# TX-4566RGBW150FC120-NUVENG-02

# PRODUCT SPECIFICATION

## Features:

◆Excellent transiting heat from LED chip operating under 1500mA.

◆Light emitting area is small, power per unit area of up to 5W/mm ².

◆High luminous output.

◆Encapsulated materials are environmentally certified and meet environmental requirements.

## Chip Material:

◆Red: AlInGaP

◆Green: GaInN

◆Blue: GaN

◆White: GaN

## Emitting Color:

◆Red

◆Green

◆Blue

◆White

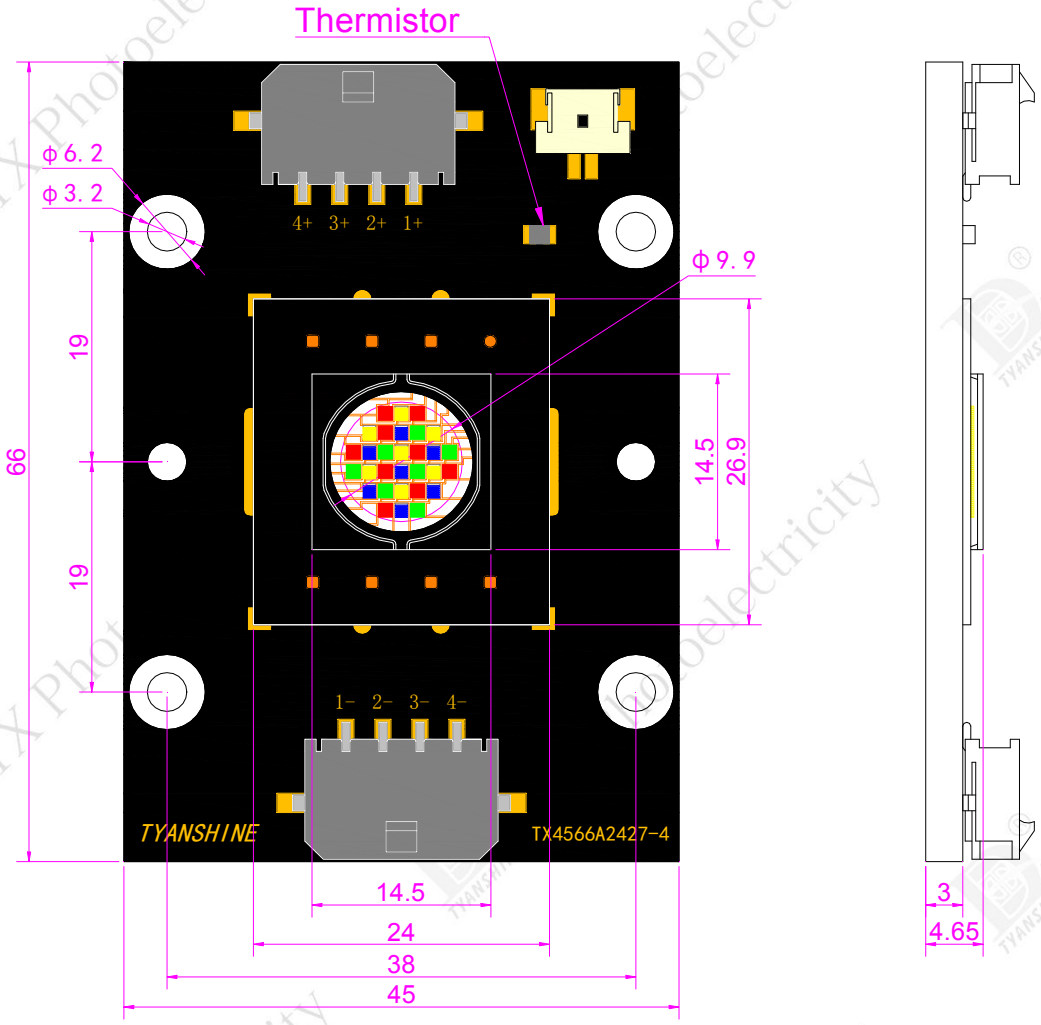
## Applications:

◆Stage lighting

◆Landscape Lighting

◆Entertainment lighting

## Package Dimensions:




1-White；2-Green；3-Red；4-Blue

(The polarity of pins 1 and 3 is opposite to that of the above substrate)

**Notes:**

1.All dimensions are in millimeters .

2.Tolerances unless otherwise mentioned are ±0.1mm .

# Absolute Maximum Ratings (Tc=25℃)

| Parameter | Symbol | | Max Ratings | Unit |
|---|---|---|---|---|
| Forward Current | IF | R | 1.8 | A |
| | | G | 1.8 | |
| | | B | 2.4 | |
| | | W | 2.4 | |
| Reverse Voltage | $V_R$ | | Not designed for reverse operation | V |
| Power Dissipation | $P_D$ | R | 41.4 | W |
| | | G | 41.4 | |
| | | B | 52.8 | |
| | | W | 52.8 | |
| Junction Temperature | Tj | R | 115 | ℃ |
| | | G | 150 | |
| | | B | 150 | |
| | | W | 150 | |
| Electrostatic Discharge Threshold (ESD) | ESD | | 2000 | V |
| Storage Temperature | $T_{stg}$ | | -40~70 | ℃ |
| Operation Temperature | $T_{opr}$ | | -40~100 | |

**Notes:**

1.Specifications are subject to change without notice.

2.The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.

3.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 | $\varphi_v$ | If=1500mA | R | 870 | 1000 | 1200 | lm |
| | | | G | 1650 | 1800 | 1950 | |
| | | | B | 320 | 360 | 400 | |
| | | | W | 2250 | 2450 | 2600 | |
| Dominant Wavelength | λd | | R | 620 | 625 | 630 | nm |
| | | | G | 518 | 523 | 528 | |
| | | | B | 450 | 453 | 460 | |
| Correlated Colour Temperature | CCT | | W | 5500 | 6500 | 7500 | K |
| Peak-emission Wavelength | λp | | R | 630 | 635 | 640 | nm |
| | | | G | 512 | 517 | 522 | |
| | | | B | 445 | 448 | 455 | |
| Spectral Line Half-Width | △λ | | R | 15 | 20 | 25 | nm |
| | | | G | 30 | 35 | 40 | |
| | | | B | 20 | 25 | 30 | |
| | | | W | 20 | 25 | 30 | |
| Forward Voltage | $V_f$ | | R | 21 | 23 | 25 | V |
| | | | G | 21 | 23 | 25 | |
| | | | B | 20 | 22 | 24 | |
| | | | W | 20 | 22 | 24 | |
| Reverse Current | $I_R$ | — | — | — | — | — | μA |
| Viewing Angle at 50％IV | $2\theta_{1/2}$ | — | — | — | 120 | — | Deg |
| Thermal Resistance Junction to Case | $R\theta_{J-C}$ | — | — | — | 0.22 | — | K/W |
| Temperature Coefficient of Voltage | V△F/T | If=1500mA | R | — | -6.2 | — | mV/℃ |
| | | | G | — | -18.4 | — | |
| | | | B | — | -13.1 | — | |
| | | | W | — | -11.6 | — | |
| Thermistor(NTC) | Rt25 | — | — | — | 10 | — | KΩ |

**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.

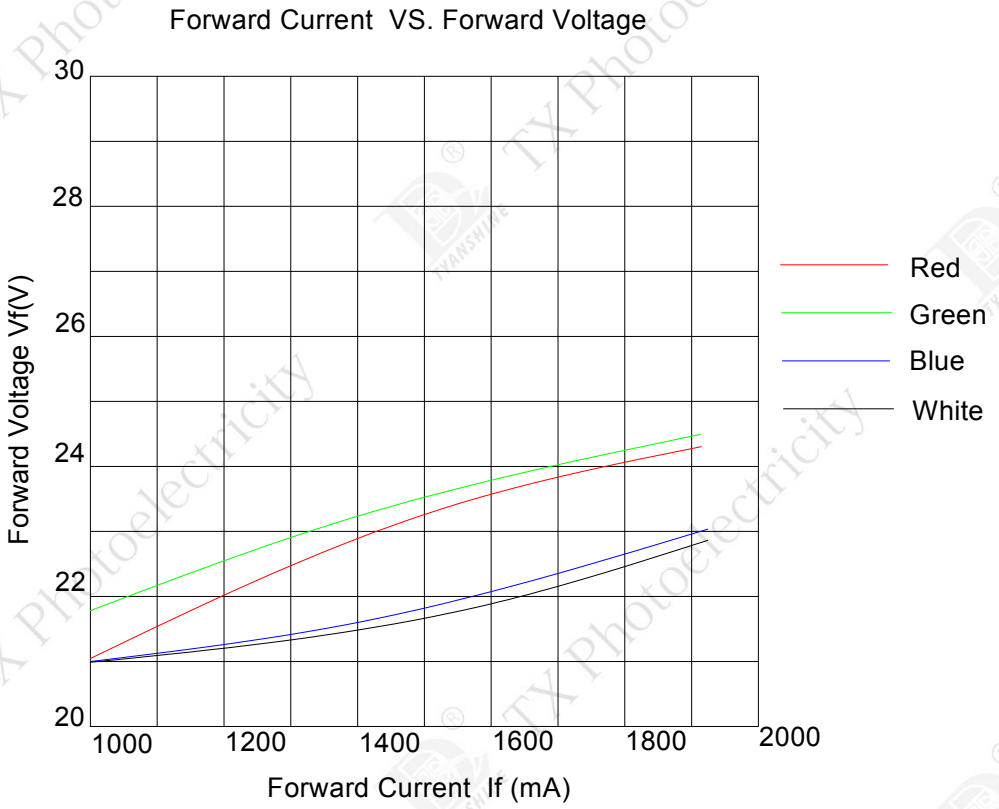
3.The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

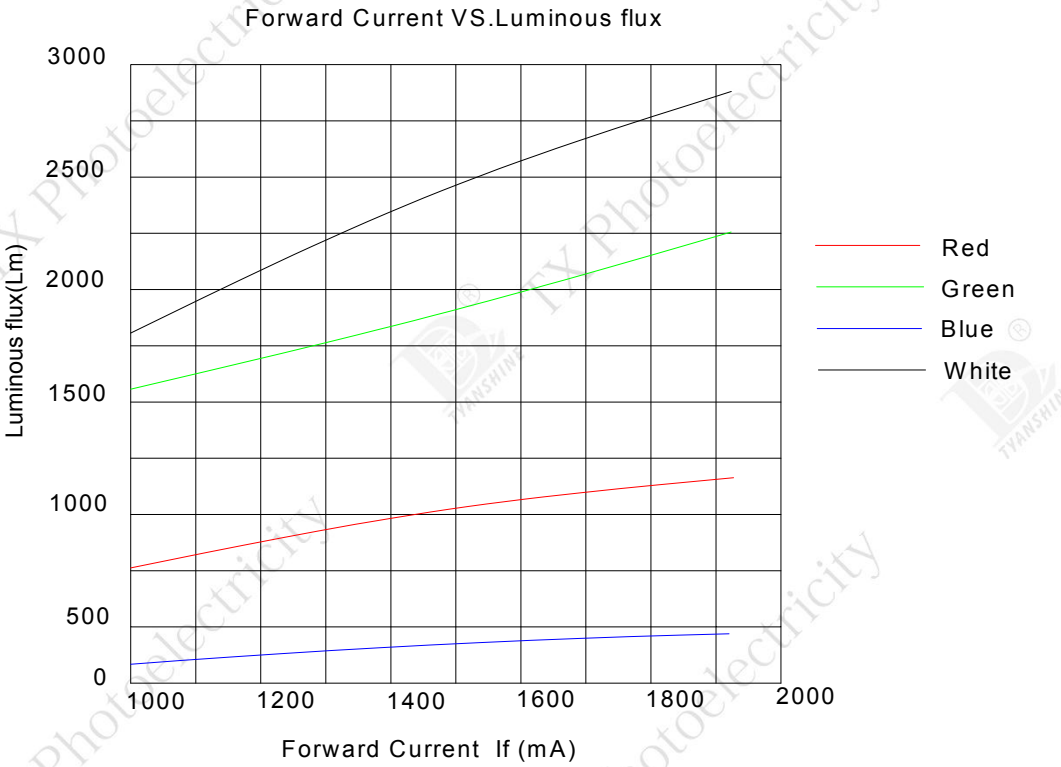
4.Luminous flux measurement tolerance:±15%.

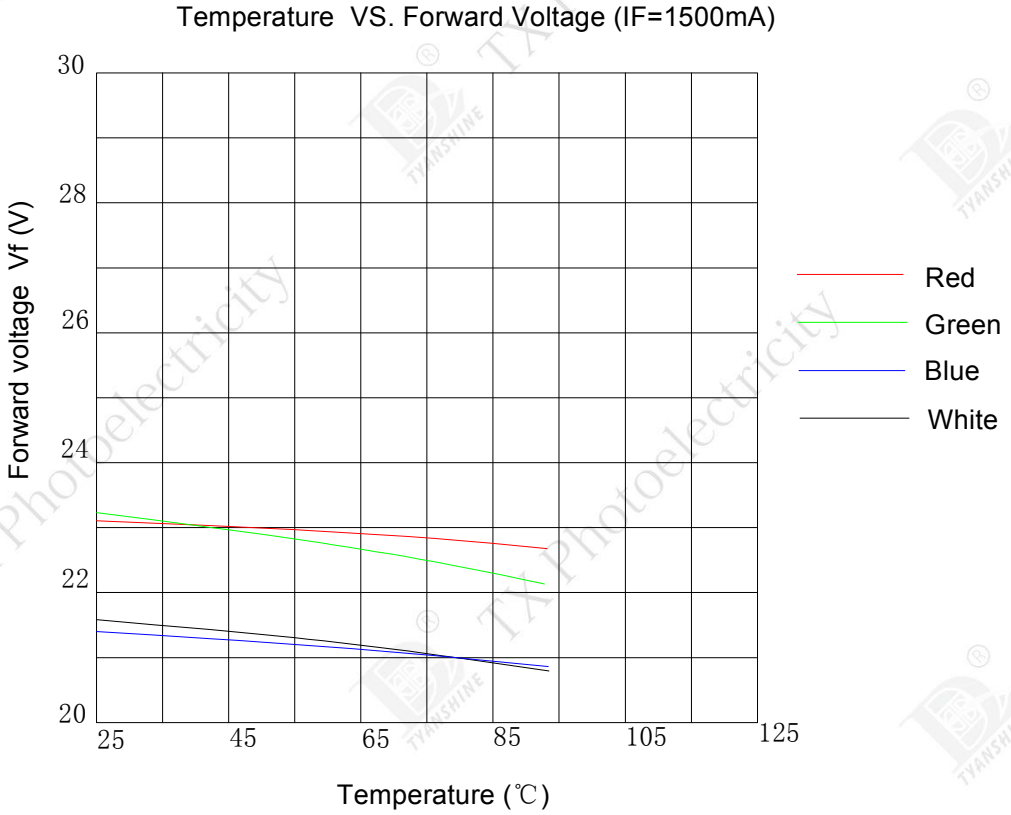
5.Forward voltage measurement tolerance:±0.15V.

## Typical Electrical/Optical Characteristics Curves

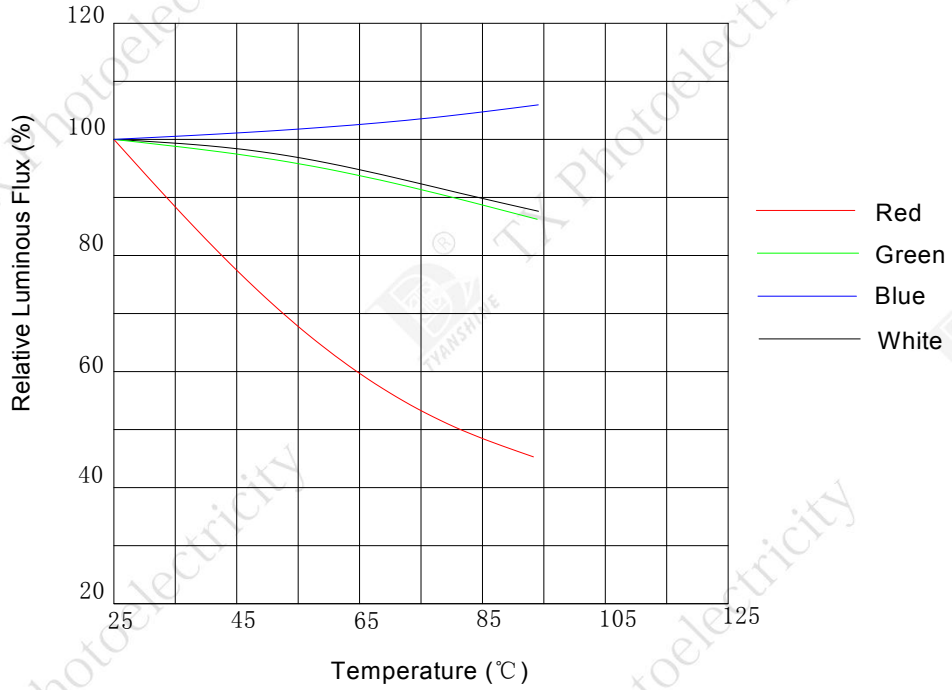
(25℃ Ambient Temperature Unless Otherwise Noted)



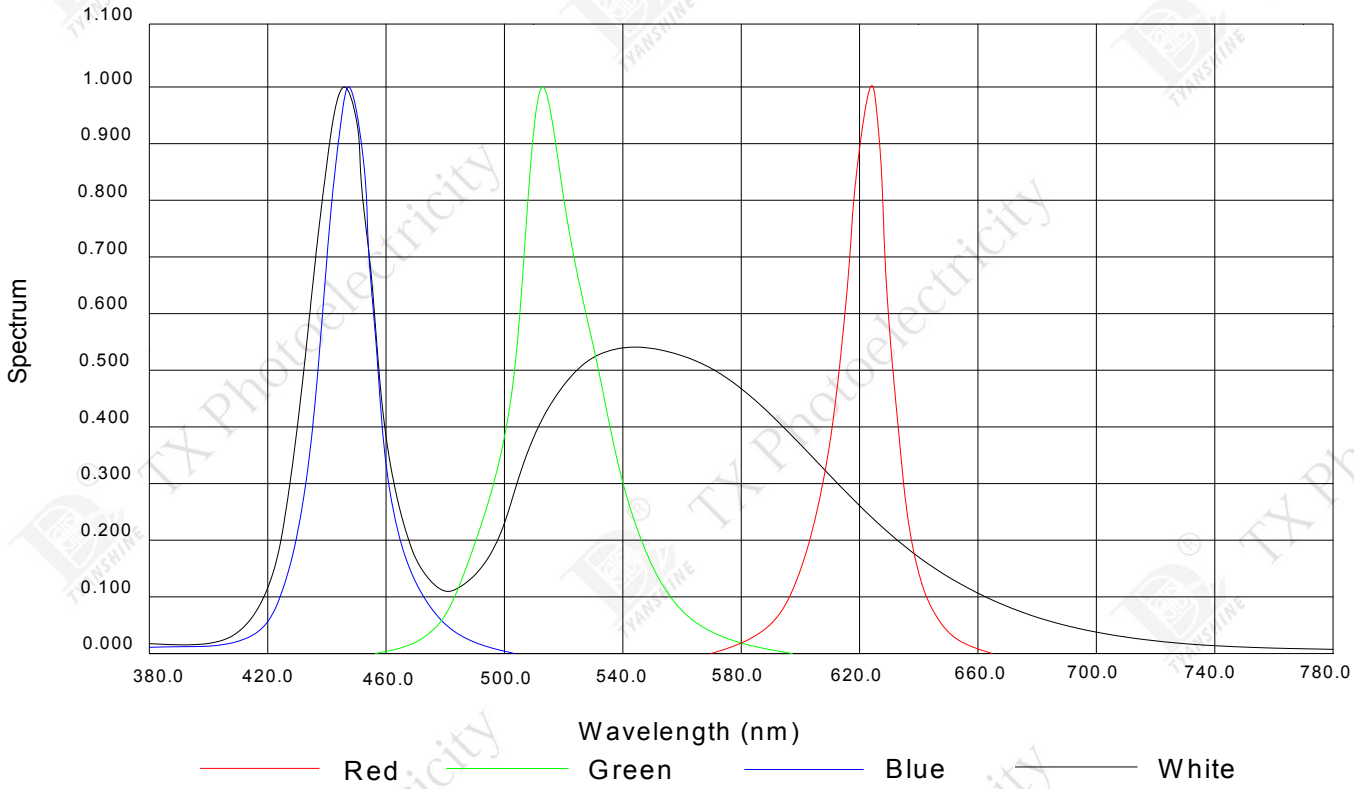

Forward Current VS.Luminous flux
Luminous flux(Lm)
3000
2500
2000
1500
1000
500
0
1000
1200
1400
1600
1800
2000
Forward Current If (mA)
Red
Green
Blue
White

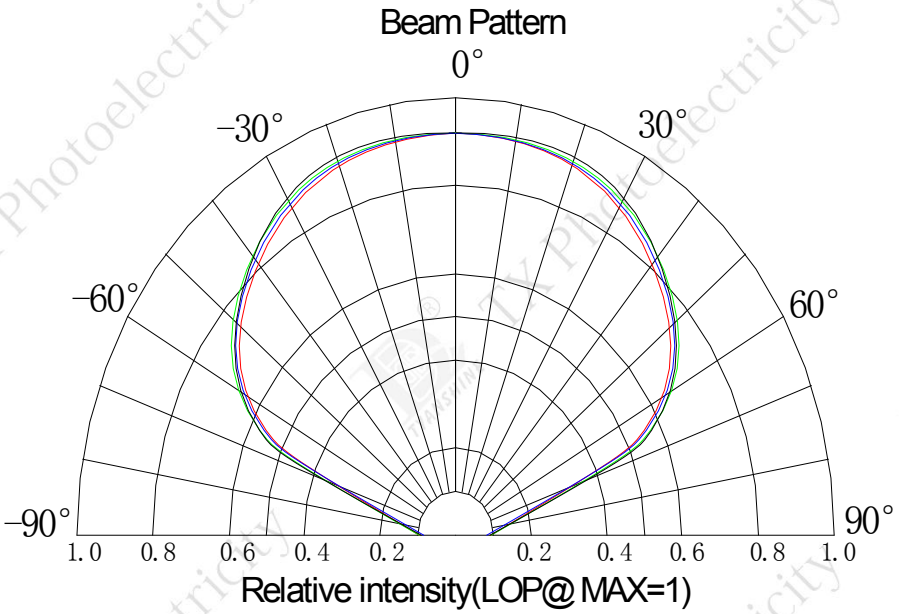

Temperature VS. Forward Voltage (IF=1500mA)
Forward voltage Vf (V)
30
28
26
24
22
20
25
45
65
85
105
125
Temperature (℃)
Red
Green
Blue
White

Temperature VS. Relative Luminous Flux (IF=1500mA)




Relative Spectral Distribution



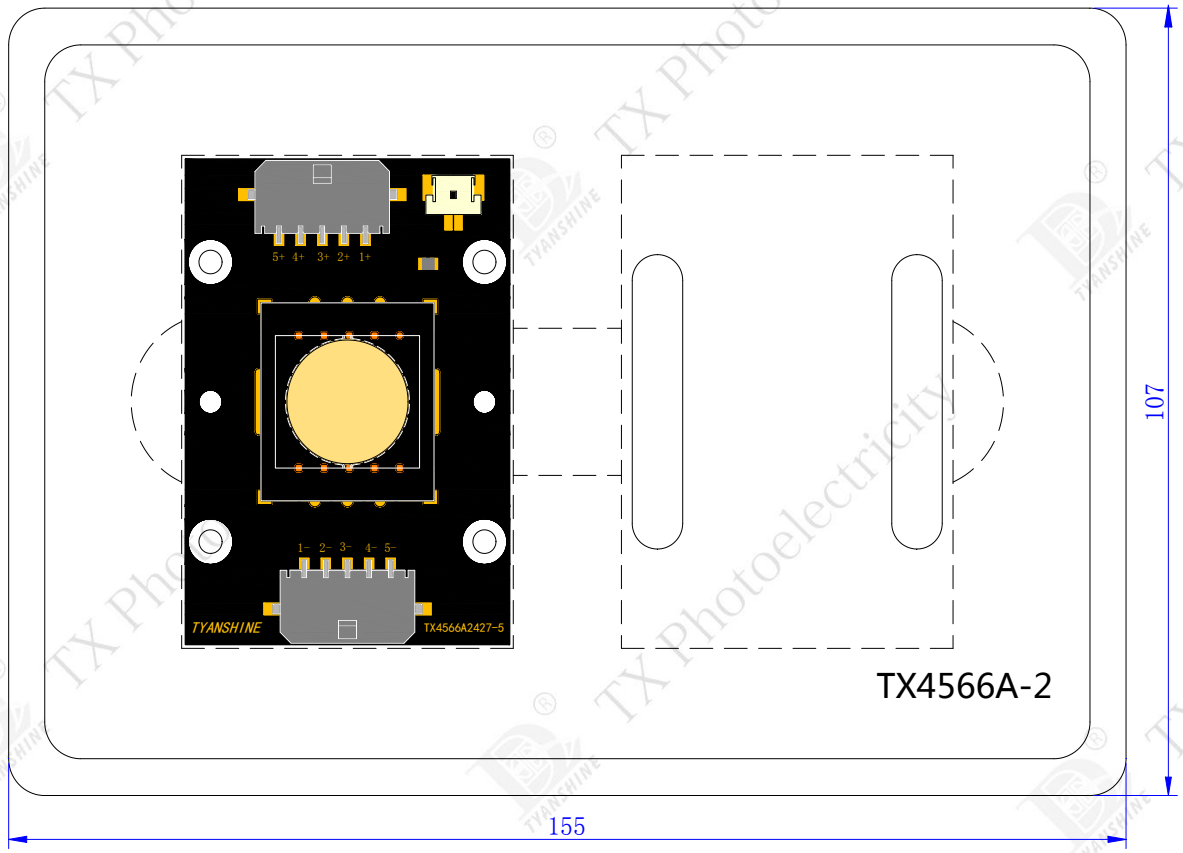



**Notes:**

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°.

# Dimensions For Cannulation And Packaging

## Quantity: 2PCS




**Notes:**

1. All dimensions are in millimeters.
2. Tolerances are ±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.