

TX-5050RGBLAC20FC180-NUVCNG-01

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under 0.7A.
- ◆High luminous output.
- ◆No UV.
- ◆Encapsulated materials are environmentally certified and meet environmental requirements.

Chip Material:

- ◆Red: AlInGaP
- ◆Green: GaInN
- ◆Blue: GaN
- ◆Lemon light: GaN
- ◆PC Amber: GaN
- ◆Cyan: GaN

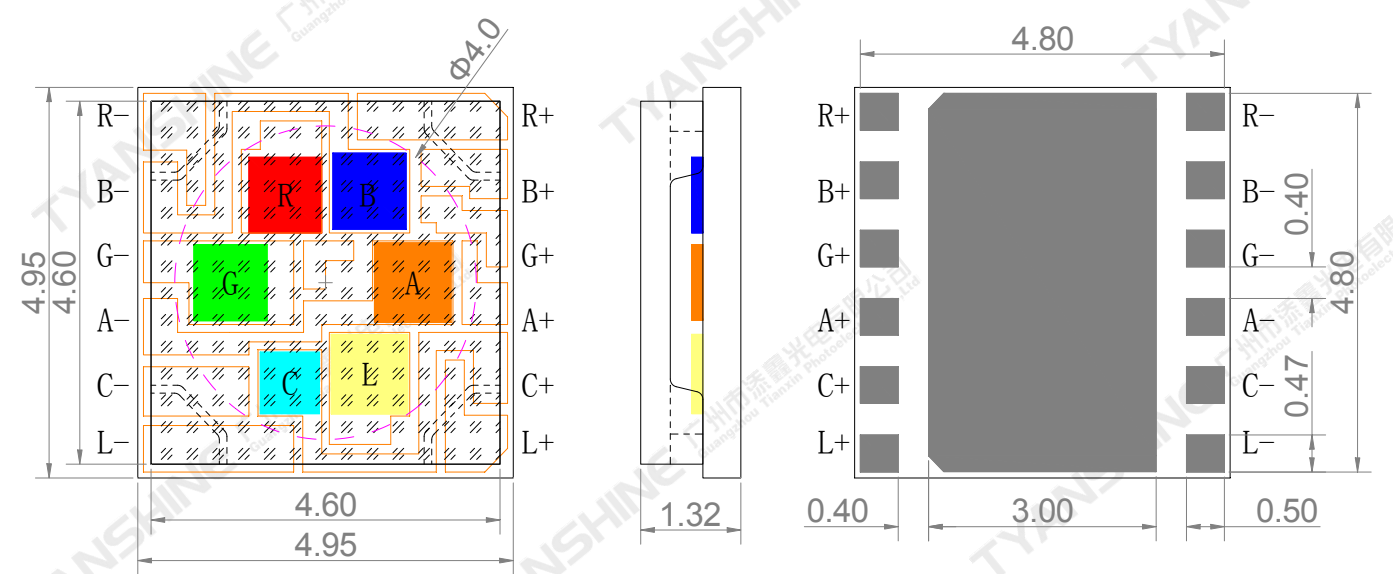
Emitting Color:

- ◆Red (R)
- ◆Green (G)
- ◆Blue (B)
- ◆Lemon light (L)
- ◆PC Amber (A)
- ◆Cyan (C)

Applications:

- ◆Stage lighting
- ◆Landscape Lighting
- ◆Entertainment lighting

Package Dimensions:



Notes:

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

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	R	1.0
		G	1.2
		B	1.2
		L	1.0
		A	1.0
		C	0.7
Peak Forward Current (Note 1)	I _{FP}	R	1.2
		G	1.5
		B	1.5
		L	1.2
		A	1.2
		C	0.8
Reverse Voltage	V _R	Not designed for reverse operation	V
Power Dissipation	P _D	R	3.15
		G	4.95
		B	4.2
		L	3.15
		A	3.22
		C	2.48
Junction Temperature	T _j	R	115
		G	150
		B	150
		L	150
		A	150
		C	150
Electrostatic Discharge Threshold (ESD)	ESD	2000	V
Storage Temperature	T _{stg}	-20~+70	℃
Operation Temperature	T _{opr}	-30~+85	

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

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.

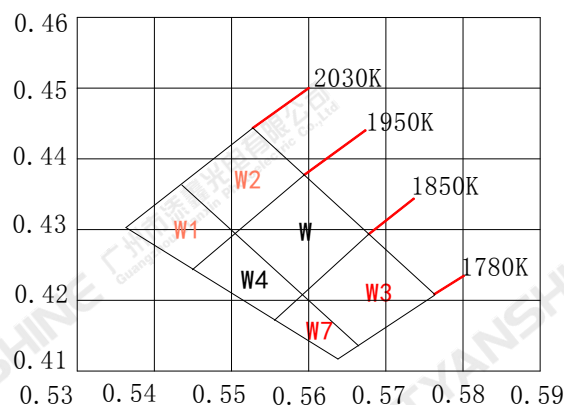
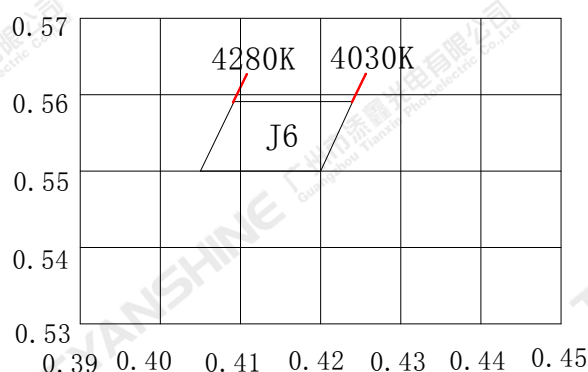
Electrical Optical Characteristics (IF=0.7A, Tc=25°C)

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	ϕ_v	R	60	—	80	lm
		G	160	—	185	
		B	28	—	38	
		L	160	—	220	
		A	100	—	150	
		C	50	—	70	
Dominant Wavelength	λ_d	R	622	626	630	nm
		G	520	525	530	
		B	450	455	460	
		C	485	488	492	
		L	565	567	569	
Peak-emission Wavelength	λ_p	R	630	635	640	nm
		G	515	520	525	
		B	445	450	455	
		C	480	485	490	
		L	538	543	548	
Correlated Colour Temperature	CCT	L	4030	—	4280	K
		A	1780	—	2030	
Forward Voltage	V_f	R	2.0	—	3.0	V
		G	2.9	—	4.1	
		B	2.9	—	4.0	
		L	2.9	—	4.0	
		A	2.9	—	4.0	
		C	2.9	—	4.0	
Viewing Angle at 50 % IV	$2\theta_{1/2}$	—	—	115	—	Deg
Reverse Current	I_R	—	—	—	—	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	R	—	4.2	—	K/W
		G	—	4.2	—	
		B	—	4.2	—	
		L	—	4.0	—	
		A	—	4.0	—	
Temperature Coefficient of Voltage	$V\Delta F/T$	R	—	-7.43	—	mV/°C
		G	—	-5.65	—	
		B	—	-3.03	—	
		L	—	-0.15	—	
		A	—	-1.6	—	
		C	—	-0.075	—	

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: $\pm 15\%$.
4. Forward voltage measurement tolerance: $\pm 0.15V$.

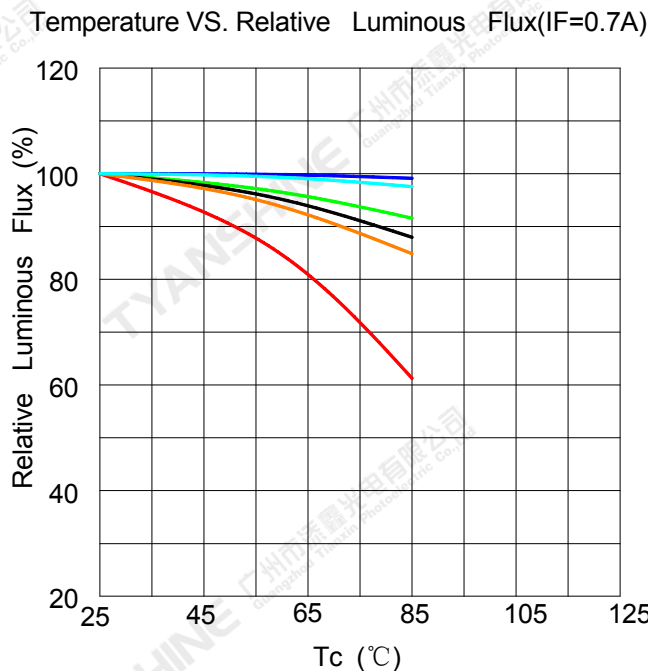
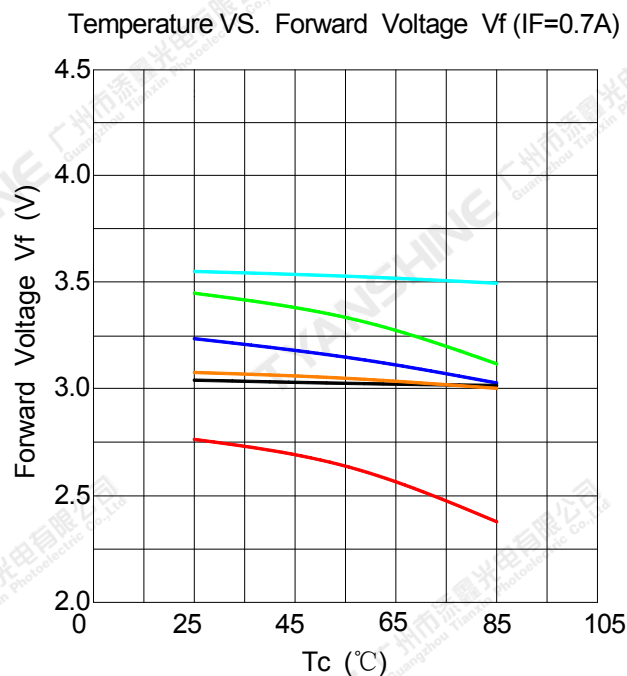
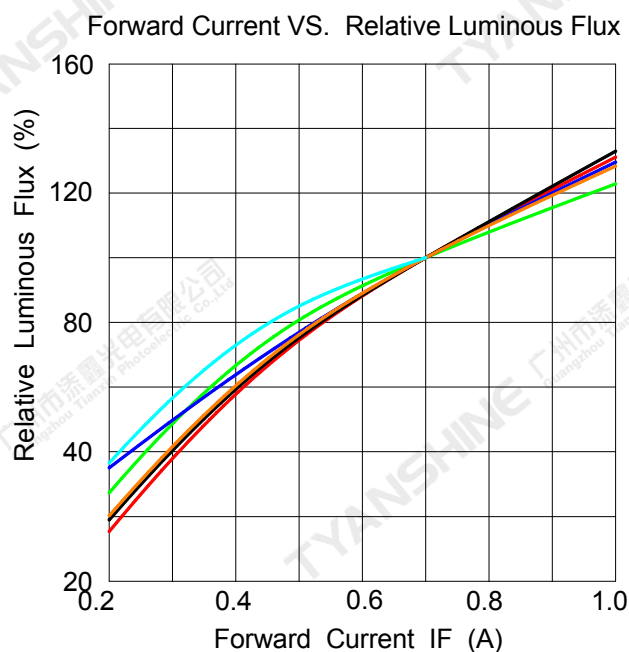
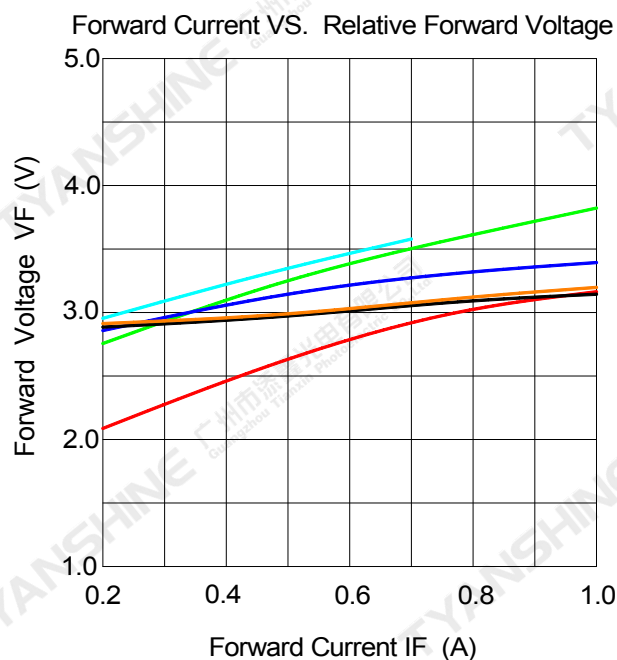
White light Color coordinate filing (IF=0.7A, Tc=25°C)



Grade	TC	P1		P2		P3		P4	
		X1	Y1	X2	Y2	X3	Y3	X4	Y4
J6	4030-4280K	0.42	0.55	0.424	0.5591	0.4092	0.5591	0.405	0.55
W	1850-1950K	0.5678	0.4294	0.5594	0.4377	0.5505	0.4294	0.5592	0.4208
W4	1850-1950K	0.5592	0.4208	0.5505	0.4294	0.545	0.4244	0.5556	0.4172
W3	1780-1850K	0.5764	0.4208	0.5678	0.4294	0.5592	0.4208	0.5664	0.4136
W7	1780-1850K	0.5664	0.4136	0.5592	0.4208	0.5556	0.4172	0.5638	0.4117
W2	1950-2030K	0.5594	0.4377	0.5528	0.4444	0.5435	0.4364	0.5505	0.4294
W1	1950-2030K	0.5505	0.4294	0.5435	0.4364	0.5363	0.4303	0.545	0.4244

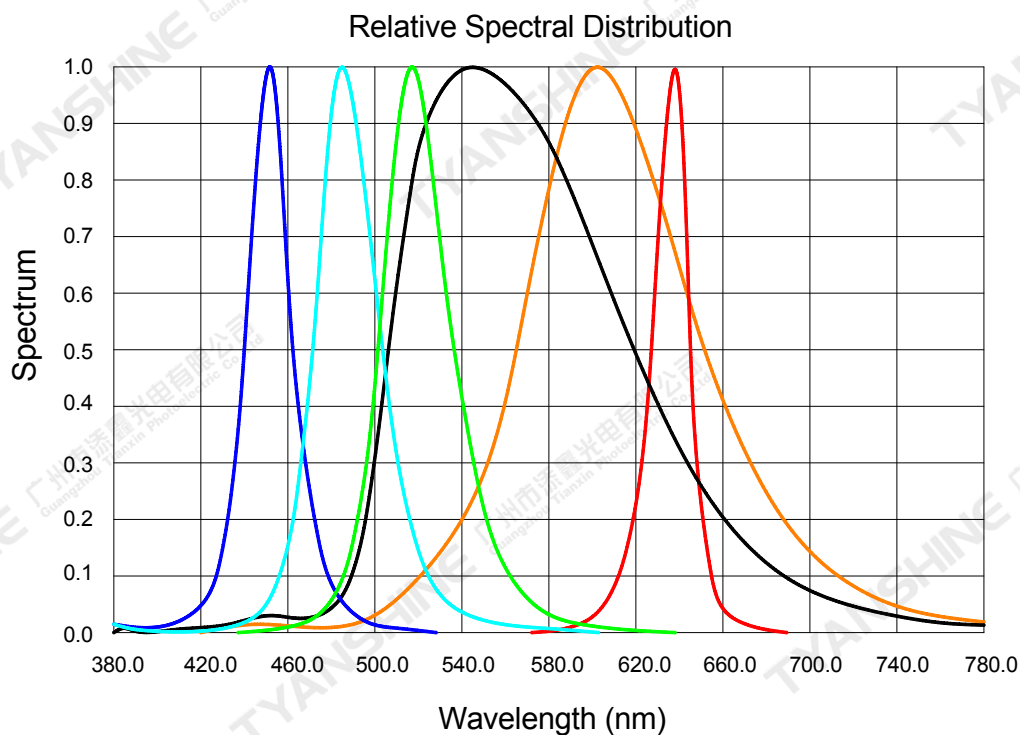
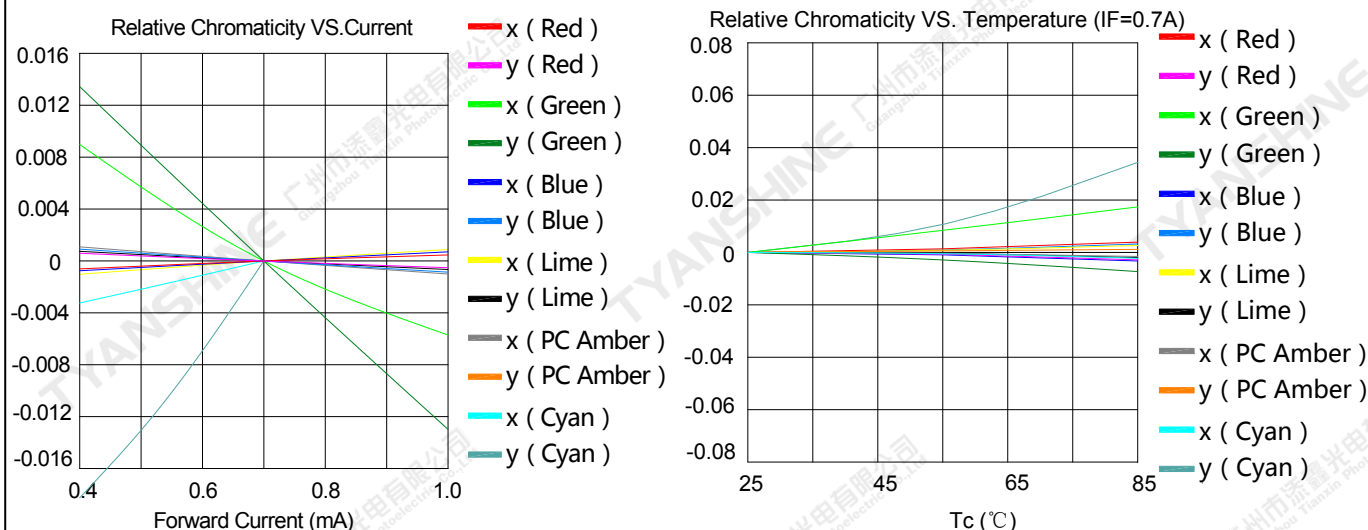
Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



Notes:

Red; Green; Blue; Lime; Cyan PC Amber;



Notes: Red; Green; Blue; Lime; Cyan; PC Amber;

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 $\pm 5^\circ$.

Usage Precautions

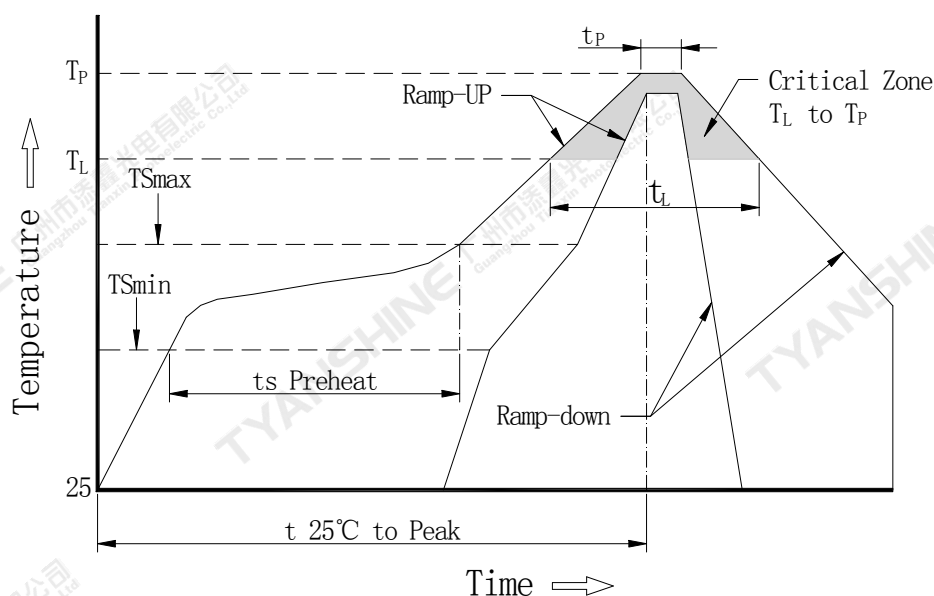
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



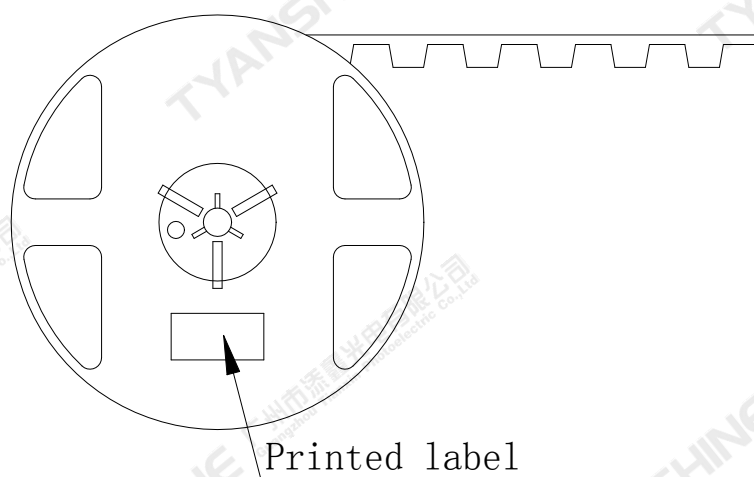
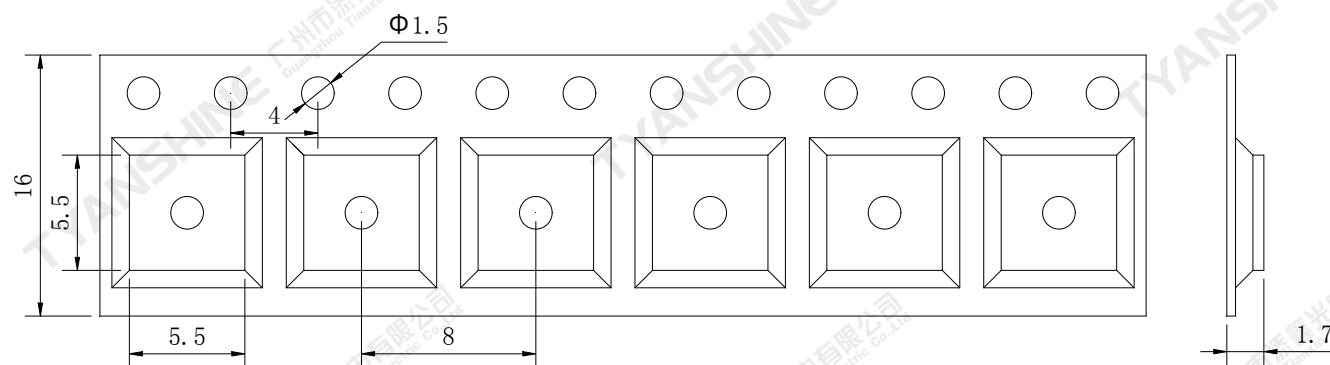
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (T_{smax} to T_P)	3°C/second max.
Preheat: Temperature Min (T_{smin})	100°C
Preheat: Temperature Max (T_{smax})	150°C
Preheat: Time (T_{smin} to T_{smax})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183°C
Time Maintained Above: Time (T_L)	60-150 seconds
Peak/Classification Temperature (T_P)	225°C
Time Within 5°C of Actual Peak Temperature (T_P)	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: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.