# TX-B3A140-002G

# PRODUCT SPECIFICATION

Approved by:        Checked by:        Prepared by:

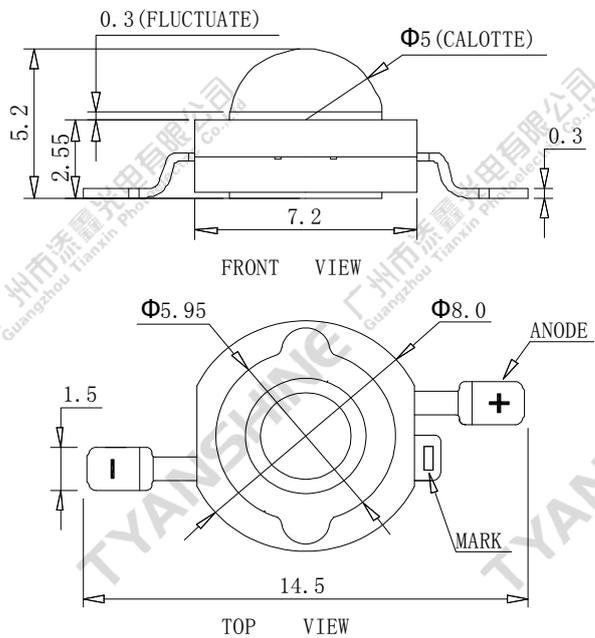| Part No. | TX-B3A140-002G | Spec No. | WKF-BA3005 | Page | 1 of 9 |
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## Features:

◆ Excellent Transiting Heat from LED Chip Operating under 700mA
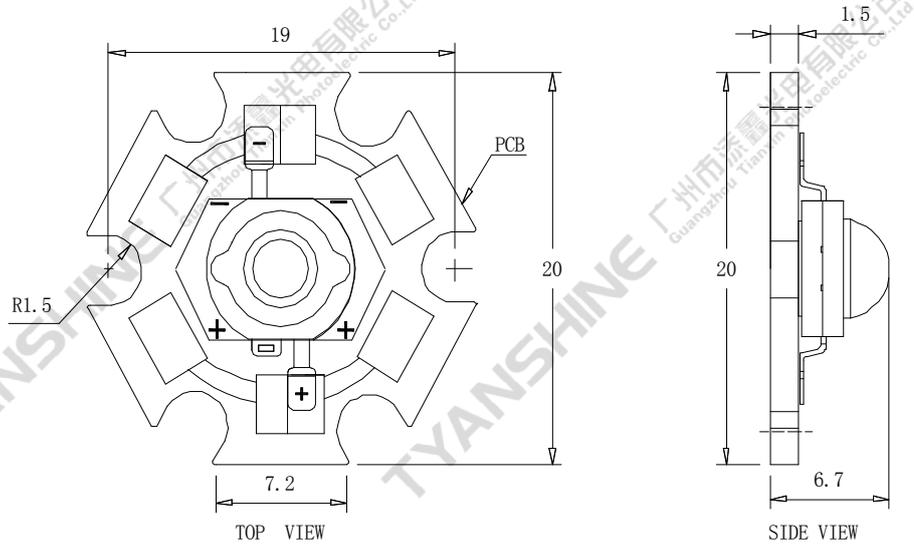
◆ High Luminous Output

◆ No UV

## Typical purpose:

◆ Portable Flashlight

◆ Garden lighting

◆ General Lighting

## Package Dimensions:



FRONT VIEW

TOP VIEW

## Installs on the aluminum sheet:



TOP VIEW

SIDE VIEW

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# Notes:

1. All dimensions are in millimeters (inches).

2. Tolerance is ±0.25 mm (0.01") unless otherwise noted.

| Part NO. | Lens Color | Emitting Color |
|---|---|---|
| TX-B3A140-002G | Water Clear | Blue |

## Absolute Maximum Ratings at Ta=25℃

| Parameter | Symbol | MAX. | Unit |
|---|---|---|---|
| LED Junction Temperature | $T_j$ | 150 | ℃ |
| Power Dissipation | $P_D$ | 2660 | mW |
| Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width) | $I_{FP}$ | 1000 | mA |
| Continuous Forward Current | IF | 700 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Electrostatic Discharge Threshold (ESD) | ESD | 2000 | V |
| Operating Temperature Range | $T_{opr}$ | -30 to +70 | ℃ |
| Storage Temperature Range | $T_{spr}$ | -40 to +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.

## Characteristics at If=700mA ,Vr=5V (Ta=25°C)：

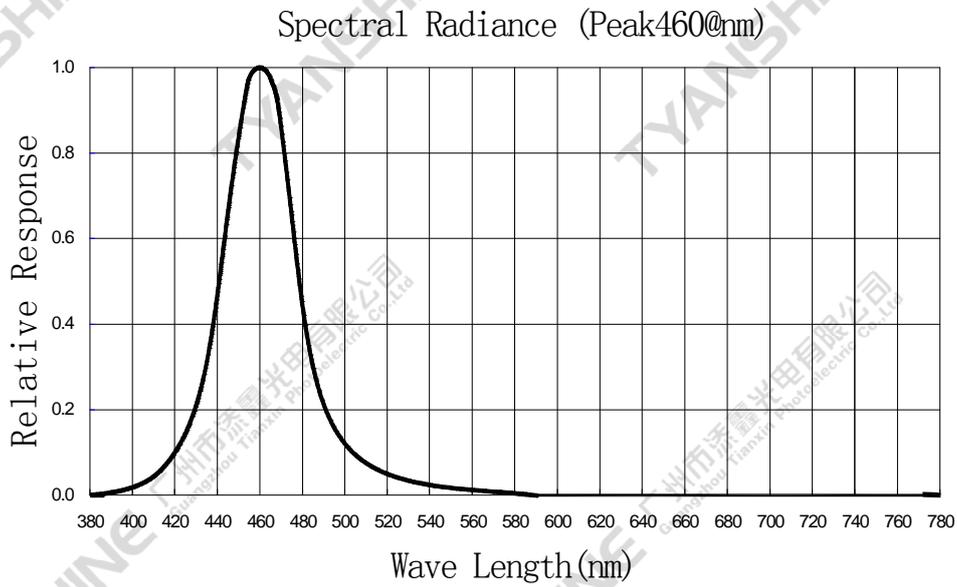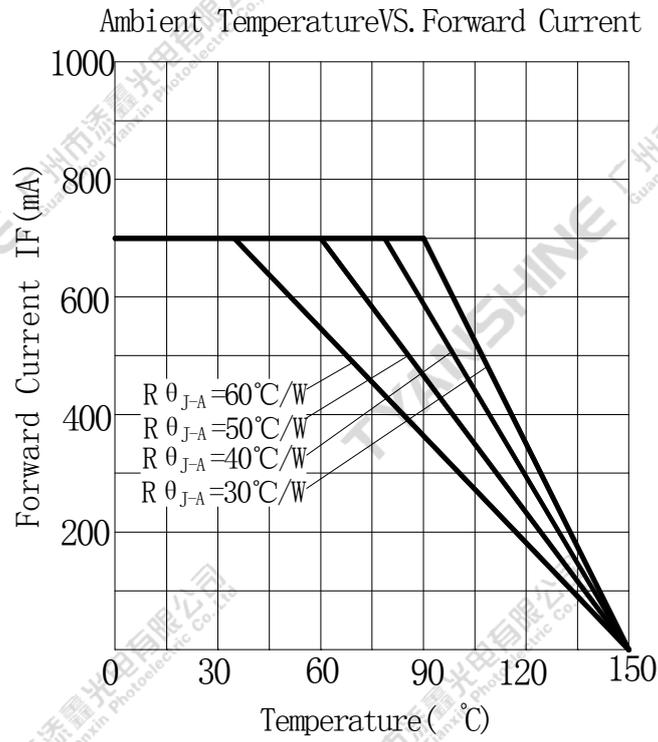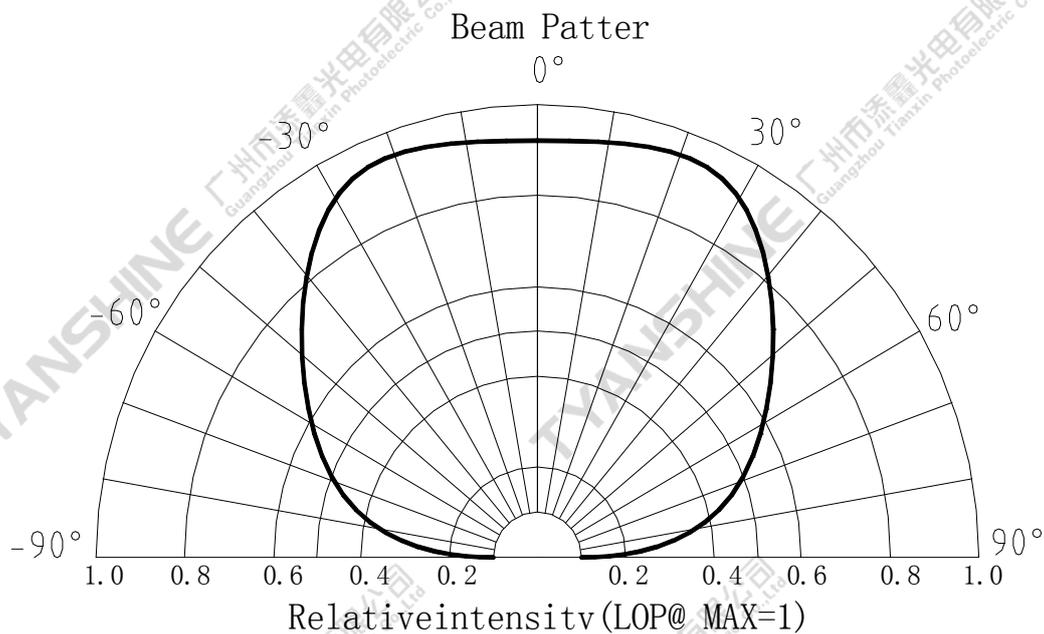| Parameter | Symbol | Values | | | Units |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| Luminous Flux | $\varphi_v$ | 40 | 50 | — | lm |
| Viewing Angle at 50％IV | $2\theta_{1/2}$ | — | 140 | — | Deg |
| Peak Emission Wavelength | $\lambda p$ | 455 | 460 | 465 | nm |
| Dominant Wavelength | $\lambda d$ | 459 | 463 | 464 | nm |
| Spectral Line Half-Width | $\triangle\lambda$ | 25 | 30 | 35 | nm |
| Forward Voltage | $V_f$ | 3.0 | 3.4 | 3.8 | V |
| Reverse Current | $I_R$ | — | — | 10 | μA |
| Thermal Resistance Junction to Case | $R\theta_{J-C}$ | — | 25 | — | K/W |
| Temperature Coefficient of Forward Voltage | $V\triangle F/T$ | — | -2 | — | mV/℃ |

## 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 ($\lambda d$) 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 ±15%.

5. Forward voltage is measured with an accuracy of ±0.15V.

# Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

Forward Current VS. Forward Voltage



Forward Current VS.Luminous fiux



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## Ambient TemperatureVS.Forward Current



R $\theta_{J-A}$=60℃/W
R $\theta_{J-A}$=50℃/W
R $\theta_{J-A}$=40℃/W
R $\theta_{J-A}$=30℃/W

Forward Current IF(mA)

Temperature( ℃)

## Spectral Radiance (Peak460@nm)



Relative Response

Wave Length(nm)

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Beam Patter
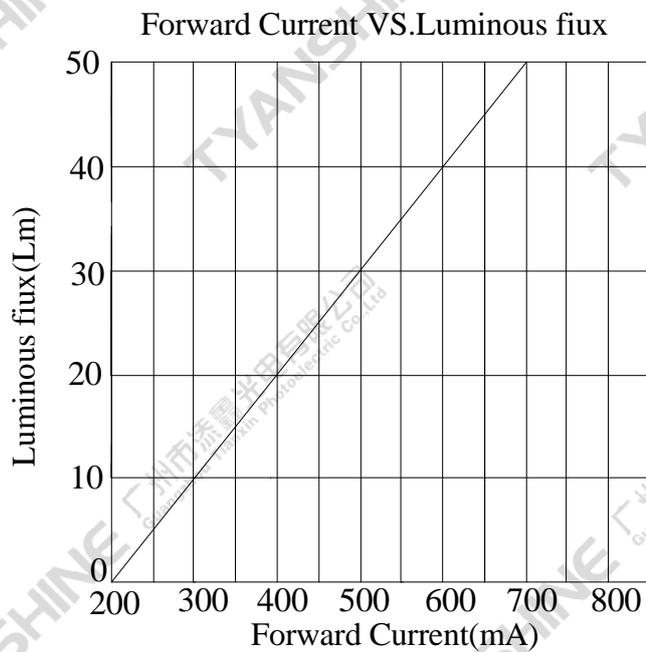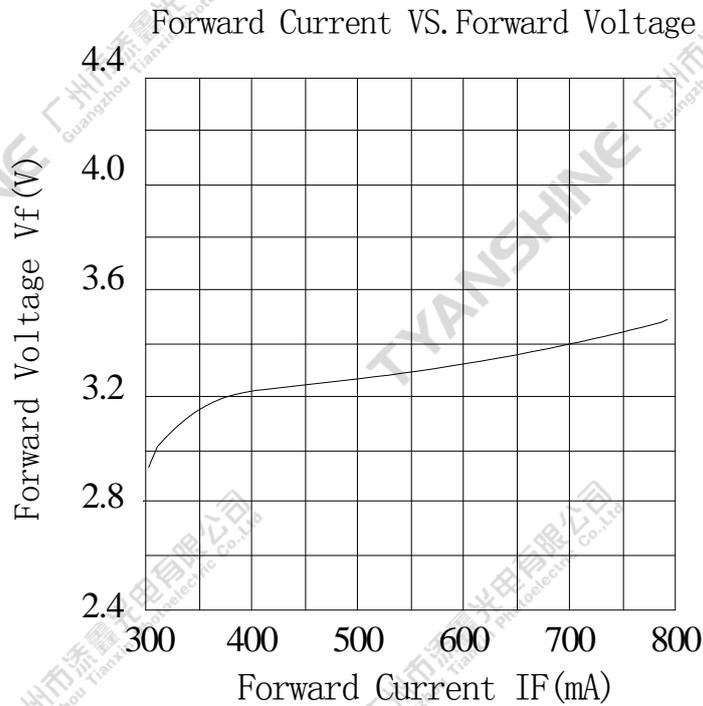


**Notes:**

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°.

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# PRECAUTION IN USE

## Storage

Recommended storage environment

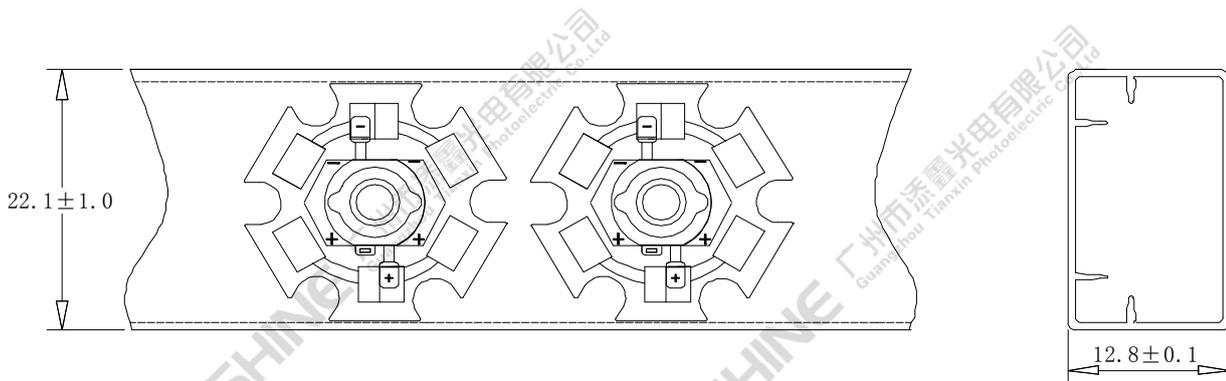Temperature: 5℃ ~ 30℃ (41oF ~ 86oF)

Humidity: 60% RH Max.

## Soldering

| Hand Soldering | |
| --- | --- |
| Temperature | 350℃ Max. |
| Soldering time | 8sec. Max. |

# Dimensions for Cannulation and Packaging

## Quantity: 50PCS



## Quantity: 24PCS



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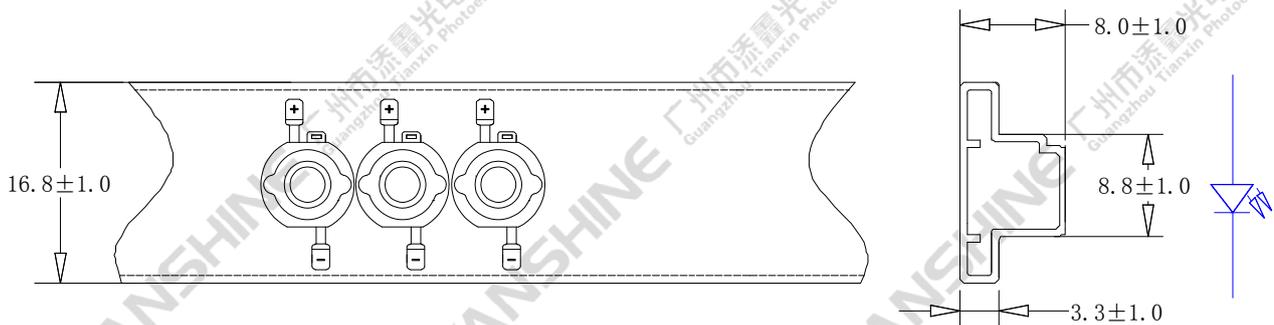
## Notes:

1. All dimensions are in millimeters (inches).

2. Tolerance is ±2.0 mm (0.08") unless otherwise noted.

3. Product is packaged with silica gel to protect the light-emitting zone. Please avoid the light-emitting area from being pressed, stressed, rubbed, come into contact with sharp metal part which would damage the product.

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