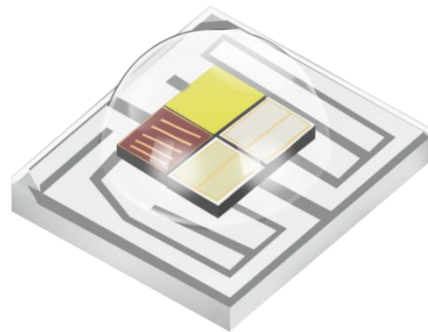


HPL-3535RGBxWx

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under 400mA
- ◆High luminous output
- ◆No UV



Chip Material:

- ◆Red: AlGaInP
- ◆Green: GaInN
- ◆Blue: GaInN
- ◆White: GaInN

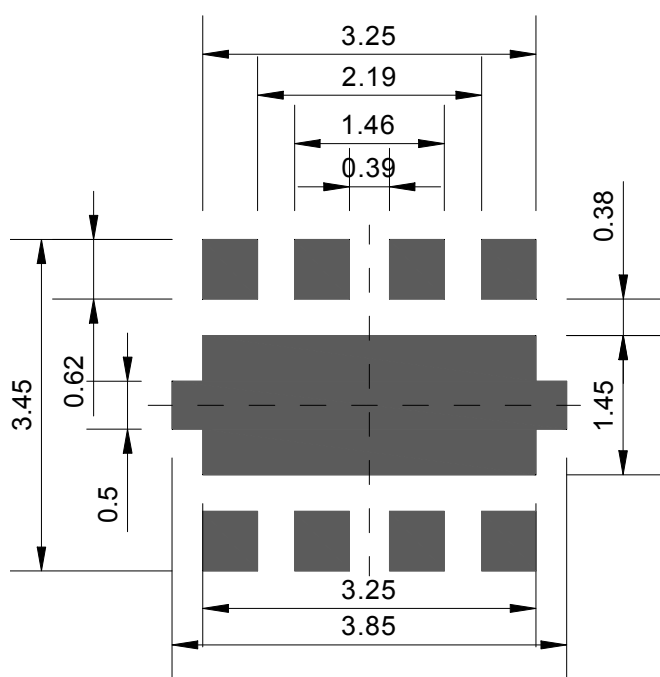
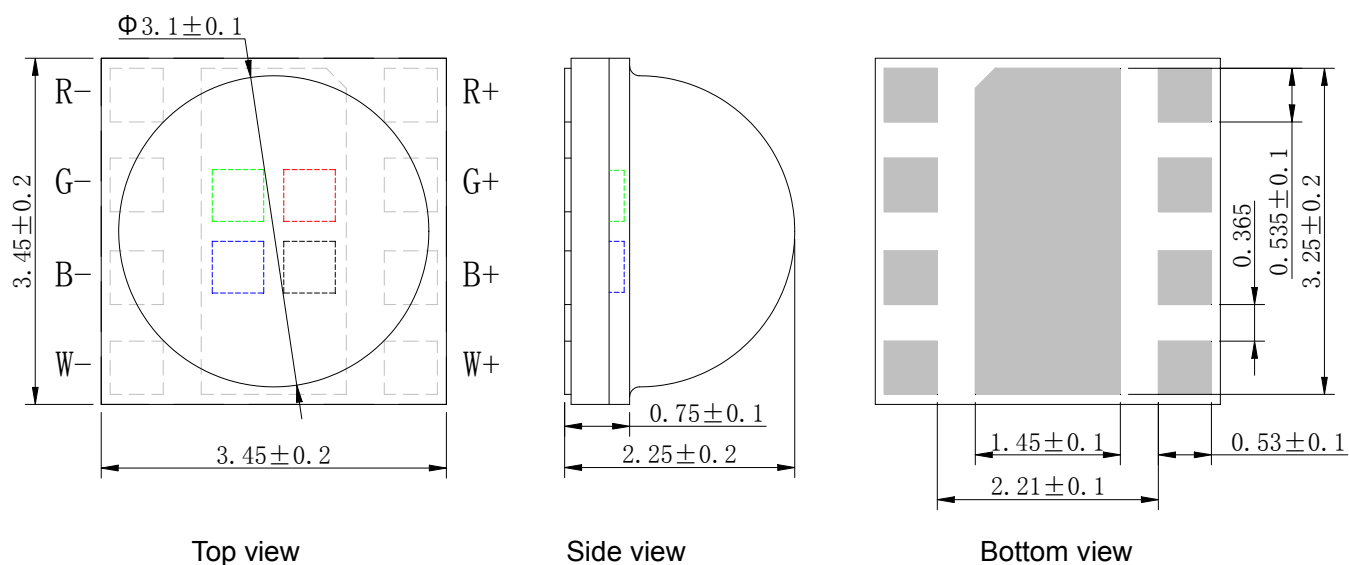
Emitting Color:

- ◆Red (R)
- ◆Green (G)
- ◆Blue (B)
- ◆White (W)

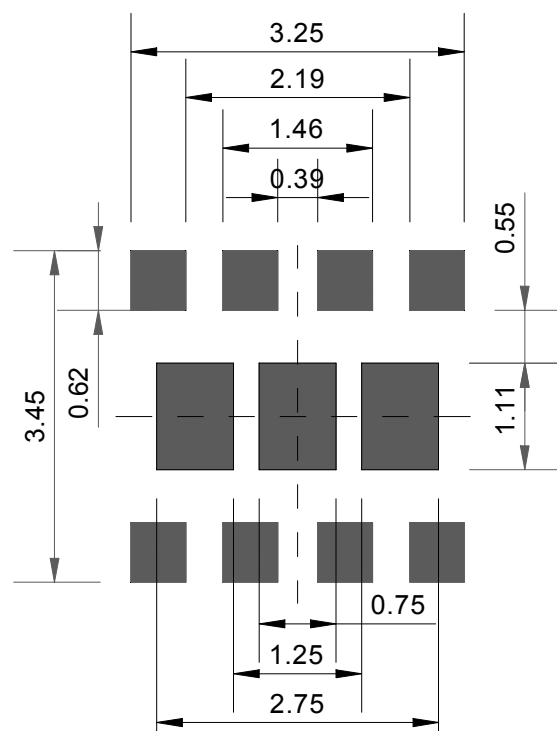
Applications:

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

Package Dimensions:



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		Max Ratings	Unit
Forward Current	IF		400	mA
Reverse Voltage	VR		Not designed for reverse operation	V
Power Dissipation	PD	R	875	mW
		G	1260	
		B	1260	
		W	1190	
Junction Temperature	Tj	R	115	℃
		G	150	
		B	150	
		W	150	
Electrostatic Discharge Threshold (ESD)	ESD		2000	V
Storage Temperature	Tstg		-40~70	℃
Operation Temperature	Topr		-30~85	

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=350mA)

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	ϕ_v	R	40	50	65	lm
		G	80	100	120	
		B	25	34	45	
		W	75	90	105	
Dominant Wavelength	λ_d	R	618	623	628	nm
		G	520	528	535	
		B	465	468	475	
Correlated Colour Temperature	CCT	W	3780	4000	4300	K
			4800	5150	5750	
			5300	6000	6500	
			6000	6580	7000	
Color Rendering Index	Ra	W	80	85	—	—
Peak-emission Wavelength	λ_p	R	625	630	635	nm
		G	516	525	530	
		B	456	465	471	
Spectral Line Half-Width	$\Delta\lambda$	R	15	20	25	nm
		G	30	35	40	
		B	20	25	30	
		W	20	25	30	
Forward Voltage	V_f	R	2.0	2.3	2.6	V
		G	2.8	3.3	3.6	
		B	2.9	3.3	3.6	
		W	2.8	3.1	3.4	
Reverse Current	I_R	$V_R=5V$	—	—	5	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	—	
		W	—	14	—	
Temperature Coefficient of Voltage	$V\Delta F/T$	R	—	-2.0	—	mV/°C
		G	—	-5.8	—	
		B	—	-1.6	—	
		W	—	-1.6	—	

White Color coordinate filing (IF=350mA)

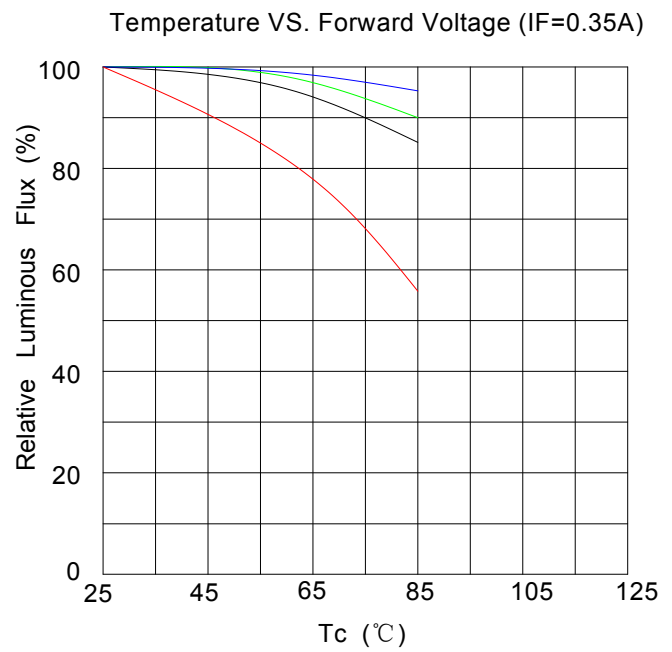
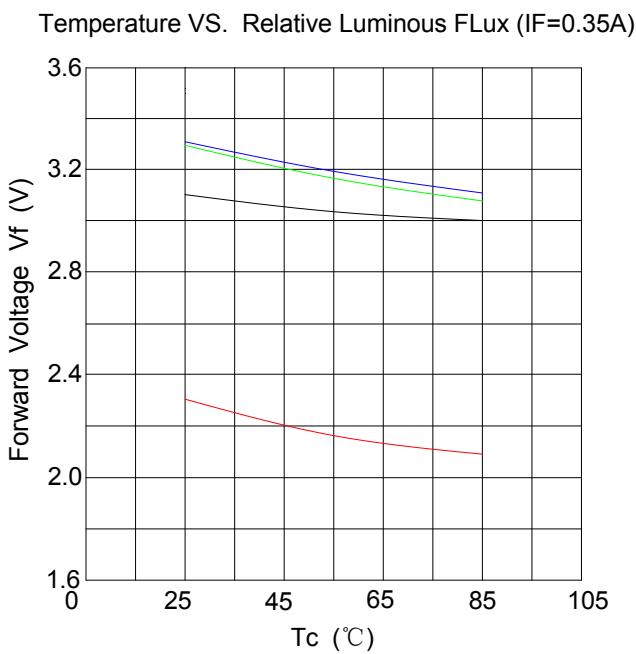
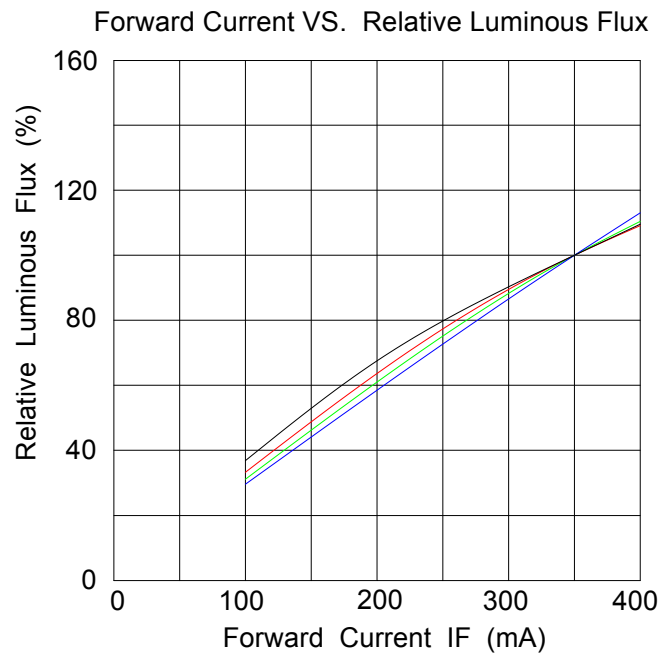
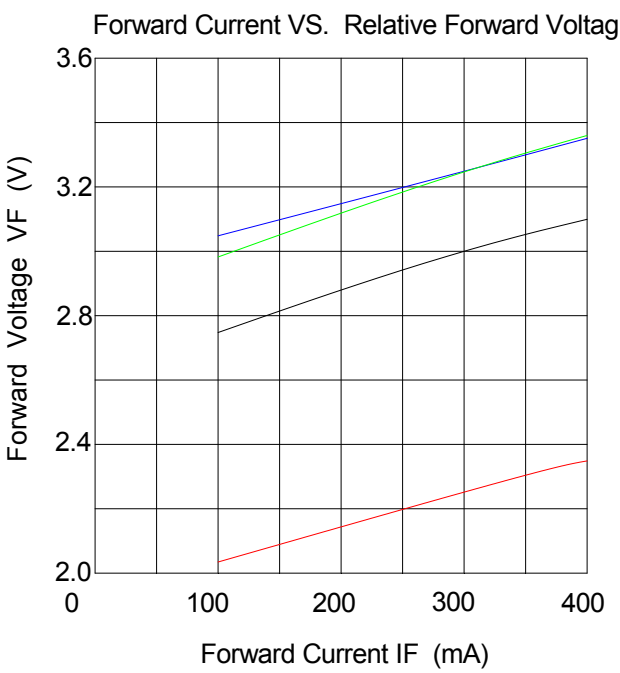
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
5D2	3780K	3950K	0.3888	0.3775	0.3811	0.3725	0.3843	0.3852	0.3927	0.3902
5B4	3950K	4150K	0.3811	0.3725	0.3729	0.3676	0.3757	0.3800	0.3843	0.3851
5A2	4150K	4300K	0.3725	0.3656	0.3666	0.3619	0.3688	0.3731	0.3750	0.3769
3D	4800K	5000K	0.3504	0.3538	0.3448	0.3489	0.3458	0.3641	0.3521	0.3690
3B1	5000K	5300K	0.3458	0.3620	0.3373	0.3549	0.3375	0.3610	0.3462	0.3681
3A1			0.3446	0.3477	0.3369	0.3410	0.3373	0.3549	0.3458	0.3620
2D1	5300K	5500K	0.3369	0.3400	0.3311	0.3350	0.3311	0.3481	0.3373	0.3533
3B			0.3372	0.3530	0.3323	0.3470	0.3325	0.3604	0.3377	0.3660
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	0.3337	0.3253	0.3428
1D	6000K	6500K	0.3220	0.3281	0.3141	0.3206	0.3127	0.3310	0.3213	0.3394
1A	6500K	7000K	0.3144	0.3186	0.3068	0.3113	0.3048	0.3207	0.3130	0.3289

Notes:

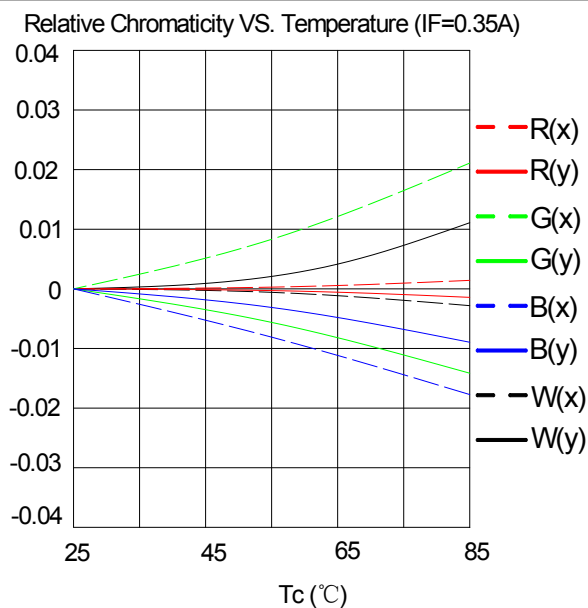
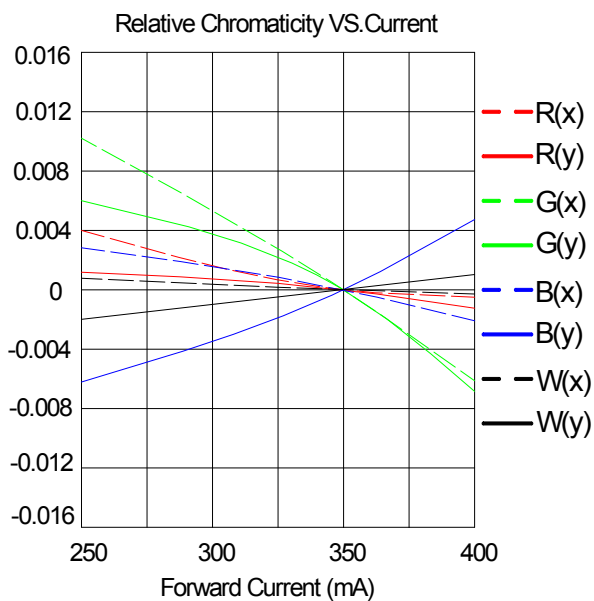
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.Luminous flux measurement tolerance:±10%.
- 4.Forward voltage measurement tolerance:±0.3V.
- 5.Ra measurement tolerance:±2.

Typical Electrical/Optical Characteristics Curves

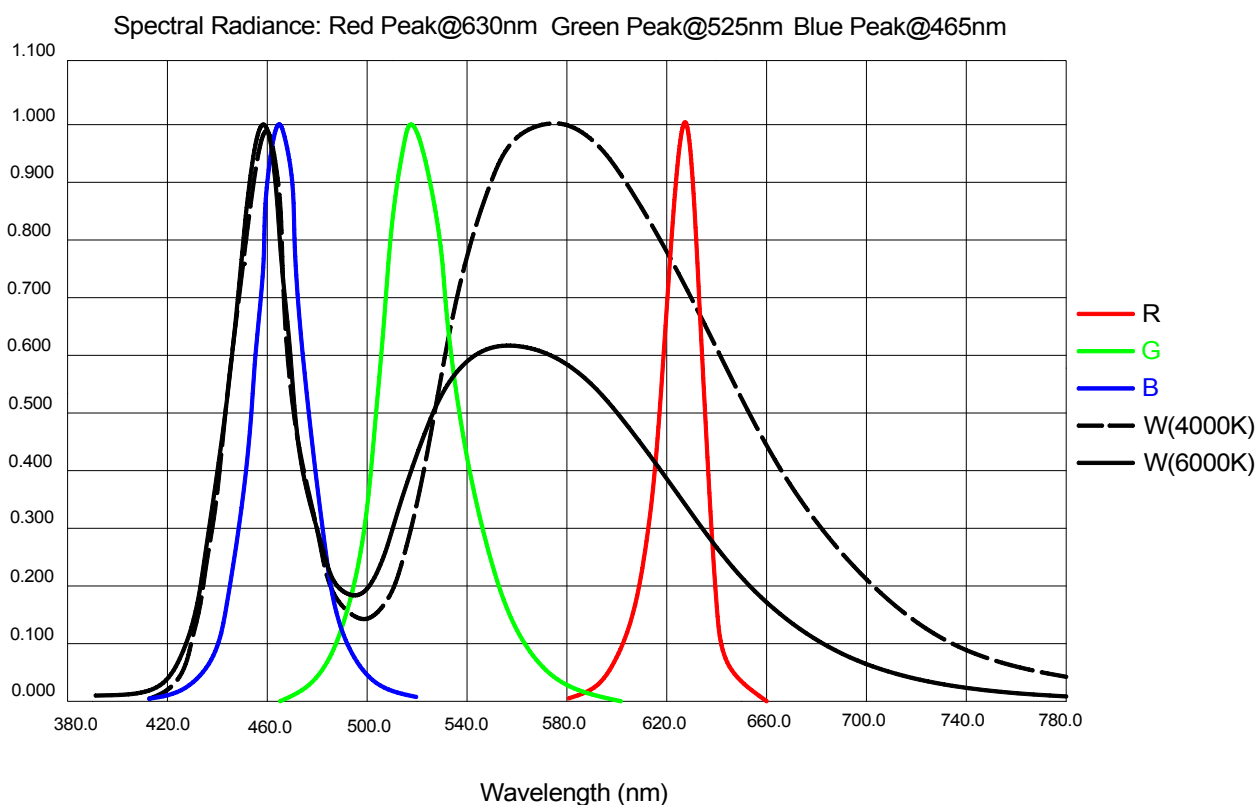
(25°C Ambient Temperature Unless Otherwise Noted)



Notes: — Red (R) ; — Green (G) ; — Blue (B) ; — White (W) ;



Notes: ■ Red (R) ; ■ Green (G) ; ■ Blue (B) ; ■ White (W) ;



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

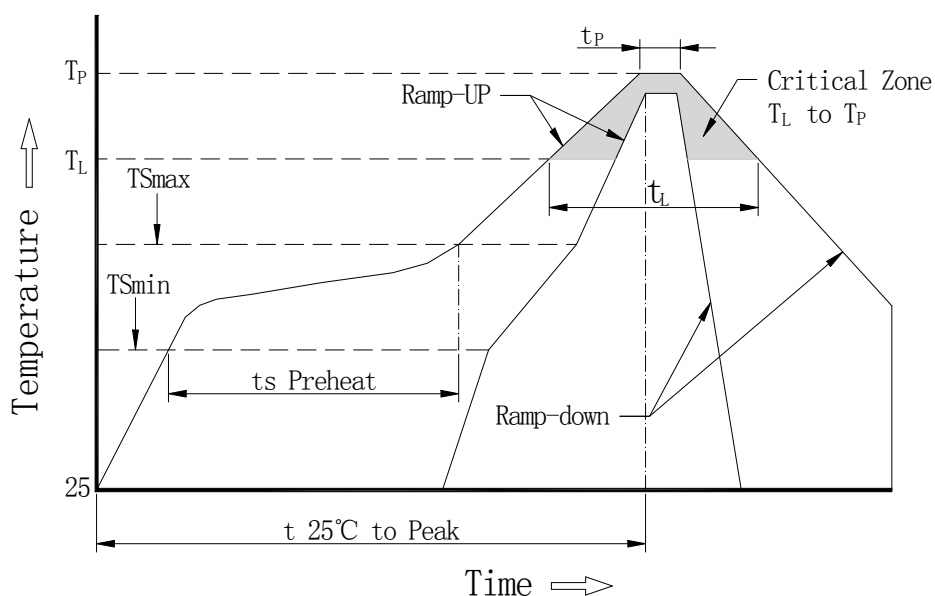
Storage Environment Condition

Temperature: 5°C ~ 30°C (41°F ~ 86°F)

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



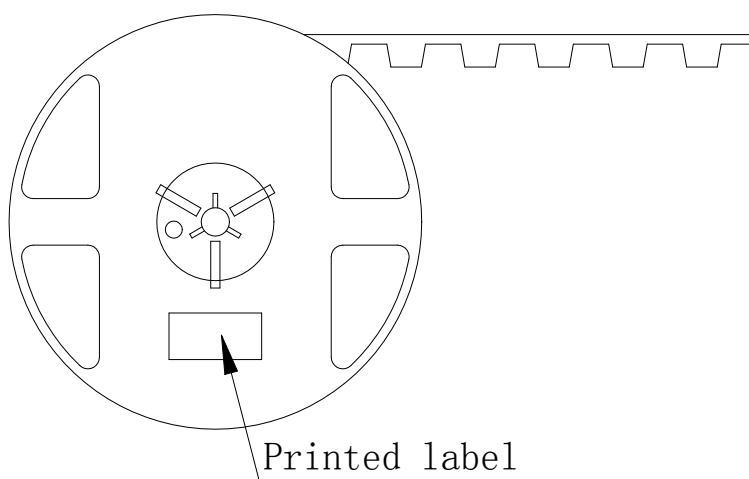
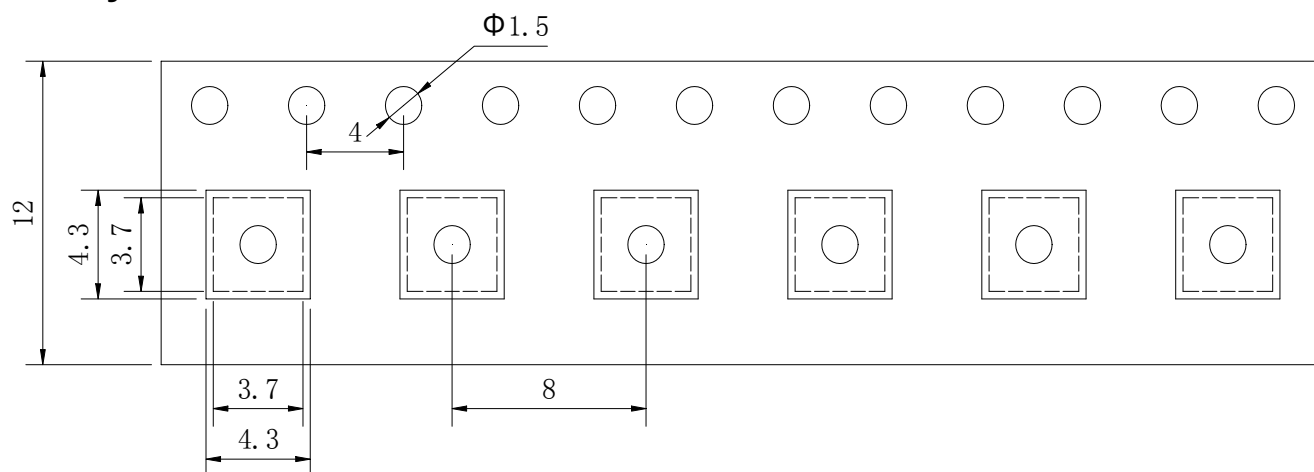
Profile Feature	Lead-Based Solder
Average Ramp-Up Rate (T_{Smax} to T_P)	3°C/second max.
Preheat: Temperature Min (T_{Smin})	100°C
Preheat: Temperature Max (T_{Smax})	150°C
Preheat: Time (T_{Smin} to T_{Smax})	60-120 seconds
Time Maintained Above: Temperature (T_L)	183°C
Time Maintained Above: Time (T_L)	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.