APPROVAL SHEET

Part No: BAT5050A-###-060mA

NOTE :

Green Part

MAKER			CUSTOMER	
SOLIDLITE				
R&D	QA	Sales	Checked	Approved
Sky				

Prepared	Checked	Approved
Rachel Lee	Sky Lin	Kenneth Wu

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TEL:886-3-5986248 FAX:886-3-5986247 http://www.solidlite.com

◆Features:

*Small package with high efficiency

*Low voltage operation, Instant light

*Long operation life

*Lead free product

*RoHS compliant

◆Application:

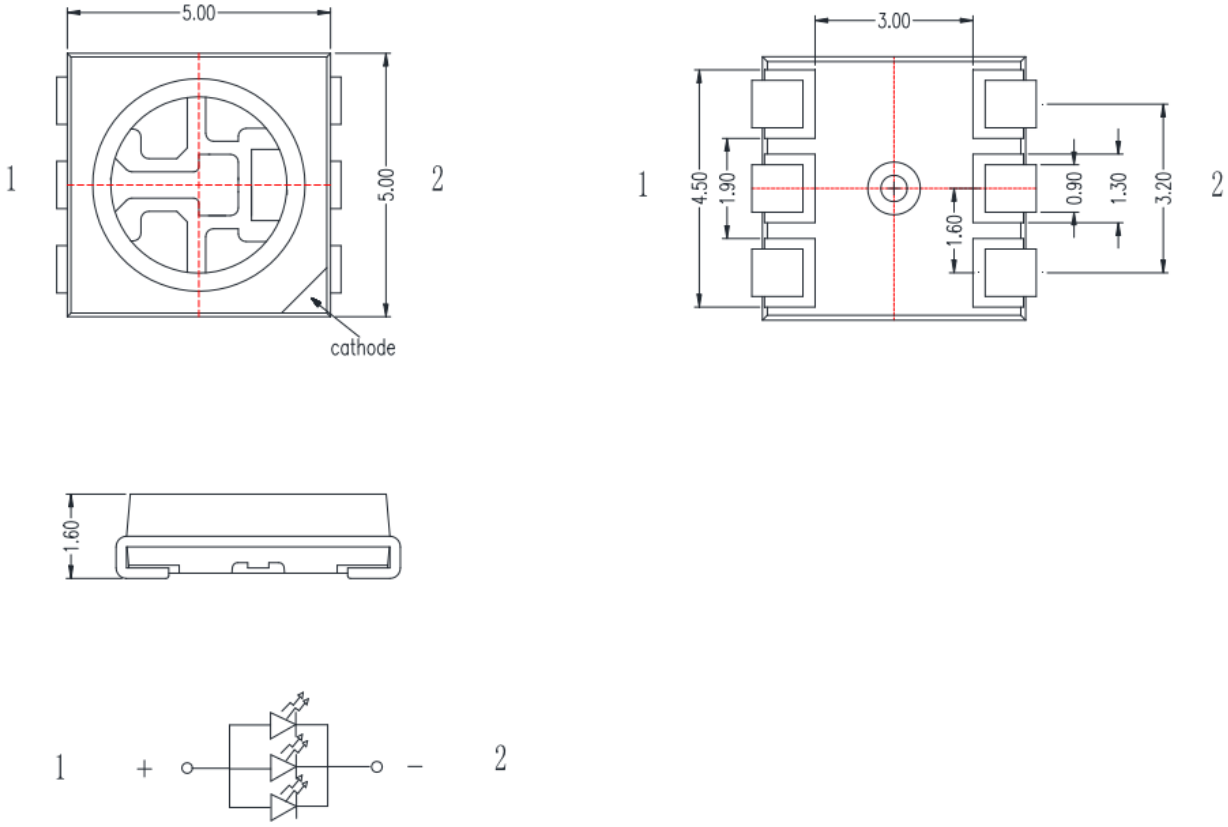
*Traditional lighting replacement

*Ordinary lighting

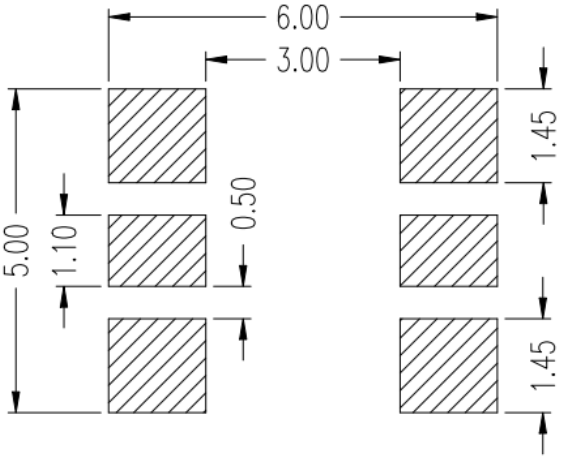
*Indoor & Outdoor sign board back light

*Architectural / Decorative Lighting

◆Package Dimensions



Soldering patterns



Notes:

1. All dimensions are in mm.
2. Tolerance is ±0.15mm unless otherwise noted.

◆Electro Optical Characteristics (TA=25℃)

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Forward Voltage	I_F=60mA	V_F	2.6	-	3.2	V
Reverse Current	V_R=-5V	I_R	-	-	10	μA
View Angle	I_F=60mA	2θ1/2	-	120	-	deg.
Electrostatic Discharge	HBM	ESD	-	-	2000	V
Color tolerance	I_F=60mA	SDCM	-	-	6	-

◆Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Forward Current	I_F	60	mA
Pulse Forward Current	I_{FP}	90	mA
Power Dissipation	P_O	200	mW
Reverse Voltage	V_R	5	V
Operation Temperature	T_{opr}	-40 to +85	℃
Storage Temperature Range	T_{stg}	-40 to +85	℃
Junction Temperature	Tj	115	℃
Thermal Resistance	$R_θ$	50	℃/W
Soldering Temperature	Tsld	260℃ for 10sec	℃

Notes：

1. Frequency 10KHz, duty ratio ≤10%
2. The forward pulse current is the maximum current used by the chip at 25℃.

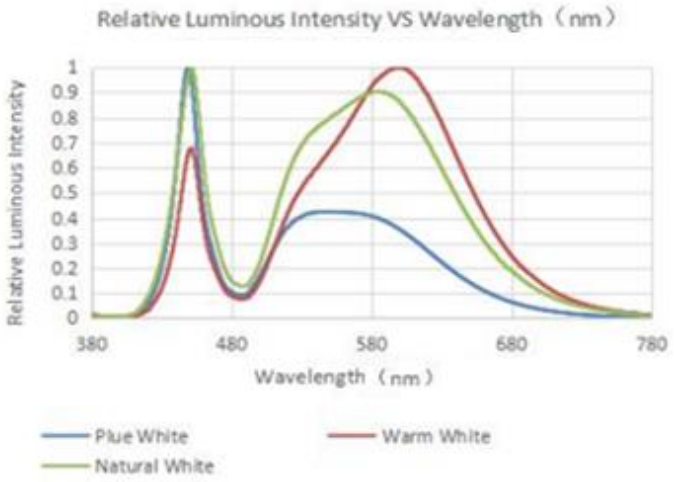
◆Mass Production List (I_F=60mA;Ta=25℃)

Product code.	Color Rendering index	CCT (K) Min.	CCT (K) Typ.	CCT (K) Max.	Φ (lm) Min.	Φ (lm) Max.
BAT5050A-EWW-060mA CCT:6500 (Code: A65)	70	---	6500	---	31	33
BAT5050A-BWW-060mA CCT:6500 (Code: A65)	80	---		---	29	31
BAT5050A-FWW-060mA CCT:6500 (Code: A65)	90	---		---	26	28
BAT5050A-EWW-060mA CCT:5700 (Code: A57)	70	---	5700	---	31	33
BAT5050A-BWW-060mA CCT:5700 (Code: A57)	80	---		---	29	31
BAT5050A-FWW-060mA CCT:5700 (Code: A57)	90	---		---	26	28
BAT5050A-EWW-060mA CCT:5000 (Code: A50)	70	---	5000	---	31	33
BAT5050A-BWW-060mA CCT:5000 (Code: A50)	80	---		---	29	31
BAT5050A-FWW-060mA CCT:5000 (Code: A50)	90	---		---	26	28
BAT5050A-EWN-060mA CCT:4500 (Code: A45)	70	---	4500	---	31	33
BAT5050A-BWN-060mA CCT:4500 (Code: A45)	80	---		---	29	31
BAT5050A-FWN-060mA CCT:4500 (Code: A45)	90	---		---	26	28
BAT5050A-EWN-060mA CCT:4000 (Code: A40)	70	---	4000	---	31	33
BAT5050A-BWN-060mA CCT:4000 (Code: A40)	80	---		---	29	31
BAT5050A-FWN-060mA CCT:4000 (Code: A40)	90	---		---	26	28
BAT5050A-EWR-060mA CCT:3500 (Code: A35)	70	---	3500	---	29	31
BAT5050A-BWR-060mA CCT:3500 (Code: A35)	80	---		---	27	29
BAT5050A-FWR-060mA CCT:3500 (Code: A35)	90	---		---	24	26
BAT5050A-EWR-060mA CCT:3000 (Code: A30)	70	---	3000	---	29	31
BAT5050A-BWR-060mA CCT:3000 (Code: A30)	80	---		---	27	29
BAT5050A-FWR-060mA CCT:3000 (Code: A30)	90	---		---	24	26
BAT5050A-EWR-060mA CCT:2700 (Code: A27)	70	---	2700	---	28	30
BAT5050A-BWR-060mA CCT:2700 (Code: A27)	80	---		---	26	28
BAT5050A-FWR-060mA CCT:2700 (Code: A27)	90	---		---	22	24

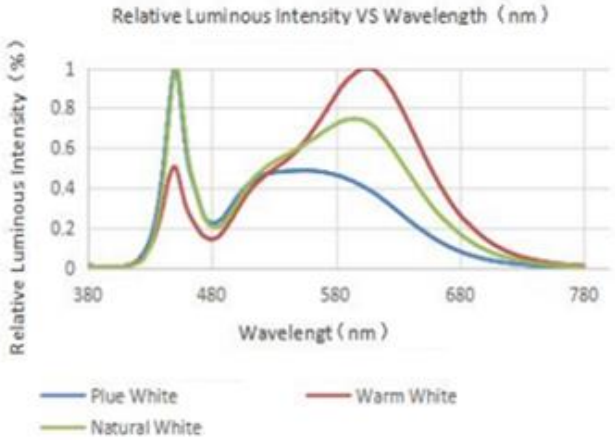
Notes: The test error

V_F: ±2% XY : ±0.003 Φ : ± 10% Ra：± 1

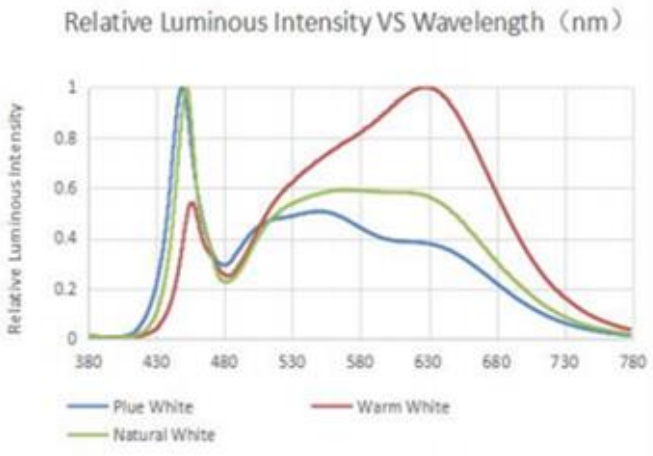
◆Spectral Distribution Ra70



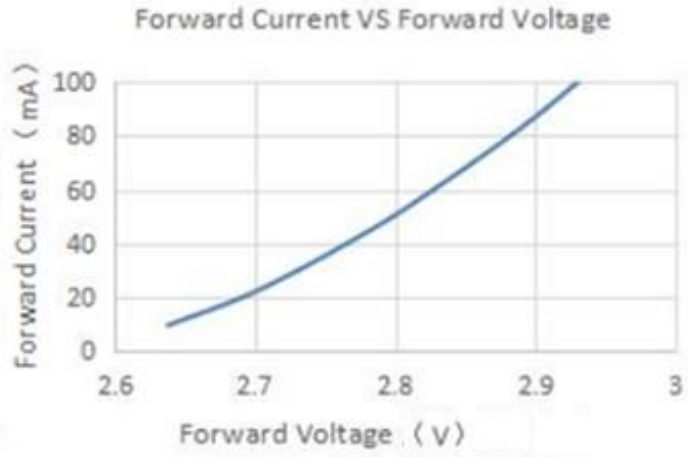
◆Spectral Distribution Ra80



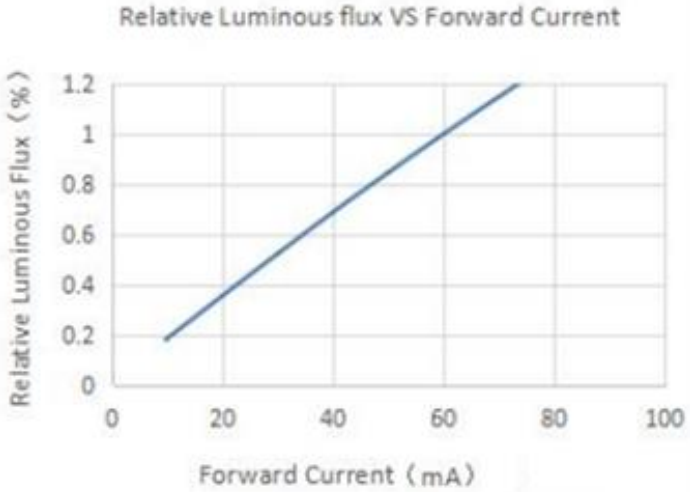
◆Spectral Distribution Ra90



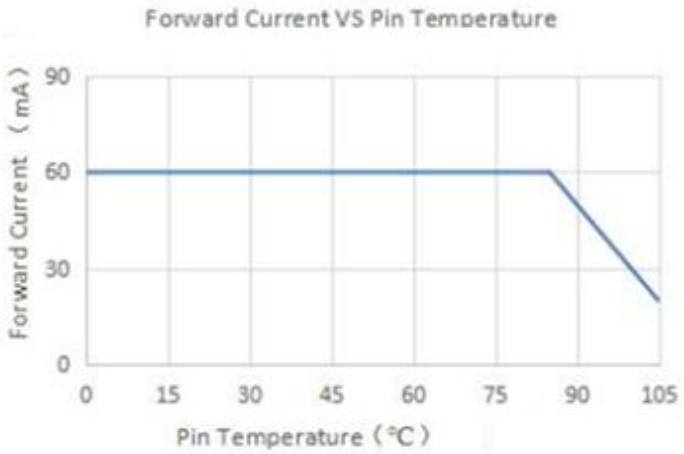
◆Forward Voltage vs. Forward Current



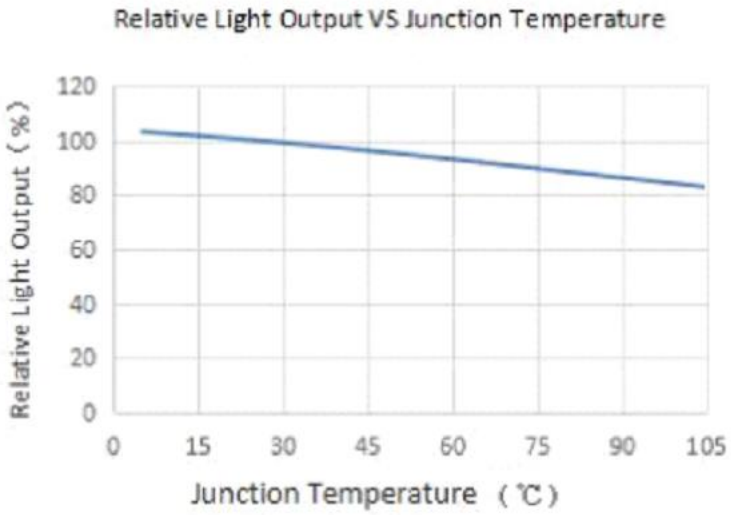
◆Relative Luminous vs Forward Current



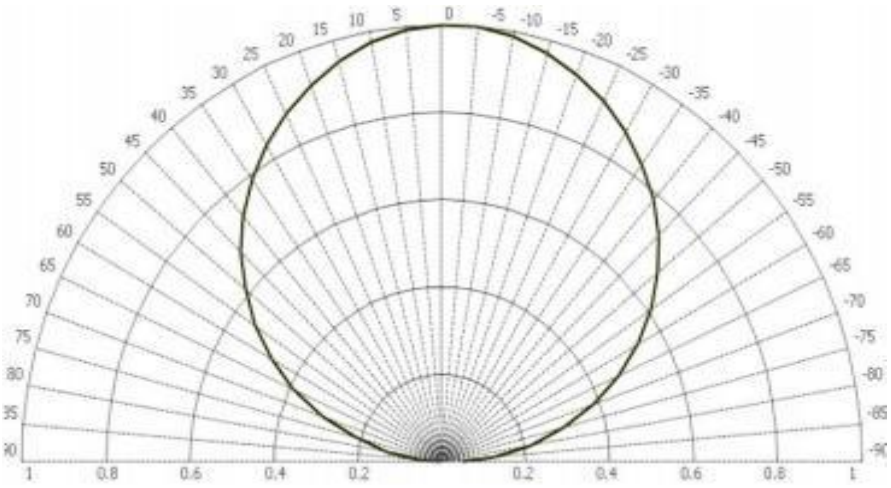
◆Ambient Temperature vs Forward Current



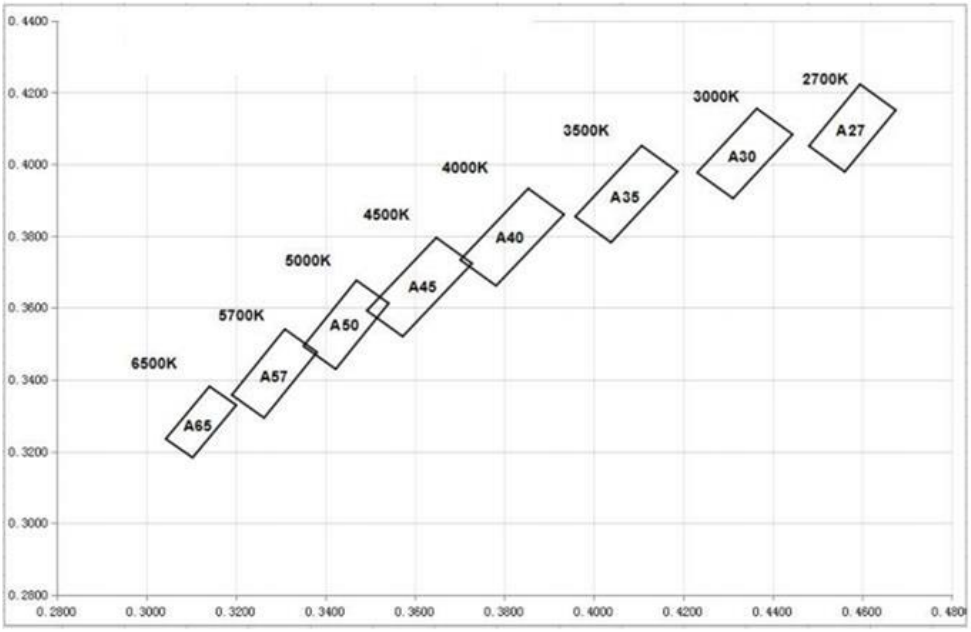
◆Relative Flux vs Junction Temperature



◆View Angle Distribution



◆CIE Chromaticity Diagram:(I_F=60mA;TA=25℃)



◆Color Rank:(I_F=60mA;TA=25℃)

CODE	CCT	X	Y
A27	2700K	0.4595	0.4223
		0.4481	0.4051
		0.4561	0.3979
		0.4675	0.4151

CODE	CCT	X	Y
A30	3000K	0.4365	0.4155
		0.4231	0.3977
		0.4311	0.3905
		0.4445	0.4083

CODE	CCT	X	Y
A35	3500K	0.4107	0.4052
		0.3959	0.3854
		0.4039	0.3782
		0.4187	0.3980

CODE	CCT	X	Y
A40	4000K	0.3854	0.3932
		0.3702	0.3734
		0.3782	0.3662
		0.3934	0.3860

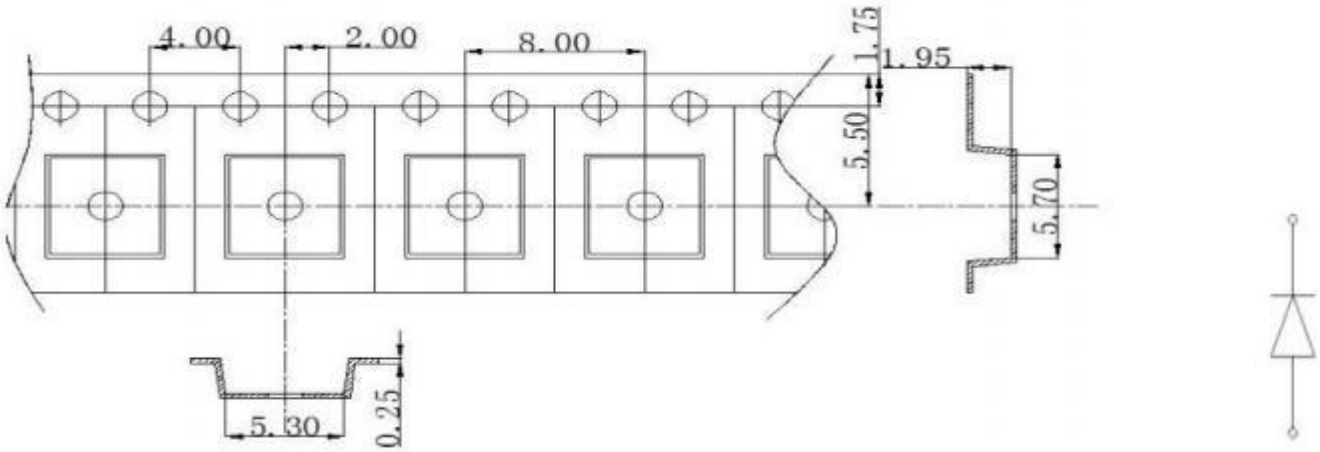
CODE	CCT	X	Y
A45	4500K	0.3649	0.3796
		0.3493	0.3592
		0.3573	0.3520
		0.3729	0.3724

CODE	CCT	X	Y
A50	5000K	0.3470	0.3677
		0.3352	0.3493
		0.3424	0.3429
		0.3542	0.3613

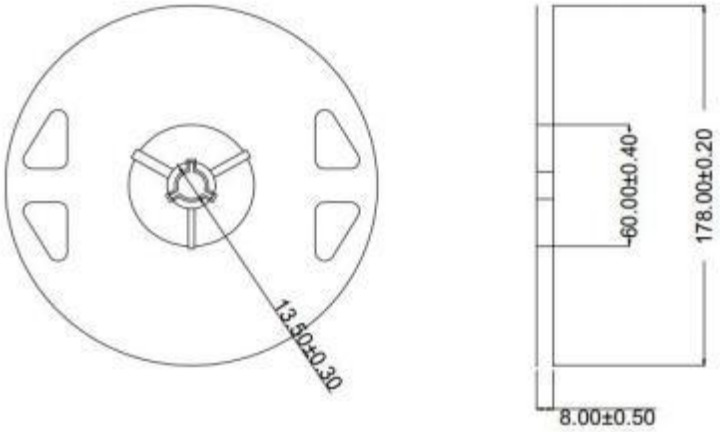
CODE	CCT	X	Y
A57	5700K	0.3310	0.3541
		0.3192	0.3357
		0.3264	0.3293
		0.3382	0.3477

CODE	CCT	X	Y
A65	6500K	0.3142	0.3381
		0.3044	0.3235
		0.3104	0.3183
		0.3202	0.3329

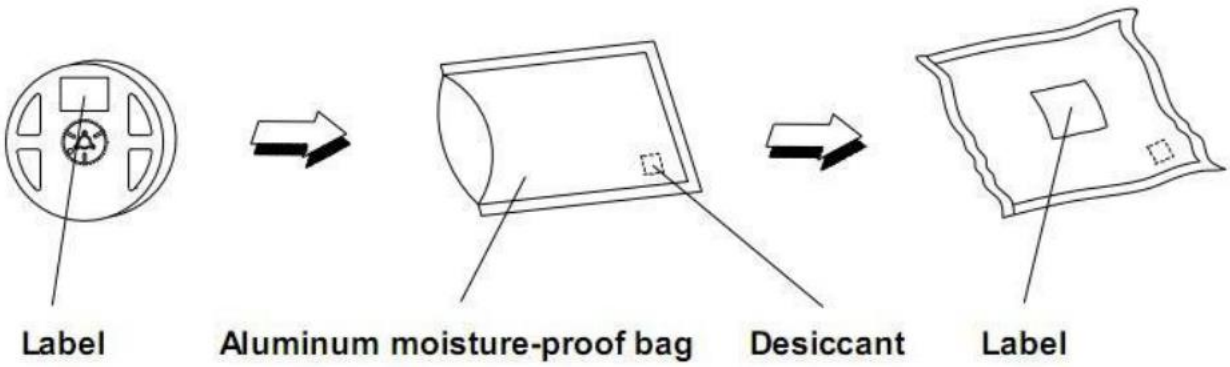
◆Packaging Specifications



Dimensions of Reel



Packaging specifications



- 5000pcs/reel

◆Label

Solidlite Corp.

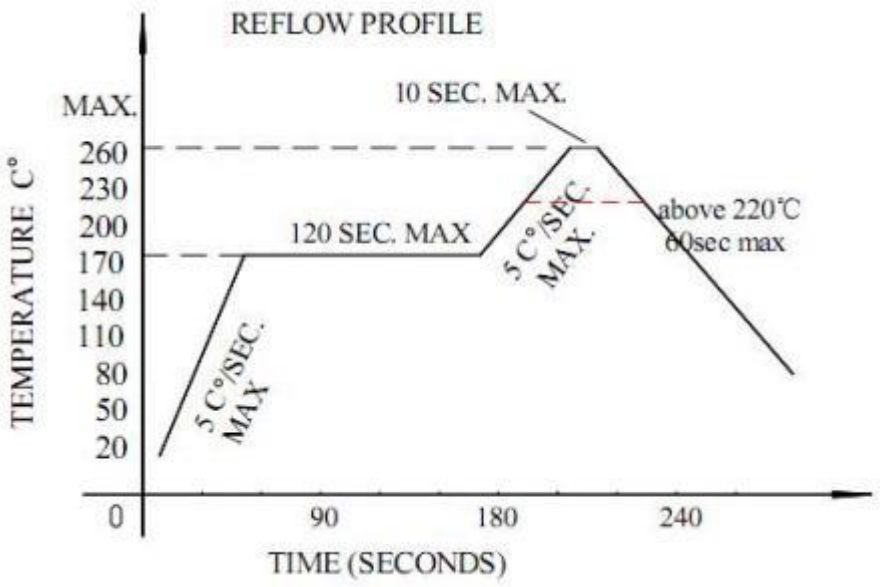
P/N :_____.

Lot :_____.

Date:_____. Rank:_____.

Q'ty :_____. QA :_____.

◆SMT Reflow Soldering Instructions SMT

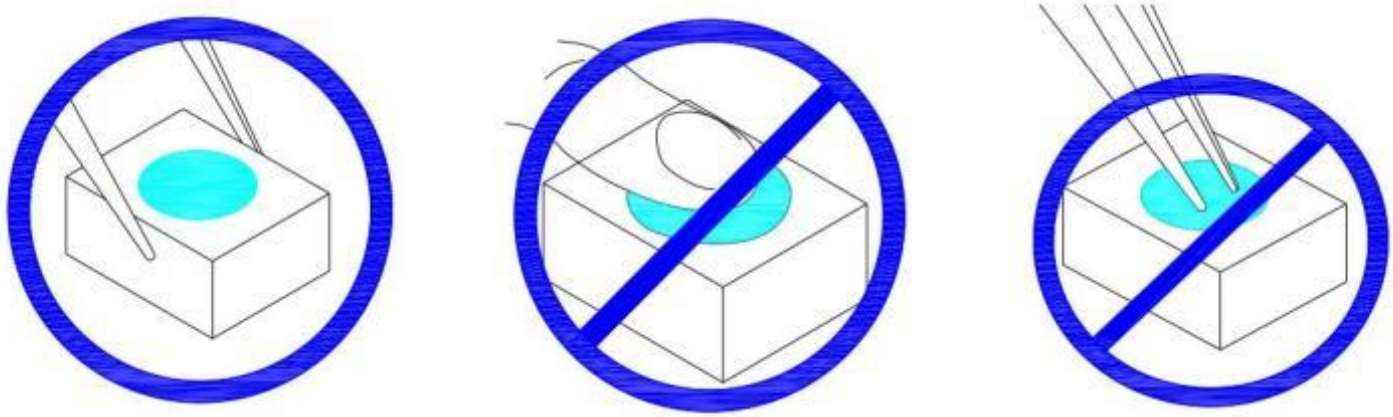


1. Reflow soldering should not be done more than two times
2. When soldering, do not put stress on the LEDs during heating.

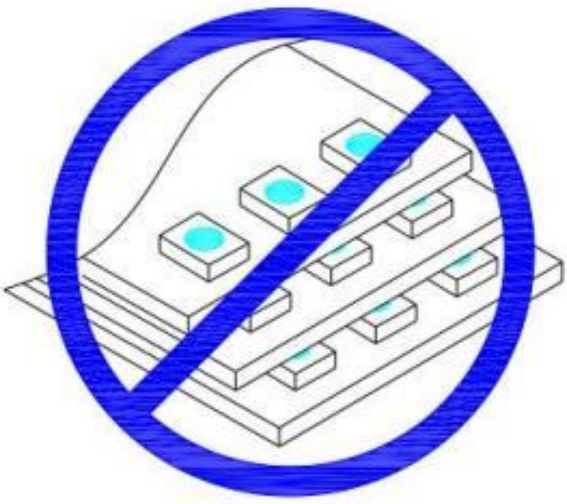
◆CARTIONS

1.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 using the picking up nozzle, the pressure on the silicone resin should be proper.

2. Comparing to epoxy encapsulant that is hard and brittle, silicone is soft er and flexible. Although its character is tics significantly reduces thermal stress, it is more prone to damage by external mechanical force. As a result, special handling precautions must be observed during assembling using silicone.
Encapsulated LED products, Failure to comply might lead to damage and premature failure of the LED.
2.1 Handle the component along the side surface by using force or appropriate tools; do not directly to Handle the silicone lens surface, it may damage the internal circuitry.



2.2 Do not stack to get her assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



3. Material confirmation. Whether the LED Bin specifications of the material are consistent , such as whether V_F, XY, bright ness and soon belong to the same specification, the same specification should be used together, if not the same specification LED is applied to the same object, it should be evaluated first, (if different V_F or XY cast together may produce difference in bright ness or color).

4.Packaging and storage

4.1 Before opening packaging, avoid moisture entry into LED. SMD series LED is suggested to be stored in a drying cabinet with built-in desiccant. The storage environment is 5-30 centigrade, no more than 50% humidity. If storage time is over 3 months, LED needs to be dehumidified (65 ˚C degrees centigrade for more than / 24 hours).

4.2 Open the precautions after packing. LED is a surface mount. When the LED is welded, the internal separation of LED may occur. The luminescence efficiency is affected and the luminance decreases or the color variation. The following are the matters to be paid attention to:

A. Before opening the package, please check the packaging bag for air leak age. If there is any air leakage, please return it to our company to re-bake the dehumidifying package before use.

B. After opening the package, welding should be completed as soon as possible (within 12 hours).

C. The remaining materials aresealed or placed in an environment of 5~40℃ Canv dno more than 30% humidity.

D. If the open package is more than 24 hours (< 168 hours) or the humidity card is changed from Blue to pink, LED needs to be dehumidified again (65 ˚C degrees centigrade for more than / 24 hours). If the package is opened for more than 168 hours, it is necessary to dismantle the tape and remove the moisture at 150℃ / 2 hours.

4.3 LED electrode and bracket are made of silver plated copper alloy. The silver layer on the surface Is easy to be affected by corrosive gases. Please avoid contacting with corrosive environment to cause LED discoloration, so as to avoid the poor weld ability of LED and influence the photoelectric performance. Avoid sudden changes in temperature and humidity of the environment, especially under high humidity environment, easy to produce water vapor condensation.

5. Electrostatic protection. LED is a chip sensitive electronic component. Various measures should be taken to avoid static electricity, such as wearing an electrostatic bracelet or anti-static gloves during use. All devices, equipment and instruments should be well grounded.