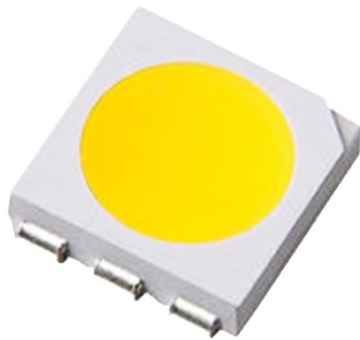


## SMD 5050 0.2W Series Data Sheet

### SOL-5050X020-XX



**SOL-5050W020-XX**

**Warm White**

**SOL-5050N020-XX**

**Nature White**

**SOL-5050C020-XX**

**Cool White**

**SOL-5050R020-XX**

**Red**

**SOL-5050Y020-XX**

**Yellow**

**SOL-5050G020-XX**

**Green**

**SOL-5050B020-XX**

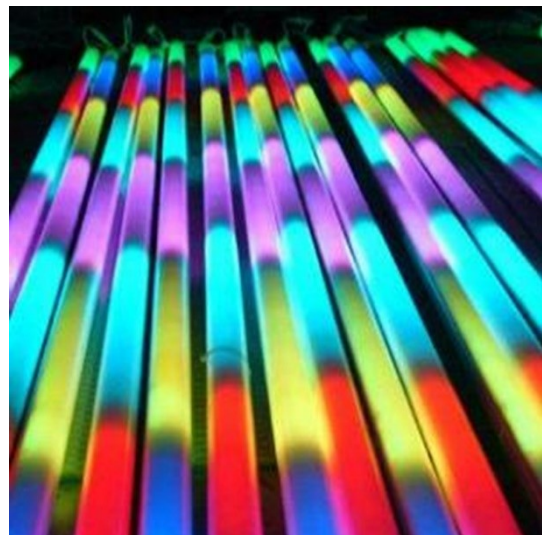
**Blue**

## ➤ Features:

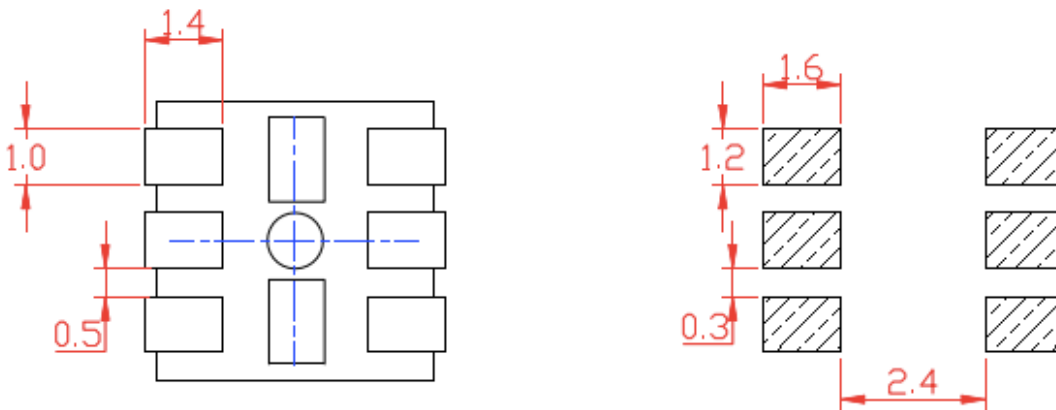
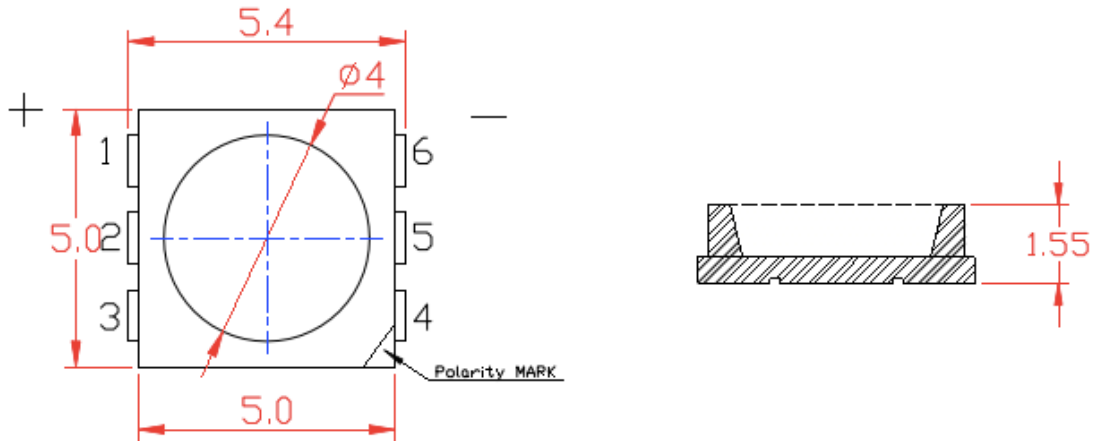
- Super high efficiency
- High reliability performance
- Viewing angle 120°
- Suitable for all SMT assembly and solder process
- Complied with RoHS directive

## ➤ Application:

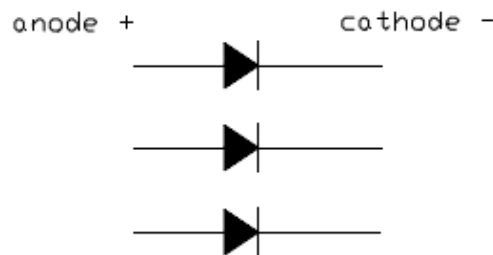
- Indoor lighting
- Outdoor lighting
- Entertainment lighting
- Commercial lighting



## ➤ Outline Dimensions:



### Soldering pads reference



## Note:

- Tolerance is .0.1mm

## ➤ Flux Characteristics, T<sub>j</sub>=25°C:

Part Number	CCT (K)or Wavelength(nm)		LuminousFlux@60mA (Lm )(MCD)		Viewing Angle (degrees) 2 θ <sub>1/2</sub>
	Min.	Max.	Min.	Max.	
SOL-5050W020-XX	2700K	3500K	22LM	24LM	120
SOL-5050N020-XX	3500K	4500K	22LM	26LM	120
SOL-5050C020-XX	5000K	10000K	22LM	26LM	120
SOL-5050R020-XX	620nm	630nm	1800MCD	2200MCD	120
SOL-5050Y020-XX	585nm	595nm	1500MCD	2000MCD	120
SOL-5050G020-XX	515nm	530nm	5000MCD	5500MCD	120
SOL-5050B020-XX	455nm	475nm	1200MCD	1600MCD	120

### Note:

- SOL maintains a tolerance of ±1nm for dominant wavelength measurements.
- SOL maintains a tolerance of ±<sup>[SEP]</sup>5% for CCT measurements.
- SOL maintains a tolerance of ± 5% on flux and power measurements.<sup>[SEP]</sup>

## ➤ Electrical Characteristics, T<sub>j</sub>=25°C:

Part Number	Forward Voltage V <sub>F</sub> (V) @60mA		
	Min.	Typ.	Max.
SOL-5050W020-XX	2.8	3.0	3.5
SOL-5050N020-XX	2.8	3.0	3.5
SOL-5050C020-XX	2.8	3.0	3.5
SOL-5050R020-XX	1.8	2.0	2.4
SOL-5050Y020-XX	1.8	2.0	2.4
SOL-5050G020-XX	2.8	3.0	3.5
SOL-5050B020-XX	2.8	3.0	3.5

Note:

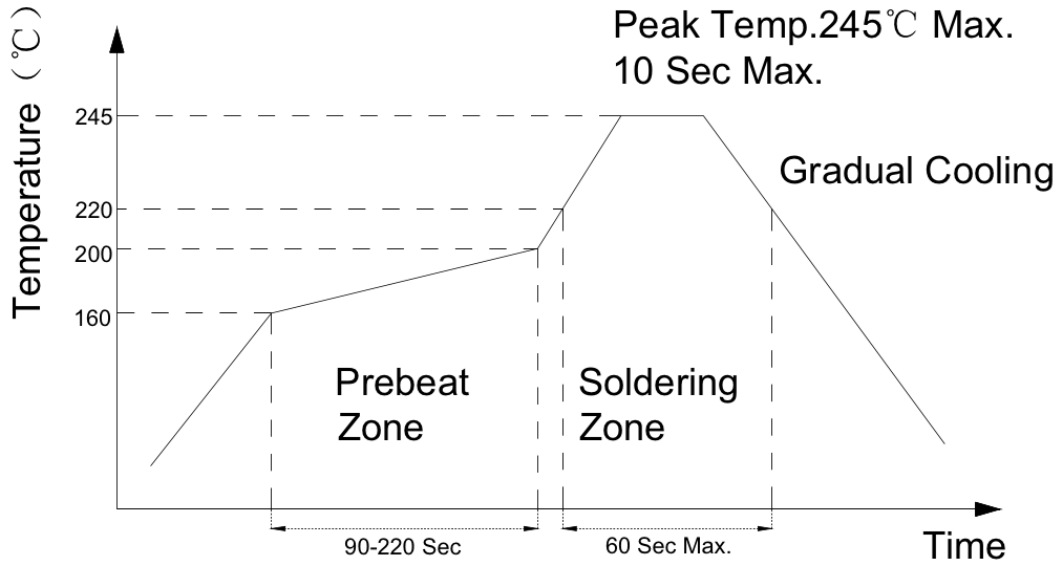
- SOL maintains a tolerance of ±0.1v for Voltage measurements.

## ➤ Absolute Maximum Ratings:

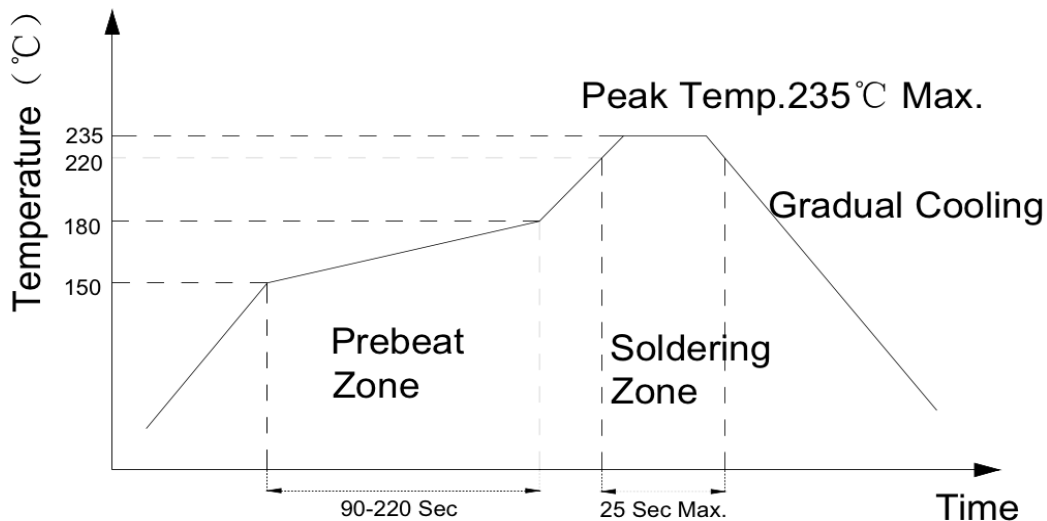
Parameter	Symbol	Test Condition	Value		Unit
			Min.	Max.	
Power Dissipation	P <sub>d</sub>			200	mW
Reverse Voltage	V <sub>R</sub>	I <sub>R</sub> = 30μA	5		V
Pulse Current	I <sub>Fp</sub>	Duty=0.1,1kHz		100	mA
Forward Current	I <sub>Fm</sub>			60	mA
Operating Temperature	T <sub>opr</sub>		-40	+85	°C
Storage Temperature	T <sub>str</sub>		-40	+100	°C

## ➤ IR reflow soldering Profile :

Lead Free solder



Lead solder



## NOTES:

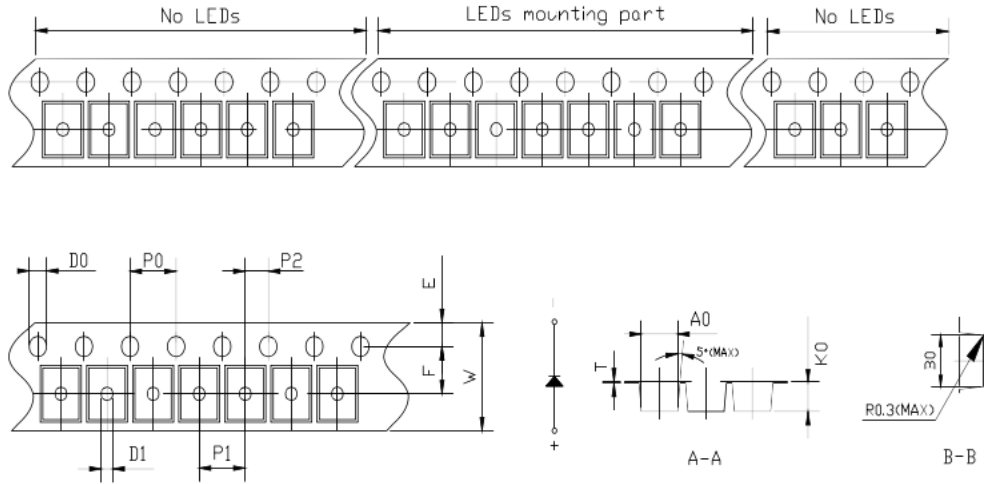
- We recommend the reflow temperature  $240^{\circ}\text{C} \pm 5^{\circ}\text{C}$ .
- Don't cause stress to the silicone resin while it is exposed to high temperature.
- Number of reflow process shall be 1 time.

## ➤ Test items and results of reliability:

Test Item	Test Conditions	Duration/ Cycle	Number of damage	Reference
Temperature	-40° C 30min ↑↓25° C(2min) 100° C 30min	100 times	0/100	JEITA ED-4701300 303
Thermal Shock	40° C 30min ↑↓ 5sec 100° C 30min	100 times	0/100	JEITA ED-4701200 303
High Temperature Storage	Ta=100° C	1000 hours	0/100	EIAJED-4701200 201
Humidity Heat Storage	Ta=85° C RH=85%	1000 hours	0/100	EIAJED-4701100 103
Low Temperature Storage	Ta=-40° C	1000 hours	0/100	EIAJED-4701200 202
Room Temperature Test	Ta=25° C IF=60mA	1000 hours	0/100	Tested with SOL standard
High Humidity Heat Test	60° C RH=90% IF=60mA	1000 hours	0/100	Tested with SOL standard
Low Temperature Test	Ta=-40° C IF=60mA	1000 hours	0/100	Tested with SOL standard
ESD(HBM)	-4KV at 1.5KΩ; 100pF	3 times	0/100	MIL-STD-883D

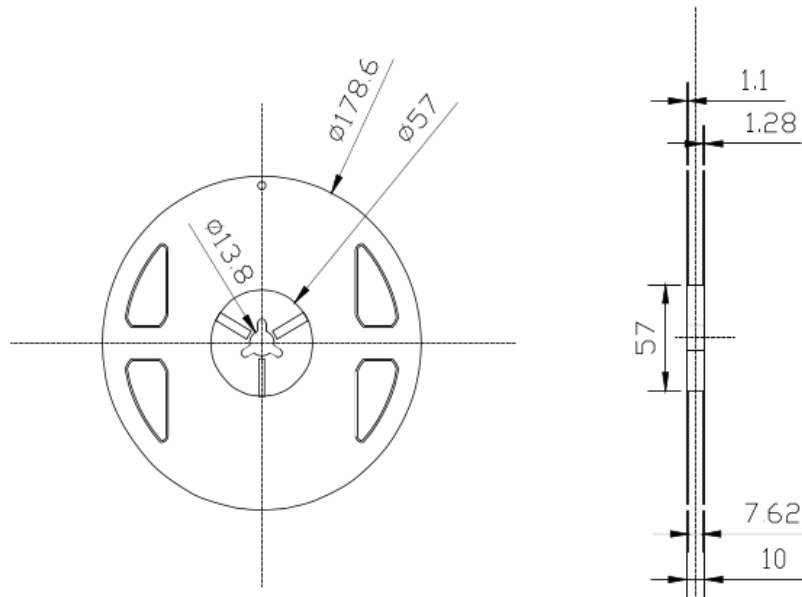
## ➤ Packaging:

### 1. Dimension of Tape (Unit: mm)



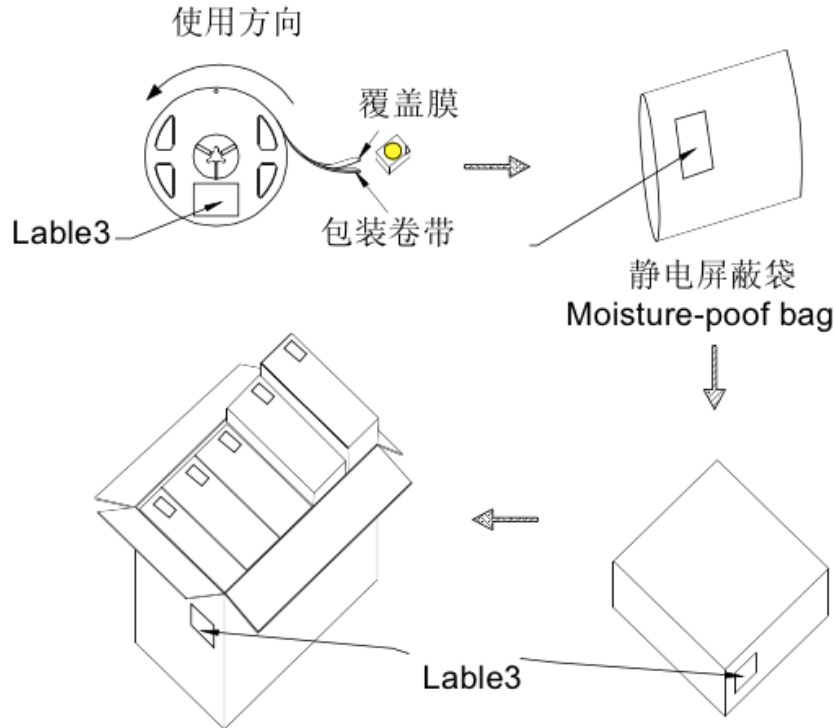
symbol	A0	B0	K0	P0	P1	P2	model	unit
spec	3.15±0.10	3.80±0.10	2.10±0.10	4.00±0.10	4.00±0.10	2.00±0.10		
symbol	W	T	E	F	D0	D1	2835	mm
spec	8.00±0.10	0.235±0.05	1.75±0.10	3.50±0.10	1.50 <sup>+0.10</sup> <sub>-0.00</sub>	1.00 <sup>+0.10</sup> <sub>0.00</sub>		

### 2. Dimension of Reel (Unit: mm)





### 3.Dimension of Package (Unit: mm)



每个外箱装5个内箱  
外箱尺寸=425\*245\*273mm  
Outside box  
Maximums for inside  
boxes

每盒5袋  
内箱尺寸：247\*230\*75  
Inside box Maximums seven

## Thank You!

