

# TX-70100RGLAC1200FC120-NUVENG-01A

## PRODUCT SPECIFICATION

### Features:

- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

### Chip Material:

- ◆ Red: AlInGaP
- ◆ Green: GaInN
- ◆ Blue: GaN
- ◆ Lemon light: GaN
- ◆ PC Amber: GaN
- ◆ Cyan: GaN

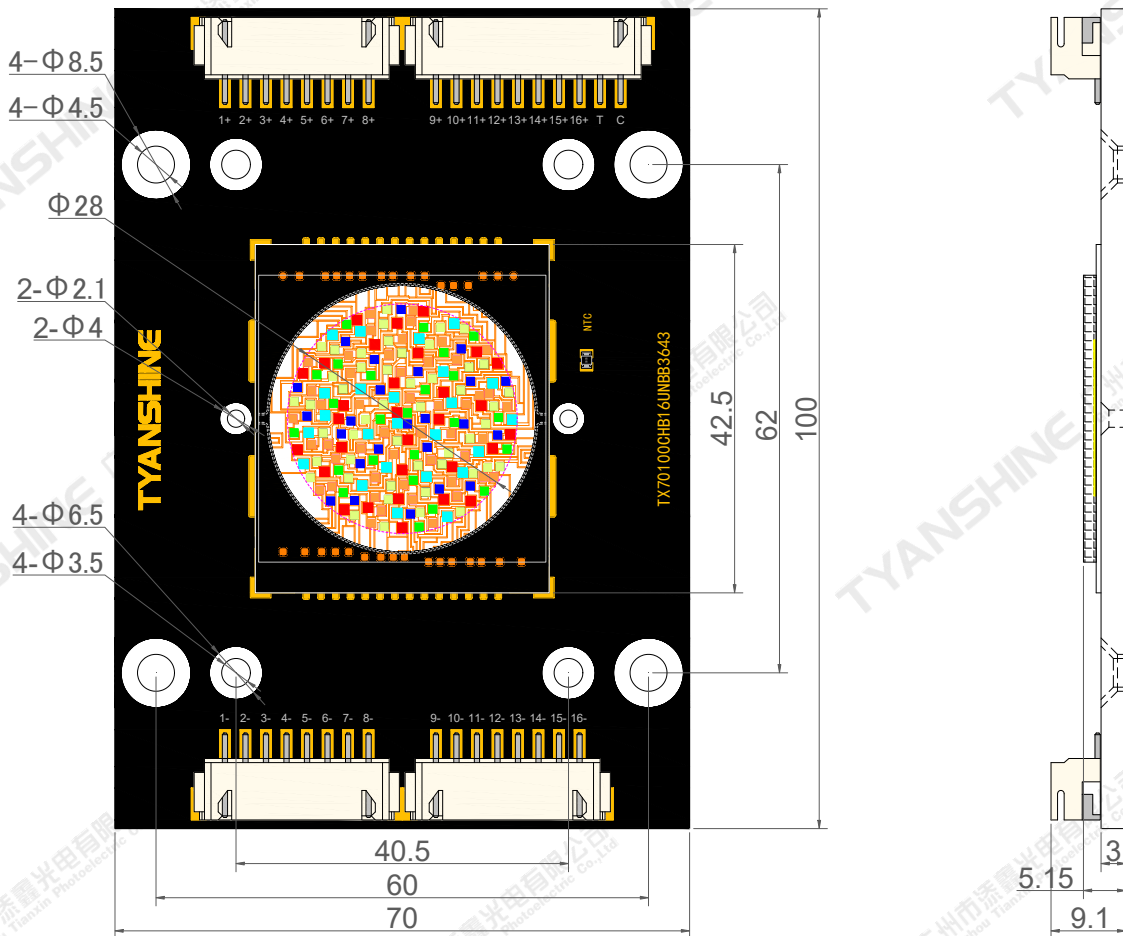
### Emitting Color:

- ◆ Red (R1/R2)
- ◆ Green (G1/G2)
- ◆ Blue (B1/B2)
- ◆ Lemon light (L1/L2/L3/L4)
- ◆ PC Amber (A1/A2/A3/A4)
- ◆ Cyan (C1/C2)

### Applications:

- ◆ Stage lighting
- ◆ Landscape Lighting
- ◆ Entertainment lighting

**Package Dimensions:**



- Red: (4+)-(R1+) / (4-)-(R1-); (8+)-(R2+) / (8-)-(R2-);
- Green: (3+)-(G1+) / (3-)-(G1-); (13+)-(G2+) / (13-)-(G2-);
- Blue: (1+)-(B1+) / (1-)-(B1-); (14+)-(B2+) / (14-)-(B2-)
- Lemon light: (2+)-(L1+) / (2-)-(L1-); (7+)-(L2+) / (7-)-(L2-);  
(11+)-(L3+) / (11-)-(L3-); (15+)-(L4+) / (15-)-(L4-);
- PC Amber: (5+)-(A1+) / (5-)-(A1-); (9+)-(A2+) / (9-)-(A2-);  
(12+)-(A3+) / (12-)-(A3-); (16+)-(A4+) / (16-)-(A4-);
- Cyan: (6+)-(C1+) / (6-)-(C1-); (10+)-(C2+) / (10-)-(C2-);

**Notes:**

- 1.All dimensions are in millimeters .
- 2.Tolerances unless otherwise mentioned are ±0.2mm .

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

Parameter	Symbol	Ratings	Unit	
Forward Current	IF	R1+R2	4.0	A
		G1+G2	5.0	
		B1+B2	5.0	
		L1+L2+L3+L4	7.2	
		A1+A2+A3+A4	7.2	
		C1+C2	4.0	
Reverse Voltage	VR	Not designed for reverse operation	V	
Power Dissipation	PD	R1+R2	148	W
		G1+G2	196	
		B1+B2	205	
		L1+L2+L3+L4	278	
		A1+A2+A3+A4	278	
		C1+C2	160	
Junction Temperature	Tj	R	115	°C
		G	150	
		B	150	
		L	150	
		A	150	
		C	150	
Electrostatic Discharge Threshold (ESD)	ESD	2000	V	
Storage Temperature	Tstg	-20~+70	°C	
Operation Temperature	Topr	-30~+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=2.6A	R1+R2	2800	3200	3600	lm
		IF=2.6A	G1+G2	5800	6500	7000	
		IF=2.6A	B1+B2	900	1100	1300	
		IF=5.2A	L1+L2+L3+L4	19800	22000	24200	
		IF=5.2A	A1+A2+A3+A4	11200	12500	13800	
		IF=2.6A	C1+C2	2400	3000	3600	
Dominant Wavelength	$\lambda_d$	IF=1.3A	R1/R2	627	632	637	nm
			G1/G2	517	522	527	
			B1/B2	444	449	454	
			C1/C2	482	487	492	
			L1/L2/L3/L4	565	567	569	
Peak-emission Wavelength	$\lambda_p$		R1/R2	637	642	647	nm
			G1/G2	512	517	522	
			B1/B2	439	444	449	
			C1/C2	480	485	490	
			L1/L2/L3/L4	540	543	547	
Correlated Colour Temperature	CCT	L1/L2/L3/L4	4150	—	4450	K	
		A1/A2/A3/A4	1780	—	1950		
Forward Voltage	$V_f$	R1/R2	32	35	38	V	
		G1/G2	34	36.5	39		
		B1/B2	35	37.5	39		
		L1/L2/L3/L4	35	37	39		
		A1/A2/A3/A4	35	37	39		
		C1/C2	38	40.5	43		
Viewing Angle at 50% IV	$2\theta_{1/2}$		—	—	120	—	Deg
Reverse Current	$I_R$		—	—	—	—	$\mu A$
Thermal Resistance Junction to Case	$R\theta_{J-C}$	R1+R2	—	—	0.15	—	K/W
		G1+G2	—	—	0.37	—	
		B1+B2	—	—	0.37	—	
		L1+L2+L3+L4	—	—	0.19	—	

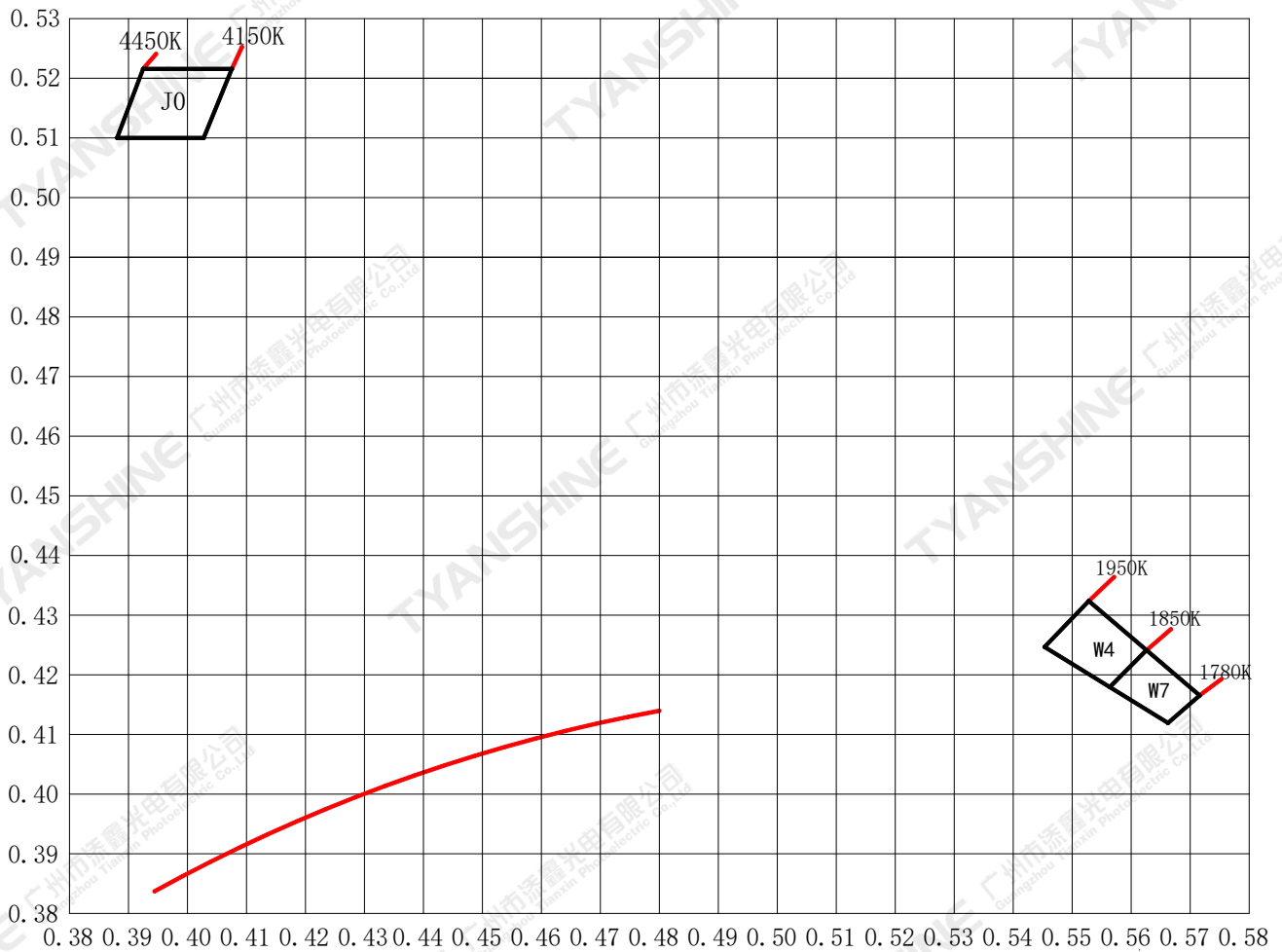
		A1+A2+A3+A4	—	0.19	—	
		C1+C2	—	0.38	—	
		Total thermal resistance	—	0.05	—	
Temperature Coefficient of Voltage	V $\Delta$ F/T	R1/R2	—	-23.8	—	mV/°C
		G1/G2	—	-37.2	—	
		B1/B2	—	-17.5	—	
		L1/L2/L3/L4	—	-20.83	—	
		A1/A2/A3/A4	—	-23.83	—	
		C1/C2	—	-31.5	—	
Thermistor(NTC)	Rt25	—	—	10	—	K $\Omega$

**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: $\pm 15\%$ .
- 4.Forward voltage measurement tolerance: $\pm 0.15V$ .

**White light Color coordinate filing**

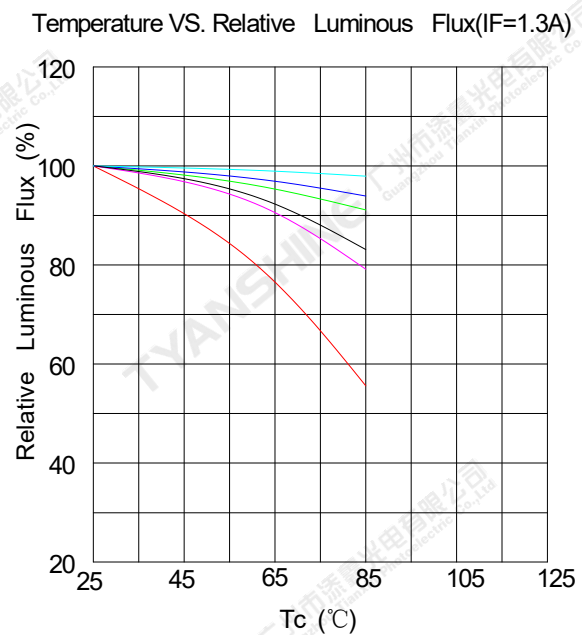
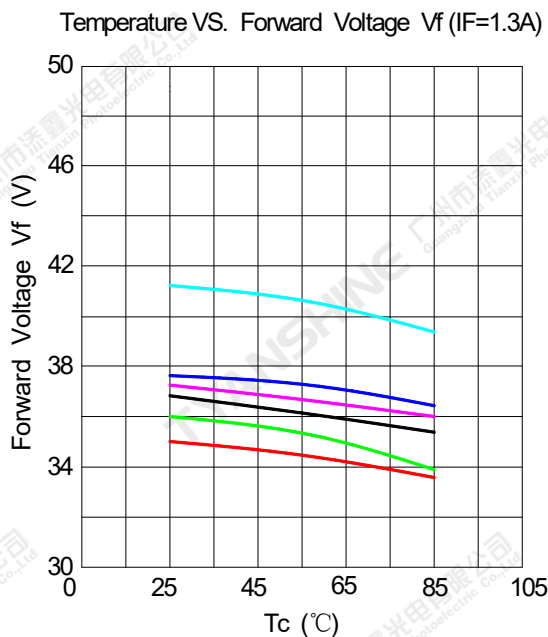
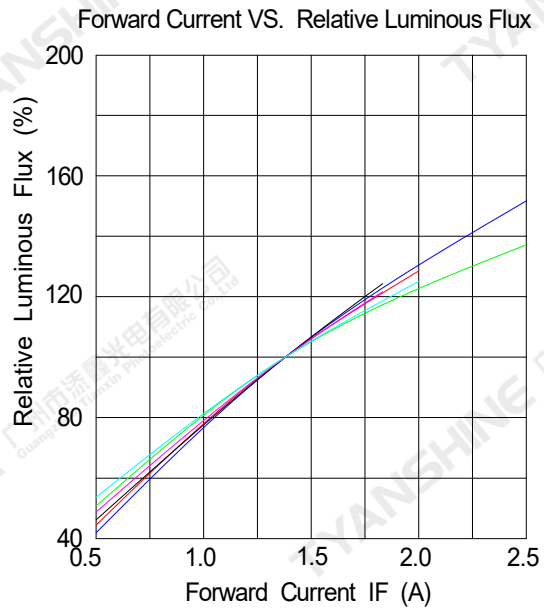
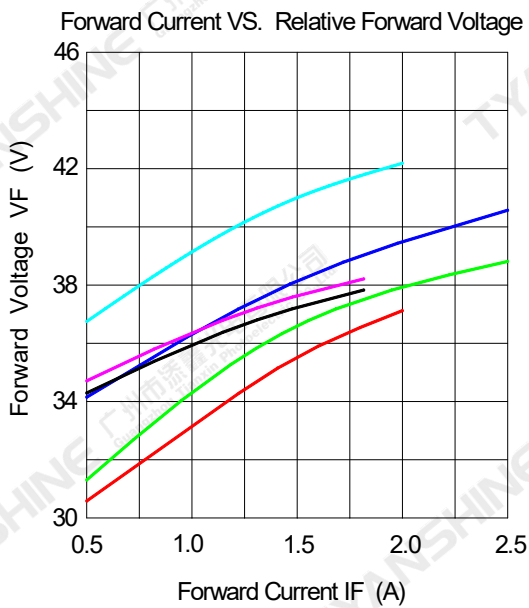
(L1/L2/L3/L4 IF=1.3A;A1/A2/A3/A4 IF=1.3A;Tc=25°C)



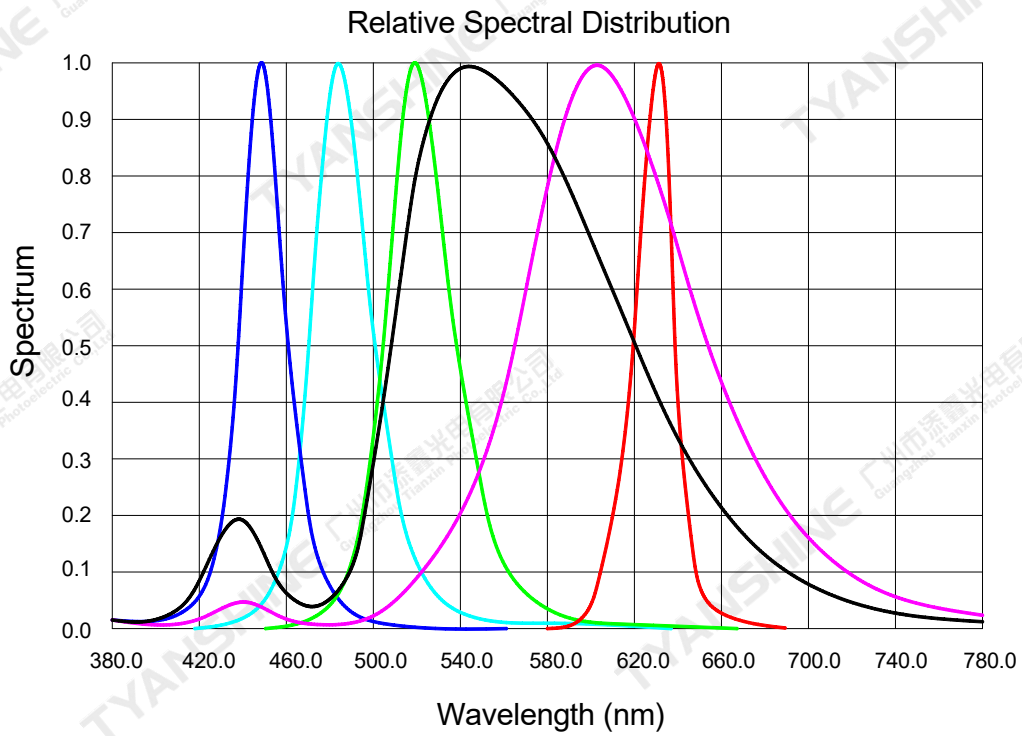
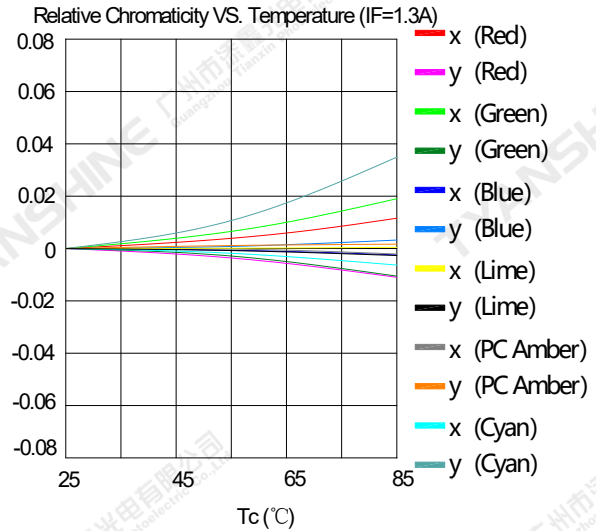
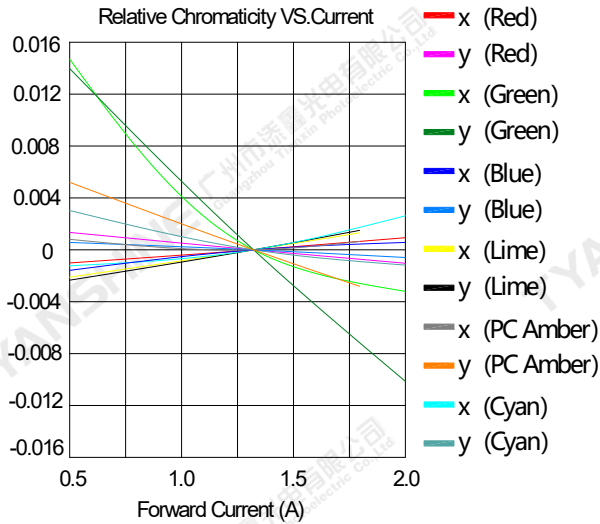
Grade	TC	P1		P2		P3		P4	
		X1	Y1	X2	Y2	X3	Y3	X4	Y4
J0	4150-4450K	0.4028	0.5101	0.4076	0.5217	0.3925	0.5217	0.3881	0.5101
W4	1850-1950K	0.5564	0.4181	0.5626	0.4243	0.5528	0.4325	0.5453	0.4248
W7	1780-1850K	0.5663	0.4121	0.5716	0.4167	0.5626	0.4243	0.5564	0.4181

# Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



**Notes:** — Red (R1/R2); — Green (G1/G2); — Blue (B1/B2); — Lemon light (L1/L2/L3/L4); — PC Amber (A1/A2/A3/A4); — Cyan (C1/C2).



**Notes:** — Red (R1/R2); — Green (G1/G2); — Blue (B1/B2); — Lemon light (L1/L2/L3/L4); — PC Amber (A1/A2/A3/A4); — Cyan (C1/C2).

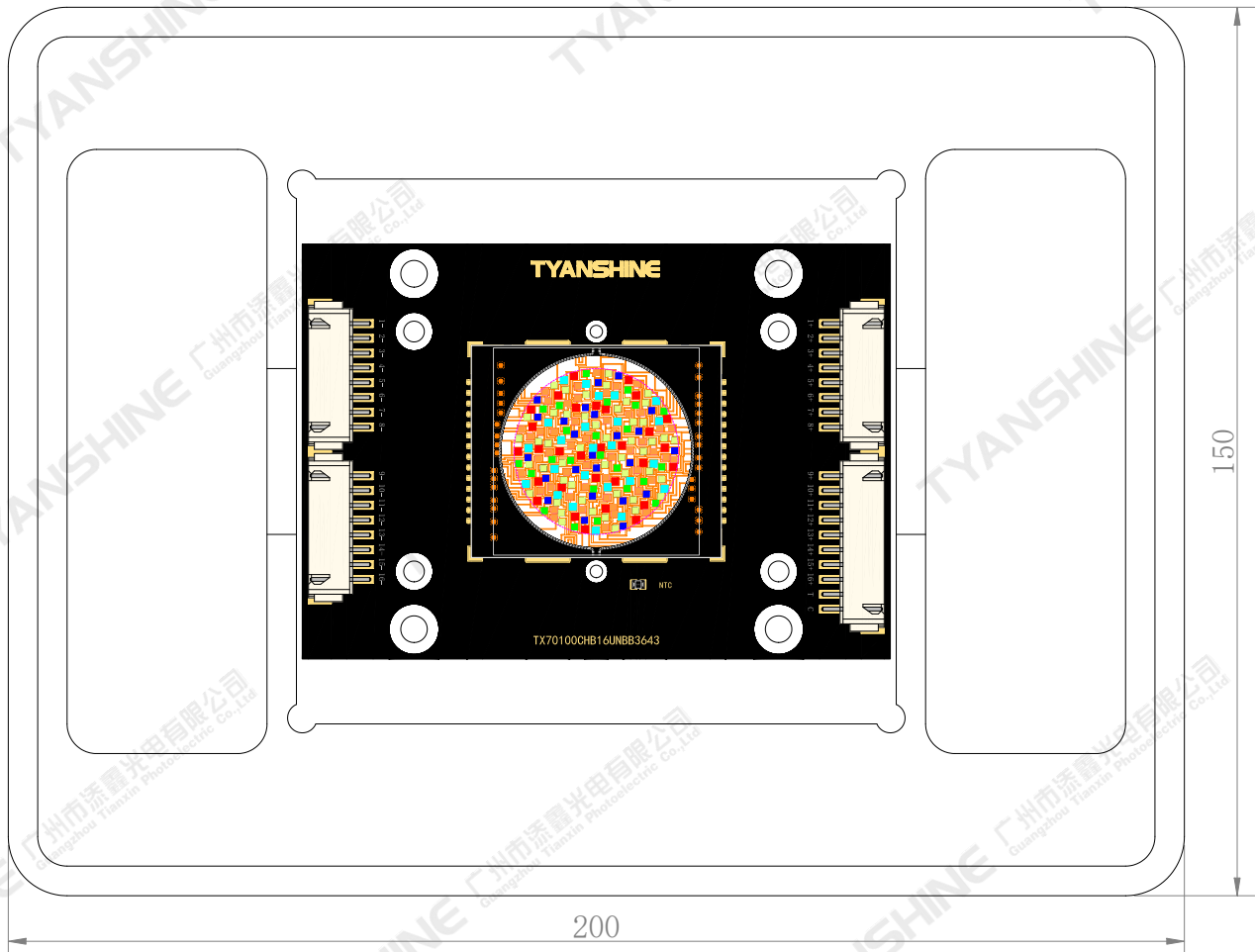
**Notes:**

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  $\pm 5^\circ$ .



**Dimensions For Cannulation And Packaging**

**Quantity:1 PCS**



**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.

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