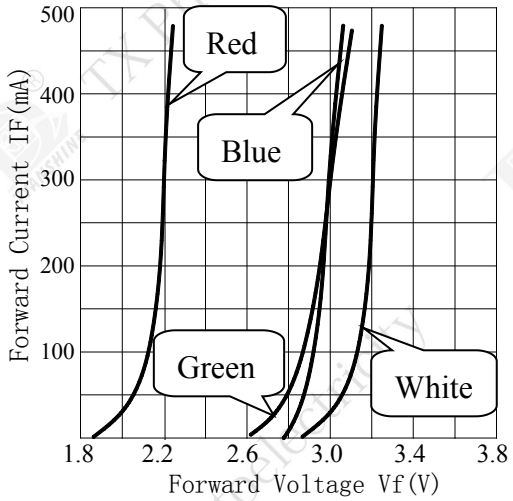
Notes:

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.

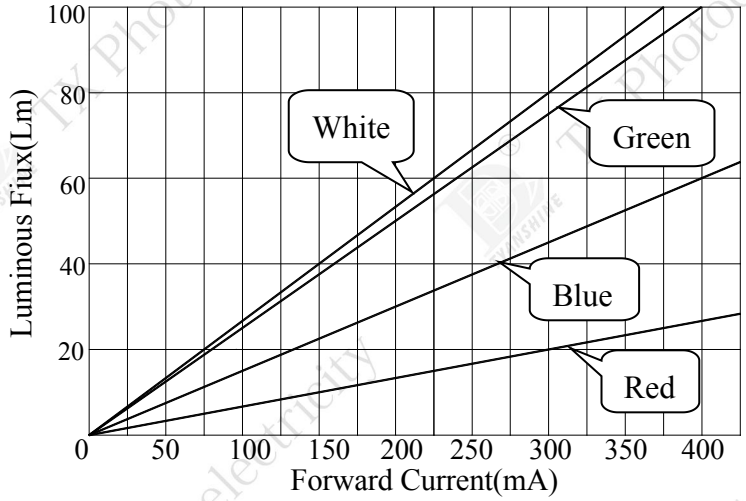
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

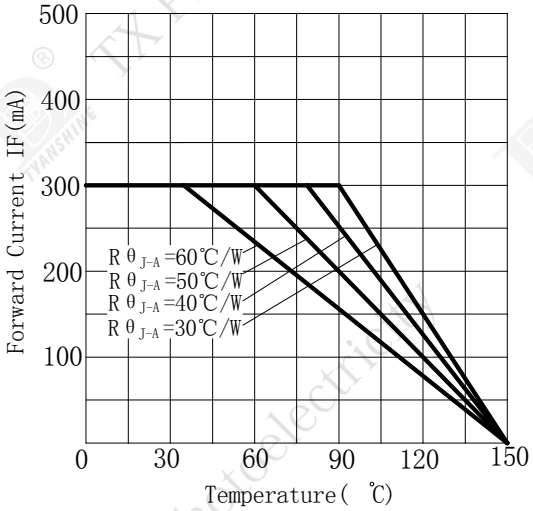
Forward Current VS. Forward Voltage

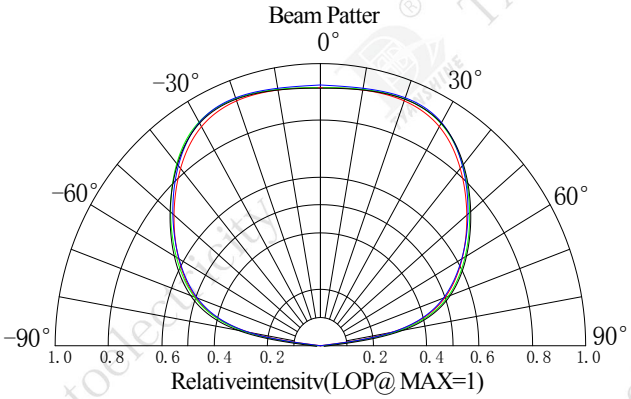


Forward Current VS. Luminous Fiux

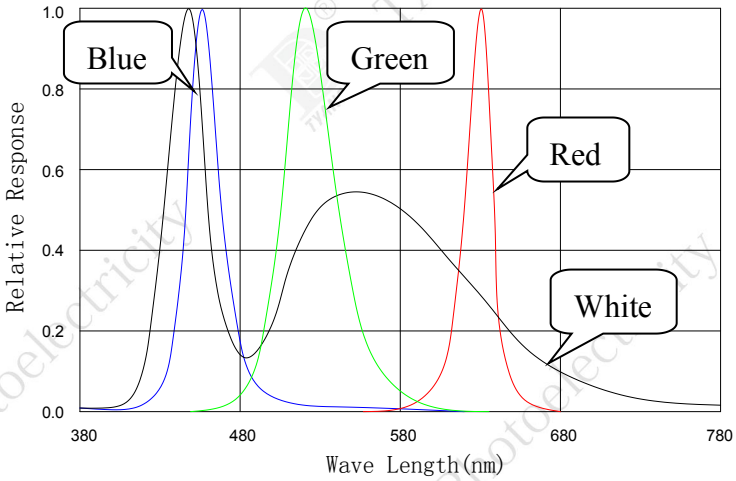


Ambient TemperatureVS.Forward Current





Spectral Radiance: Blue Peak@455nm
Red Peak@631nm
Green Peak@520nm



PRECAUTION IN USE

Storage

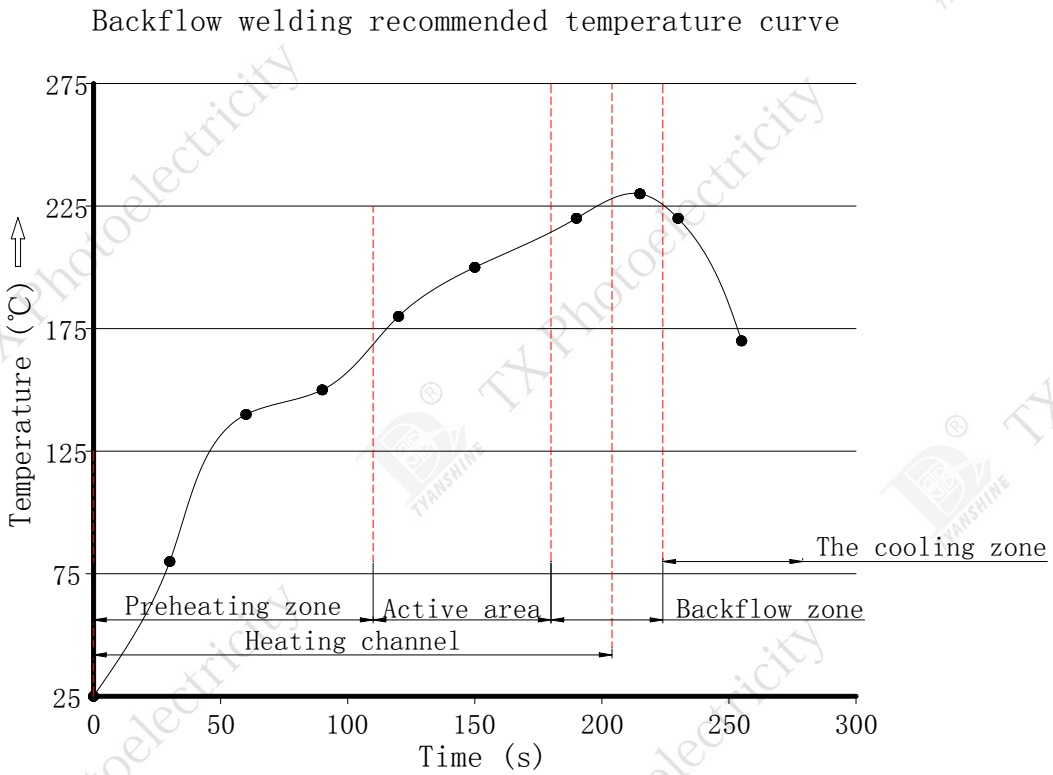
Recommended storage environment

Temperature: 5℃ ~ 30℃ (41oF ~ 86oF)

Humidity: 60% RH Max.

Soldering

Use the conditions shown to the under figure.

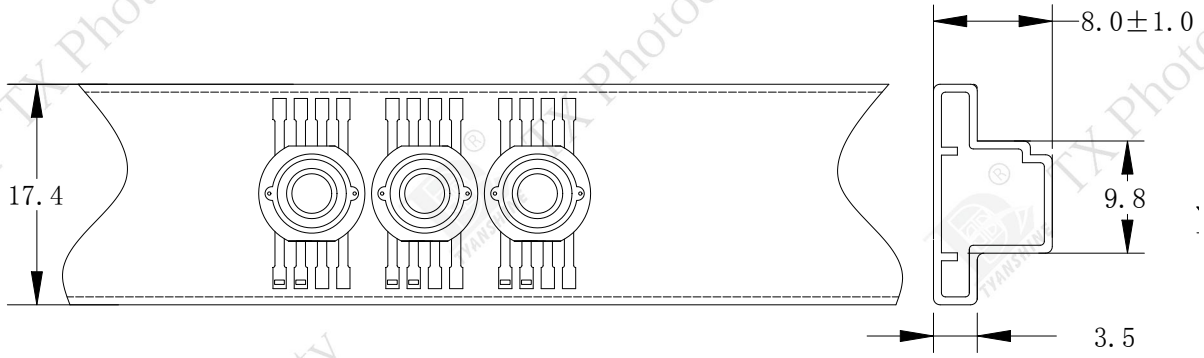


Profile Feature	Lead-Based Solder
Preheat: Temperature Min (Ts_{min})	25℃
Preheat: Temperature Max (Ts_{max})	170℃
Preheat: Time (Ts_{min} to Ts_{max})	60-120 seconds
Heating rate	1-3℃/sec
Time Maintained Above: Temperature (T_L)	170-215℃
Time Maintained Above: Time (T_L)	60-110 seconds
Reflux temperature	215-230℃
Reflux time	30-70 seconds
Cooling rate	3-5℃/sec

Note: the above temperature for reflow furnace temperature range of the measured temperature, reflow furnace temperature range of the measured temperature should not exceed 210 ℃.

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.