

# TX-90100WS500FC120-NUVENG-01H95

## PRODUCT SPECIFICATION (R&D version)

### Features:

- ◆ Excellent transiting heat from white LED chip operating under W:3.5A\*4 S:3.5A\*4 .
- ◆ Provide uniform cross distribution of positive white and warm white dual color scheme, mixed pure.
- ◆ No UV.
- ◆ High luminous output.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆ GaInN
- ◆ GaInN

### Emitting Color:

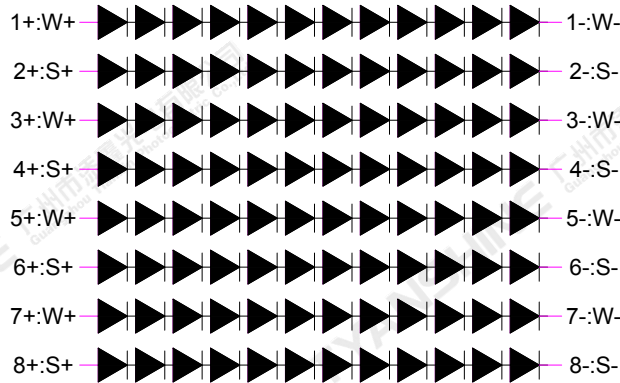
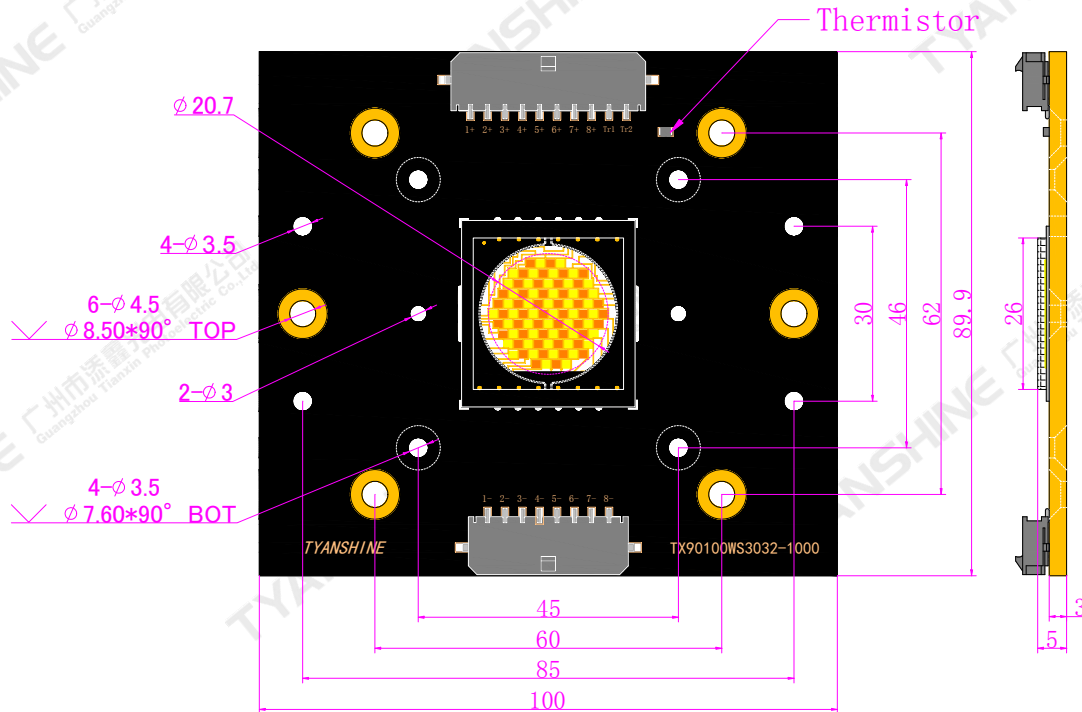
- ◆ White
- ◆ Warm White

### Applications:

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

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**Package Dimensions:**



**Notes:**

- 1.All dimensions are in millimeters .
- 2.Tolerances unless otherwise mentioned are  $\pm 0.1$ mm .

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

Parameter	Symbol	Ratings	Unit	
Forward Current	IF	1(W)	3.5	A
		2(S)	3.5	
		3(W)	3.5	
		4(S)	3.5	
		5(W)	3.5	
		6(S)	3.5	
		7(W)	3.5	
		8(S)	3.5	
Reverse Voltage	VR	—	V	
Power Dissipation	PD	W	546	W
		S	546	
Junction Temperature	Tj	W	150	°C
		S	150	
Electrostatic Discharge Threshold (ESD)	ESD	2000	V	
Storage Temperature	Tstg	-40~+85	°C	
Operation Temperature	Topr	-40~+125		

**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**

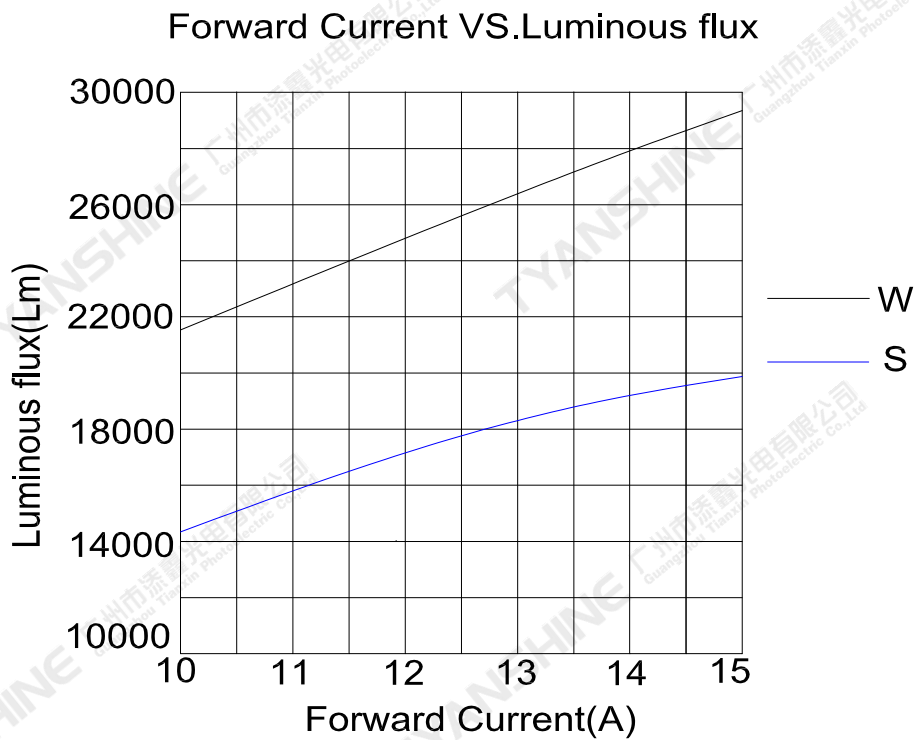
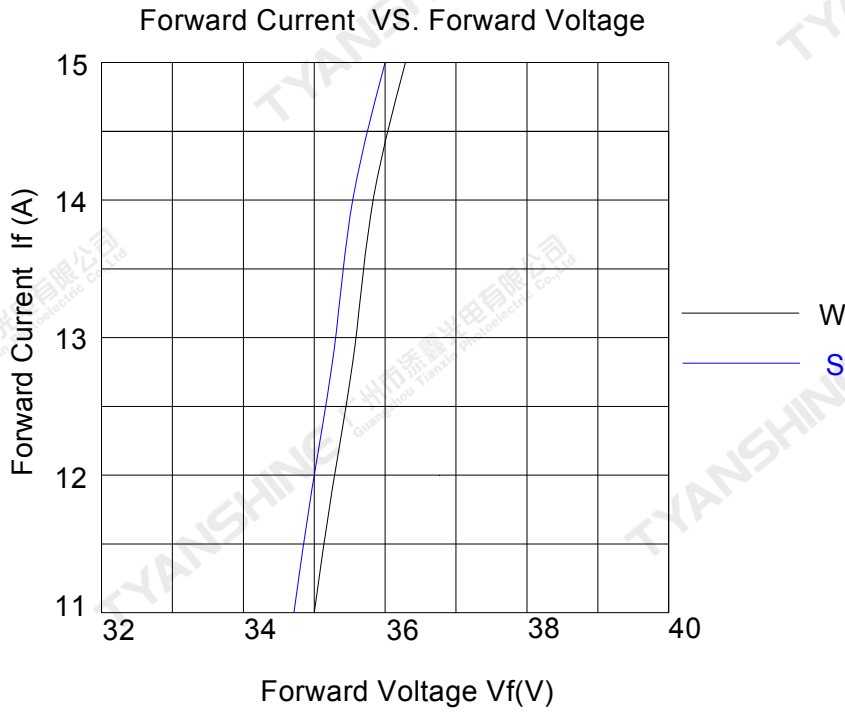
Parameter	Symbol	Condition	Emitting color	Min.	Typ.	Max.	Units
Luminous Flux	$\phi_v$	If=3.5*4=14A (Tc=25°C)	W	25000	27800	30500	lm
			S	17000	18800	20700	
		If=3.5*4=14A (Tc=85°C)	W	21600	24000	26400	
			S	13500	15000	16500	
Forward Voltage	$V_f$	If=3.5*4=14A (Tc=25°C)	W	33	36	39	V
			S	33	36	39	
		If=3.5*4=14A (Tc=85°C)	W	32	35	38	
			S	32	35	38	
Correlated Colour Temperature	CCT	If=3.5*4=14A (Tc=25°C)	W	5600	6000	6500	K
			S	2840	2930	3030	
		If=3.5*4=14A (Tc=85°C)	W	5800	6500	7000	
			S	2855	2960	3070	
Viewing Angle at 50% IV	$2\theta_{1/2}$	—	W	—	115	—	Deg
			S	—	115	—	
Reverse Current	$I_R$	—	W	—	—	—	$\mu A$
			S	—	—	—	
Thermal Resistance Junction to Case	$R_{\theta J-C}$	—	W	—	0.023	—	K/W
			S	—	0.023	—	
Temperature Coefficient of Voltage	$V_{\Delta F/T}$	If=3.5*4=14A	W	—	-19	—	mV/°C
			S	—	-19	—	
Color Rendering Index	Ra		W	95	97.5	—	—
			S	95	97.5	—	—

**Notes:**

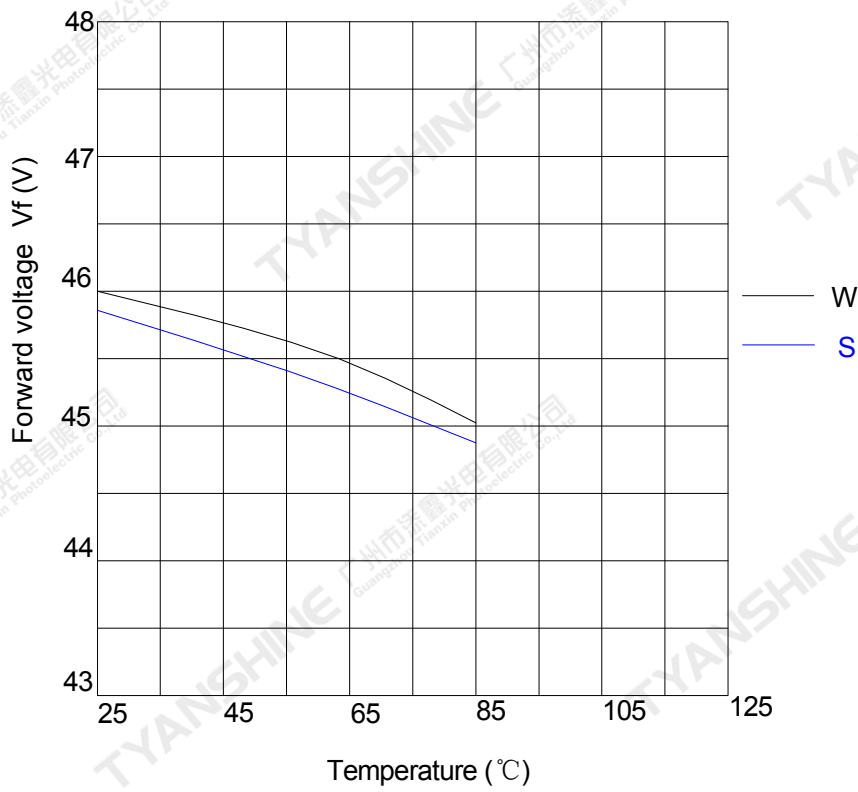
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.Luminous flux measurement tolerance:±15%.
- 4.Forward voltage measurement tolerance:±0.15V.

**Typical Electrical/Optical Characteristics Curves**

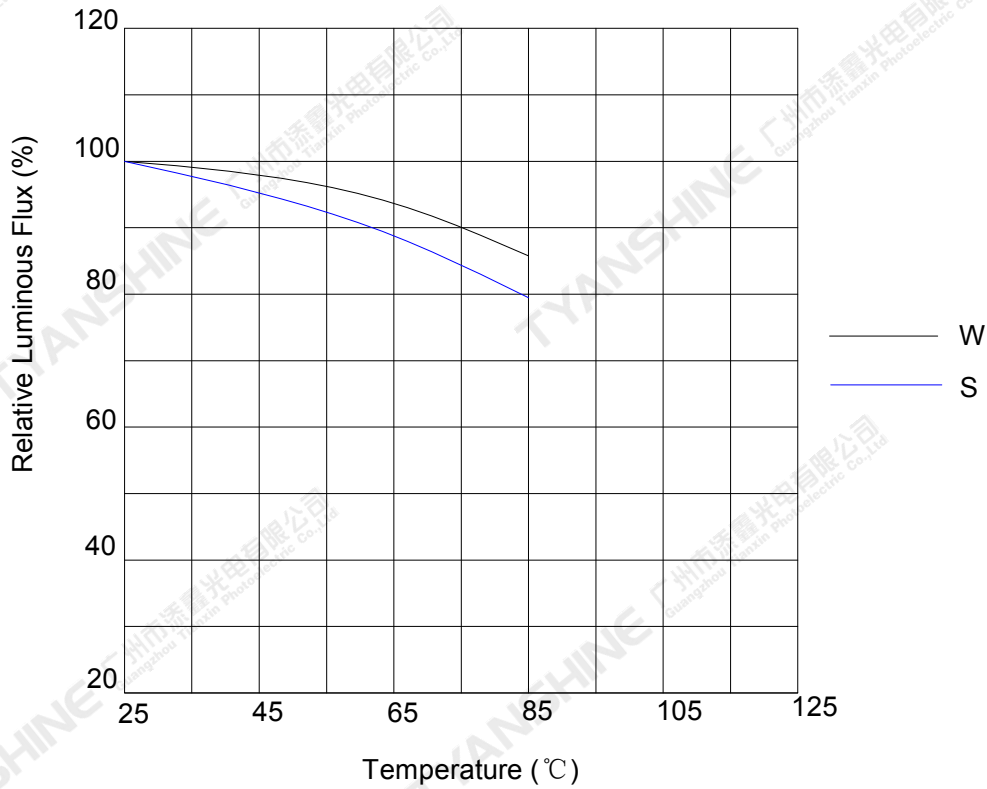
(25°C Ambient Temperature Unless Otherwise Noted; W/S:IF=3.5A\*4=14A)

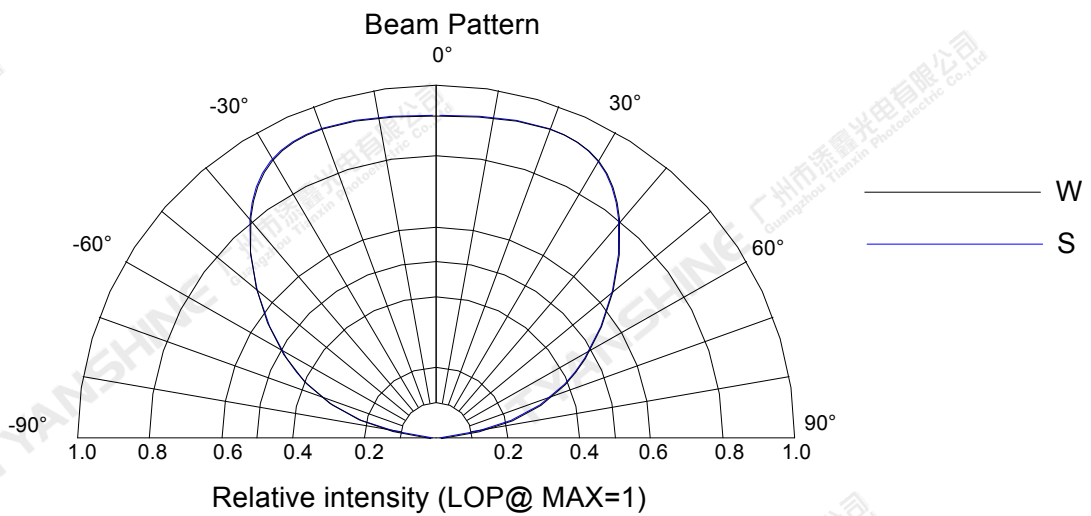
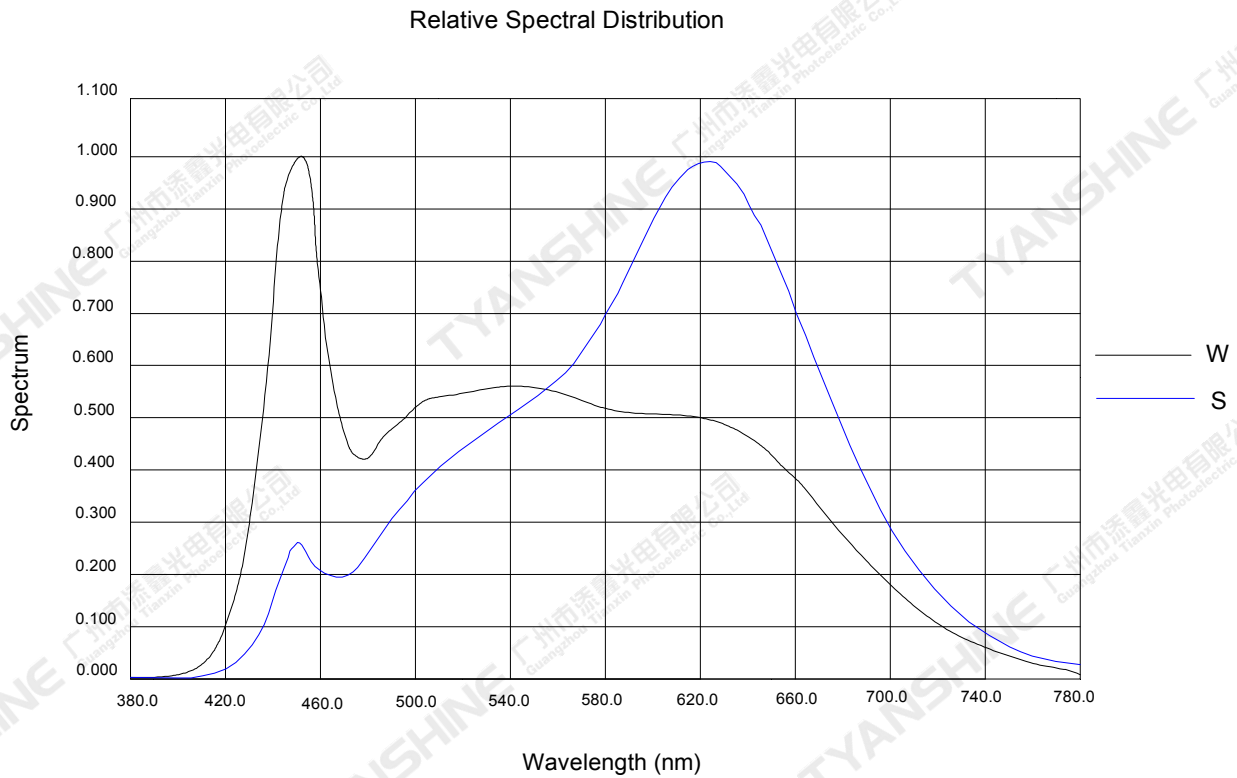


Temperature VS. Forward Voltage (IF=14A)



Temperature VS. Relative Luminous Flux (IF=14A)





**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  $\pm 5^\circ$ .