

**TX-5060RBGW40FC120-NUVENG-01B****PRODUCT SPECIFICATION****Features:**

- ◆ Provide uniform cross distribution of positive white and warm white dual color scheme, mixed pure.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

**Chip Material:**

- ◆ Red:AlInGaP
- ◆ Green: GaInN
- ◆ Blue:GaInN
- ◆ White:GaInN

**Emitting Color:**

- ◆ Red (R)
- ◆ Green (G)
- ◆ Blue (B)
- ◆ White (W)

**Applications:**

- ◆ Auxiliary lighting
- ◆ Ambient lighting
- ◆ Architectural lighting
- ◆ Entertainment lighting

Part No.	TX-5060RBGW40FC120-NUVENG-01B	Spec No.	WKF-FC0098	Page	1 of 10
----------	-------------------------------	----------	------------	------	---------



**Absolute Maximum Ratings (Tc=25°C)**

Parameter	Symbol	Ratings	Unit	
Forward Current	IF	R	2.5	A
		B	3.0	
		G	3.0	
		W	2.5	
Reverse Voltage	V <sub>R</sub>	Not designed for reverse operation	V	
Power Dissipation	P <sub>D</sub>	R	6.5	W
		B	10.2	
		G	10.2	
		W	8.3	
Junction Temperature	T <sub>j</sub>	R	115	°C
		B	150	
		G	150	
		W	150	
Electrostatic Discharge Threshold (ESD)	ESD	2000	V	
Storage Temperature(Only for LED, not including packaging)	T <sub>stg</sub>	-40~+85	°C	
Operation Temperature	T <sub>opr</sub>	-40~+85		

**Notes:**

- Specifications are subject to change without notice.
- The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
- 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.

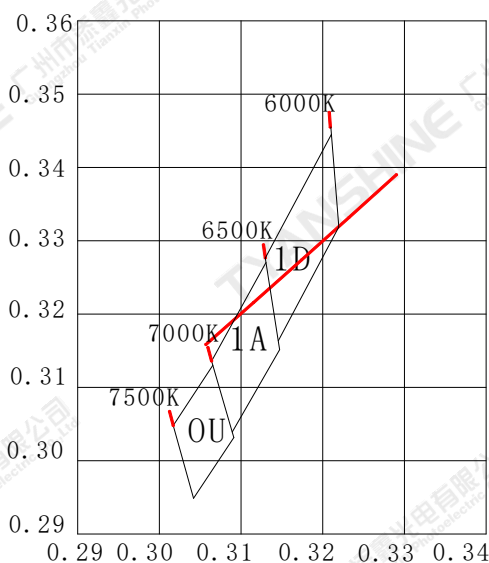
**Electrical Optical Characteristics (Tc=25°C)**

Parameter	Symbol	Condition	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=1.0A	R	105	—	135	lm
			B	35	—	45	
			G	240	—	290	
			W	300	—	360	
Forward Voltage	$V_f$		R	2.0	—	2.8	V
			B	2.9	—	3.8	
			G	2.8	—	3.7	
Dominant Wavelength	$\lambda_d$		W	2.9	—	3.8	nm
			R	615	620	625	
			B	450	455	460	
Peak-emission Wavelength	$\lambda_p$		G	522	527	532	nm
			R	625	630	635	
			B	445	450	455	
Correlated Colour Temperature	CCT		W	6000	—	7500	K
Color Rendering Index	Ra		W	—	—	—	—
Viewing Angle at 50 % IV	$2\theta_{1/2}$		—	—	120	—	Deg
Reverse Current	$V_R=5V$	R	—	—	2	$\mu A$	
		B	—	—	2		
		G	—	—	2		
	W	Not designed for reverse operation					
Thermal Resistance Junction to Case	$R\theta_{J-C}$	If=2.5A	R	—	4.38	K/W	
		If=3.0A	B	—	4.96		
		If=3.0A	G	—	2.97		
		If=2.5A	W	—	14.28		
Temperature Coefficient of Voltage	$V\Delta F/T$	If=1.0A	R	—	-2.1	mV/°C	
			B	—	1.22		
			G	—	1.42		
			W	—	-2.95		

**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.Luminous flux measurement tolerance:  $\pm 10\%$ .
- 4.Forward voltage measurement tolerance:  $\pm 3\%$ .
- 5.Ra measurement tolerance:  $\pm 2$ .

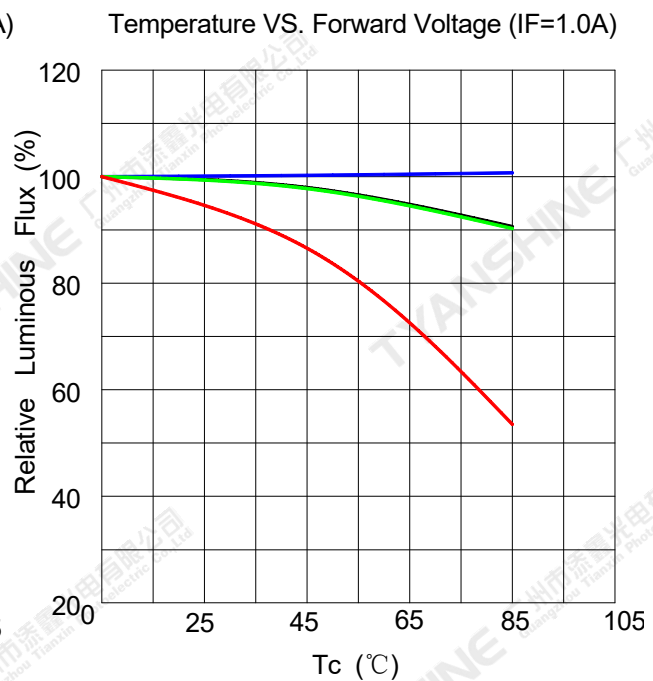
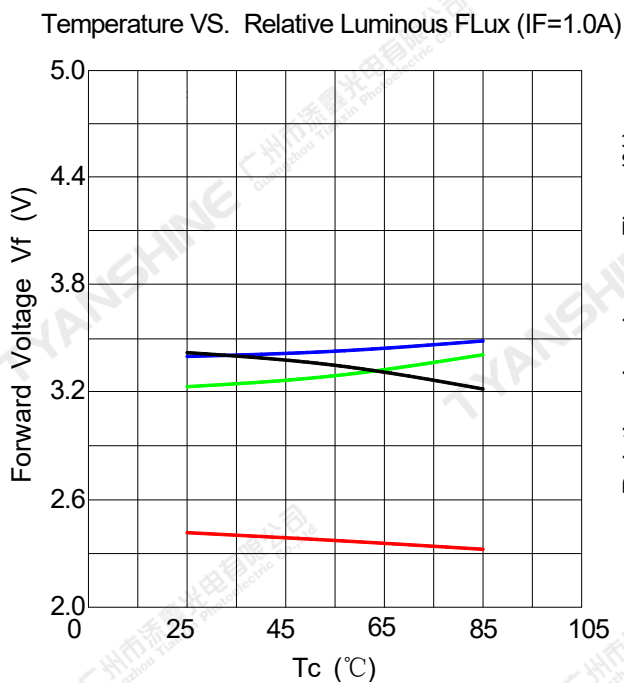
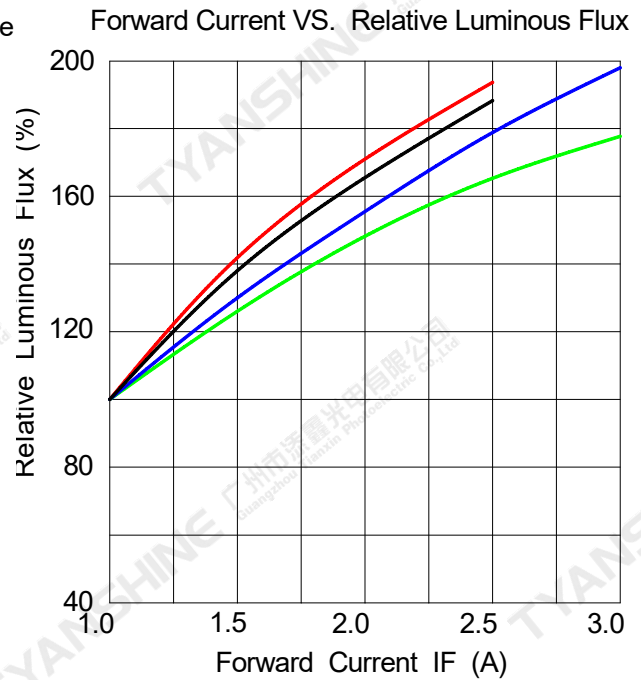
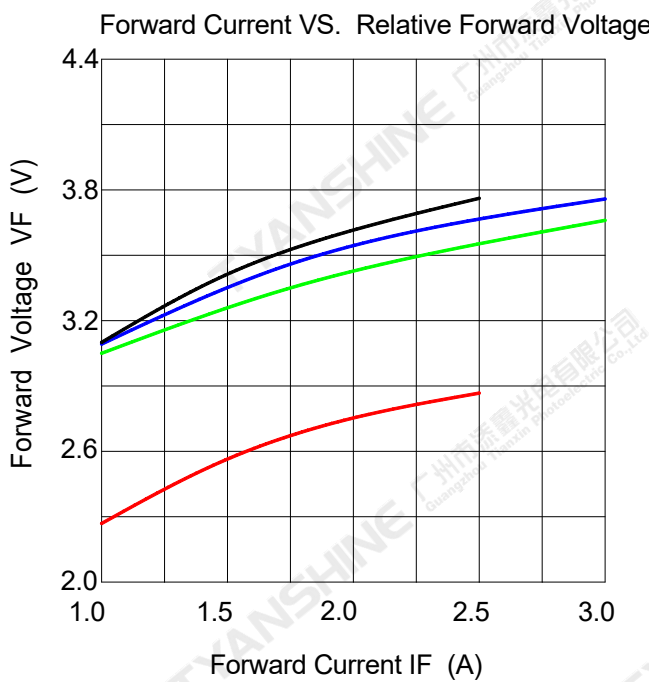
**White light Color coordinate filing Tc=25°C,IF=1.0A**



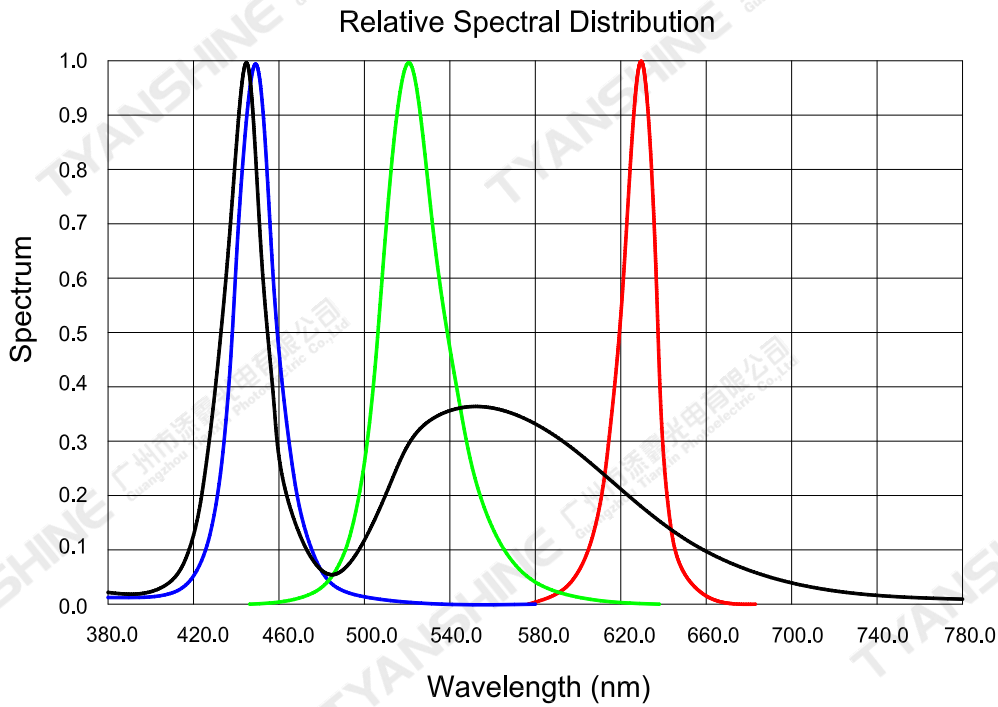
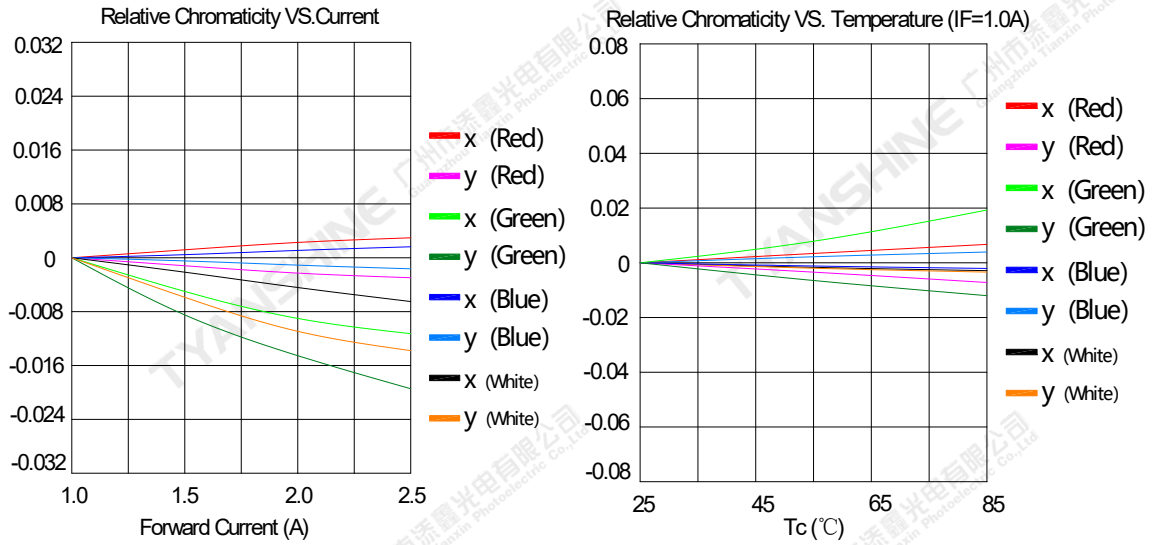
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
1D	6000K	6500K	0.3220	0.3319	0.3211	0.3445	0.3130	0.3276	0.3146	0.3163
1A	6500K	7000K	0.3147	0.3151	0.3131	0.3270	0.3064	0.3136	0.3089	0.3039
OU	7000K	7500K	0.3091	0.3032	0.3065	0.3130	0.3017	0.3048	0.3042	0.2949

## Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



**Notes:** — Red (R) ; — Green (G) ; — Blue (B) ; — White (W) ;



**Notes:**    — Red (R) ;    — Green (G) ;    — Blue (B) ;    — White (W) ;

**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  $\pm 5^\circ$ .

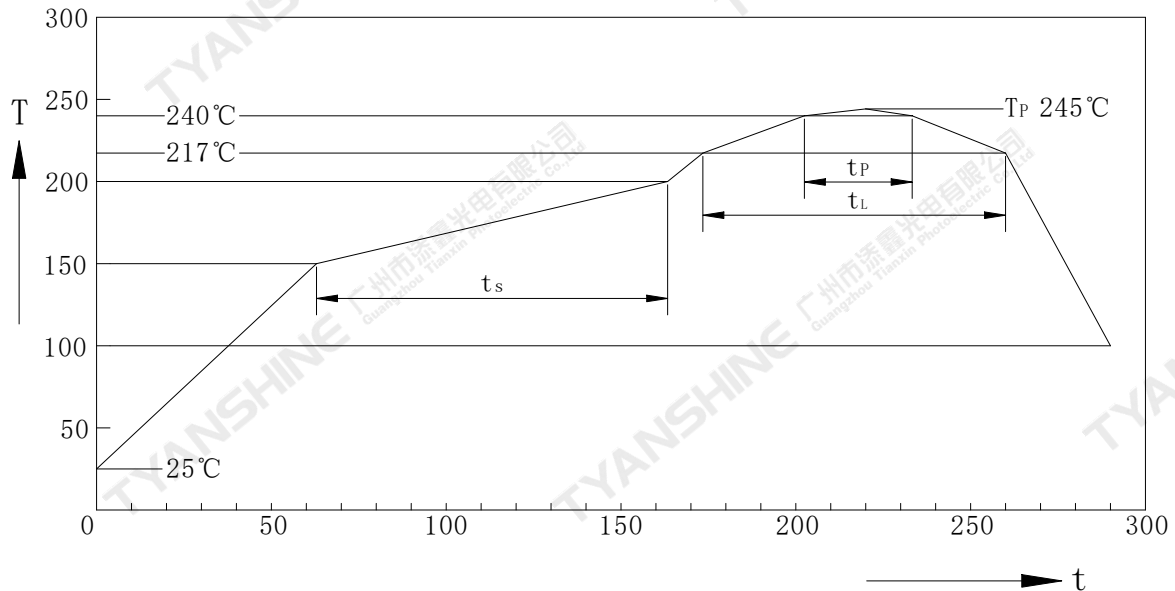
## Usage Precautions

### Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

### Soldering Condition



Profil-Charakteristik Profile Feature	Symbol	Pb-Free(SnAgCu)Assembly			Einheit Unit
		Minimum	Recommendation	Maximum	
Ramp-up Rate to Preheat 25°C to 150°C	-	-	2	3	K/s
Time $t_s$ $T_{Smin}$ to $T_{Smax}$	$t_s$	60	100	120	s
Ramp-up Rate to Peak $T_{Smax}$ to $T_p$	-	-	2	3	K/s
Liquidus Temperature	$T_L$	217			°C
Time above Liquidus temperature	$t_L$	-	80	100	s
Peak Temperature	$T_P$	-	245	255	°C
Time within 5°C of the specified peak temperature $T_p-5$ K	$t_p$	10	20	30	s
Ramp-down Rate $T_p$ to 100°C	-	-	3	6	K/s
Time 25°C to $T_p$	-	-	-	480	-

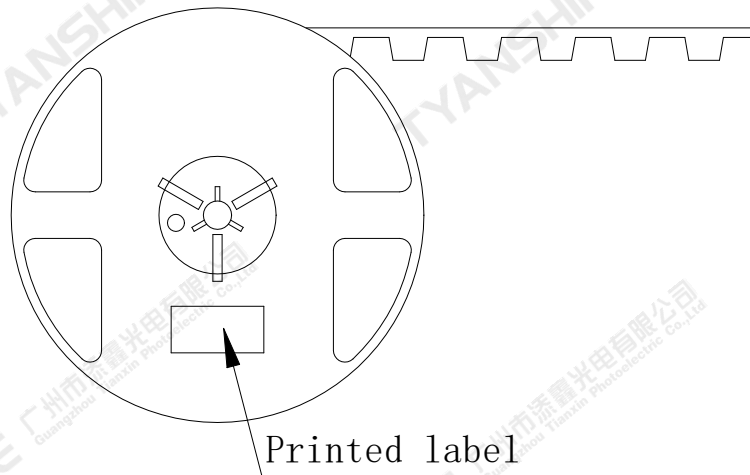
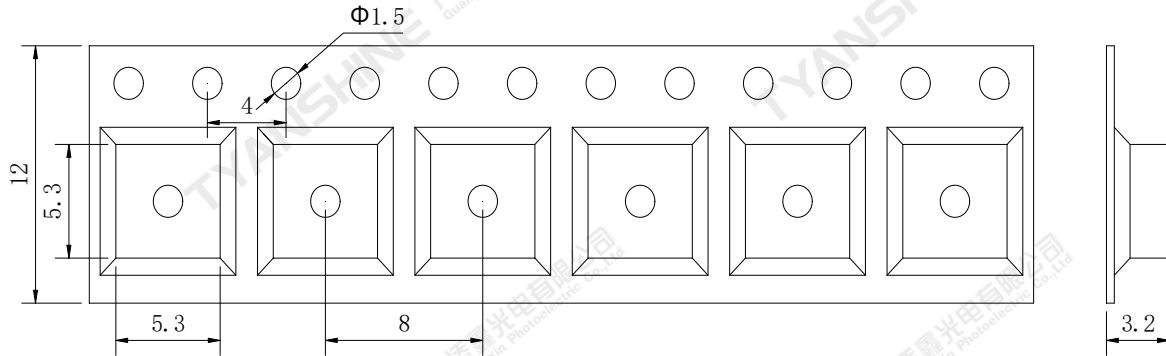
**Note:**

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



**Dimensions For Cannulation And Packaging**

**Quantity:1000PCS**



**Notes:**

1. All dimensions are in millimeters.
2. Tolerances are  $\pm 2.0$  mm unless otherwise noted.
3. The products are packaged together with silica gel, Transport, not to the weight of welding LED light-emitting area, As a result of the weight of LED light-emitting zone in the quality of, Irresponsible of the Company.

Part No.	TX-5060RBGW40FC120-NUVENG-01B	Spec No.	WKF-FC0098	Page	9 of 10
----------	-------------------------------	----------	------------	------	---------

