

# TX-8090SW1300C70F31-10H952770

## PRODUCT SPECIFICATION (R&D version)

**Features:**

- ◆Excellent transiting heat from LED chip operating under  $4.66A \times 3(S1+S2+S3)/(W1+W2+W3)$
- ◆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:**

- ◆GaInN

**Emitting Color:**

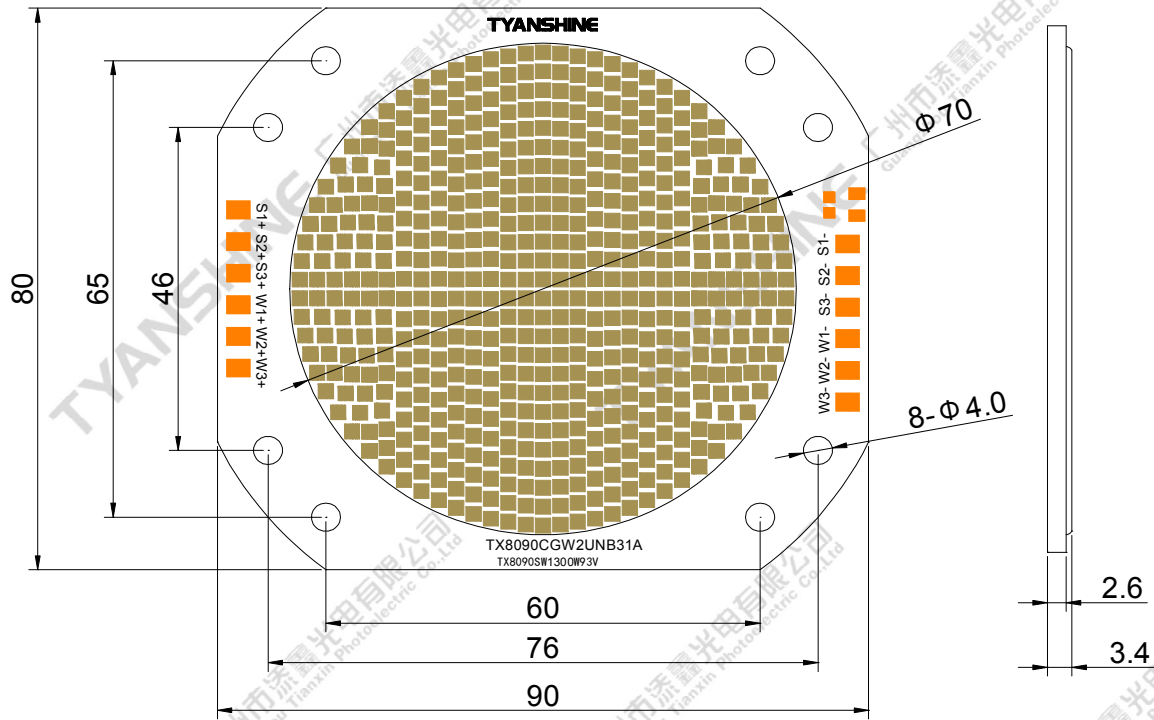
- ◆White
- ◆Warm white

**Applications:**

- ◆Commercial lighting
- ◆General Lighting

Part No.	TX-8090SW1300C70F31-10H952770	Spec No.	WKF-DD0014	Page	1 of 8
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**Package Dimensions:**



S1/S2/S3: Warm White (S) ; W1/W2/W3: White (W)

**Notes:**

- 1.All dimensions are in millimeters .
- 2.Tolerances unless otherwise mentioned are  $\pm 0.25\text{mm}$  .

**Code Formats:**

TX-8090SW1300C70F31-10H952770

TX	—	8090	SW	1300	C	70	F	31	—	10	H95	2770
TYANSHINE	—	series	performance	watt typ	texture	LES	chip code	die count in series	—	BOM	Ra	CCT

Part No.	TX-8090SW1300C70F31-10H952770	Spec No.	WKF-DD0014	Page	2 of 8
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**Absolute Maximum Ratings**

Parameter	Symbol	Ratings	Unit
Forward Current	IF (S1+S2+S3)	5A*3	A
	IF (W1+W2+W3)	5A*3	A
	IF (S1+S2+S3) + (W1+W2+W3)	(3.58A)+(3.58A)	A
Reverse Voltage	VR	Not designed for reverse operation	V
Power Dissipation	PD	S1+S2+S3	1400
		W1+W2+W3	1400
		(S1+S2+S3) + (W1+W2+W3)	2000
Junction Temperature	Tj	W	135
		S	135
Case Temperature (C)	Tc	105	°C
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	Tstg	-40~+100	°C
Operation Temperature	Topr	-40~+105	

**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.

Part No.	TX-8090SW1300C70F31-10H952770	Spec No.	WKF-DD0014	Page	3 of 8
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**Electrical Optical Characteristics (Tc=25°C)**

Parameter	Symbol	Condition	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=1A*3	S1+S2+S3	22500	25300	—	lm
			W1+W2+W3	27000	31500	—	
Forward Voltage	$V_f$		S1+S2+S3	82	85	88	V
			W1+W2+W3	82	85	88	
Correlated Colour Temperature	CCT		S1+S2+S3	2500	—	2700	K
			W1+W2+W3	6000	—	7000	
Luminous Flux	$\phi_v$	If=4.66A*3	S1+S2+S3	91000	102200	—	lm
			W1+W2+W3	115000	132000	—	
Forward Voltage	$V_f$		S1+S2+S3	89	93	97	V
			W1+W2+W3	89	93	97	
Correlated Colour Temperature	CCT		S1+S2+S3	2550	—	2750	K
			W1+W2+W3	6500	—	7500	
Viewing Angle at 50% IV	$2\theta_{1/2}$		S1+S2+S3	—	115	—	Deg
			W1+W2+W3	—	115	—	
Thermal Resistance Junction to Case	$R_{\theta_{J-C}}$		S1+S2+S3	—	0.031	—	K/W
			W1+W2+W3	—	0.031	—	
Color Rendering Index	Ra		S/W	95	—	—	—
TLCI	—		S/W	95	—	—	—
TM-30	RF	S/W	90	—	—	—	
	RG	S/W	98	—	103	—	

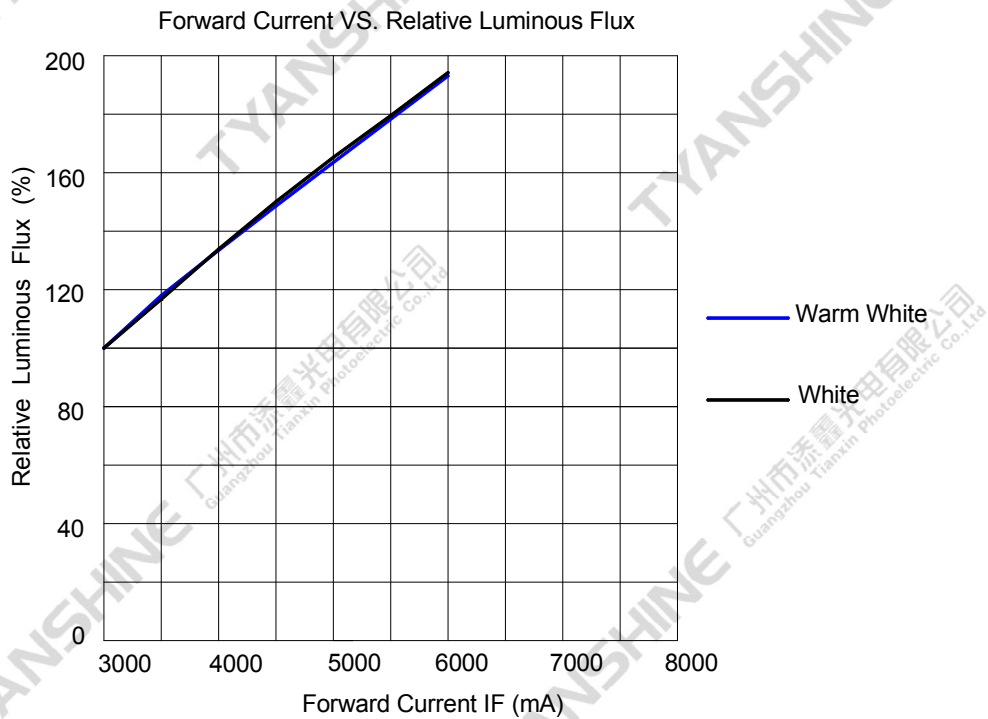
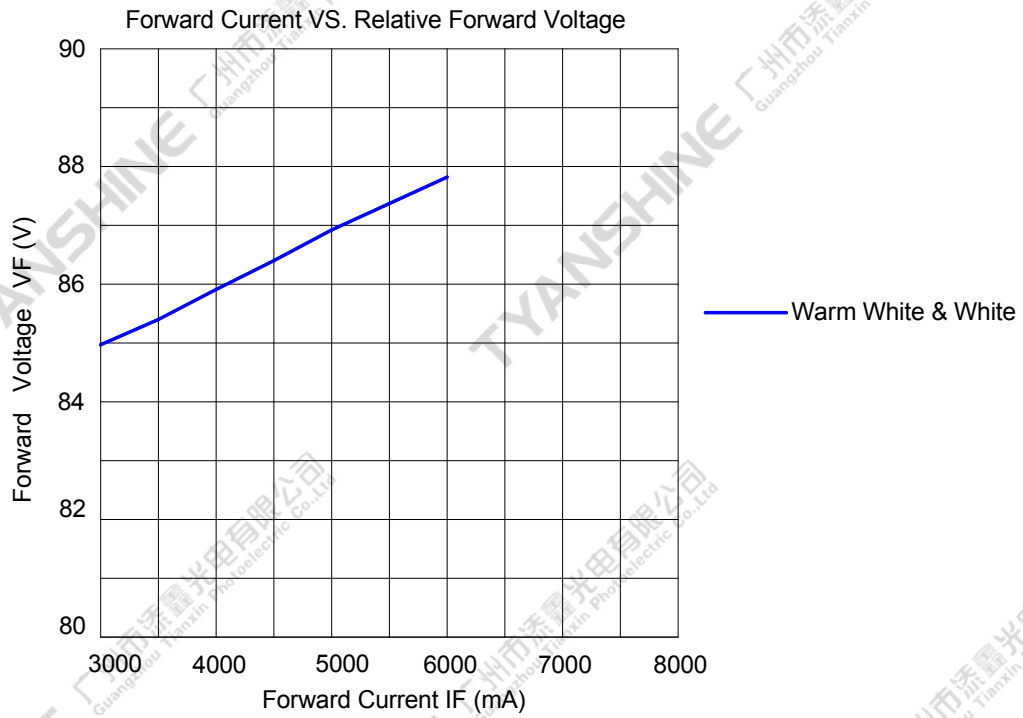
**Notes:**

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- Luminous flux measurement tolerance:  $\pm 15\%$ .
- Forward voltage measurement tolerance:  $\pm 3\%$ .
- Ra measurement tolerance:  $\pm 2$ .
- chromaticity (x, y) measurements tolerance:  $\pm 0.005$ .

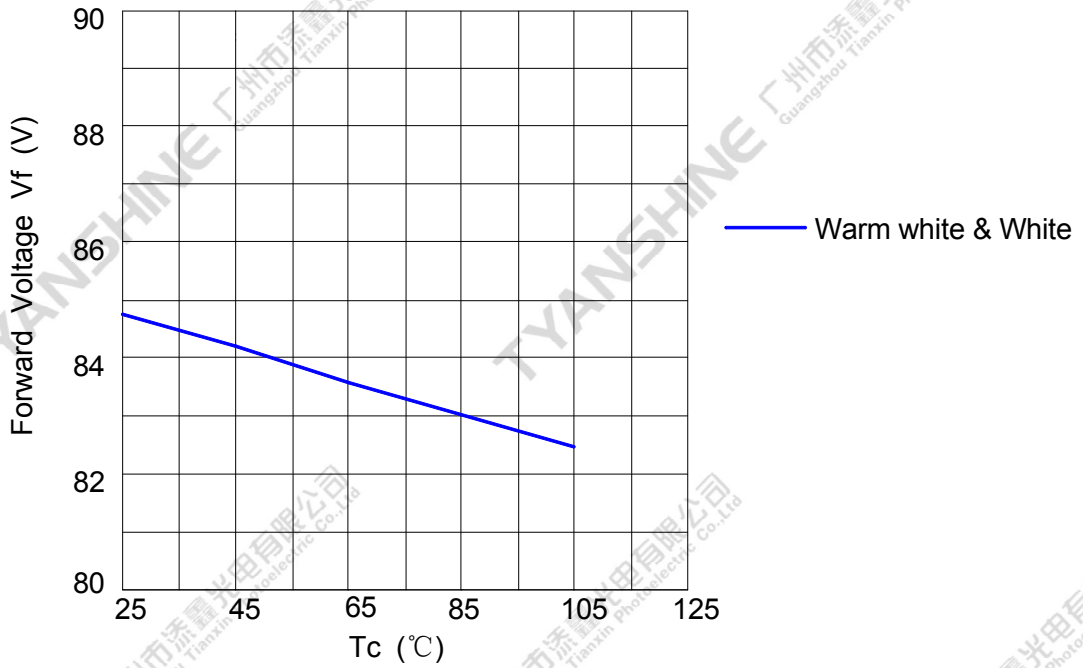
Part No.	TX-8090SW1300C70F31-10H952770	Spec No.	WKF-DD0014	Page	4 of 8
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# Typical Electrical/Optical Characteristics Curves

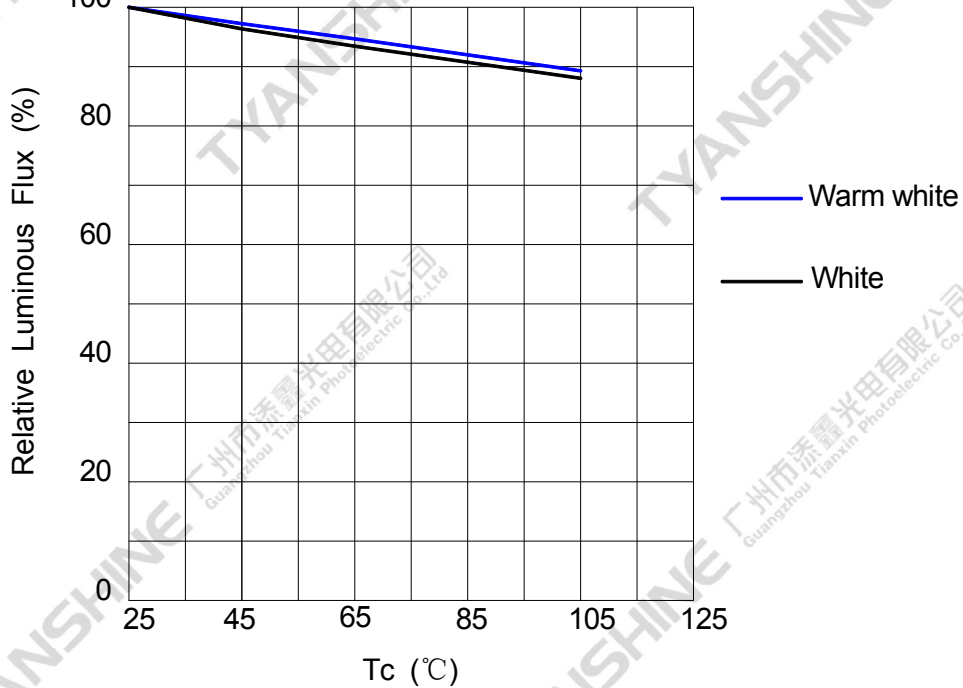
(25°C Ambient Temperature Unless Otherwise Noted)

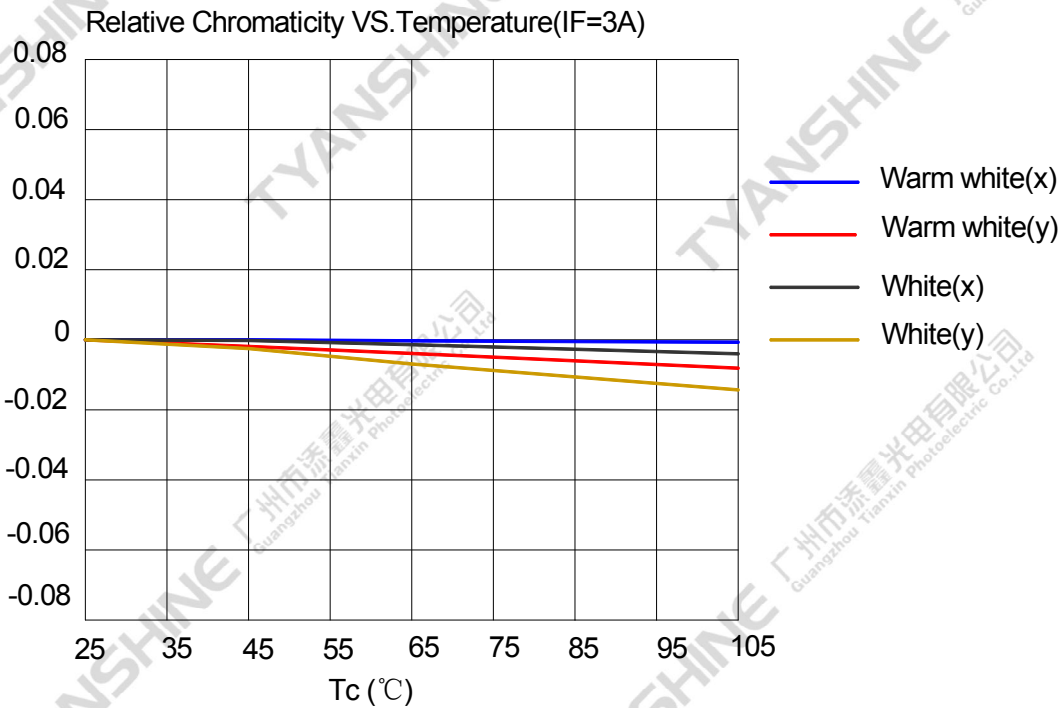
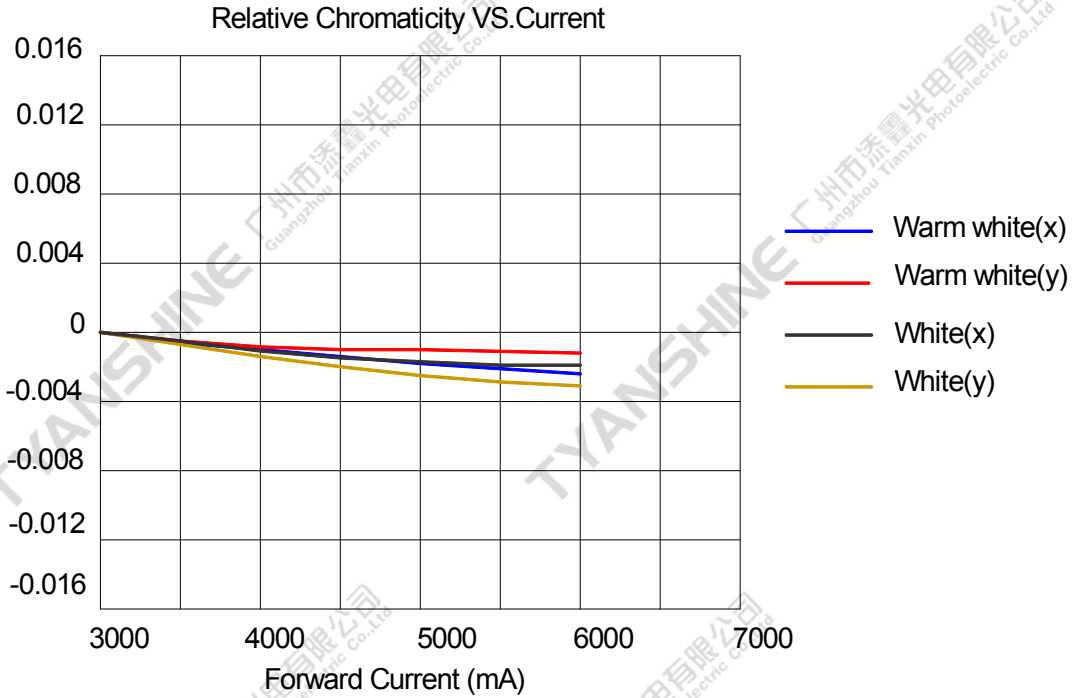


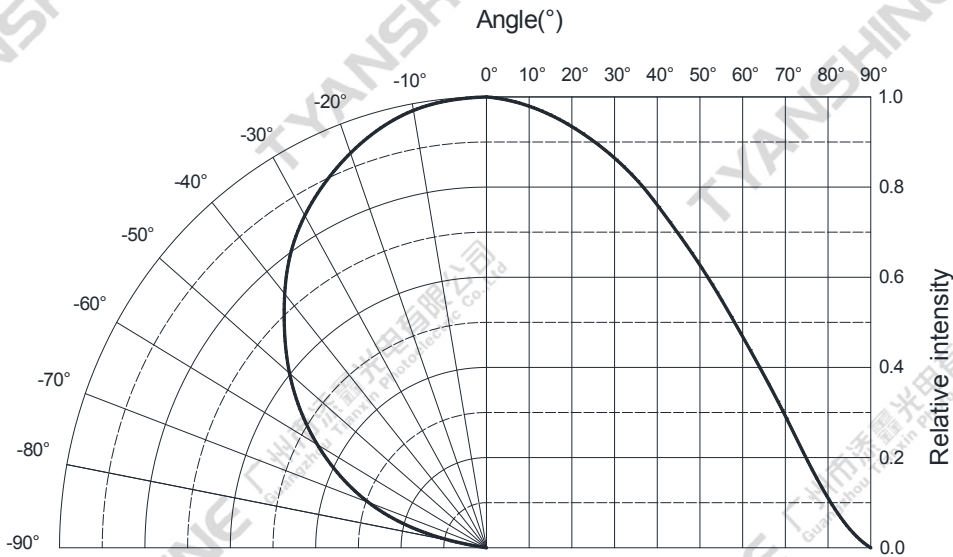
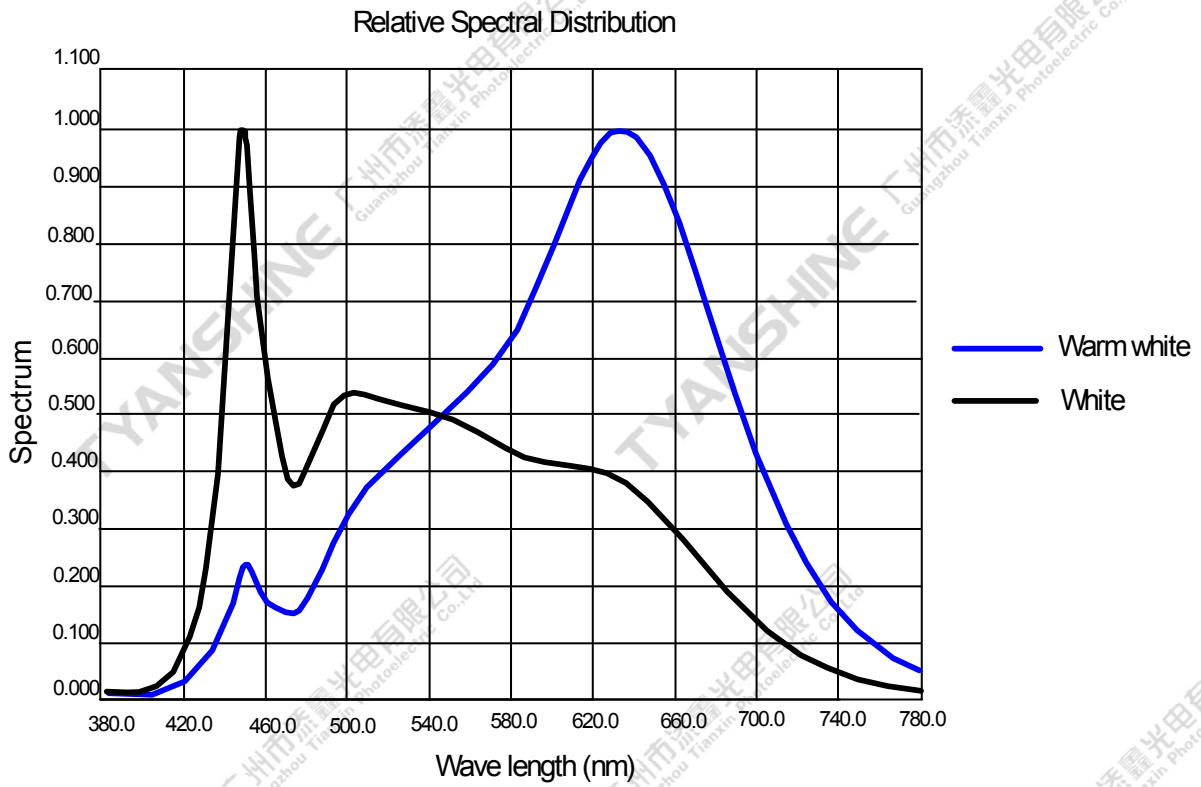
Temperature VS. Relative Luminous FLux (IF=3A)



Temperature VS. Forward Voltage (IF=3A)







**Notes:**

1. 2θ 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 ± 5°.

Part No.	TX-8090SW1300C70F31-10H952770	Spec No.	WKF-DD0014	Page	8 of 8
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