

## SPECIFICATION FOR APPROVAL

- ★ Commodity: 5050 SMD LED
- ★ Model No: 5050-RGBCW
- ★ Emission Color:RGB+Cool White
- ★ Lens Appearance: Water Clear
- ★ Quality & Safety Certification: RoHS

CUSTOMER APPROVED BY	DATE

APPROVED	DRAWER

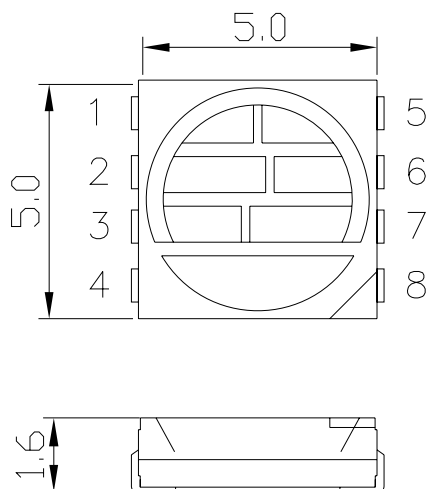
● **Features**

- Chip Material: InGaN.
- Low Power Consumption.
- High Efficiency.
- Low Current Requirement.

● **Applications**

- Backlight.
- Traffic Lights.
- Lights.
- LED Display.
- Other Electric Products.

● **Package Dimensions**



1/2/3/4.Anode. 5/6/7/8.Cathode.

Notes

- 1: All dimensions are in millimeters.
- 2: Tolerance is  $\pm 0.1$ mm unless otherwise specified.

● **Absolute Maximum Ratings (Ta = 25°C)**

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	250	mW
Forward Current	I <sub>F</sub>	R: 20, G: 20, B: 20, W: 20	mA
Peak Forward Current	I <sub>FP</sub>	R: 100, G: 100, B: 100, W: 100	mA
Reverse Voltage	V <sub>R</sub>	R: 5, G: 5, B: 5, W: 5	V
Electrostatic Discharge	Esd	2000~3000	V
Operating Temperature Range	T <sub>opr</sub>	-20~80	°C
Storage Temperature Range	T <sub>stg</sub>	-40~85	°C
Soldering Temperature	T <sub>sol</sub>	260 (for 5 seconds)	°C

● Typical Electrical-Optical Characteristics Curves (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	R	1.8	2.2	2.4	V
		G	2.8	3.2	3.4	V
		B	2.8	3.2	3.4	V
		W	2.8	3.2	3.4	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	μA
Dominant Wavelength	λ <sub>D</sub>	R	620	625	630	nm
		G	515	520	525	nm
		B	460	465	470	nm
Color Temperature	CCT	W	5500	6500	7500	K
Luminous Intensity	I <sub>v</sub>	R	600	700	800	mcd
		G	1000	1100	1200	mcd
		B	400	500	600	mcd
		W	2200	2400	2600	mcd
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> =20mA		120		deg

● Typical Electrical/Optical Characteristics Curves (R)

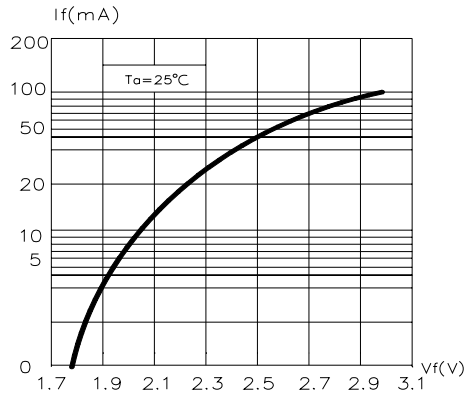


Fig.1 Forward Current vs. Forward Voltage

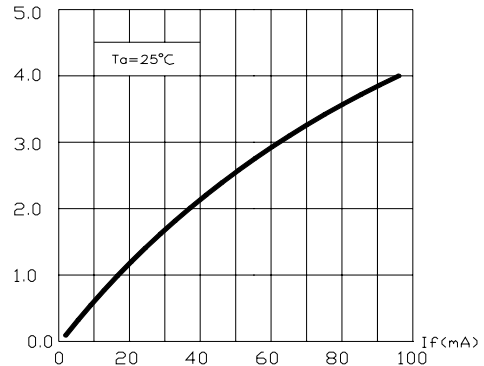


Fig.2 Relative Luminous Intensity vs. Forward Current

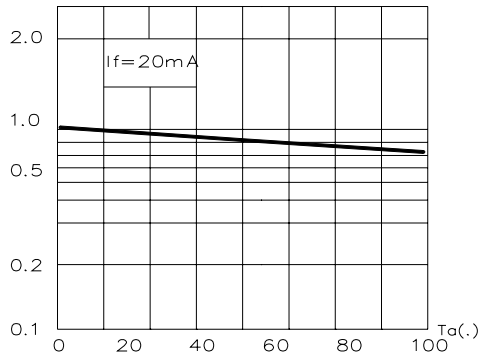


Fig.3 Relative Luminous Intensity vs. Ambient Temperature

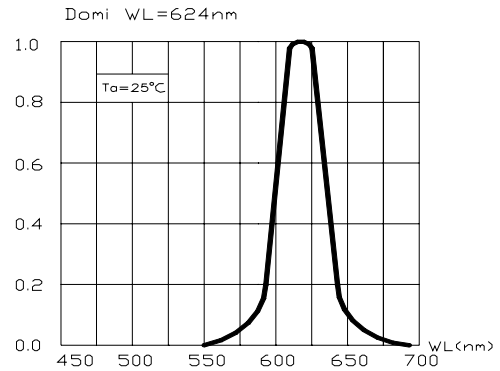


Fig.4 Relative Luminous Flux vs. Wavelength

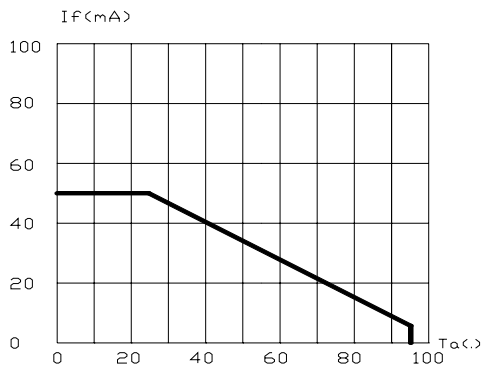


Fig.5 Maximum Forward Current vs. Ambient Temperature

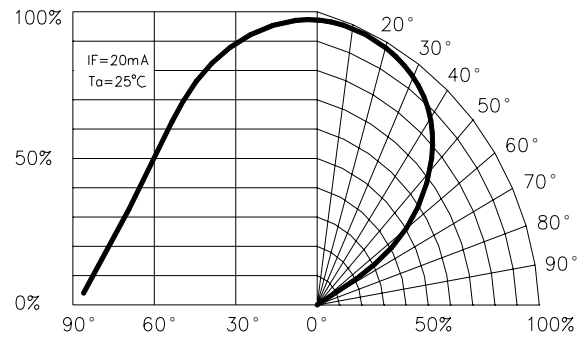


Fig.6 Relative Luminous Intensity vs. Radiation Angle

● Typical Electrical/Optical Characteristics Curves (G)

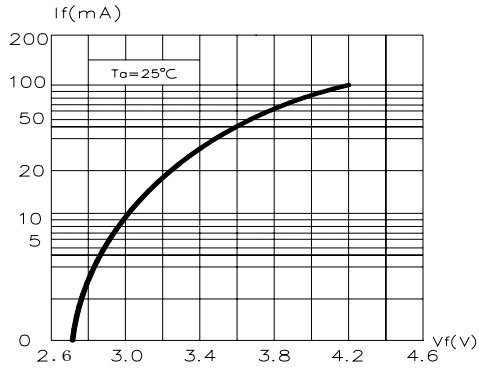


Fig.1 Forward Current vs. Forward Voltage

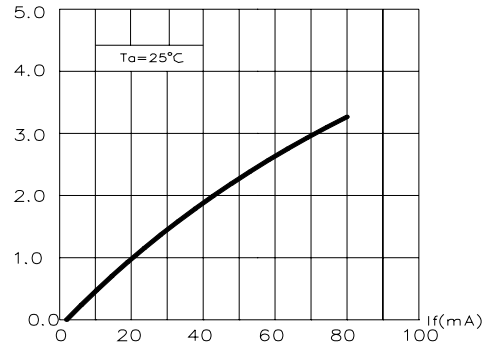


Fig.2 Relative Luminous Intensity vs. Forward Current

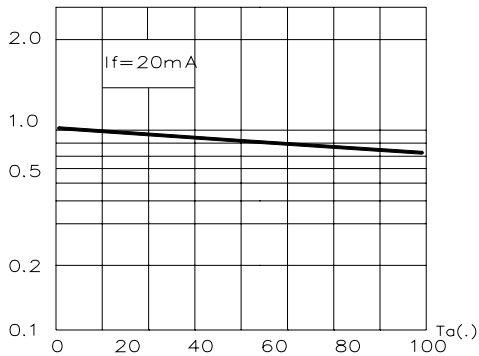


Fig.3 Relative Luminous Intensity vs. Ambient Temperature

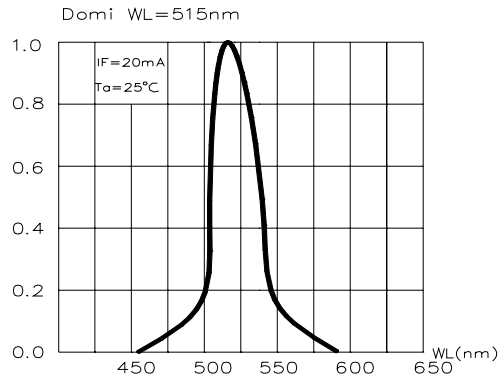


Fig.4 Relative Luminous Flux vs. Wavelength

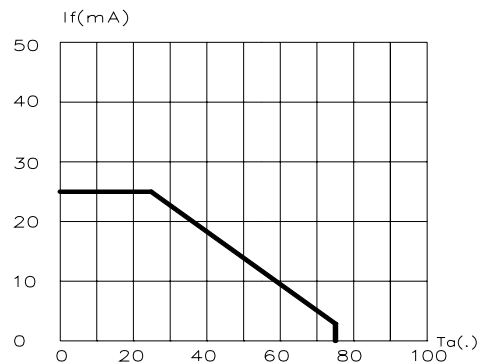


Fig.5 Maximum Forward Current vs. Ambient Temperature

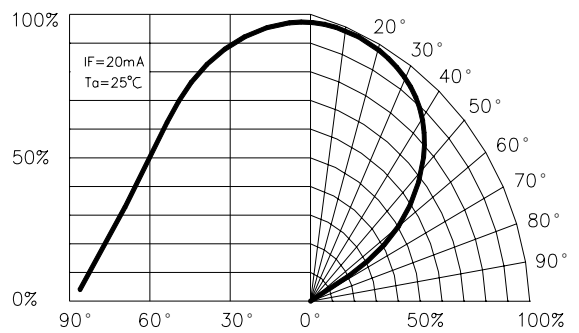


Fig.6 Relative Luminous Intensity vs. Radiation Angle

● Typical Electrical/Optical Characteristics Curves (B)

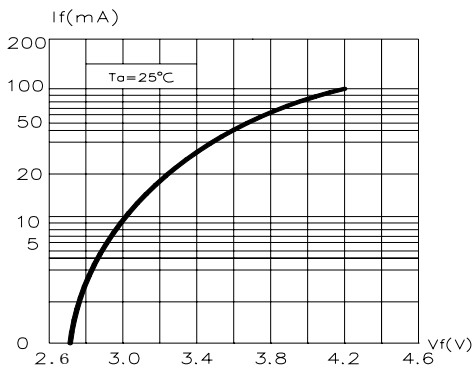


Fig.1 Forward Current vs. Forward Voltage

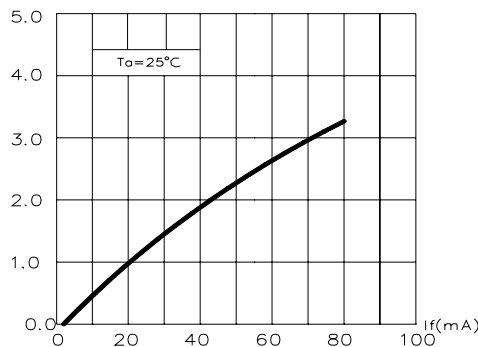


Fig.2 Relative Luminous Intensity vs. Forward Current

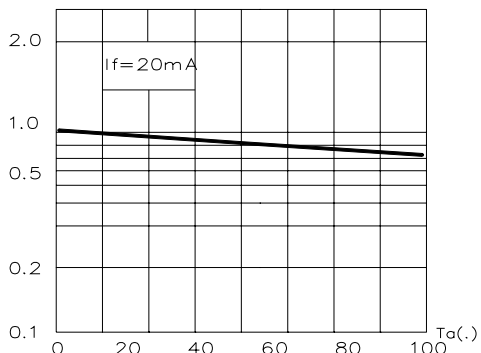


Fig.3 Relative Luminous Intensity vs. Ambient Temperature

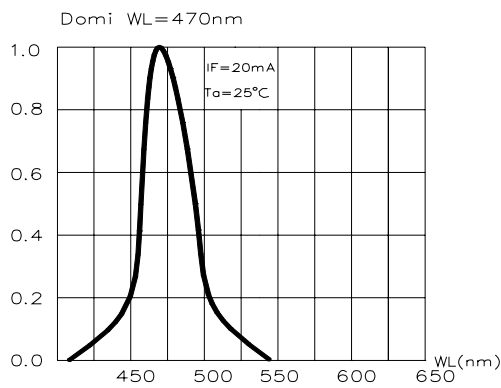


Fig.4 Relative Luminous Flux vs. Wavelength

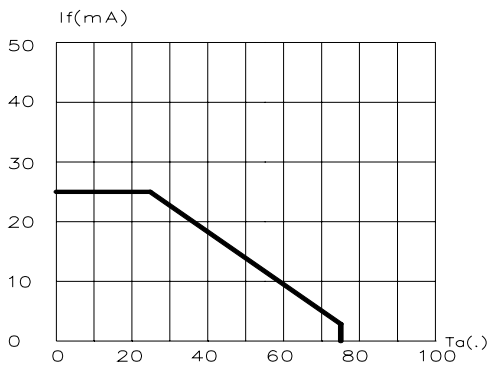


Fig.5 Maximum Forward Current vs. Ambient Temperature

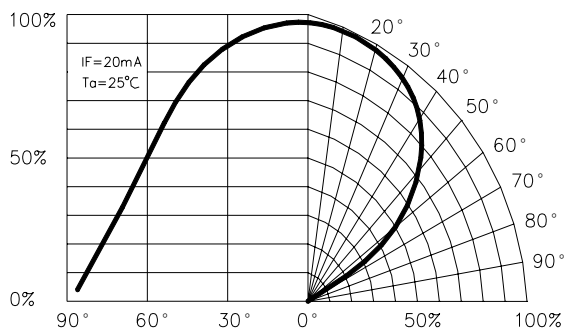


Fig.6 Relative Luminous Intensity vs. Radiation Angle

● Typical Electrical/Optical Characteristics Curves (W)

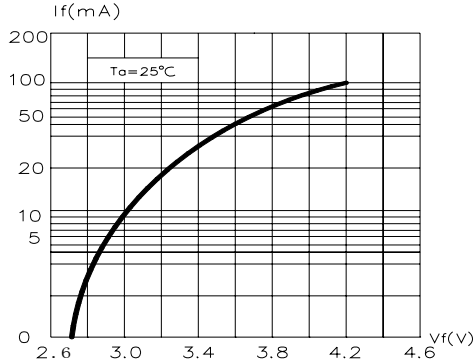


Fig.1 Forward Current vs. Forward Voltage

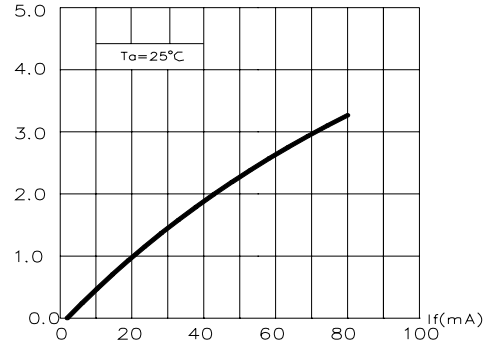


Fig.2 Relative Luminous Intensity vs. Forward Current

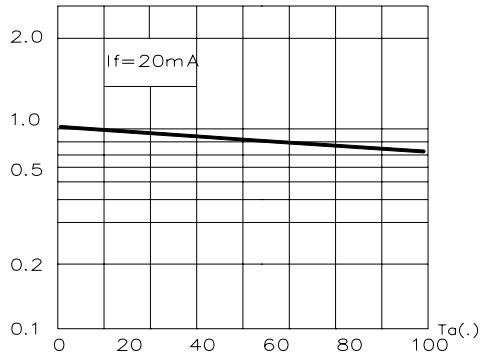


Fig.3 Relative Luminous Intensity vs. Ambient Temperature

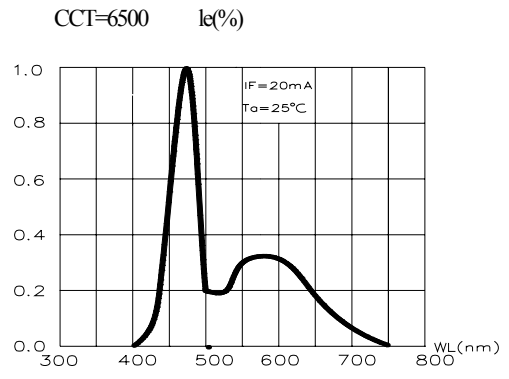


Fig.4 Intensity vs. Wavelength.

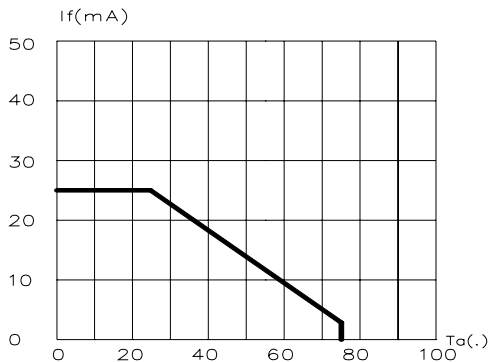


Fig.5 Maximum Forward Current vs. Ambient Temperature

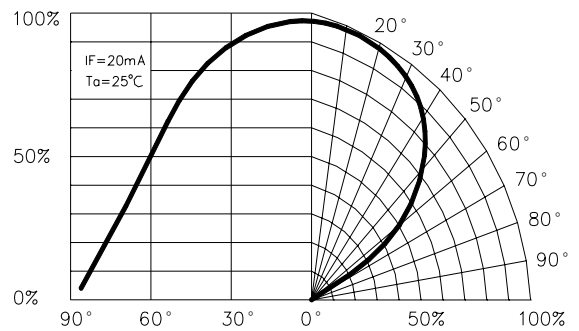
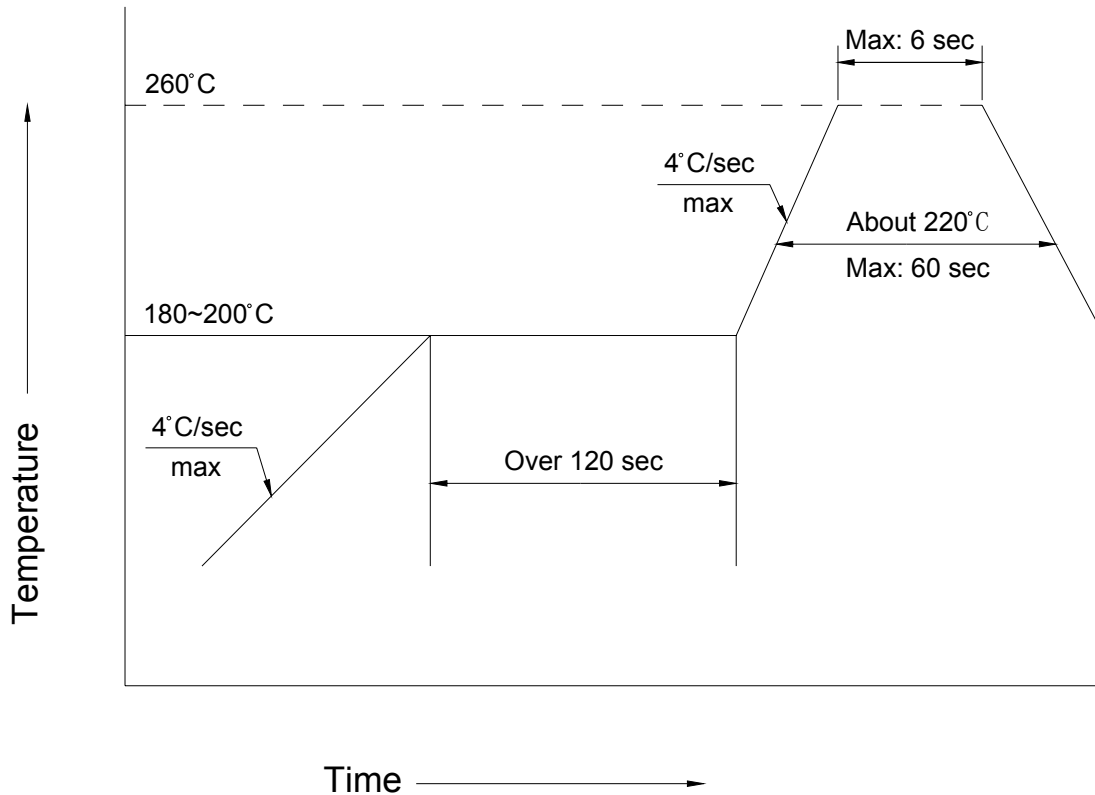


Fig.6 Relative Luminous Intensity vs. Radiation Angle

## ● SMT Reflow Soldering Instructions



- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.

## ● Soldering Iron

- When hand soldering, the temperature of the iron must be less than 300°C for 3 seconds.
- The hand solder should be done only one times.

## ● Repairing

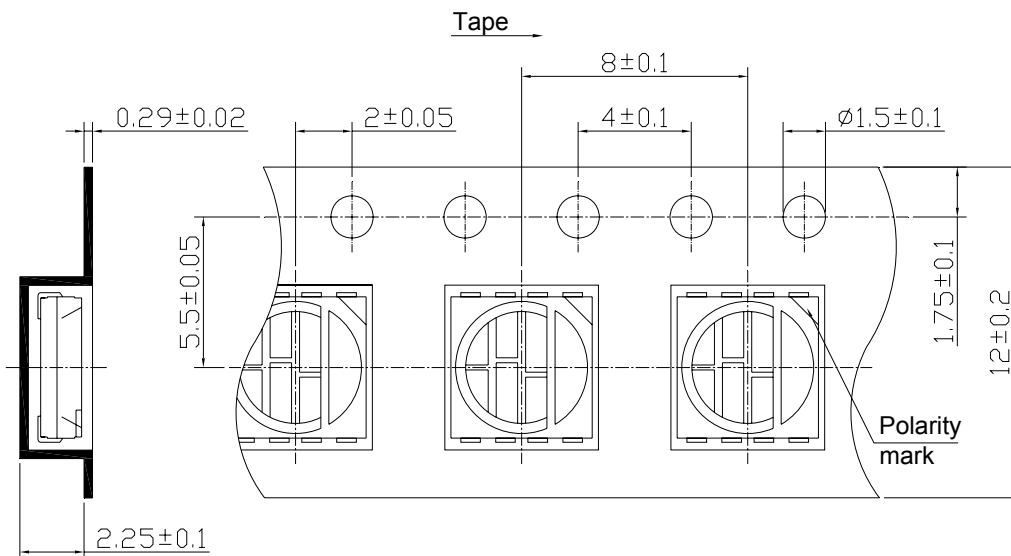
- Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double head soldering iron should be used. It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.

## ● Cautions

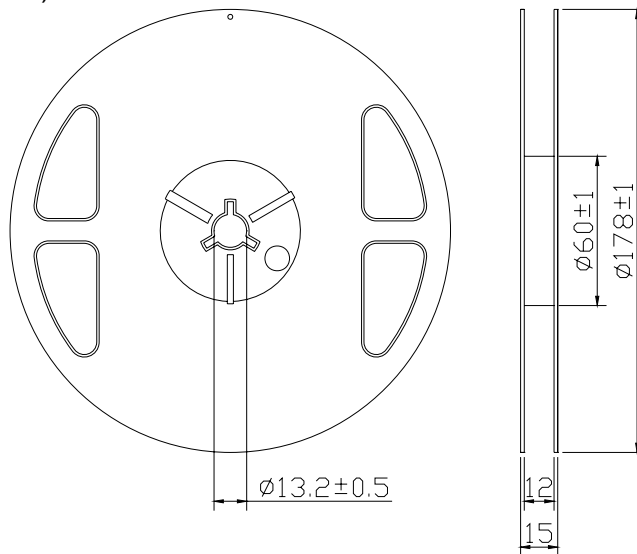
- The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.



● **Tape Specifications** (Units: mm)



● **Reel Dimensions** (Units: mm)



● **Moisture Resistant Packaging**

