Preliminary

TX-RBWG8B120-001A

DATA SHEET

Approved by: Checked by: Prepared by:

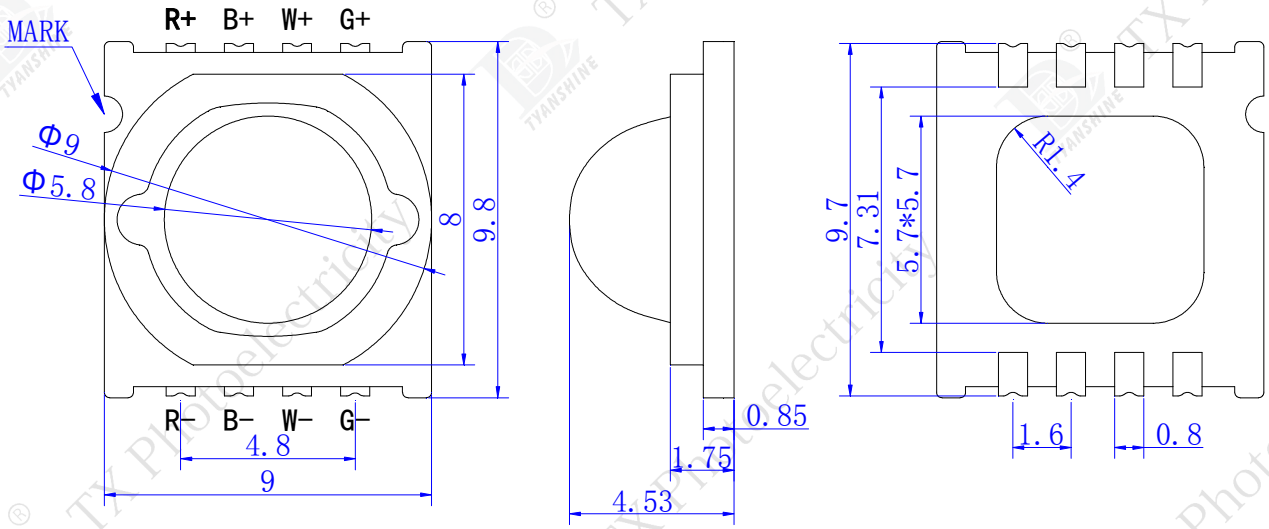
Features:

- 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.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
TX-RBWG8B120-001A	Red	Blue	White	Green	Water Clear	Red & True Blue & White& Green
	AlGaInP	GaInN	GaInN	GaInN		

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol		MAX.	Unit
LED Junction Temperature	Tj		150	℃
Power Dissipation	P_D	R	1300	mW
		B	1800	
		W	1800	
		G	1800	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I_{FP}		—	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	

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)

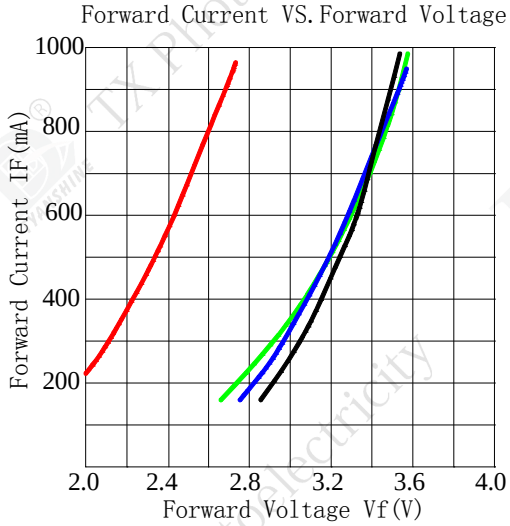
Parameter	Symbol	Emitting Color	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	ϕ_v	R	60	75	—	lm
		B	25	35	—	
		W	140	175	—	
		G	135	170	—	
Viewing Angle at 50％IV	$2\theta_{1/2}$	R	—	120	—	Deg
		B	—	120	—	
		W	—	120	—	
		G	—	120	—	
Peak Emission Wavelength	λp	R	620	625	630	nm
		B	447	453	457	
		G	510	515	520	
Dominant Wavelength	λd	R	618	622	626	nm
		B	453	457	463	
		G	520	524	529	
Correlated Colour Temperature	CCT	W	5500	6500	7500	K
Spectral Line Half-Width	△λ	R	15	20	25	nm
		B	15	20	25	
		W	15	20	25	
		G	25	30	35	
Forward Voltage	V_f	R	2.0	2.3	2.6	V
		B	3.0	3.3	3.6	
		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	$R\theta_{J-C}$	—	—	2.8	—	K/W
Temperature Coefficient of Forward Voltage	V△F/T	—	—	-2	—	mV/℃

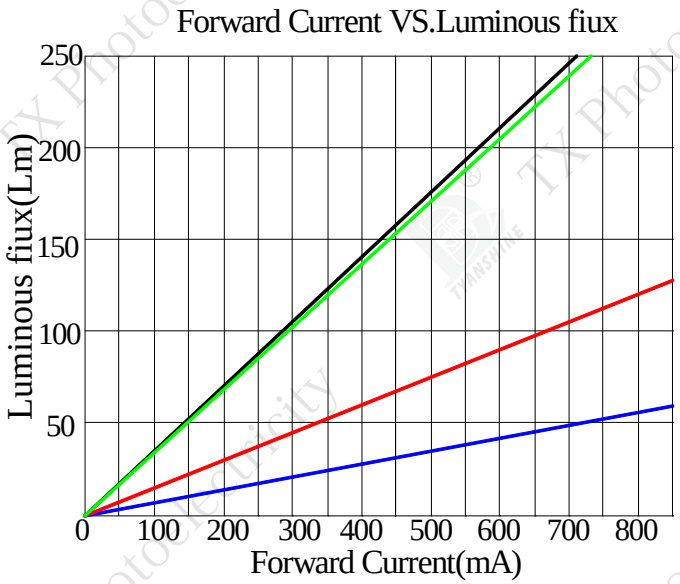
Notes:

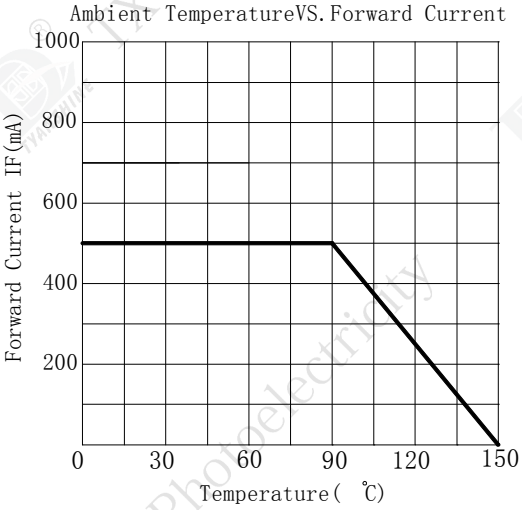
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity
3. The dominant wavelength (λd) is derived from the CIE chromaticity 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.

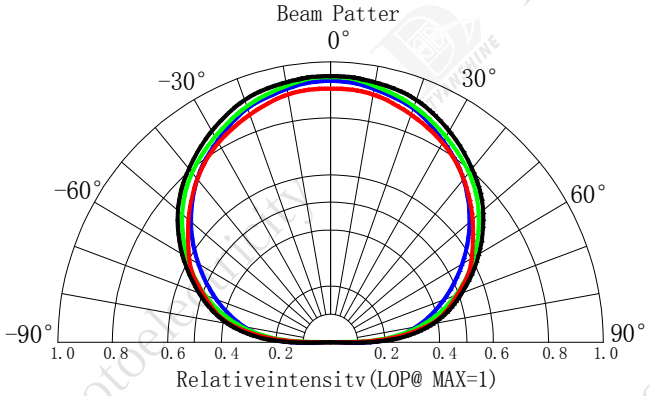
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

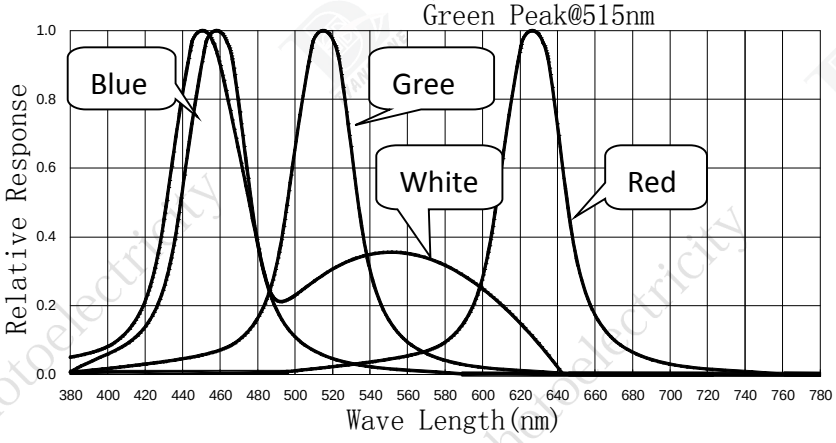








Spectral Radiance: Red Peak@625nm
Blue Peak@452.5nm
Green Peak@515nm



PRECAUTION IN USE

Storage

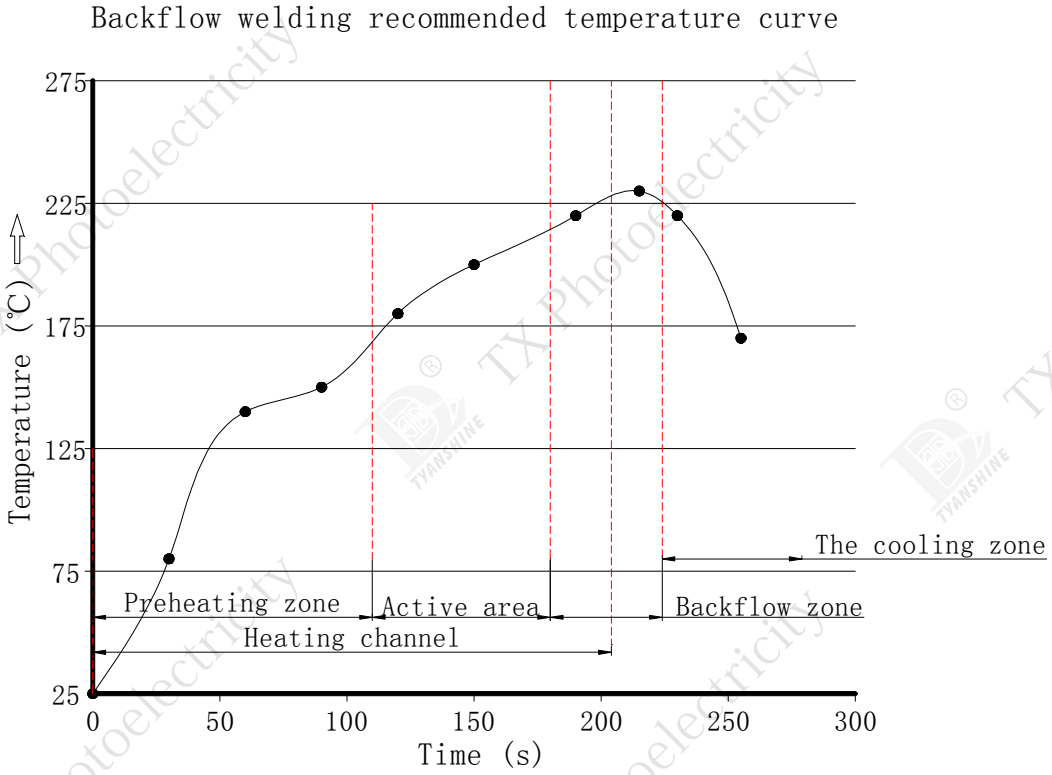
Recommended storage environment

Temperature: 5℃ ~ 30℃ (41oF ~ 86oF)

Humidity: 60% RH Max.

Soldering

Use the conditions shown to the under figure.

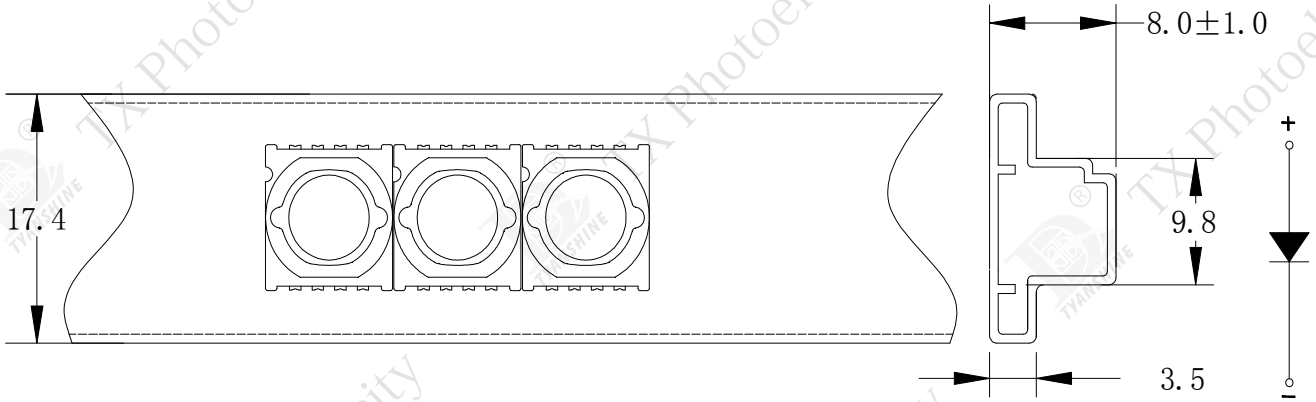


Profile Feature	Lead-Based Solder
Preheat: Temperature Min (Ts_{min})	25℃
Preheat: Temperature Max (Ts_{max})	170℃
Preheat: Time (Ts_{min} to Ts_{max})	60-120 seconds
Heating rate	1-3℃/sec
Time Maintained Above: Temperature (T_L)	170-215℃
Time Maintained Above: Time (T_L)	60-110 seconds
Reflux temperature	215-235℃
Reflux time	30-70 seconds
Cooling rate	3-5℃/sec

Note: All temperatures refer to topside of the package, measured on the package body surface.

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.