

TX-3535RGB8VSD1-NG4DC-01H80

PRODUCT SPECIFICATION

Features:

- ◆ Excellent transiting heat from LED chip operating under R:700mA GBS:800mA
- ◆ High luminous output
- ◆ No UV

Moisture Proof Grade:

- ◆ LEVEL1

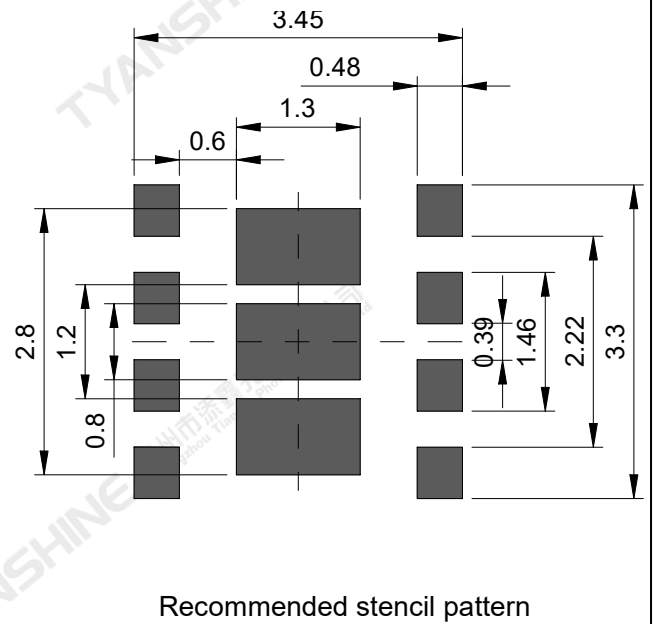
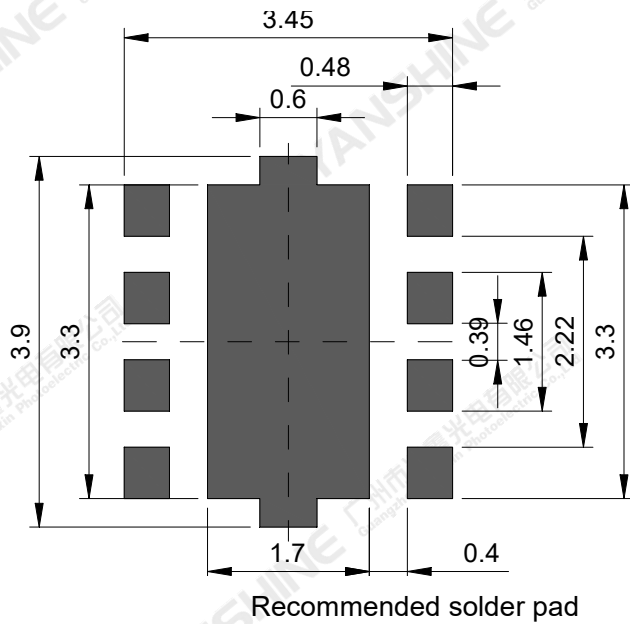
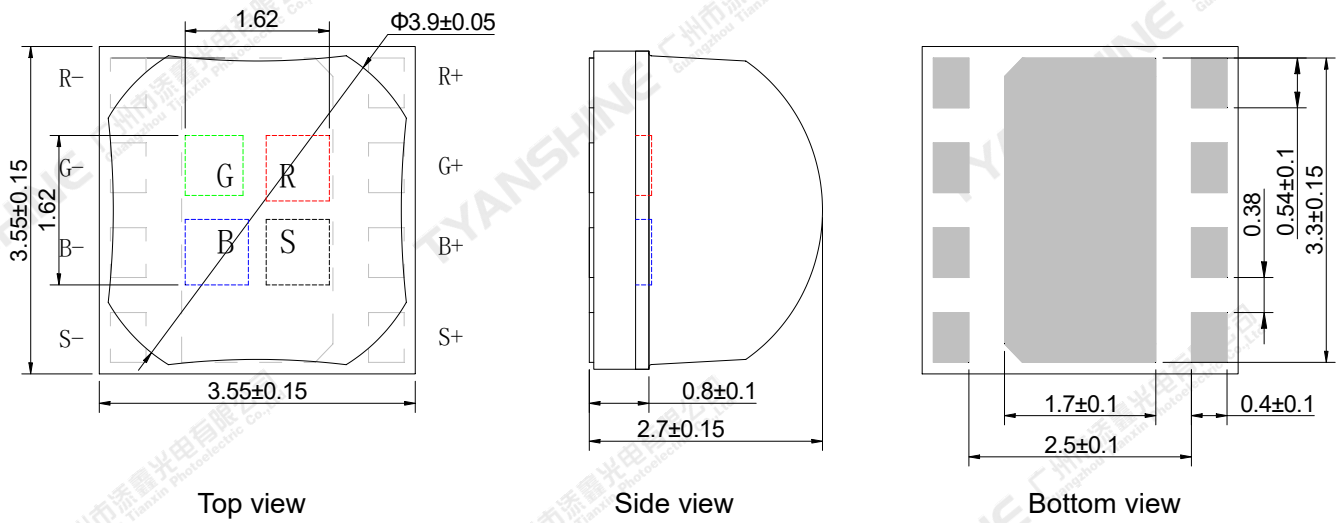
Emitting Color:

- ◆ Red (R)
- ◆ Green (G)
- ◆ Blue (B)
- ◆ Warm white (S)

Applications:

- ◆ Portable flashlight
- ◆ Garden lighting
- ◆ General lighting

Package Dimensions:



Notes:

1. All dimensions are in millimeters .
2. Tolerances unless otherwise mentioned are ± 0.15 mm .

Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Max Ratings	Unit	
Forward Current	I _F	R	700	mA
		G	800	
		B	800	
		S	800	
Peak Forward Current (Condition 1)	I _{FP}	R	840	mA
		G	960	
		B	960	
		S	960	
Reverse Voltage	V _R	5	V	
Power Dissipation	P _D	R	1680	mW
		G	2560	
		B	2480	
		S	2560	
Junction Temperature	T _j	R	125	°C
		G	150	
		B	150	
		S	150	
Electrostatic Discharge Threshold (ESD)	ESD	2000	V	
Storage Temperature	T _{stg}	-40~70	°C	
Operation Temperature	T _{opr}	-30~85		
Ceramic side temperature(Notes 4)	T _{cs}	85		

Condition 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.
- Temperature on the side of the ceramic substrate near the heat sink.

Part No.	TX-3535RGS8VSD1-NG4DC-01H80	Spec No.	WKF-ED0130	Page	3 of 10
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Electrical Optical Characteristics (Tc=25°C, IF=500mA)

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	Φ_v	R	70	85	100	lm
		G	115	140	165	
		B	35	33	50	
		S	105	120	135	
Correlated Colour Temperature	CCT	S	2860	3040	3240	K
Color Rendering Index	Ra	S	80	82	—	—
Dominant Wavelength	λ_d	R	618	623	628	nm
		G	523	528	533	
		B	462	467	472	
Peak-emission Wavelength	λ_p	R	625	630	635	nm
		G	518	523	528	
		B	458	463	468	
Spectral Line Half-Width	$\Delta\lambda$	R	14	16	18	nm
		G	30	35	40	
		B	18	21	24	
		S	115	130	145	
Forward Voltage	V_f	R	2.0	2.4	2.7	V
		G	2.9	3.2	3.6	
		B	2.8	3.1	3.5	
		S	2.9	3.2	3.6	
Reverse Current	I_R	$V_R=5V$	—	—	2	μA
Viewing Angle at 50% IV	$2\theta_{1/2}$	—	—	120	—	Deg
Thermal Resistance Junction to Case	$R_{\theta J-C}$	R	—	14	—	K/W
		G	—	14	—	
		B	—	14	—	
		S	—	14	—	
Temperature Coefficient of Voltage	$V\Delta F/T$	R	—	-2.0	—	mV/°C
		G	—	-5.8	—	
		B	—	-1.6	—	
		S	—	-1.6	—	

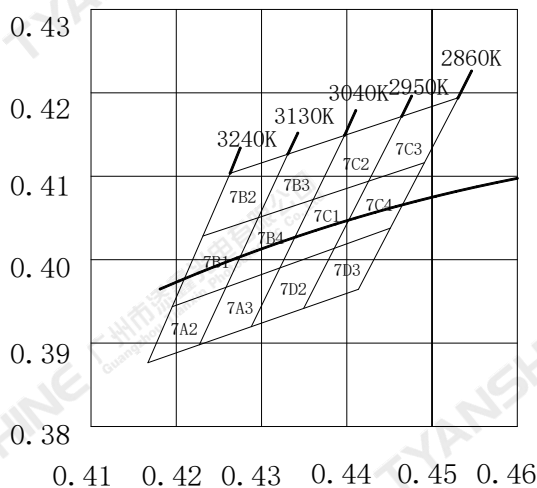
Notes:

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:±10%V.
- 5.Ra measurement tolerance:±2.

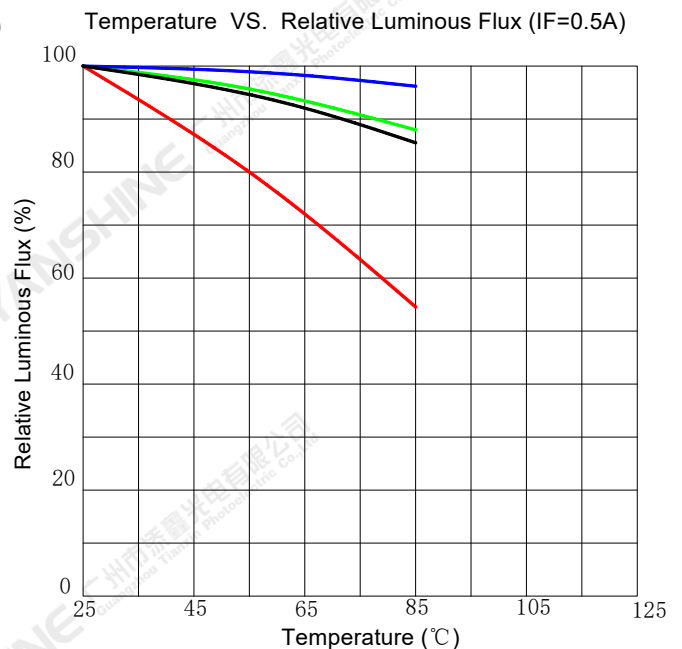
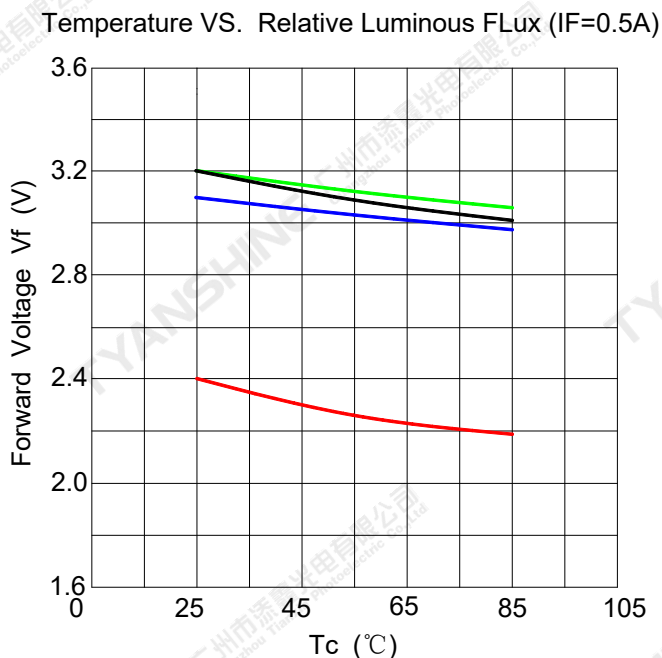
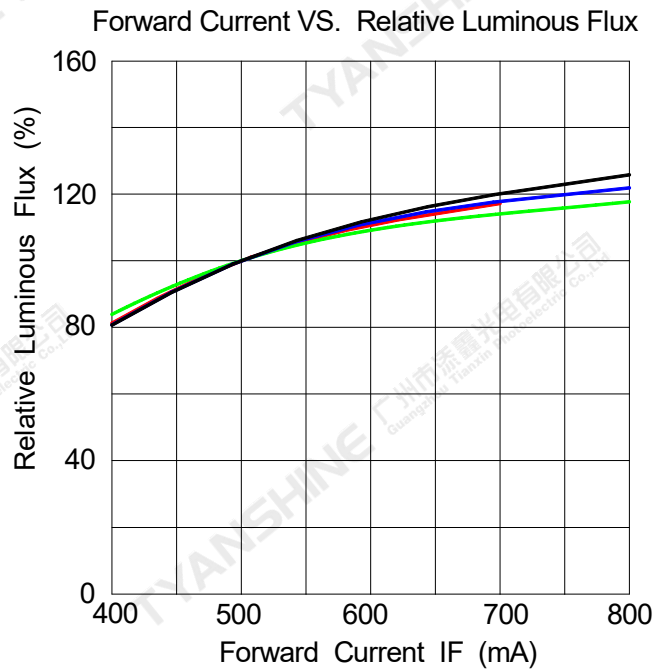
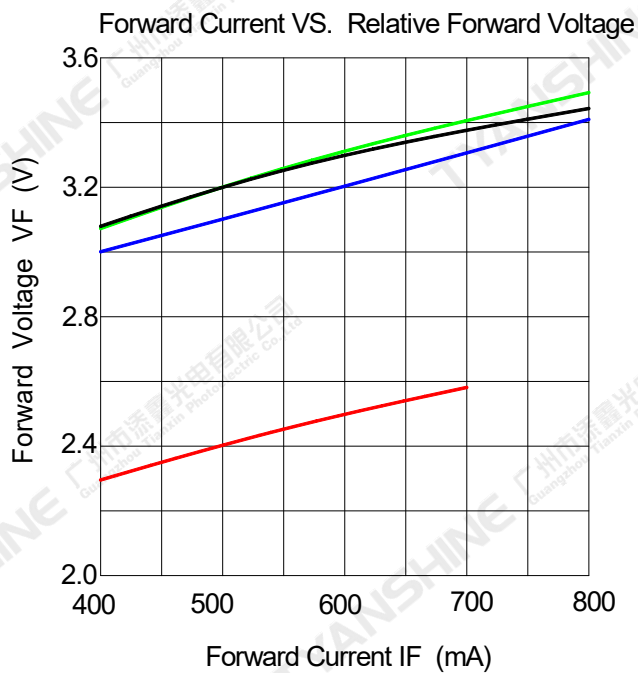
White light Color coordinate filing (IF=500mA)



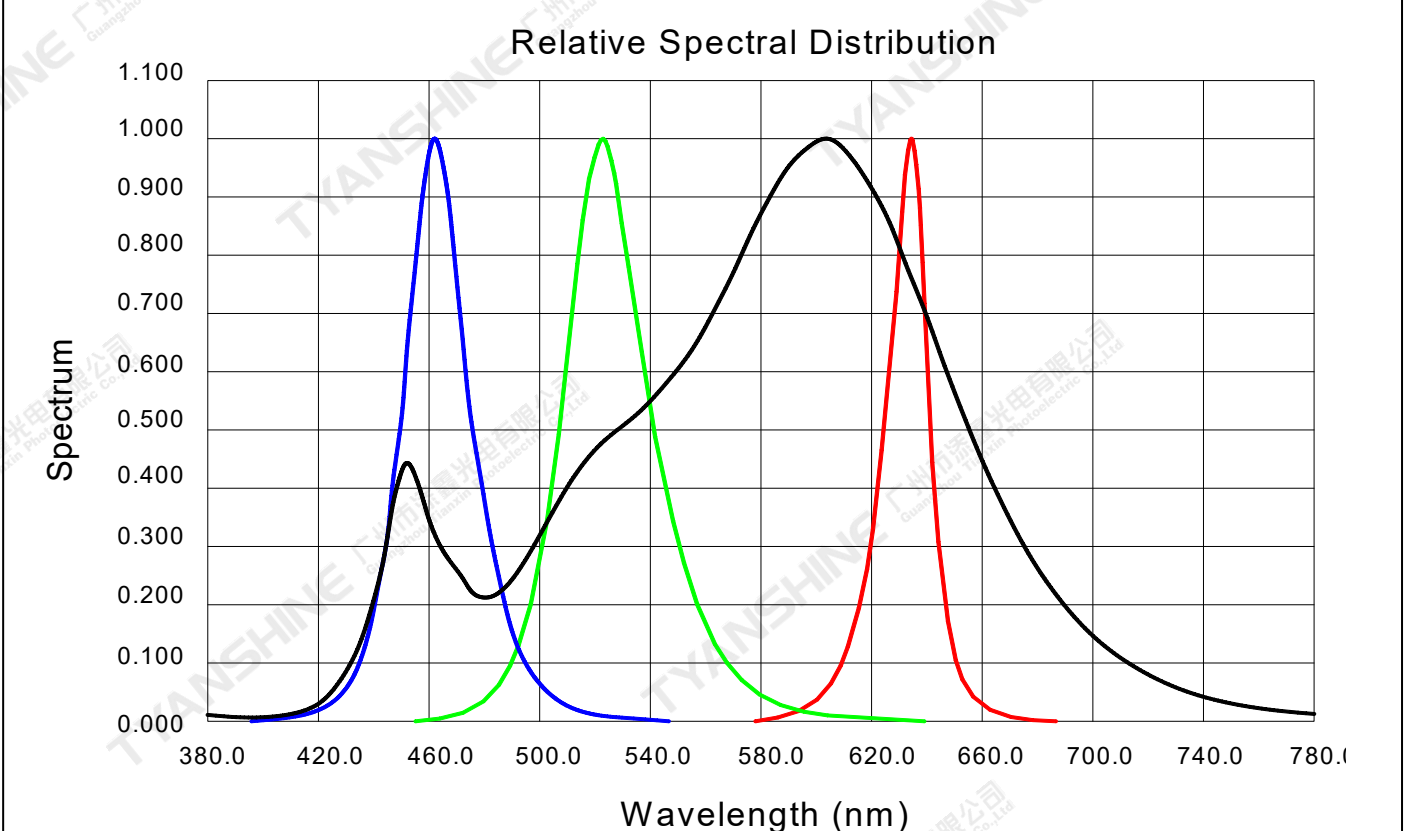
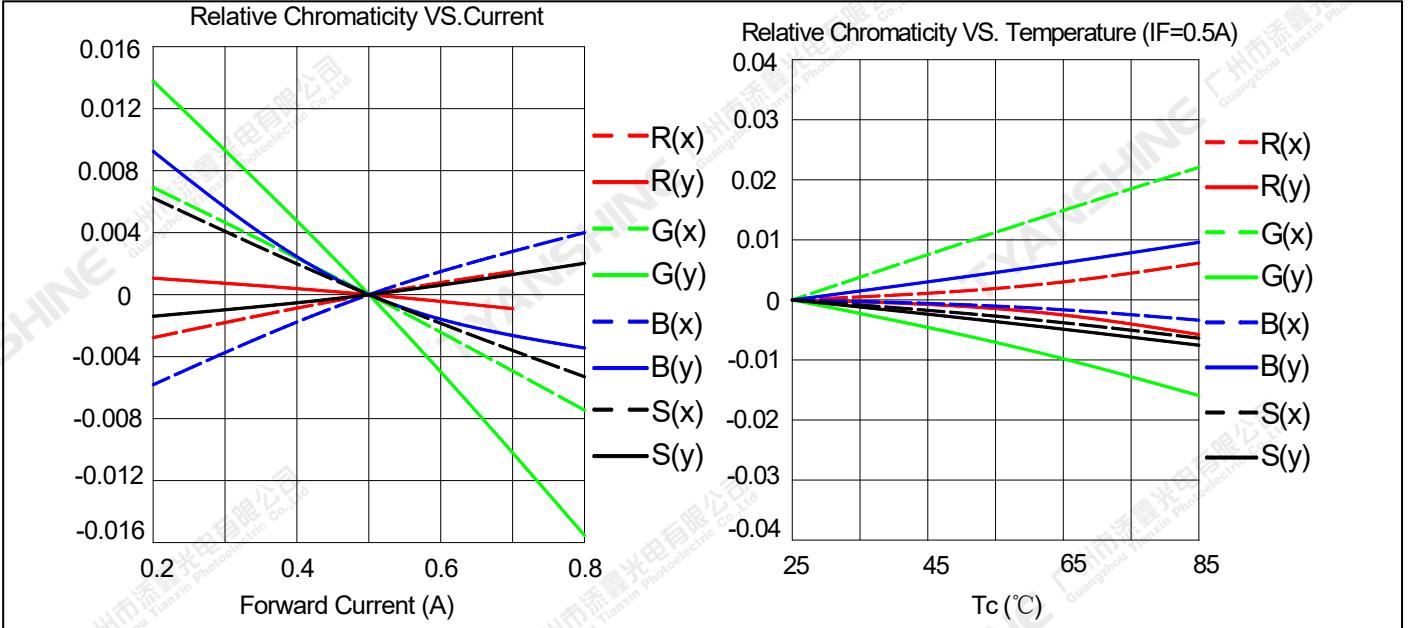
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
7D3	2860K	2950K	0.4414	0.3964	0.4349	0.3942	0.4385	0.4014	0.4451	0.4038
7C4			0.4451	0.4038	0.4385	0.4014	0.4426	0.4094	0.4491	0.4116
7C3			0.4491	0.4116	0.4426	0.4094	0.4464	0.4172	0.4531	0.4194
7D2	2950K	3040K	0.4349	0.3942	0.4288	0.3920	0.4322	0.3990	0.4385	0.4014
7C1			0.4385	0.4014	0.4322	0.3990	0.4361	0.4072	0.4426	0.4094
7C2			0.4426	0.4094	0.4361	0.4072	0.4397	0.4149	0.4464	0.4172
7A3	3040K	3130K	0.4288	0.3920	0.4227	0.3898	0.4258	0.3967	0.4322	0.3990
7B4			0.4322	0.3990	0.4258	0.3967	0.4296	0.4050	0.4361	0.4072
7B3			0.4361	0.4072	0.4296	0.4050	0.4331	0.4126	0.4397	0.4149
7A2	3130K	3240K	0.4227	0.3898	0.4167	0.3876	0.4195	0.3944	0.4258	0.3967
7B1			0.4258	0.3967	0.4195	0.3944	0.4231	0.4028	0.4296	0.4050
7B2			0.4296	0.4050	0.4231	0.4028	0.4263	0.4104	0.4331	0.4126

Typical Electrical/Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



Notes: — Red (R) ; — Green (G) ; — Blue (B) ; — Warm white (S) ;



Notes: ■ Red (R) ; ■ Green (G) ; ■ Blue (B) ; ■ Warm white (S) ;

- Notes:**
- 2θ 1/2 is the off axis angle from lamp centerline where the luminous intensity is 1/2 of the peak value.
 - View angle tolerance is ± 5°.

Usage Precautions

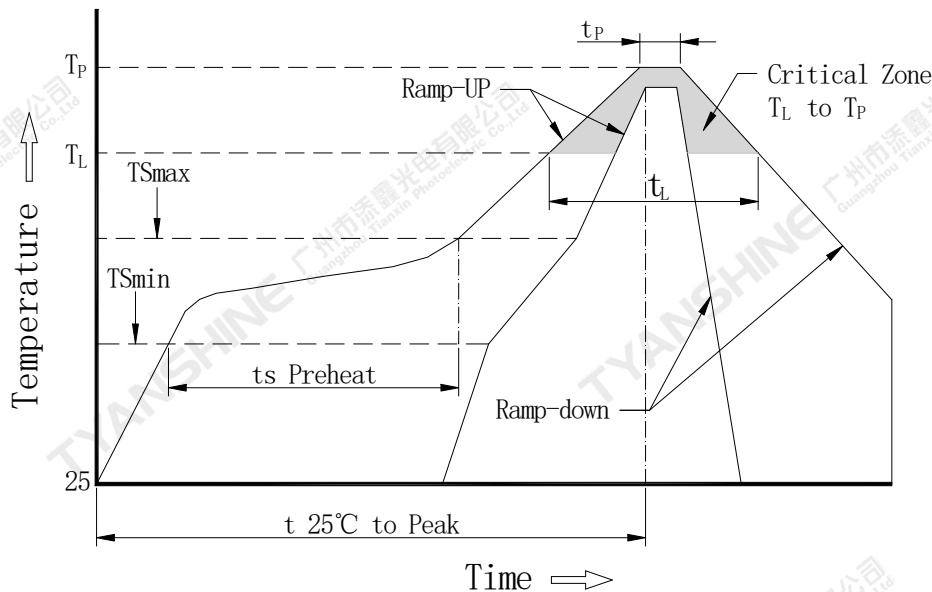
Storage Environment Condition

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 Solderr(SnBi35Ag0.3)
Average Ramp-Up Rate (T _{Smax} to T _P)	3°C/second max.
Preheat: Temperature Min (T _{Smin})	130°C
Preheat: Temperature Max (T _{Smax})	190°C
Preheat: Time (T _{Smin} to T _{Smax})	120-180 seconds
Time Maintained Above: Temperature (T _L)	230°C
Time Maintained Above: Time (T _L)	60-150 seconds
Peak/Classification Temperature (T _P)	255°C
Time Within 5°C of Actual Peak Temperature (T _P)	10-35 seconds
Ramp-Down Rate	5°C/second max.
Time 25°C to Peak Temperature	7 minutes max.

Note:

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

