SPECIFICATION

Product : Topview 5050 RGB SMD LED

Part No. : IWS-L5056-RGB-K3

Date : 2023. 08. 03 Ver. 0.1

Customer :

Checked By	Checked By	Checked By	Checked By	Approval

Manufacturer : CoAsia Corp.

Checked By	Checked By	Checked By	Checked By	Approval
Approved				

CoAsia Corporation
193, Namdongseo-ro, Namdong-gu, Incheon 21634 KOREA
TEL:+82-32-813-1801, FAX:+82-32-816-1900
URL: http://www.coasiacorp.co.kr

1. Features

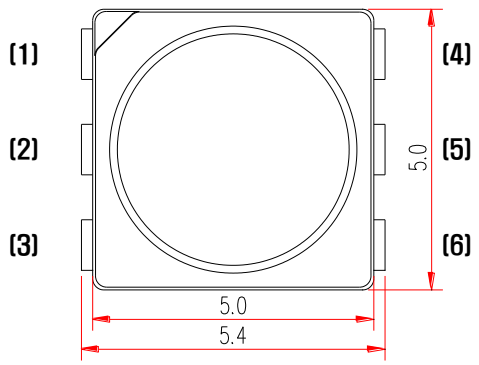
- 3 Chip High-Luminosity SMD LED
- 5.4 x 5.0 x 1.6 mm (L x W x H), 6-Pin, Small Size Surface Mount Type
- Wide Viewing Angle
- Long Operating Life
- MSL 3

2. Applications

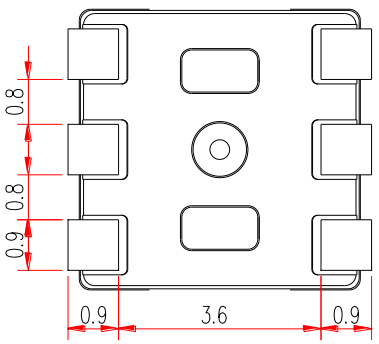
- Automotive: Backlight in Dashboard and Switch
- Lighting Device: Indicator, General Lighting
- Camera Flash, Hand Carrier Flash
- General Use

3. Outline Drawing and Dimension

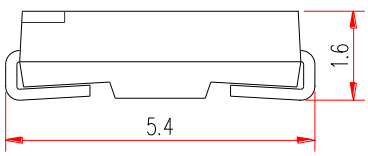
Unit : mm, Tolerance : ±0.1mm



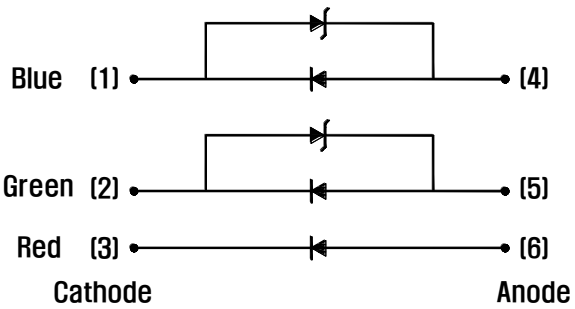
[Top view]



[Bottom view]



[Side view]



[Circuit diagram]

Note

1. All dimensions are in millimeters
2. All dimensions without tolerances are for reference only

4. Absolute Maximum Ratings(T_a = 25 °C)

Parameter	Symbol	Value			Unit
		Red	Green	Blue	
Power Dissipation	P_d	72	102	102	mW
Continuous Forward Current	I_F	30	30	30	mA
Peak Forward Current *1	I_{FP}	100	100	100	mA
Junction Temperature	T_j	125	125	125	°C
Operating Temperature	T_{opr}	-40 ~ 105			°C
Storage Temperature	T_{stg}	-40 ~ 125			°C
Soldering Temperature	T_{sol}	260 (30sec)			°C

*1 Duty ratio = 1/10, Pulse width = 0.1ms

5. Electro-optical Characteristics(T_a = 25 °C)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit.
Forward Voltage*2	V_F	I_F = 20mA /1-chip	Red	1.8	-	2.4	V
			Green	2.6	-	3.4	V
			Blue	2.8	-	3.4	V
Reverse Current	I_R	V_R = 5V /1-chip	Red	-	-	10	μA
			Green				
			Blue				
Dominant Wavelength*3	W_D	I_F = 20mA /1-chip	Red	618	-	635	nm
			Green	517	-	535	nm
			Blue	455	-	475	nm
Luminous Intensity*4	I_V	I_F = 20mA /1-chip	Red	400	-	1,400	mcd
			Green	900	-	2,100	
			Blue	200	-	600	
View angle*5	$2\theta_{1/2}$	-	-	-	120	-	º

*2 Forward Voltage has a tolerance of ±0.05V.

*3 Dominant Wavelength has an accuracy of ±2nm.

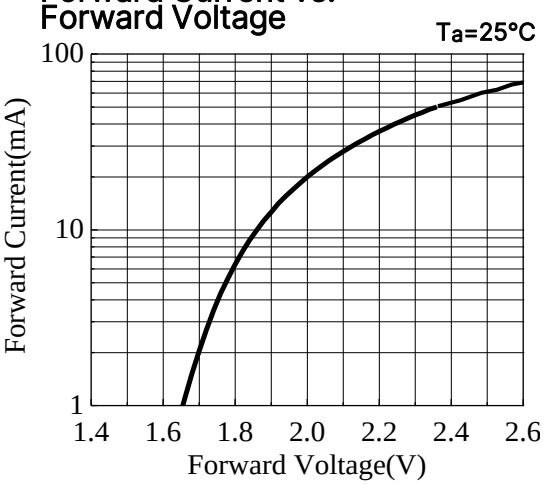
*4 Luminous Intensity is tested by a tester calibrated by CAS 140B(CIE LED_B) and has an accuracy of 10%.

*5 Viewing Angle is the angle until 50% of brightness measured from the front part of LED.

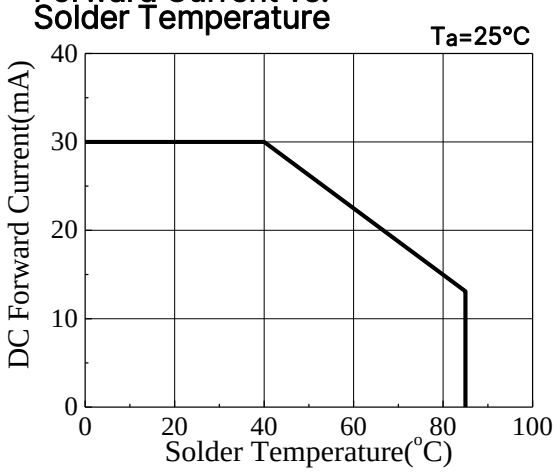
6. Typical Characteristics Curves

6.1 Red

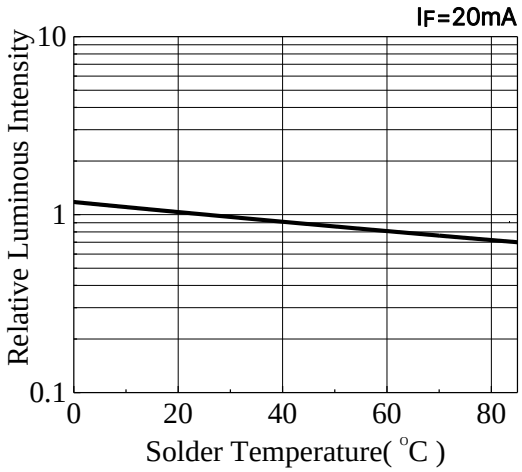
Forward Current vs. Forward Voltage



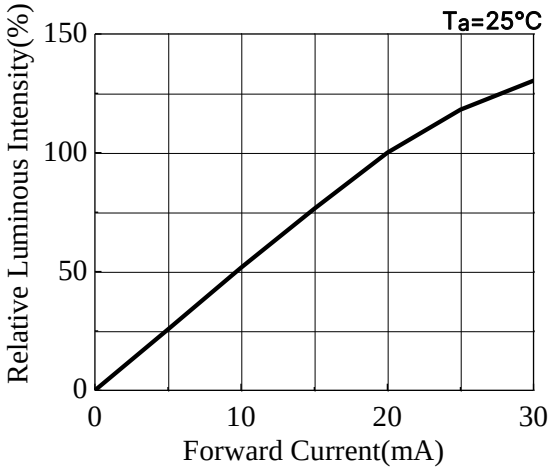
Forward Current vs. Solder Temperature



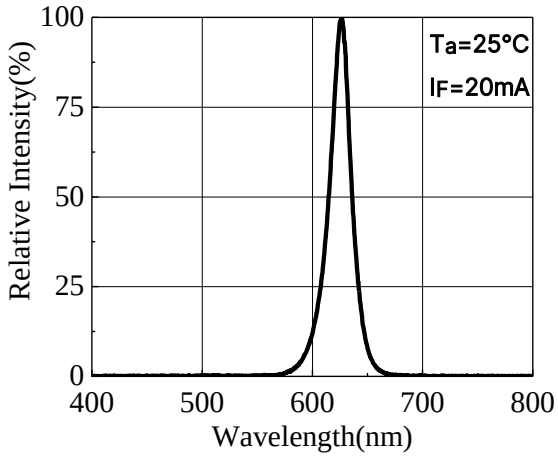
Relative Luminous Intensity vs. Solder Temperature



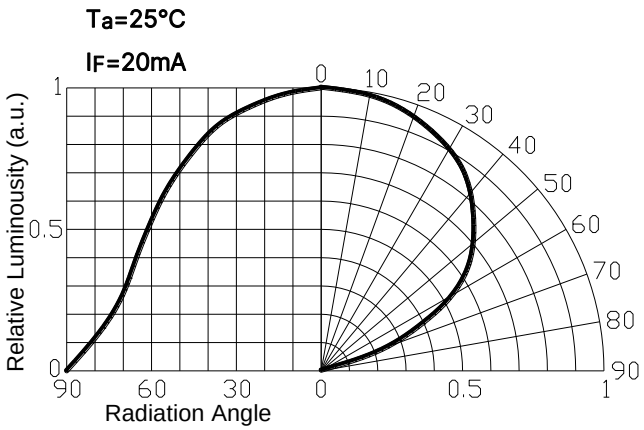
Relative Luminous Intensity vs. Forward Current



Relative Intensity vs. Wavelength

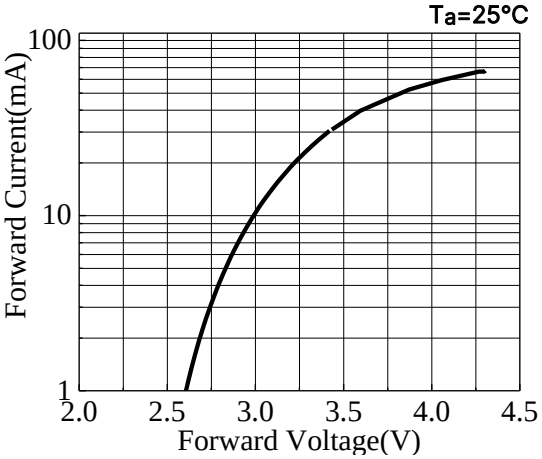


Radiation Diagram

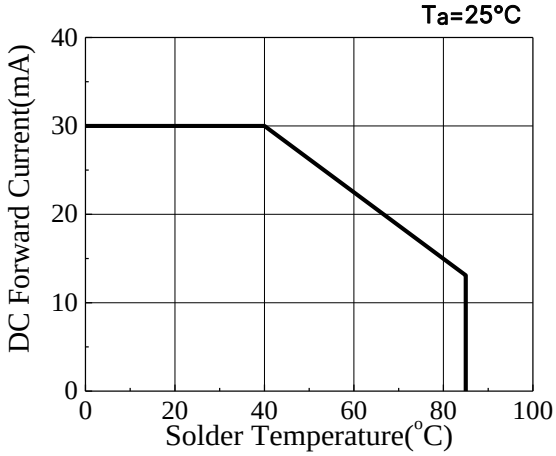


6.2 Green

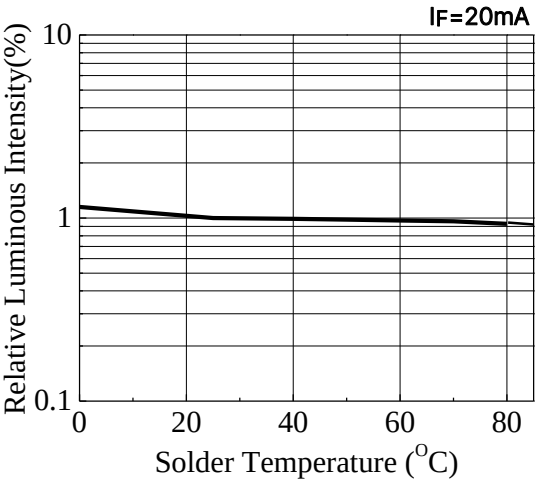
Forward Current vs. Forward Voltage



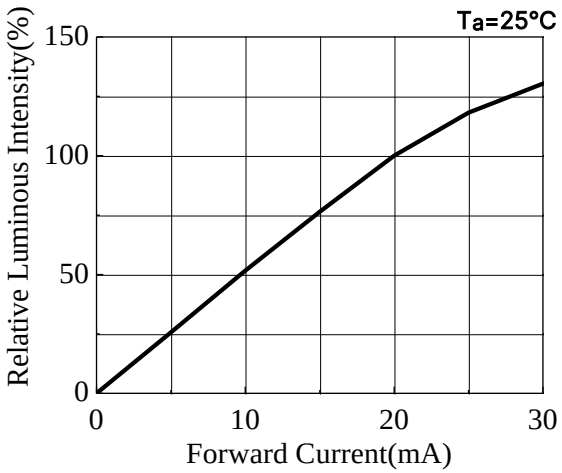
Forward Current vs. Solder Temperature



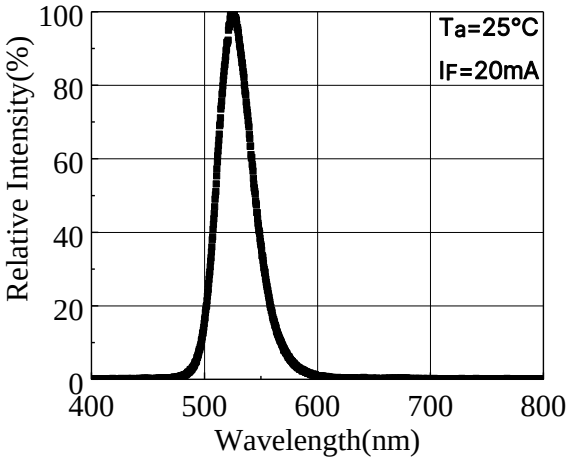
Relative Luminous Intensity vs. Solder Temperature



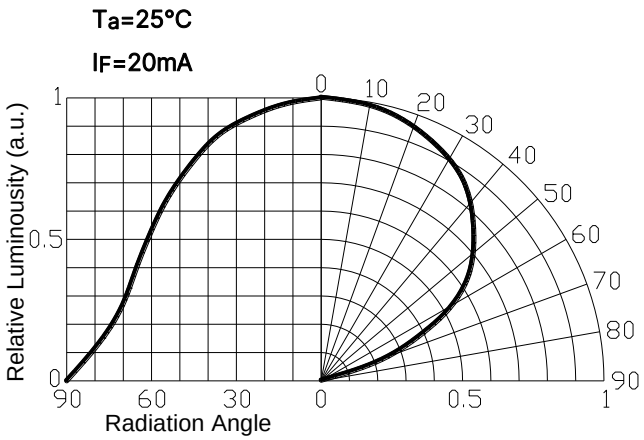
Relative Luminous Intensity vs. Forward Current



Relative Intensity vs. Wavelength

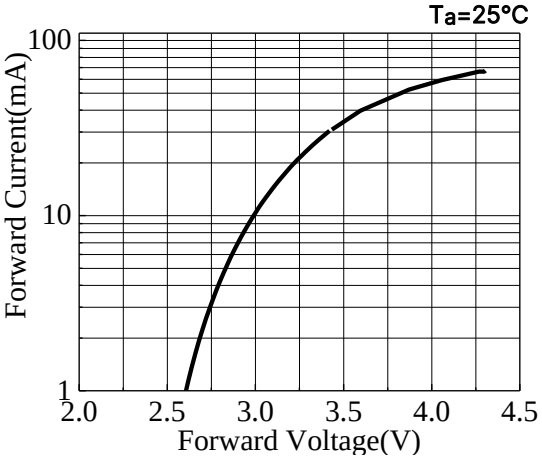


Radiation Diagram

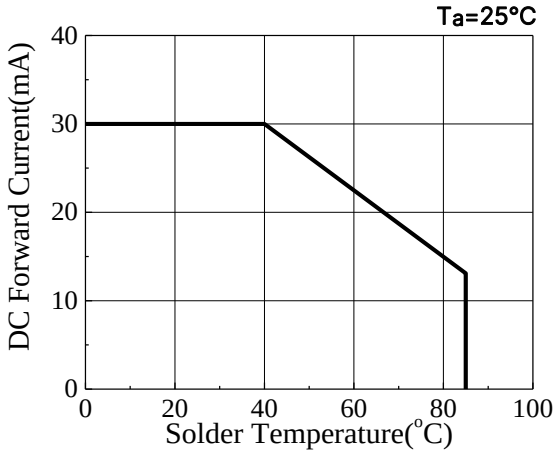


6.3 Blue

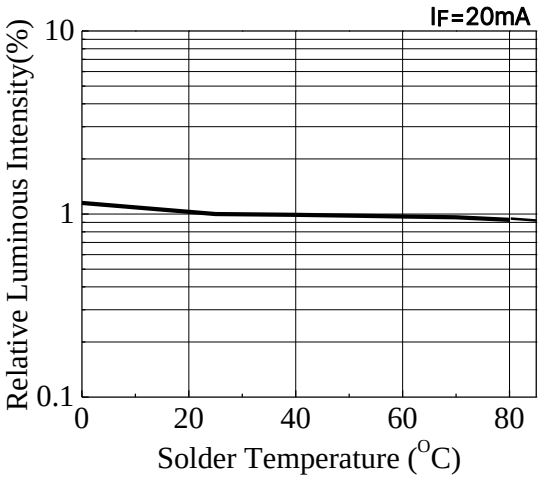
Forward Current vs. Forward Voltage



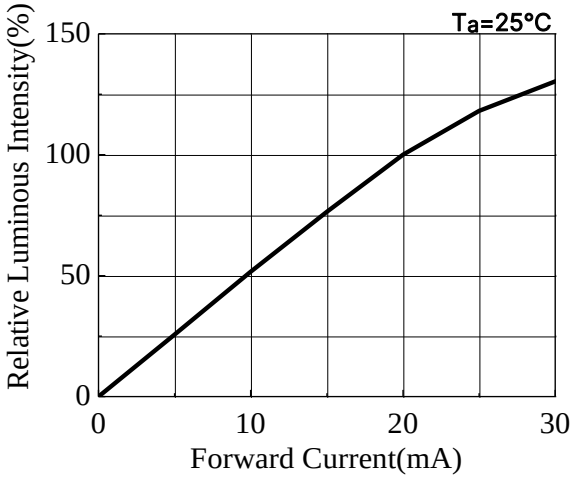
Forward Current vs. Solder Temperature



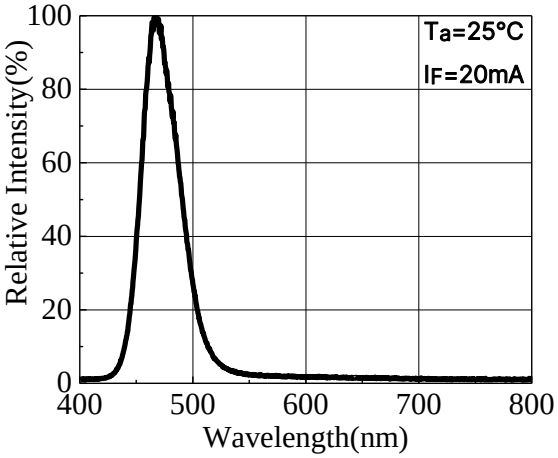
Relative Luminous Intensity vs. Solder Temperature



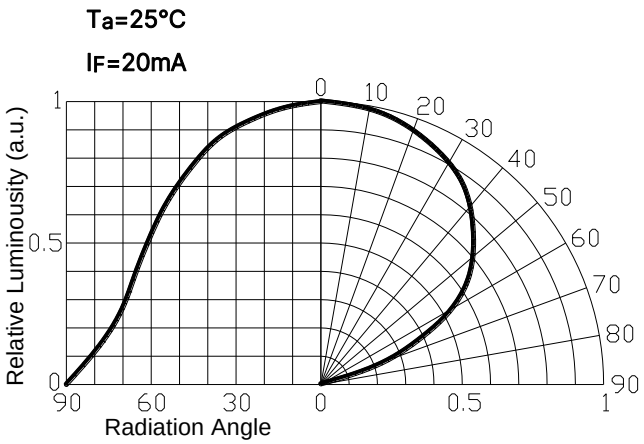
Relative Luminous Intensity vs. Forward Current



Relative Intensity vs. Wavelength

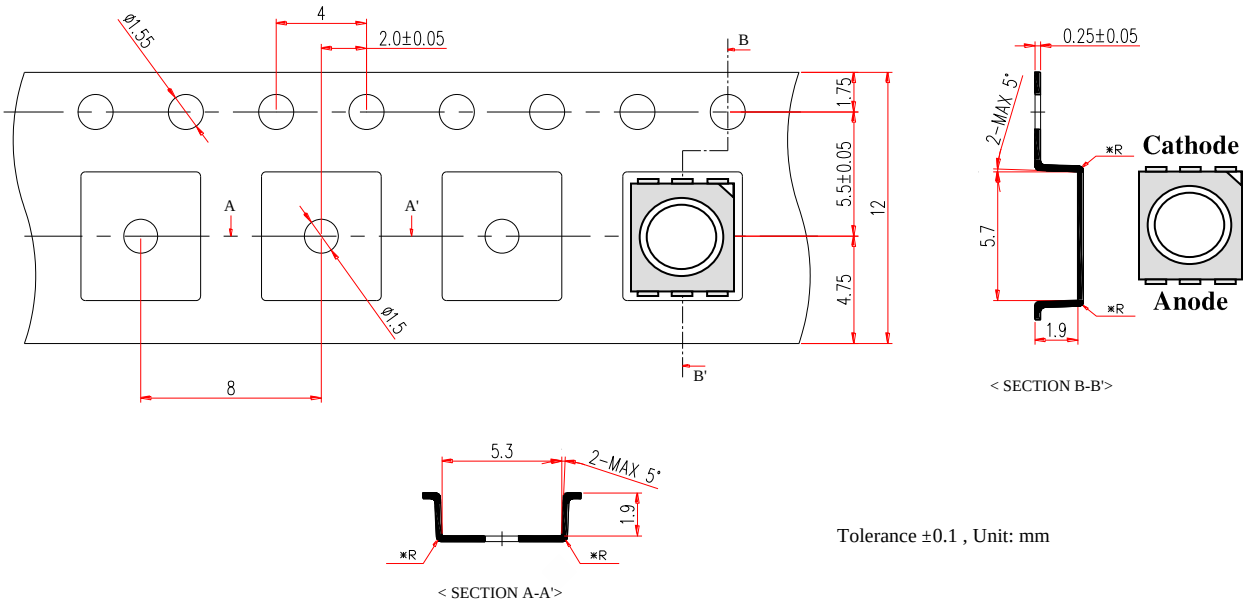


Radiation Diagram



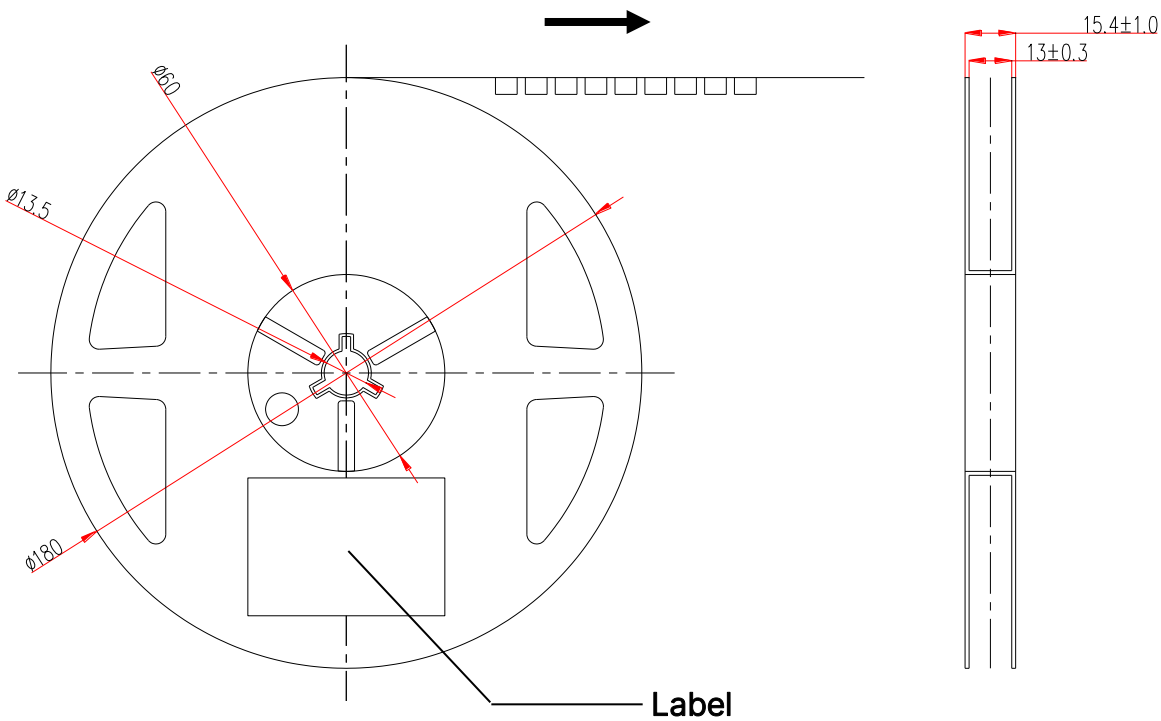
7. Dimension of Tape / Reel

7.1 Tape Dimension



Tolerance ±0.1 , Unit: mm

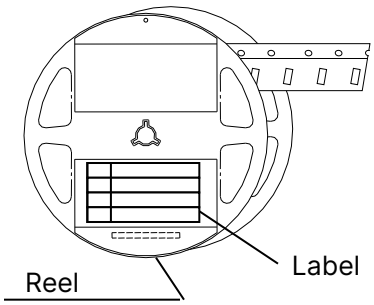
7.2 Reel Dimension



8. Packing Dimension

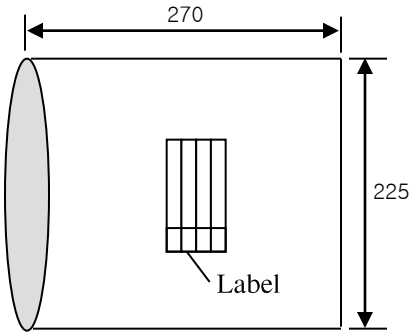
Unit :mm

Reel



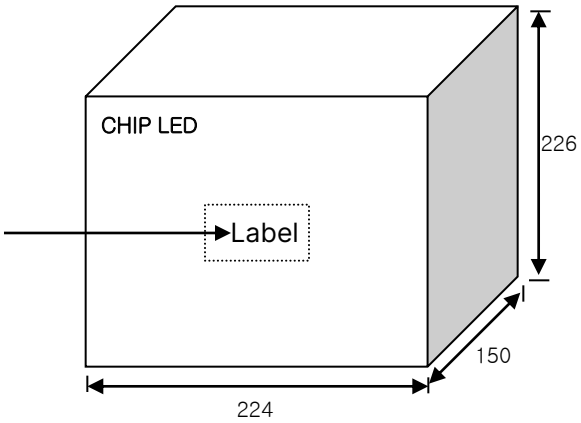
Bake: 60°C, 48hrs

Aluminum Shield Bag



Including Silica gel in a bag

Card board Box



Al Pack Label, Reel Label (70 × 37)

Lot :			IWS-L5056-RGB-K3	
	MIN	AVG	MAX	STD
V_F[volt] Iv[mcd] W_D[nm]				
Q'ty :			yyyy/mm/dd	

	Dimensions (mm)	Reel / Box	Q'ty / Box(pcs)
Reel	Φ180mm, 15mm Width	–	1,000 Max
Al Shield Bag	270x225	–	1,000 Max
Card board Box	224x150x226	9 Max	9,000 Max

9. Spec. Review History

Review Ver.	Date	Correction List	Etc.
Ver 0.1	2023.08.03	Established	