



Preliminary

TX-5050WA10FC120-NGVEND34-03 DATA SHEET

Approved by:

Checked by:

Prepared by:

Part No.	TX-5050WA10FC120-NGVEND34-03	Spec No.	WKF-BE0124	Page	1 of 8
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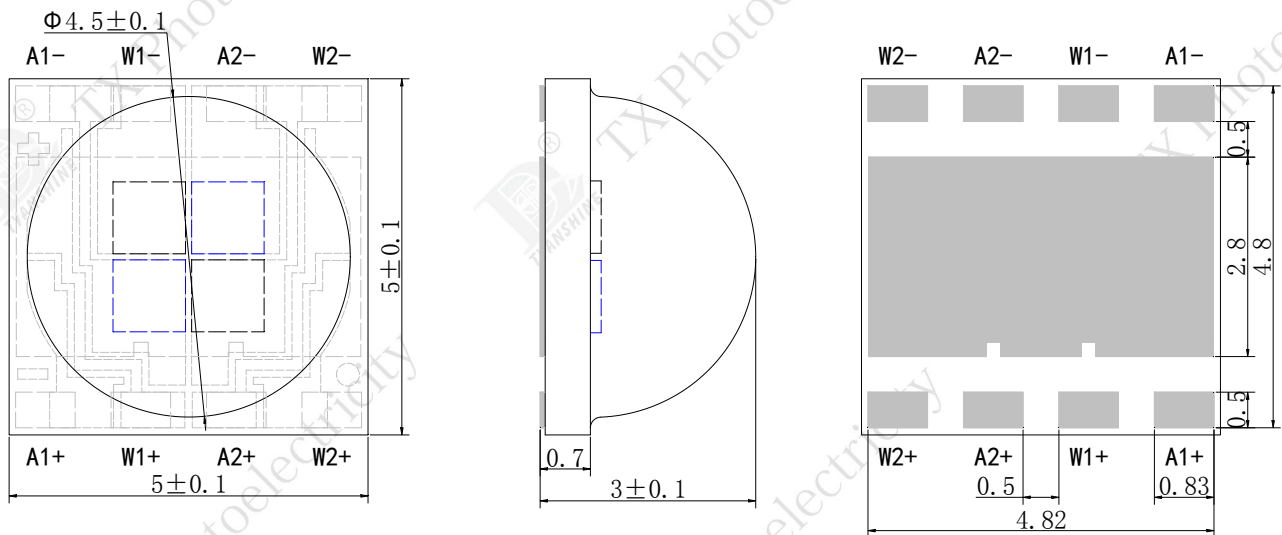
Features:

- ◆ Excellent Transiting Heat from LED Chip Operating under 700mA
- ◆ 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	Emitting Color
TX-5050WA10FC120-NGVEND34-03	White	PC Amber	Water Clear	White & PC Amber
	GaInN	GaInN		

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Min	Typ	Max	Unit
LED Junction Temperature	T _j	—	—	150	°C
Power Dissipation	P _D	W1	—	2660	mW
		A1	—	2660	
		W2	—	2660	
		A2	—	2660	
Continuous Forward Current	I _F	—	700	—	mA
Reverse Voltage	V _R	—	5	—	V
Electrostatic Discharge Threshold (ESD)	ESD	—	2000	—	V
Operating Temperature Range	T _{opr}	-40	—	70	°C
Storage Temperature Range	T _{spr}	-40	—	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=700mA ,Vr=5V (Ta=25°C):

Parameter	Symbol	Emitt ing Color	Values			Units
			Min.	Typ.	Max.	
Luminous Flux	ϕ_v	W1	200	275	—	lm
		A1	110	125	—	
		W2	200	275	—	
		A2	110	125	—	
Viewing Angle at 50 % IV	$2\theta_{1/2}$	—	—	120	—	Deg
Forward Voltage	V_f	W1	3.2	3.5	3.8	V
		A1	3.2	3.5	3.8	
		W2	3.2	3.5	3.8	
		A2	3.2	3.5	3.8	
Peak Emission Wavelength	λ_p	A	590	593	596	nm
Dominant Wavelength	λ_d	A	585	588	591	nm
Correlated Colour Temperature	CCT	W	5000	5500	6500	K
		A	1740	—	2050	
Reverse Current	I_R	—	—	—	2.0	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	—	—	2.6	—	K/W
Temperature Coefficient of Forward Voltage	$V\Delta F/T$	—	—	-2	—	mV/°C
Color Rendering Index	Ra	—	—	—	—	—

Product spectral parameters level table:

Grade	Colour temperature Tc(K)	X1		X2		X3		X4	
		X	Y	X	Y	X	Y	X	Y
1T	6000-6500	0.3099	0.3509	0.3196	0.3602	0.3205	0.3481	0.3115	0.3391
1C		0.3115	0.3391	0.3205	0.3481	0.3213	0.3373	0.3130	0.3290
1D		0.3130	0.3290	0.3213	0.3373	0.3221	0.3261	0.3144	0.3186
1U		0.3144	0.3186	0.3221	0.3261	0.3231	0.3120	0.3161	0.3159
2S	5700-6000	0.3196	0.3602	0.3290	0.3690	0.3290	0.3538	0.3207	0.3462
2B		0.3207	0.3462	0.3290	0.3538	0.3290	0.3417	0.3215	0.3350
2A		0.3215	0.3350	0.3290	0.3417	0.3290	0.3300	0.3222	0.3243
2R		0.3222	0.3243	0.3290	0.3300	0.3290	0.3180	0.3231	0.3120
2T	5300-5700	0.3290	0.3690	0.3381	0.3762	0.3376	0.3616	0.3290	0.3538
2C		0.3290	0.3538	0.3376	0.3616	0.3371	0.3490	0.3290	0.3417
2D		0.3290	0.3417	0.3371	0.3490	0.3366	0.3369	0.3290	0.3300
2U	5300-5700	0.3290	0.3300	0.3366	0.3369	0.3361	0.3245	0.3290	0.3180
3S	5000-5300	0.3381	0.3762	0.3480	0.3840	0.3463	0.3687	0.3376	0.3616
3B		0.3376	0.3616	0.3463	0.3687	0.3451	0.3554	0.3371	0.3490
3A		0.3371	0.3490	0.3451	0.3554	0.3440	0.3427	0.3366	0.3369

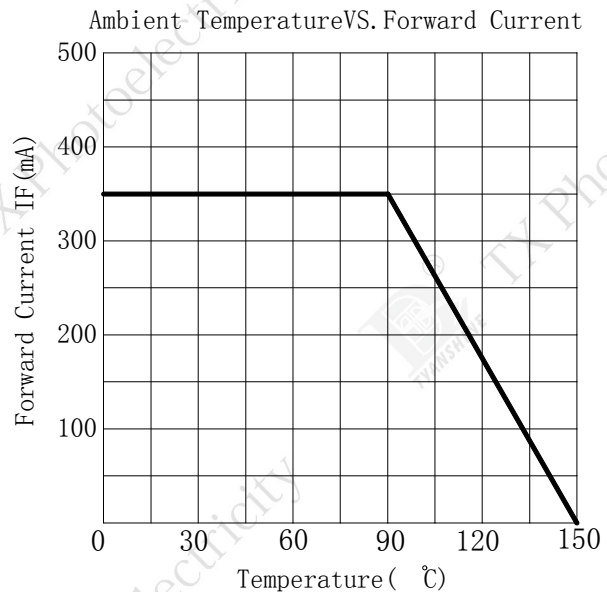
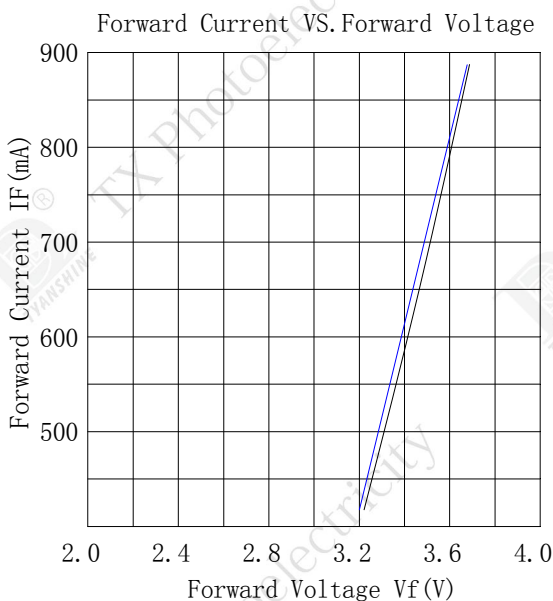
3R		0.3366	0.3369	0.3440	0.3428	0.3429	0.3307	0.3361	0.3245
W	1840-1965	0.5508	0.4340	0.5581	0.4376	0.5690	0.4284	0.5598	0.4258
W1	1965-2030	0.5472	0.4373	0.5412	0.4349	0.5481	0.4257	0.55697	0.4283
W2	1950-2050	0.5443	0.4402	0.5512	0.4447	0.5581	0.4376	0.5508	0.4340
W3	1785-1870	0.5672	0.4191	0.5598	0.4258	0.5690	0.4284	0.5766	0.4219
W4	1840-1950	0.5481	0.4257	0.5570	0.4283	0.5639	0.4221	0.5533	0.4188
W5	1940-2050	0.5357	0.4320	0.5412	0.4349	0.5481	0.4257	0.5420	0.4230
W6	1870-1950	0.5420	0.4230	0.5481	0.4257	0.5533	0.4188	0.5464	0.4140
W7	1800-1870	0.5533	0.4188	0.5639	0.4221	0.5689	0.4175	0.5576	0.4340
W8	1755-1825	0.5577	0.4134	0.5689	0.4174	0.5749	0.4110	0.5631	0.4067
W9	1740-1810	0.5672	0.4191	0.5765	0.4219	0.5844	0.4145	0.5749	0.4110

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 (λ_d) 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 $\pm 15\%$.
5. Forward voltage is measured with an accuracy of $\pm 0.15V$.

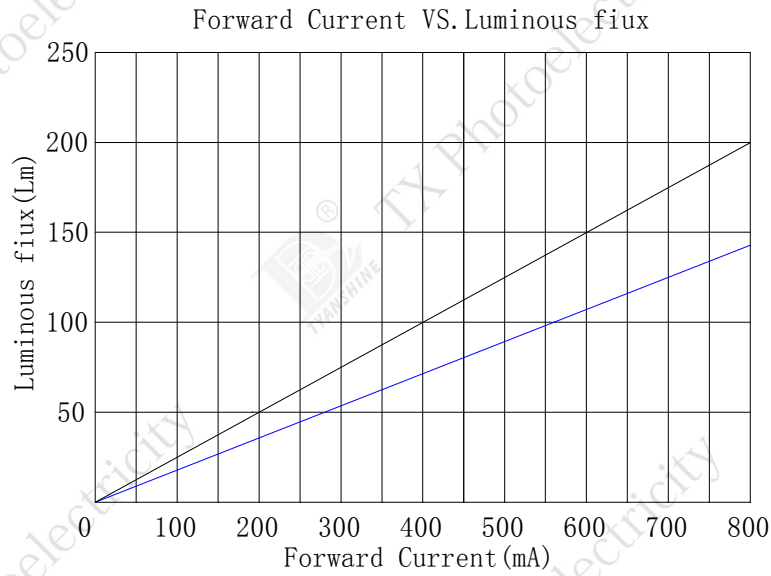
Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

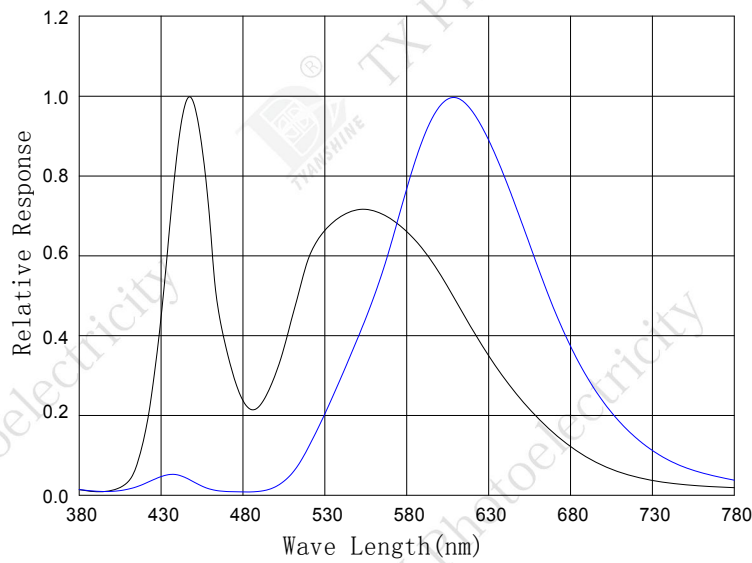


Note: — White; — PC Amber

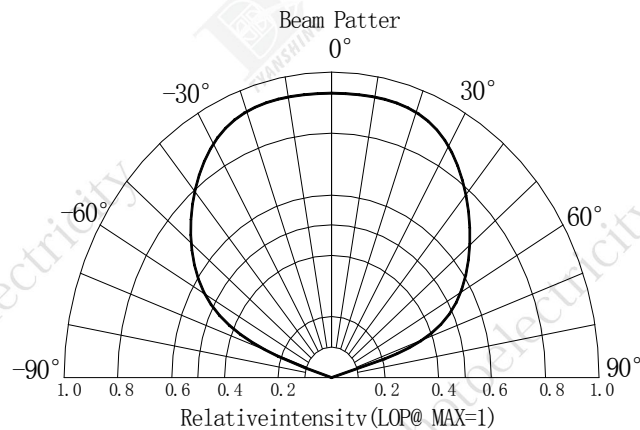
Typical Electrical / Optical Characteristics Curves



Note: — White; — PC Amber



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PRECAUTION IN USE

Storage

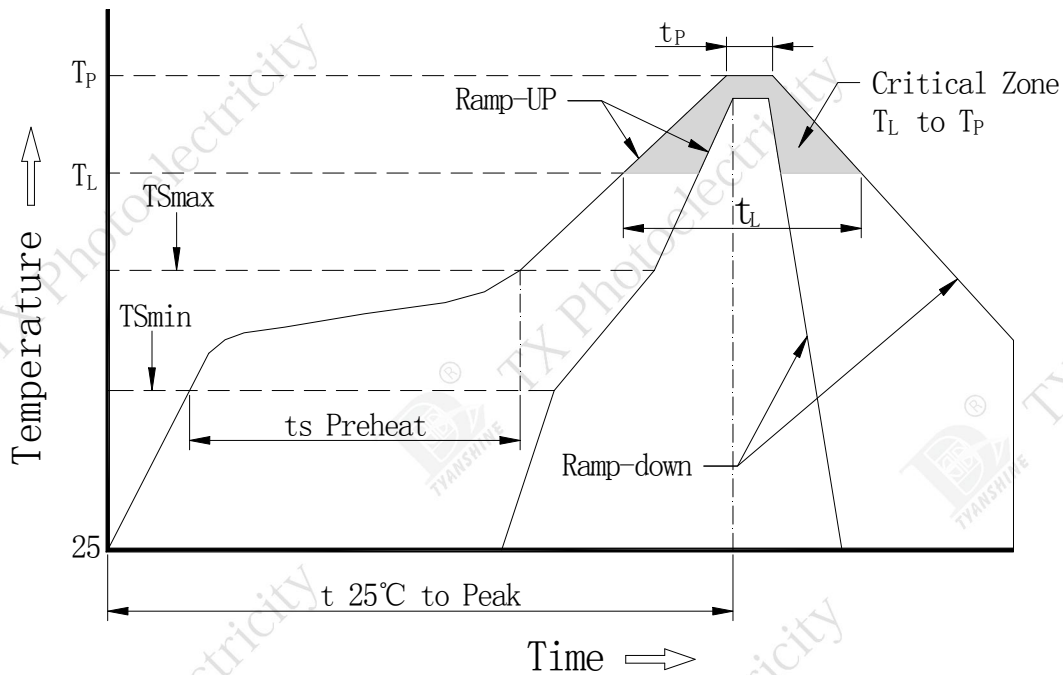
Recommended storage environment

Temperature: 5°C ~ 30°C (41oF ~ 86oF)

Humidity: 60% RH Max.

Soldering

Use the conditions shown to the under figure.

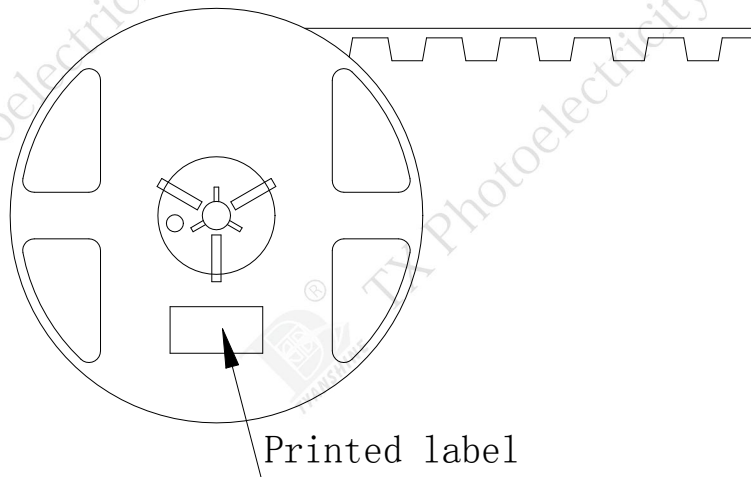
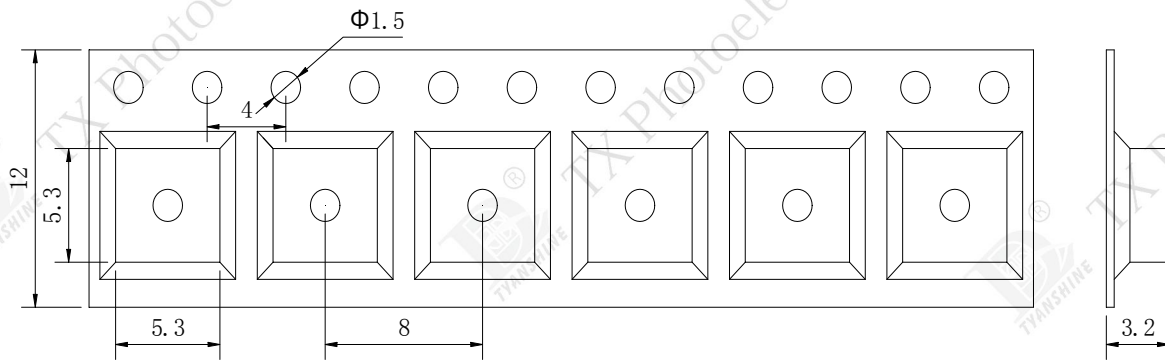


Profile Feature	Lead-Based Solder	Lead-Free Solder
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.	3°C/second max.
Preheat: Temperature Min (T_{Smin})	100°C	150°C
Preheat: Temperature Max (T_{Smax})	150°C	200°C
Preheat: Time (T_{Smin} to T_{Smax})	60-120 seconds	60-180 seconds
Time Maintained Above: Temperature (T_L)	183°C	217°C
Time Maintained Above: Time (T_L)	60-150 seconds	60-150 seconds
Peak/Classification Temperature (T_P)	215°C	260°C
Time Within 5°C of Actual Peak Temperature (T_P)	10-30 seconds	20-40 seconds
Ramp-Down Rate	6°C/second max.	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.

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

Dimensions for Cannulation and Packaging

Quantity: 500PCS



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 2.0 mm (0.08") 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.