

TX-2020G3VSA1-NG4DA-01

PRODUCT SPECIFICATION

Features:

- ◆ Excellent transiting heat from LED chip operating under 1000mA.
- ◆ High luminous output.
- ◆ No UV.
- ◆ Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

- ◆ GaN

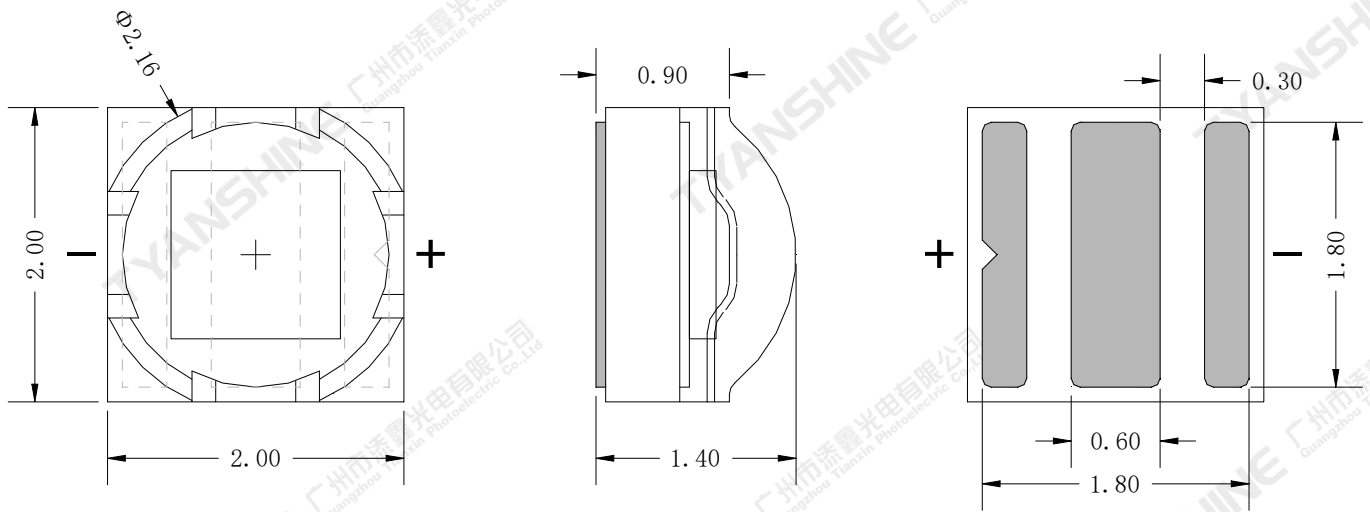
Emitting Color:

- ◆ Green(G)

Applications:

- ◆ Portable Flashlight
- ◆ Garden lighting
- ◆ General Lighting

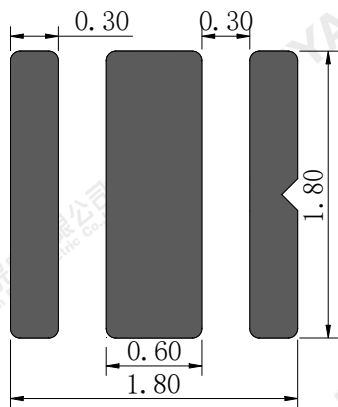
Package Dimensions:



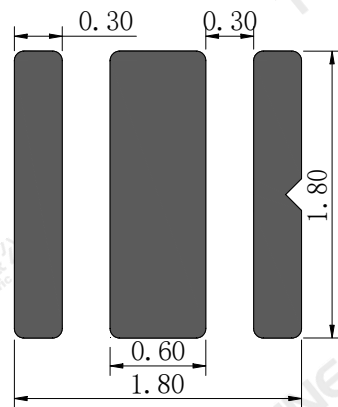
Top view

Side view

Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

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

Absolute Maximum Ratings (Tc=25°C)

| Parameter | Symbol | Ratings | Unit |
|---|------------------|----------------------|------|
| Forward Current | I _F | 1000 | mA |
| Peak Forward Current ^{Note 1} | I _{FP} | 1500 | |
| Reverse Voltage | V _R | 5 | V |
| Power Dissipation | P _D | 3.6 | W |
| Junction Temperature | T _J | 150 | °C |
| Electrostatic Discharge Threshold (ESD) | ESD | ESD sensitive device | V |
| Storage Temperature | T _{stg} | -40~+70 | °C |
| Operation Temperature | T _{opr} | -30~+85 | |

Note: 1.Pulse width ≤0.1 msec, duty ≤1/10.

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, IF=0.35A)

| Parameter | Symbol | Min. | Typ. | Max. | Units |
|-------------------------------------|-----------------|----------|------|------|---------|
| Luminous Flux | ϕ_v | 125 | 140 | — | lm |
| Forward Voltage | V_f | 2.6 | 2.8 | 3.3 | V |
| Peak Emission Wavelength | λ_p | 518 | 523 | 528 | nm |
| Dominant Wavelength | λ_d | 525 | 530 | 535 | nm |
| Spectral Line Half-Width | $\Delta\lambda$ | 26 | 30 | 34 | nm |
| Viewing Angle at 50% IV | $2\theta_{1/2}$ | — | 160 | — | Deg |
| Reverse Current | I_R | $V_R=5V$ | — | 1 | μA |
| Thermal Resistance Junction to Case | $R\theta_{J-C}$ | — | 8.0 | — | K/W |
| Temperature Coefficient of Voltage | $V\Delta F/T$ | — | -3.3 | — | mV/°C |

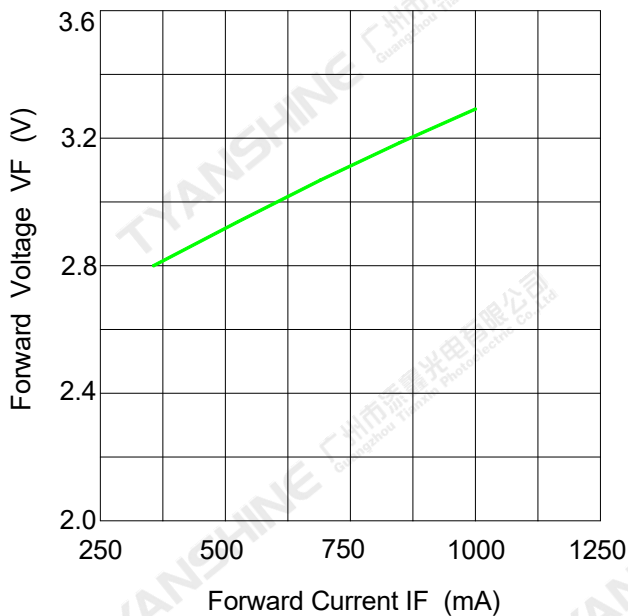
Notes:

- 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:±10%.
- 4.Forward voltage measurement tolerance:±0.3V.
- 5.Ra measurement tolerance:±2.

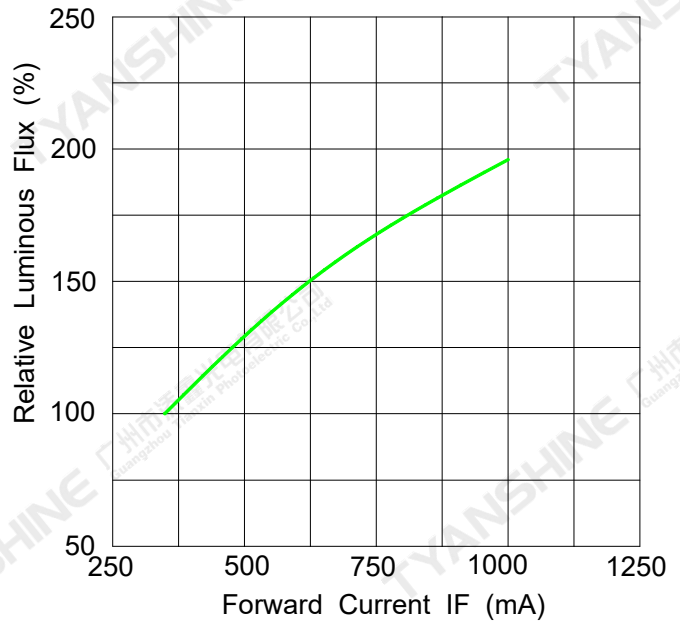
Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

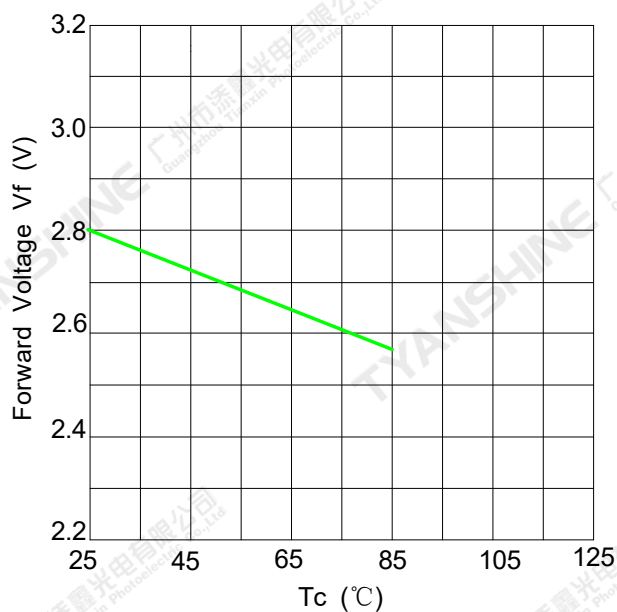
Forward Current VS. Relative Forward Voltage



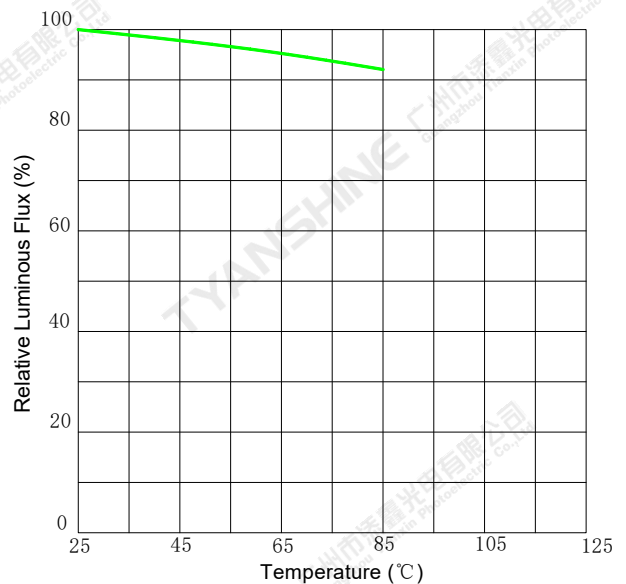
Forward Current VS. Relative Luminous Flux



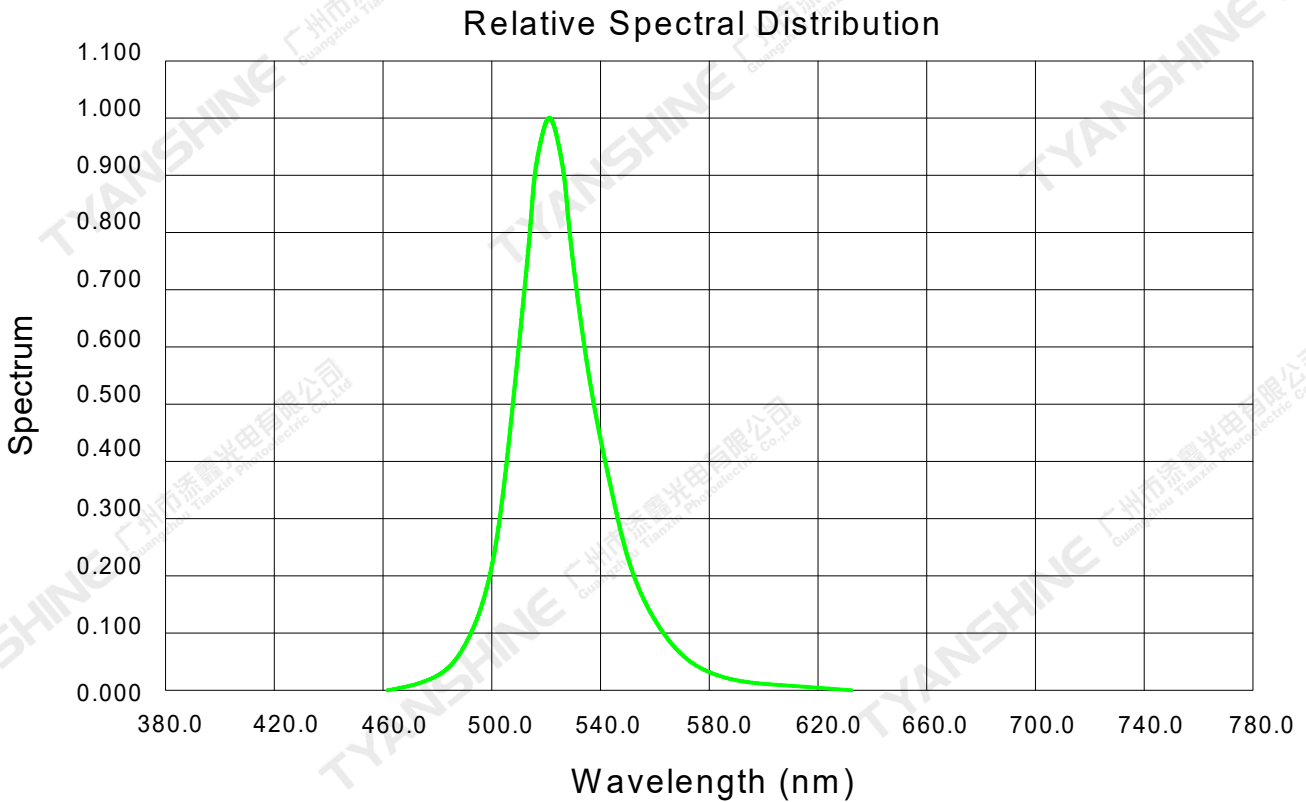
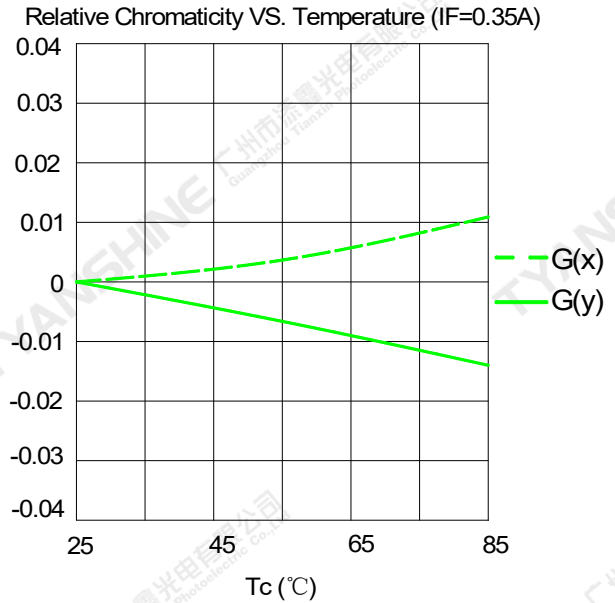
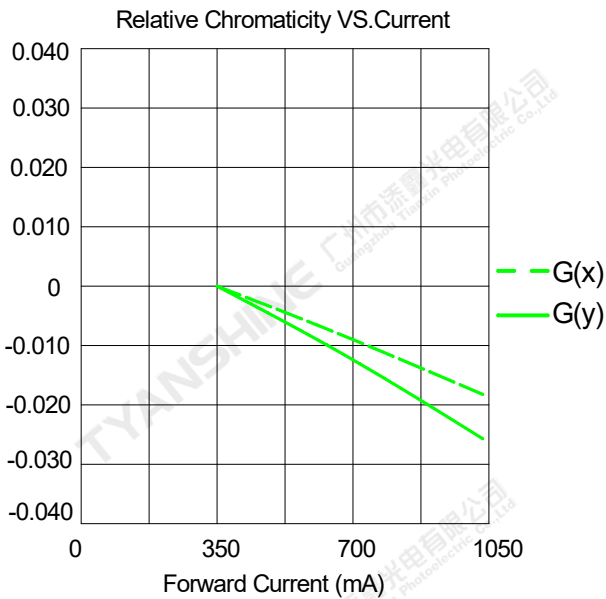
Temperature VS. Relative Forward Voltage ($I_F=0.35A$)



Temperature VS. Relative Luminous Flux ($I_F=0.35A$)



Notes: — Green (G) ;



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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 $\pm 5^\circ$.

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| Part No. | TX-2020G3VSA1-NG4DA-01 | Spec No. | WKF-EK0002 | Page | 6 of 8 |
|----------|------------------------|----------|------------|------|--------|

Usage Precautions

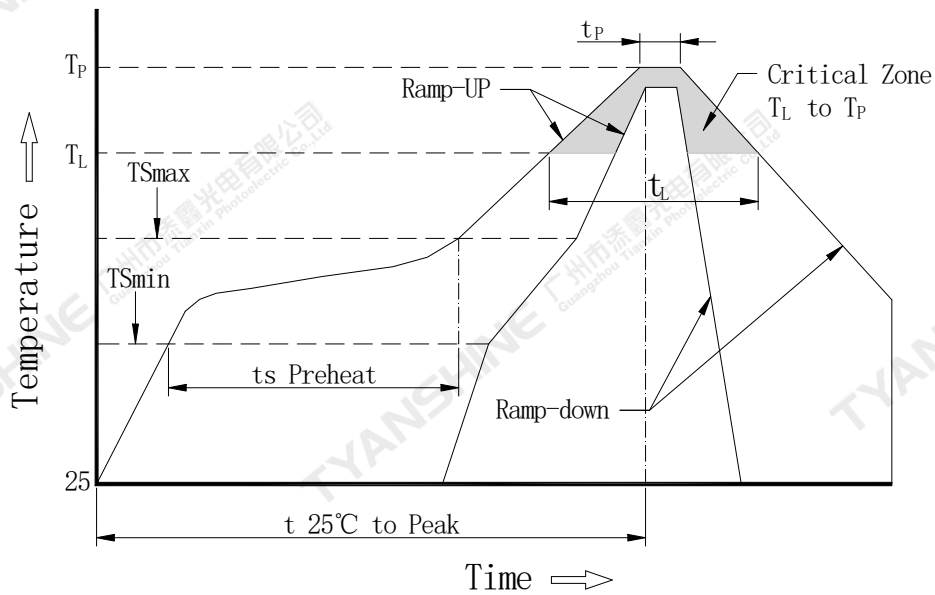
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



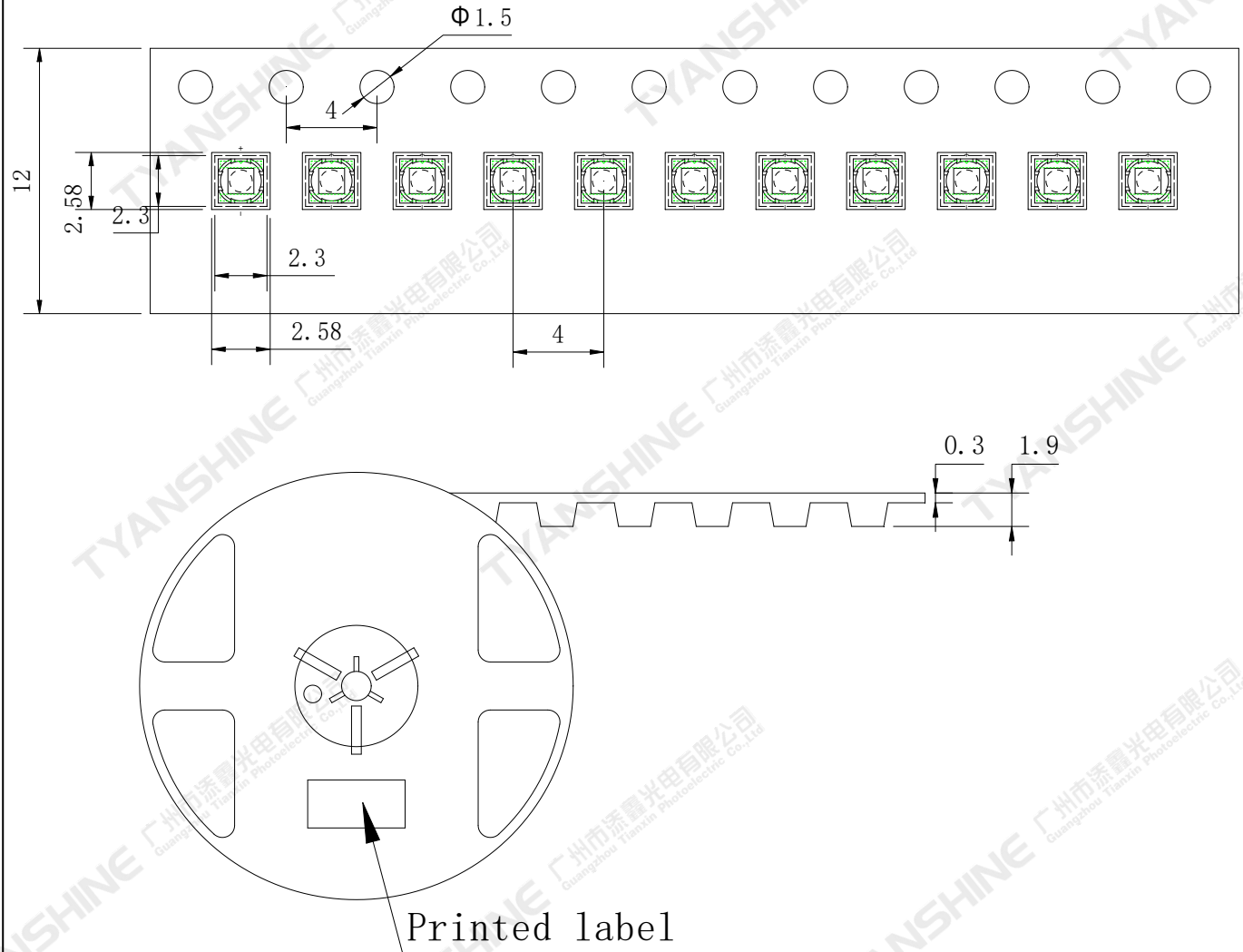
| Profile Feature | Pb-Free Solder(SnBi35Ag0.3) |
|---|-----------------------------|
| Average Ramp-Up Rate (TS _{max} to TP) | 3°C/second max. |
| Preheat: Temperature Min (TS _{min}) | 100°C |
| Preheat: Temperature Max (TS _{max}) | 150°C |
| Preheat: Time (TS _{min} to TS _{max}) | 60-120 seconds |
| Time Maintained Above: Temperature (TL) | 183°C |
| Time Maintained Above: Time (TL) | 60-150 seconds |
| Peak/Classification Temperature (TP) | 225°C |
| Time Within 5°C of Actual Peak Temperature (TP) | 10-30 seconds |
| Ramp-Down Rate | 6°C/second max. |
| Time 25°C to Peak Temperature | 6 minutes max. |

Note:

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

Dimensions For Cannulation And Packaging

Quantity:3000 PCS



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-2020G3VSA1-NG4DA-01 | Spec No. | WKF-EK0002 | Page | 8 of 8 |
|----------|------------------------|----------|------------|------|--------|