

TX-7070W54FSC3-NU3CD-01

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under 1800mA*3.
- ◆Ceramic eutectic package allows it to have minimal internal stress and excellent thermal path.
- ◆Flip chip coated with package, the output of lumen is stable.
- ◆High luminous output.
- ◆Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

- ◆GaN

Emitting Color:

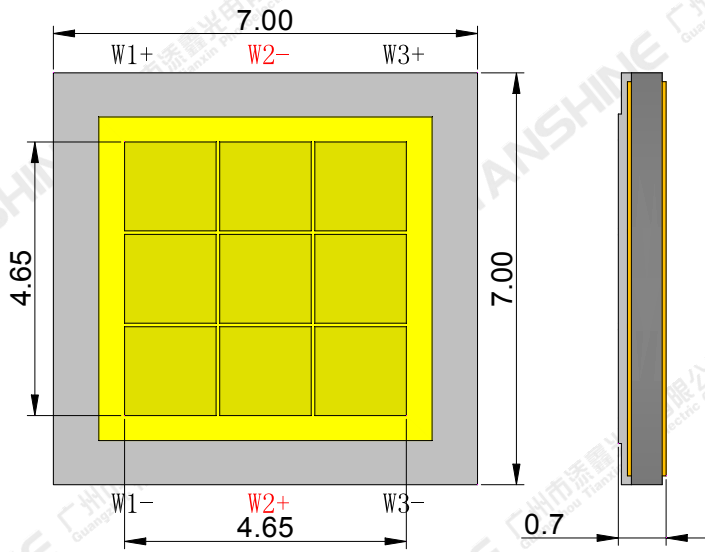
- ◆Cold white

Applications:

- ◆Automobile lighting

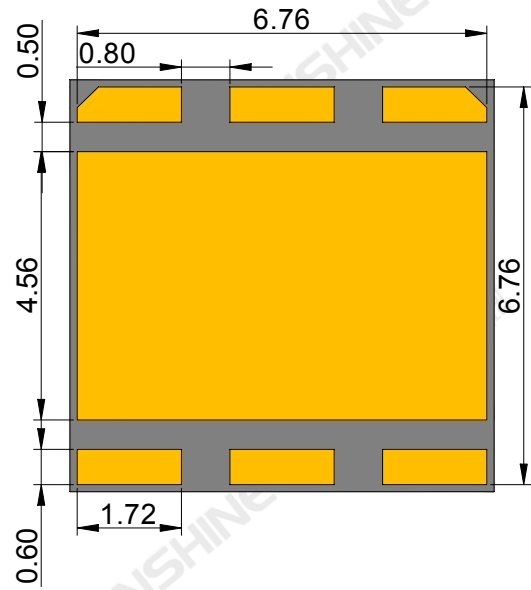
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|----------|-------------------------|----------|------------|------|--------|
| Part No. | TX-7070W54FSC3-NU3CD-01 | Spec No. | WKF-EK0024 | Page | 1 of 9 |
|----------|-------------------------|----------|------------|------|--------|

Package Dimensions:

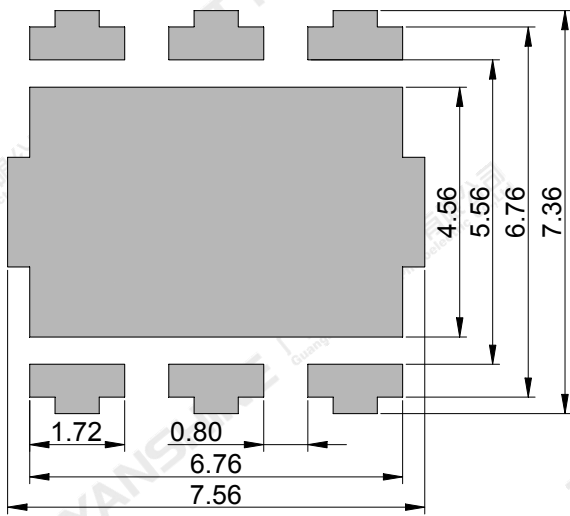


Top view

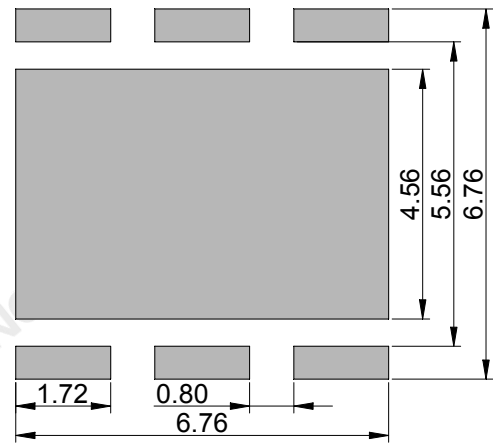
Side view



Bottom view



Recommended solder pad



recommended stencil pattern

Notes:

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

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|----------|-------------------------|----------|------------|------|--------|
| Part No. | TX-7070W54FSC3-NU3CD-01 | Spec No. | WKF-EK0024 | Page | 2 of 9 |
|----------|-------------------------|----------|------------|------|--------|

Absolute Maximum Ratings (Tc=25°C)

| Parameter | Symbol | Ratings | Unit |
|---|--------|------------------------------------|------|
| Forward Current | IF | W1/W2/W3=1800 | mA |
| Reverse Voltage | VR | Not designed for reverse operation | V |
| Power Dissipation | PD | 54 | W |
| Junction Temperature | Tj | 150 | °C |
| Electrostatic Discharge Threshold (ESD) | ESD | 2000 | V |
| Storage Temperature | Tstg | -40~+70 | °C |
| Operation Temperature | Topr | -30~+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 (Tc=25°C)

| Parameter | Symbol | Condition | Emitting color | Min. | Typ. | Max. | Units |
|-------------------------------------|-----------------|-----------|----------------|------|------|------|---------|
| Luminous Flux | ϕ_v | If=1800mA | W1/W2/W3 | 1750 | 1900 | 2050 | lm |
| Forward Voltage | V_f | | W1/W2/W3 | 9.2 | 9.5 | 10.0 | V |
| Correlated Colour Temperature | CCT | If=1000mA | W | 5300 | 5850 | 6300 | K |
| Viewing Angle at 50% IV | $2\theta_{1/2}$ | — | W | — | 120 | — | Deg |
| Reverse Current | I_R | — | W | — | — | — | μA |
| Thermal Resistance Junction to Case | $R\theta_{J-C}$ | If=1800mA | W | — | 0.2 | — | K/W |
| Temperature Coefficient of Voltage | $V\Delta F/T$ | | W | — | -2.8 | — | mV/°C |

White Color coordinate filing (IF=1000mA)

| Region | CCT Range(K) | | X1 | Y1 | X2 | Y2 | X3 | Y3 | X4 | Y4 |
|--------|--------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Min | Max | | | | | | | | |
| G12 | 5300K | 5700K | 0.3374 | 0.3592 | 0.3276 | 0.3470 | 0.3273 | 0.3620 | 0.3380 | 0.3757 |
| G10 | 5700K | 6000K | 0.3277 | 0.3432 | 0.3218 | 0.3369 | 0.3207 | 0.3501 | 0.3274 | 0.3570 |
| F01 | 6000K | 6300K | 0.3222 | 0.3325 | 0.3167 | 0.3263 | 0.3152 | 0.3404 | 0.3209 | 0.3473 |

Notes:

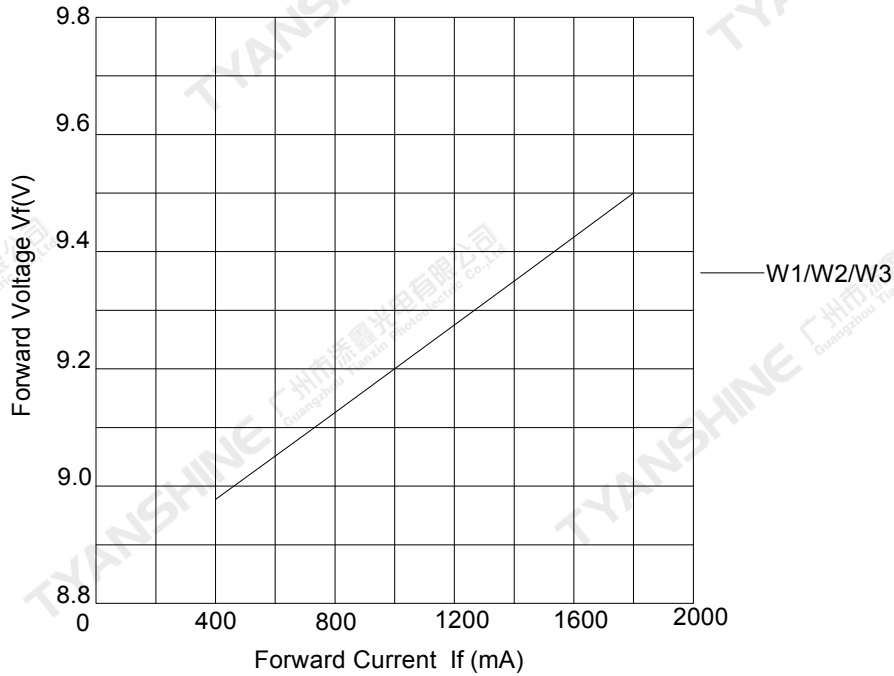
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength (λ_d) is derived from the CIE chromaticity 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.

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|----------|-------------------------|----------|------------|------|--------|
| Part No. | TX-7070W54FSC3-NU3CD-01 | Spec No. | WKF-EK0024 | Page | 4 of 9 |
|----------|-------------------------|----------|------------|------|--------|

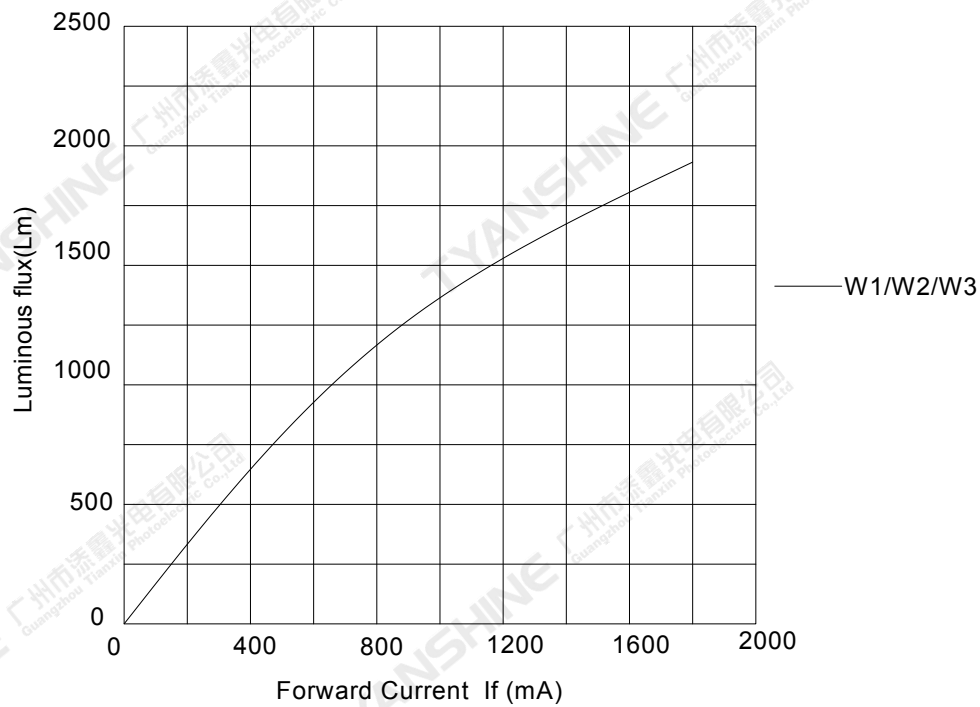
Typical Electrical/Optical Characteristics Curves

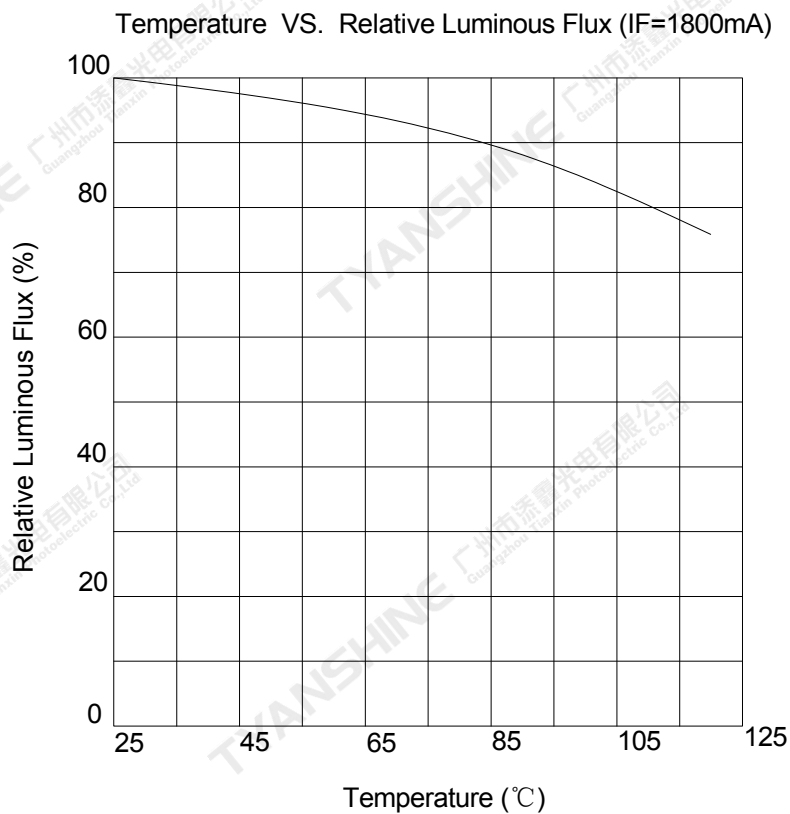
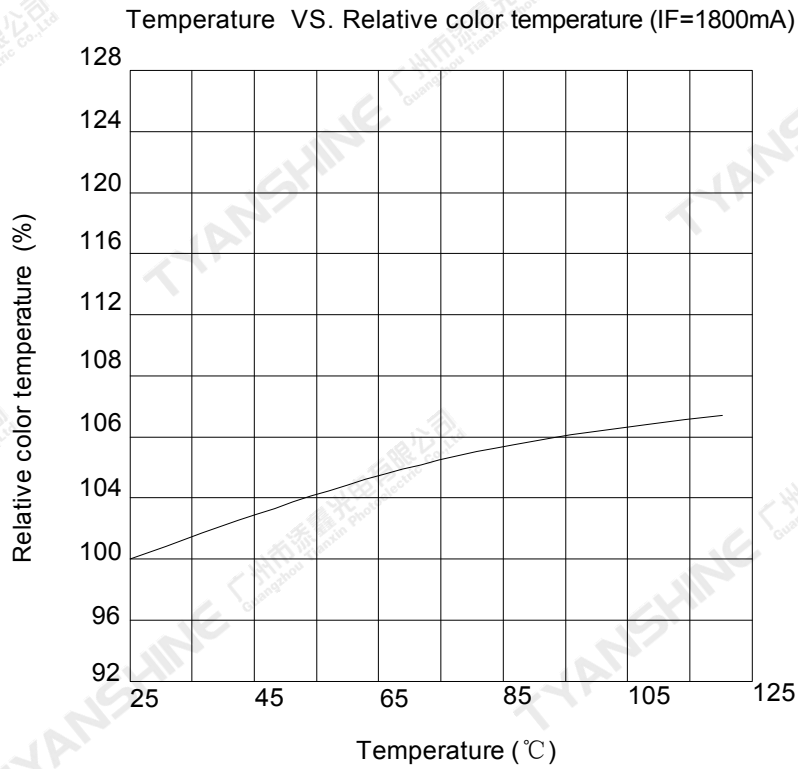
(25°C Ambient Temperature Unless Otherwise Noted)

Forward Current VS. Forward Voltage

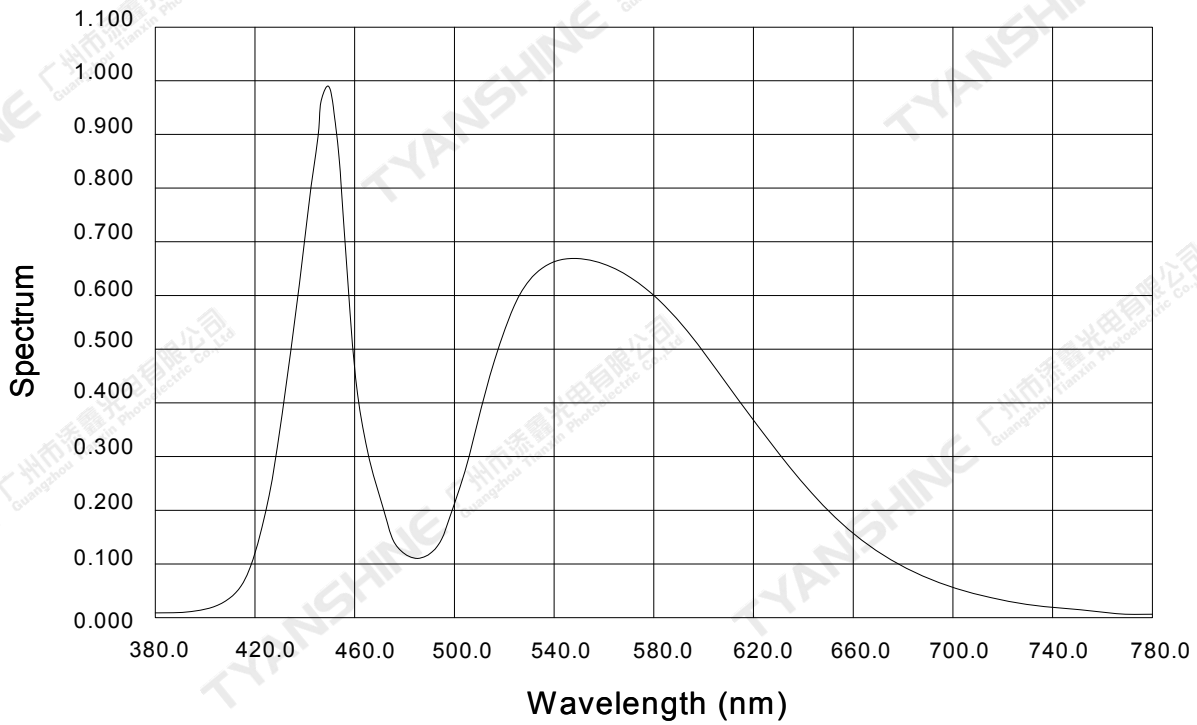


Forward Current VS. Luminous flux

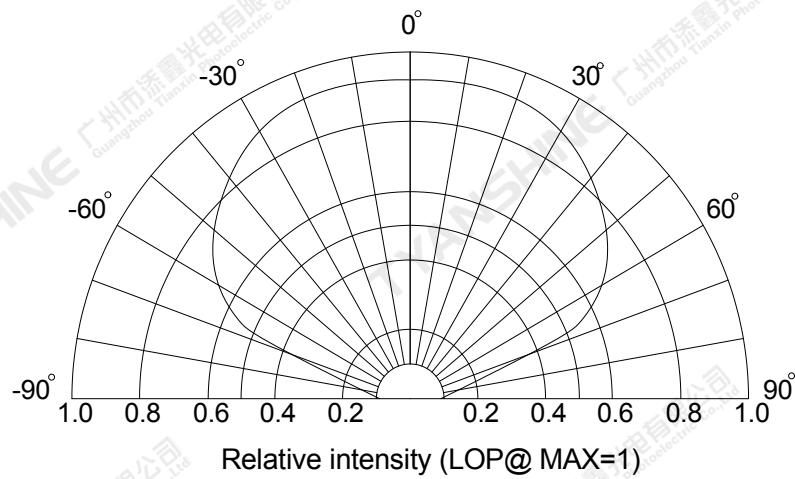




Relative Spectral Distribution



Beam Pattern



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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|----------|-------------------------|----------|------------|------|--------|
| Part No. | TX-7070W54FSC3-NU3CD-01 | Spec No. | WKF-EK0024 | Page | 7 of 9 |
|----------|-------------------------|----------|------------|------|--------|

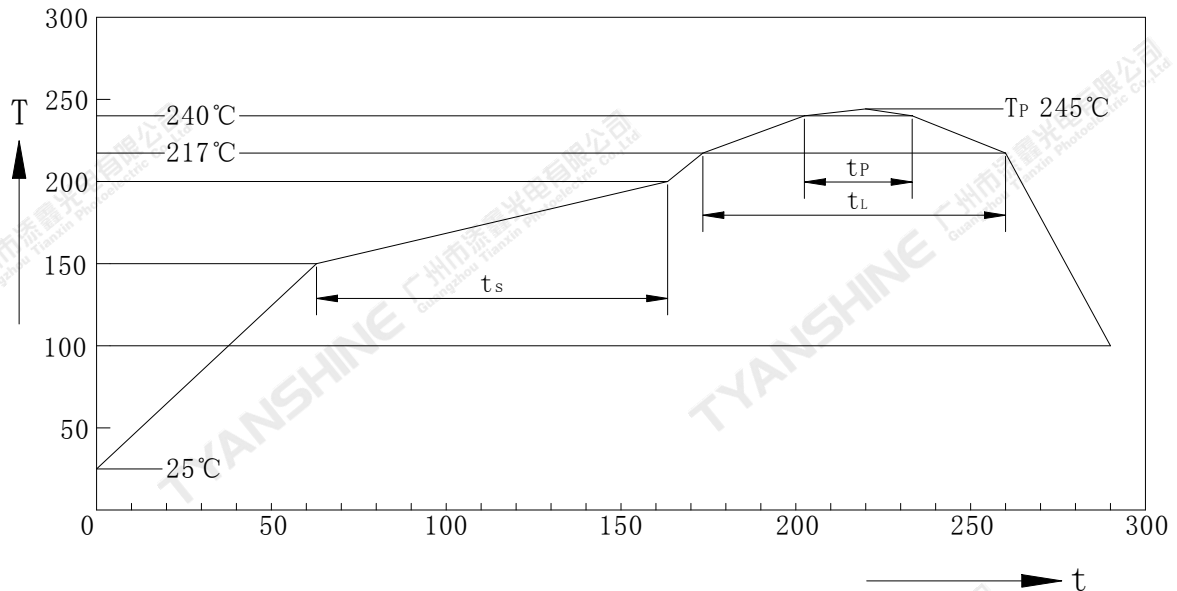
Usage Precautions

Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition



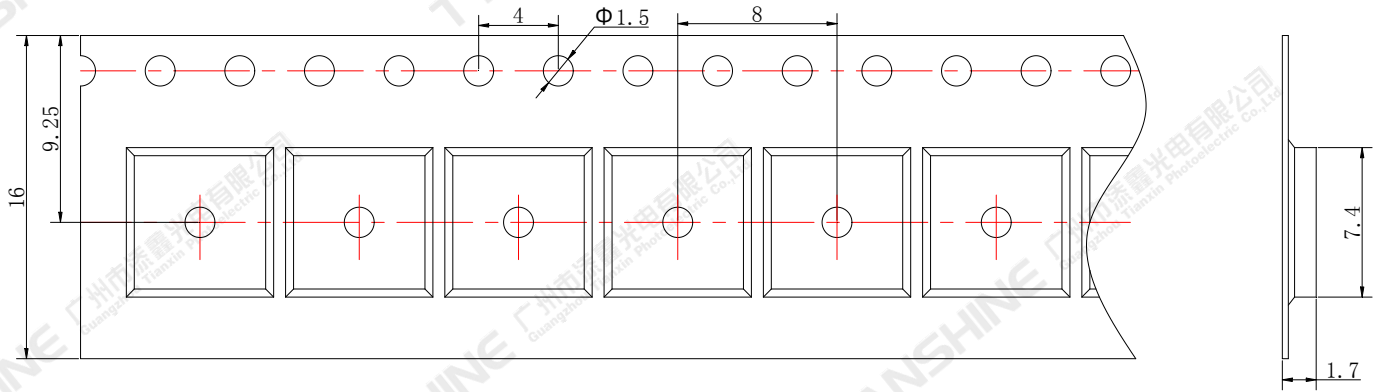
| Profil-Charakteristik Profile Feature | Symbol | Pb-Free(SnAgCu)Assembly | | | Einheit Unit |
|--|--------|-------------------------|----------------|---------|-----------------|
| | | Minimum | Recommendation | Maximum | |
| Ramp-up Rate to Preheat 25°C to 150°C | - | - | 2 | 3 | K/s |
| Time t_s T_{Smin} to T_{Smax} | t_s | 60 | 100 | 120 | s |
| Ramp-up Rate to Peak T_{Smax} to T_p | - | - | 2 | 3 | K/s |
| Liquidus Temperature | T_L | 217 | | | °C |
| Time above Liquidus temperature | t_L | - | 80 | 100 | s |
| Peak Temperature | T_P | - | 245 | 260 | °C |
| Time within 5°C of the specified peak temperature T_p-5 K | t_p | 10 | 20 | 30 | s |
| Ramp-down Rate T_p to 100°C | - | - | 3 | 6 | K/s |
| Time 25°C to T_p | - | - | - | 480 | - |

Note:

All temperatures refer to topside of the package, measured on the package body surface.

Dimensions For Cannulation And Packaging

Quantity: 1000PCS



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.

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|----------|-------------------------|----------|------------|------|--------|
| Part No. | TX-7070W54FSC3-NU3CD-01 | Spec No. | WKF-EK0024 | Page | 9 of 9 |
|----------|-------------------------|----------|------------|------|--------|