

TX-5050W20FSB2-NG4AA-01H90

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under1.8A.
- ◆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:

- ◆InGaN

Emitting Color:

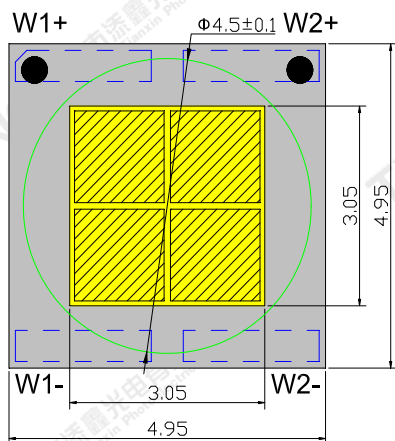
- ◆Cold white

Applications:

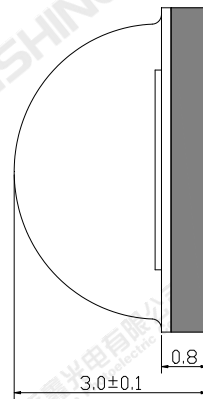
- ◆Automobile lighting

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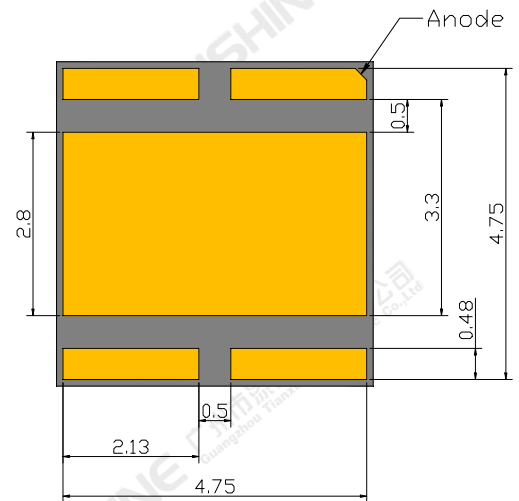
Package Dimensions:



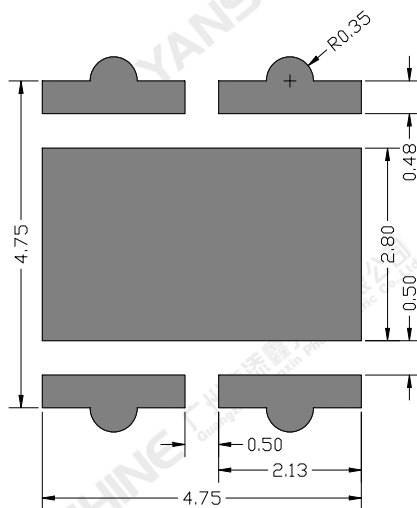
Top view



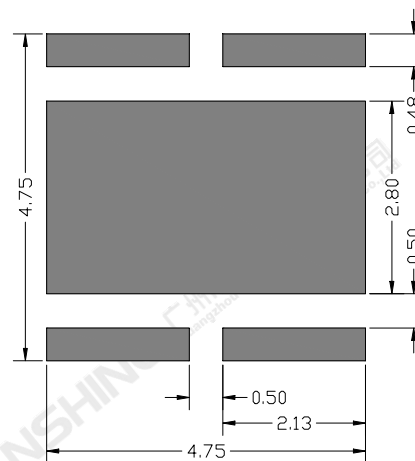
Side view



Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

1. All dimensions are in millimeters .
2. Tolerances unless otherwise mentioned are ± 0.1 mm .

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol	Ratings	Unit
Forward Current	IF	W1/W2=1.8	A
Reverse Voltage	V _R	Not designed for reverse operation	V
Power Dissipation	P _D	20	W
Junction Temperature	T _j	150	℃
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	T _{stg}	-40~+70	℃
Operation Temperature	T _{opr}	-30~+85	

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	ϕ_v	If=0.7A*2	W _(3150K)	800	860	960	lm
			W _(6000K)	840	900	960	
Forward Voltage	V _f		W	5.8	6.0	6.5	V
Viewing Angle at 50 % IV	2 $\theta_{1/2}$		W	—	120	—	Deg
Correlated Colour Temperature	CCT	If=0.7A*2	W _(3150K)	3000	3150	3300	K
			W _(6000K)	5500	6000	6500	
Color Rendering Index	Ra	—	W	—	90	—	—
Reverse Current	I _R	—	W	—	—	—	μ A
Thermal Resistance Junction to Case	R θ_{J-C}		W	—	0.64	—	K/W
Temperature Coefficient of Voltage	V Δ F/T	If=0.7A*2	W	—	-4.1	—	mV/°C

White light Color coordinate filing (IF=0.7A)

Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
7A2	3000K	3150K	0.4311	0.3921	0.4214	0.3887	0.4261	0.3993	0.4362	0.4029
7B1			0.4362	0.4029	0.4261	0.3993	0.4308	0.4098	0.4411	0.4132
6D3	3150K	3300K	0.4214	0.3887	0.4115	0.3852	0.4157	0.3956	0.4261	0.3993
6C4			0.4261	0.3993	0.4157	0.3956	0.4200	0.4063	0.4308	0.4098
2C	5500K	5800K	0.3322	0.3420	0.3257	0.3337	0.3252	0.3458	0.3324	0.3544
2A	5800K	6200K	0.3259	0.3292	0.3186	0.3212	0.3174	0.3339	0.3253	0.3428
1D	6200K	6500K	0.3188	0.3192	0.3143	0.3143	0.3126	0.3261	0.3176	0.3319

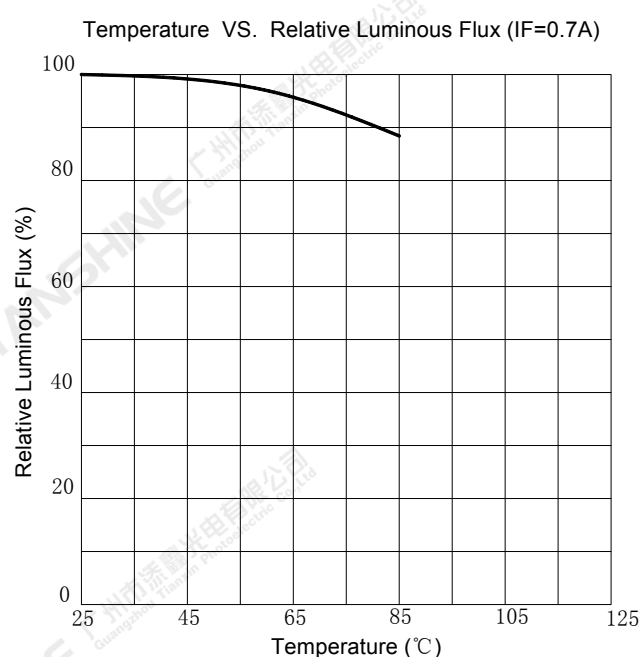
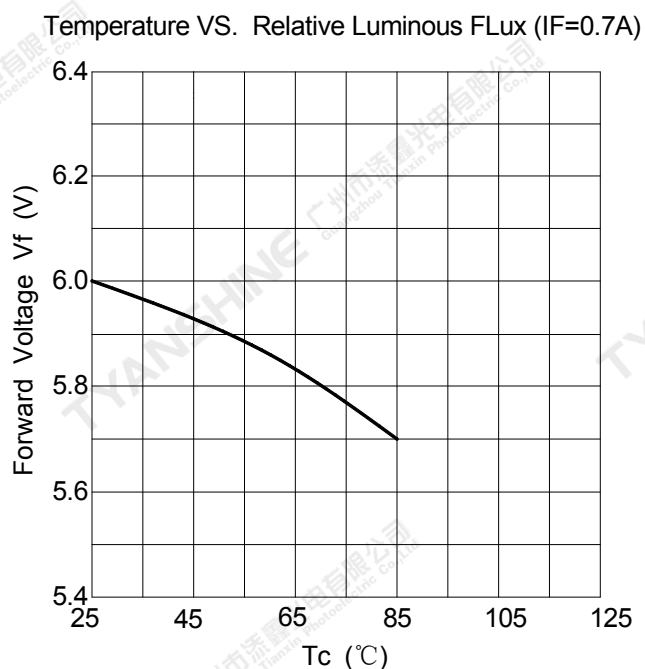
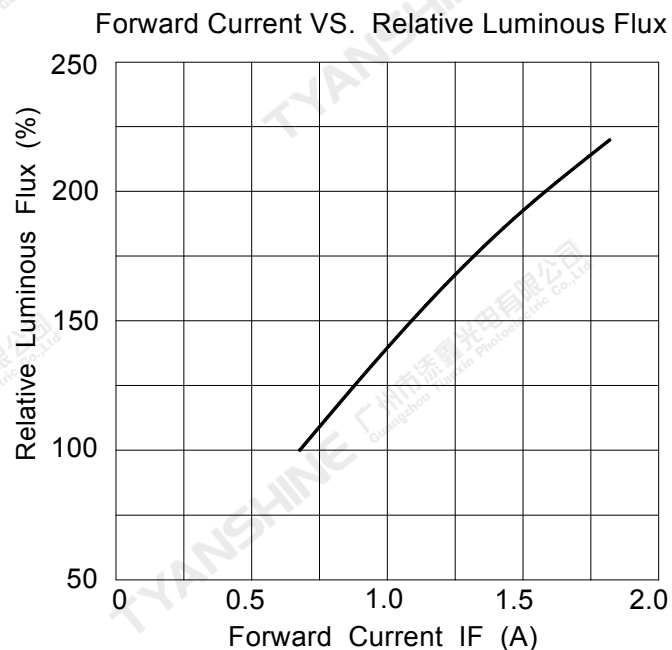
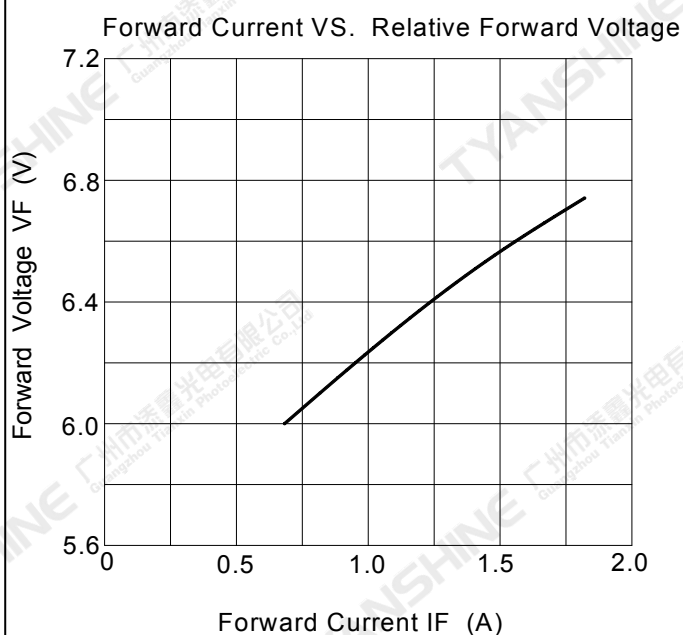
Notes:

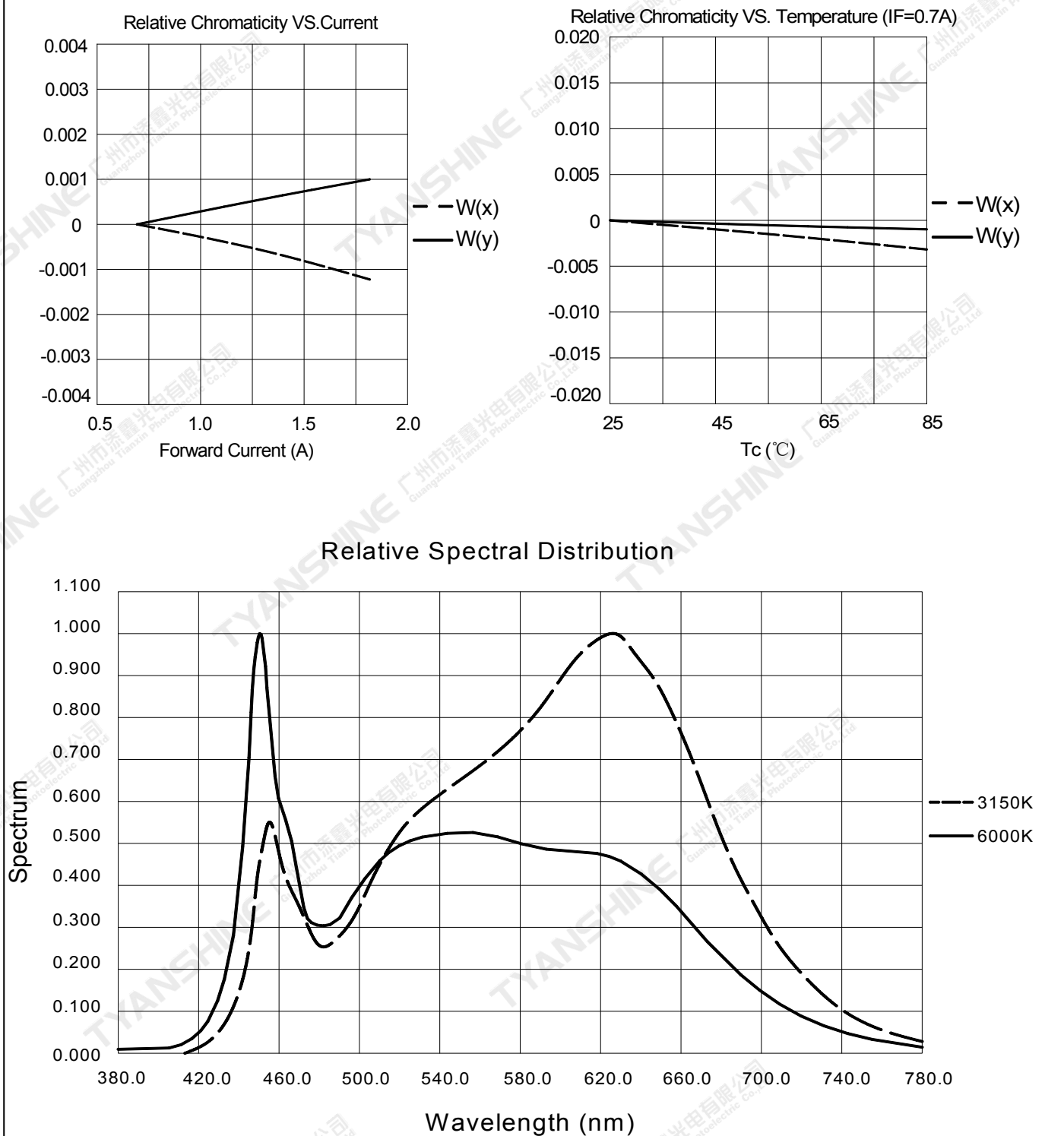
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength (λ_d) is derived from the CIE chromaticity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

(25°C Ambient Temperature Unless Otherwise Noted)

**Notes:** — White (W) ;



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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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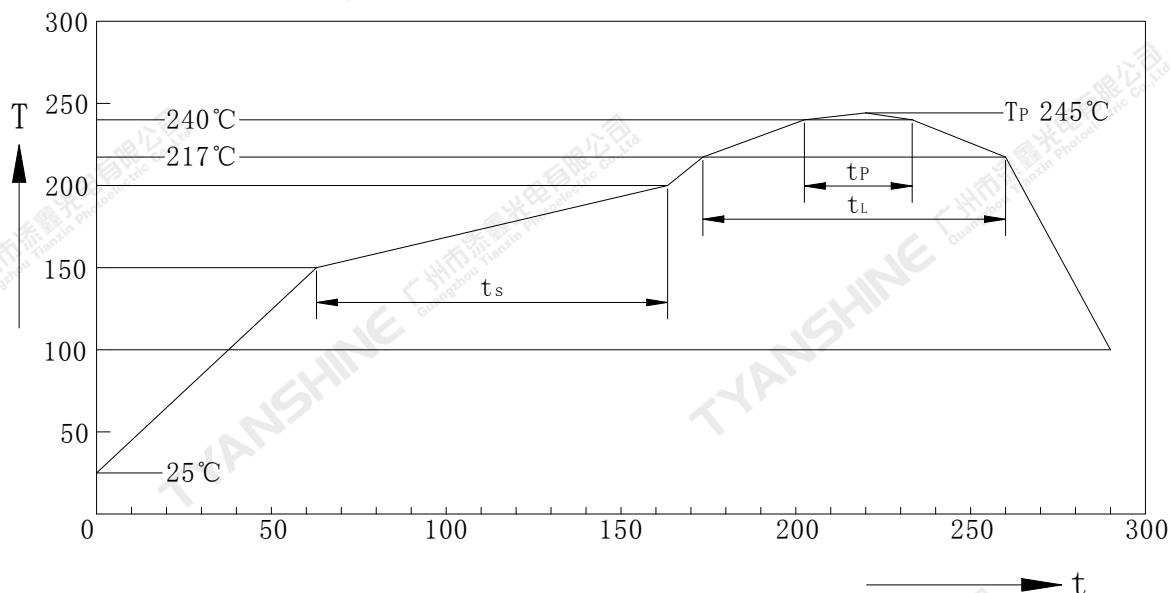
Usage Precautions

Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition



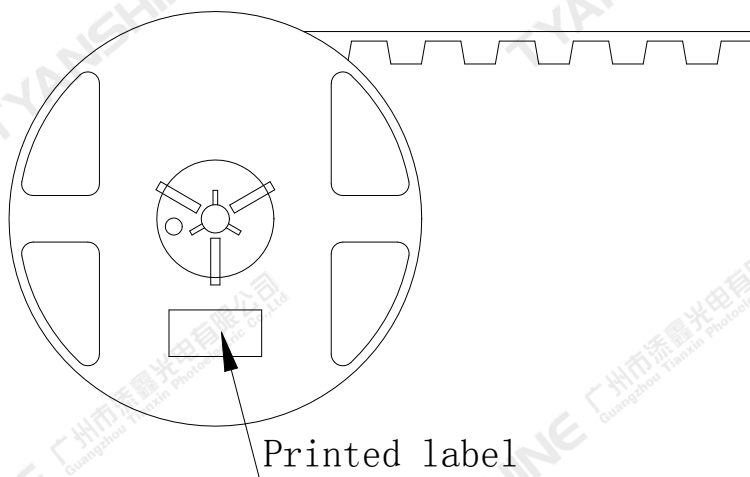
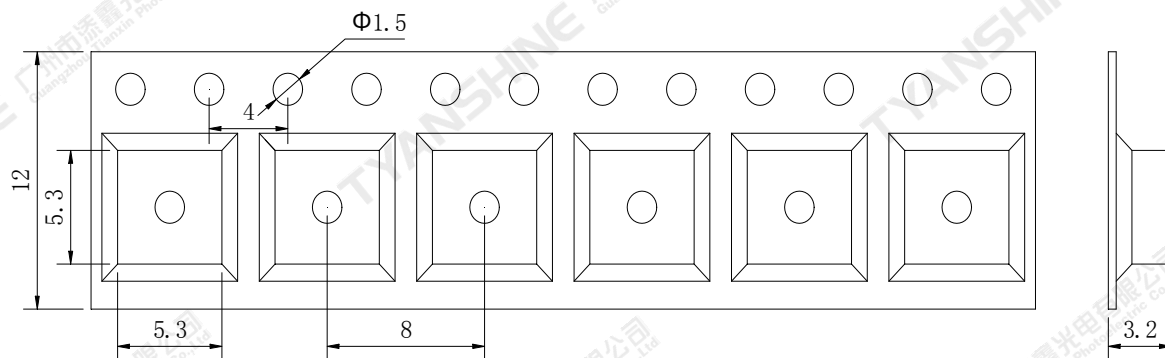
Profil-Charakteristik Profile Feature	Symbol	Pb-Free(SnAgCu)Assembly			Einheit Unit
		Minimum	Recommendation	Maximum	
Ramp-up Rate to Preheat 25°C to 150°C	-	-	2	3	K/s
Time t_s T_{Smin} to T_{Smax}	t_s	60	100	120	s
Ramp-up Rate to Peak T_{Smax} to T_p	-	-	2	3	K/s
Liquidus Temperature	T_L	217			°C
Time above Liquidus temperature	t_L	-	80	100	s
Peak Temperature	T_P	-	245	260	°C
Time within 5°C of the specified peak temperature $T_p \pm 5$ 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: 500PCS



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.