

TX-RBWG8B120-001A

PRODUCT SPECIFICATION



Approved by:

Checked by:

Prepared by:

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Guangzhou Tianyan Photoelectric Co., Ltd

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

Absolute Maximum Ratings at Ta=25

Parameter	Symbol	MAX.	Unit
LED Junction Temperature	T _j	135	
Power Dissipation 	P _D	R	1300
		B	1800
		W	1800
		G	1800
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I _{FP}	—	mA
Continuous Forward Current	I _F	500	mA
Reverse Voltage	V _R	5	V
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Operating Temperature Range	T _{opr}	-30 to +70	
Storage Temperature Range	T _{spr}	-40 to +80	

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.

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

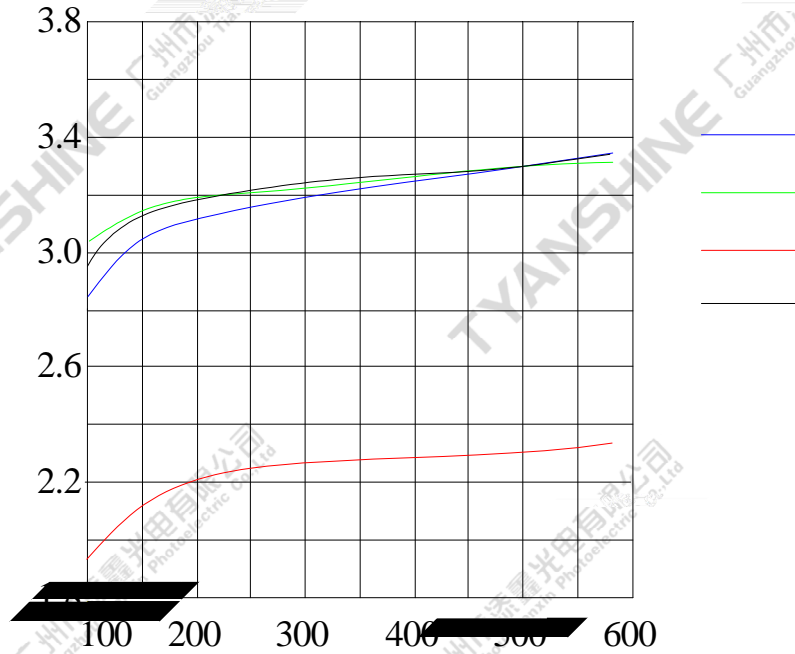
Parameter	Symbol	Emitting Color	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	ν	R	60	85	—	lm
		B	25	35	—	
		W	140	175	—	
		G	130	170	—	
Viewing Angle at 50° IV	$2_{1/2}$	R	—	120	—	Deg
		B	—	120	—	
		W	—	120	—	
		G	—	120	—	
Peak Emission Wavelength	ρ	R	620	625	630	nm
		B	450	452.5	455	
		G	510	515	520	
Dominant Wavelength	d	R	618	622	636	nm
		B	453	457	463	
		G	520	525	530	
Correlated Colour Temperature	CCT	W	5500	6500	7500	K
Spectral Line Half-Width		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	2.8	3.2	3.6	
Reverse Current	I_R	—	—	—	10	μA
Thermal Resistance Junction to Case	R_{J-C}	—	—	2.8	—	K/W
Temperature Coefficient of Forward Voltage	$V_{F/T}$	—	—	-2	—	mV/

Notes:

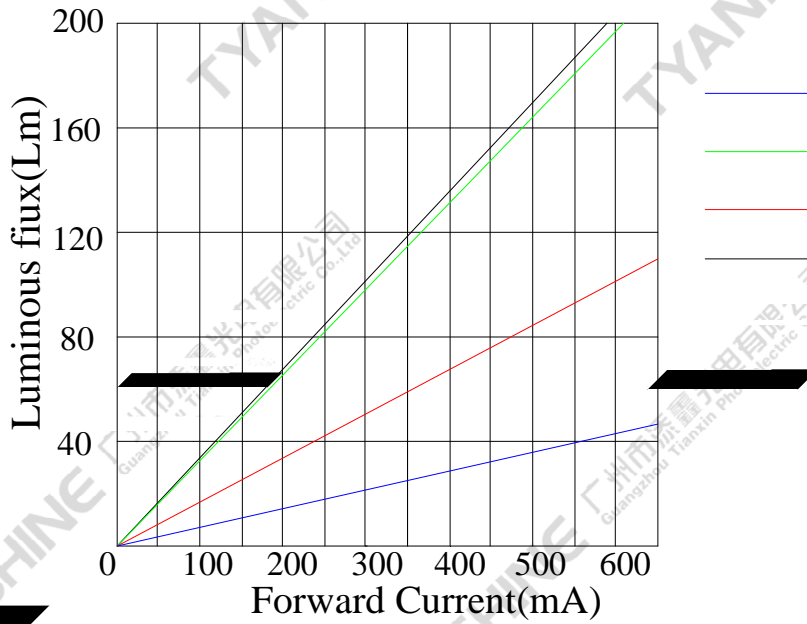
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity
- The dominant wavelength (d) is derived from the CIE chromaticity diagram and 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 $\pm 0.15V$.

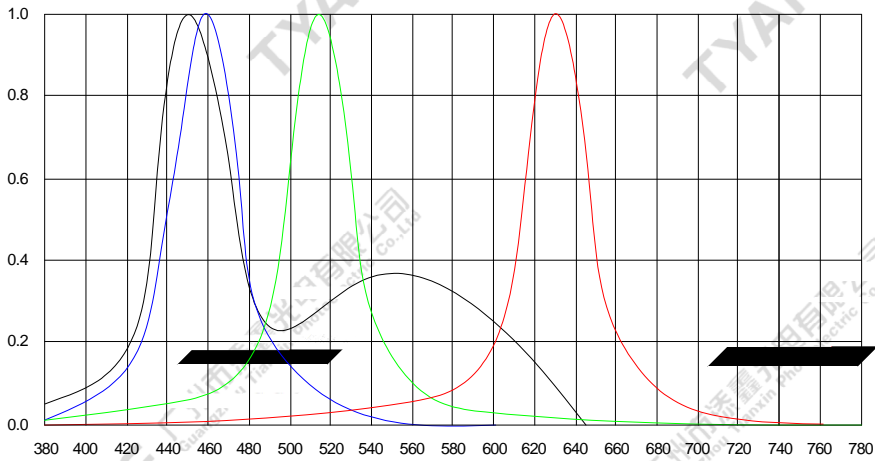
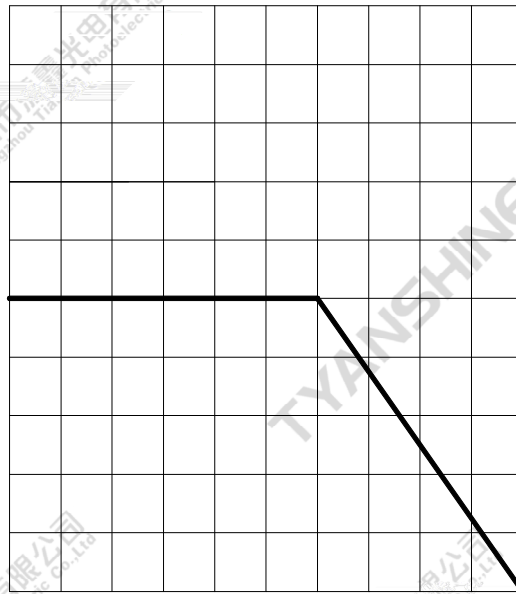
Typical Electrical / Optical Characteristics Curves

(25 Ambient Temperature Unless Otherwise Noted)



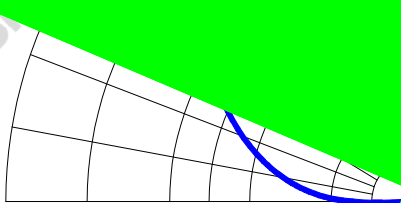
Forward Current VS.Luminous flux





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