Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Acrich
semiconductor eco lighting

SEOUL SEMICONDUCTOR

Specification

SAWW9H0A

Preliminary

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SAWW9H0A

SAWW9H0A

Features

- Super high flux output and high luminance
- Designed for high current operation
- SMT solderable
- Lead free product
- RoHS compliant
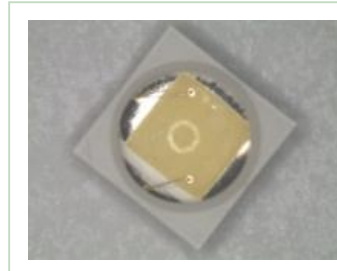
Description

The Acrich series of LEDs are designed for AC operation and high flux output applications.

Acrich LEDs are an environmentally friendly semiconductor lighting source that can be directly connected to an AC power source without any DC conversion required.

Acrich's thermal management performance exceeds other power LED solutions by incorporating state-of-the-art SMD design and use of specialized thermal emission material. Acrich is an ideal light source for general purpose illumination applications

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Applications

- LED bulb
- Spot light
- Architectural lighting
- Street light

* The appearance and specifications of the product can be changed for improvement without notice.

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Full code of SAWW9H0A

1. Part Number Form : $X_1X_2X_3X_4X_5X_6X_7X_8 - X_9X_{10}X_{11}$

X_1	Company	S	SSC
X_2	Package series	A	Acrich
X_3	Color	W	Warm White
X_4		W	
X_5	Series number	9	MJT4040
X_6	Voltage	H	
X_7	PCB type	0	Emitter
X_8	Revision No.	A	Rev0
X_9	Luminous flux	-	-
X_{10}	Color bin	-	-
X_{11}	Voltage	-	-

LF		Color bin	Voltage	
U3	109.0 ~ 118.5		A	60~63
V1	118.5 ~ 136.0	G0~G5 H0~H5	B	63~66
V2	136.0 ~ 154.0		C	66~68

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2. Sticker Diagram on Reel & Aluminum Vinyl Bag

Rank : $X_9 X_{10} X_{11}$

QUANTITY : 1000

Lot No : #########

SSC PART NUMBER : $X_1 X_2 X_3 \ X_4 X_5 X_6 X_7 X_8$

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Outline dimensions

4.00

3.65

1.50

2.20

[INNER CIRCUIT DIAGRAM]

Anode   Cathode

4.00

4.00

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4.00

0.40   0.60

1.57

4.00

1.57

2.88

3.24

2.27

2.37

0.50

Anode

Cathode
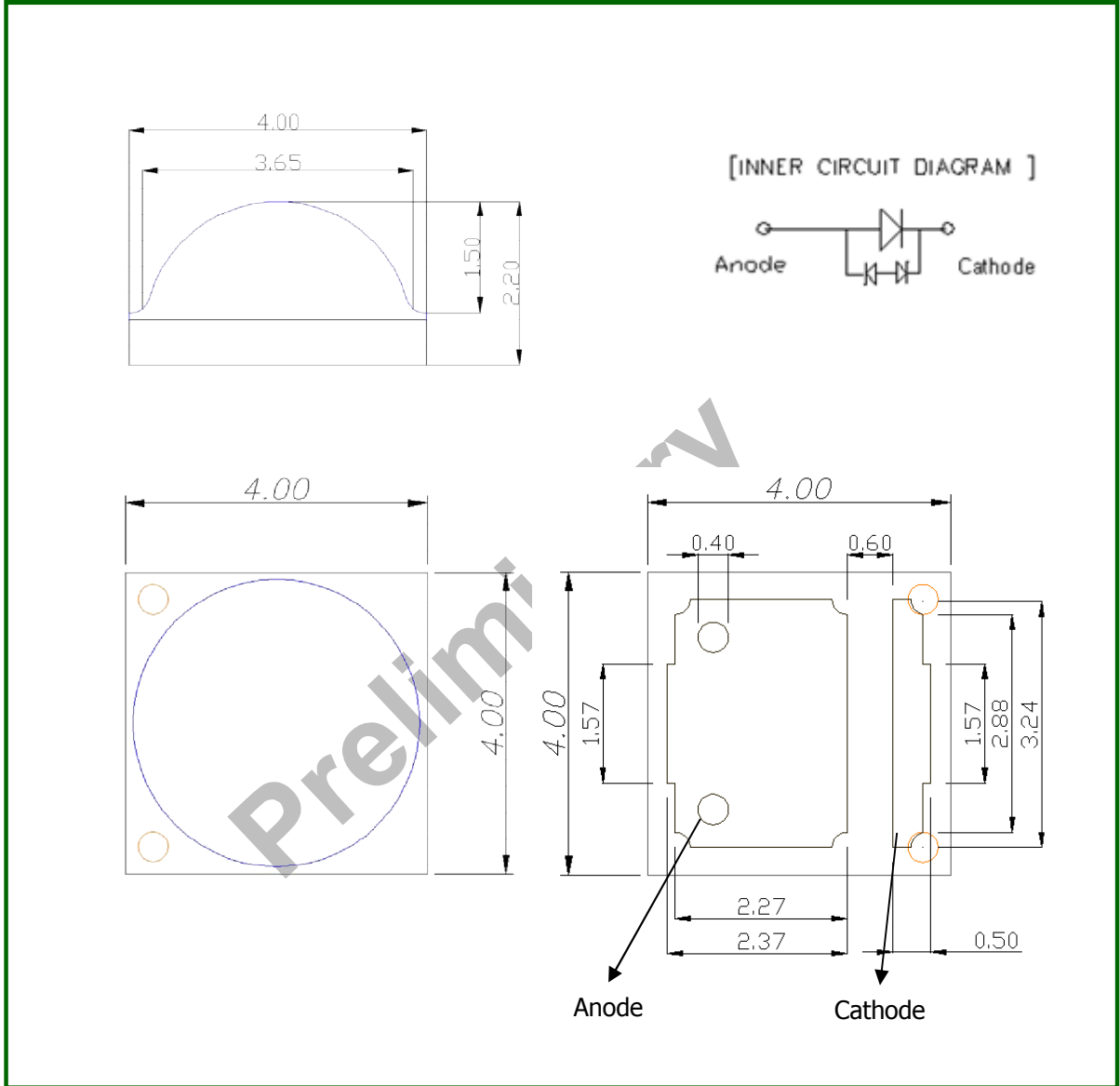
Notes :

[1] All dimensions are in millimeters. (tolerance is ±0.20mm)
[2] Scale : none
[3] The appearance and specifications of the product may be changed for improvement without notice
[4] Electrical ly neutral thermal path

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Characteristics of SAWW9H0A

1. Cool white

1-1 Electro-Optical characteristics at IF= 20mA, Ta=25ºC

Parameter	Symbol	Value			Unit
		Min	Typ	Max	
Luminous Flux [1]	Φ_V [2]	-	128	-	lm
Correlated Color Temperature [3]	CCT	2,600	-	3,200	K
CRI	R_a	80	-	-	-
Forward Voltage	V_F	60	64	68	V
Thermal resistance	Rth	6			ºC/W
View Angle	2Θ 1/2	125			deg.

1-2 Absolute Maximum Ratings

| Parameter	Symbol	Value	Unit
Forward Current	I_F	30	mA
Power Dissipation	P_D	1.95	W
Junction Temperature	T_j	125	ºC
Operating Temperature	T_{opr}	-30 ~ +85	ºC
Storage Temperature	T_{stg}	-40 ~ +110	ºC
ESD Sensitivity	-	-	-

* Notes :
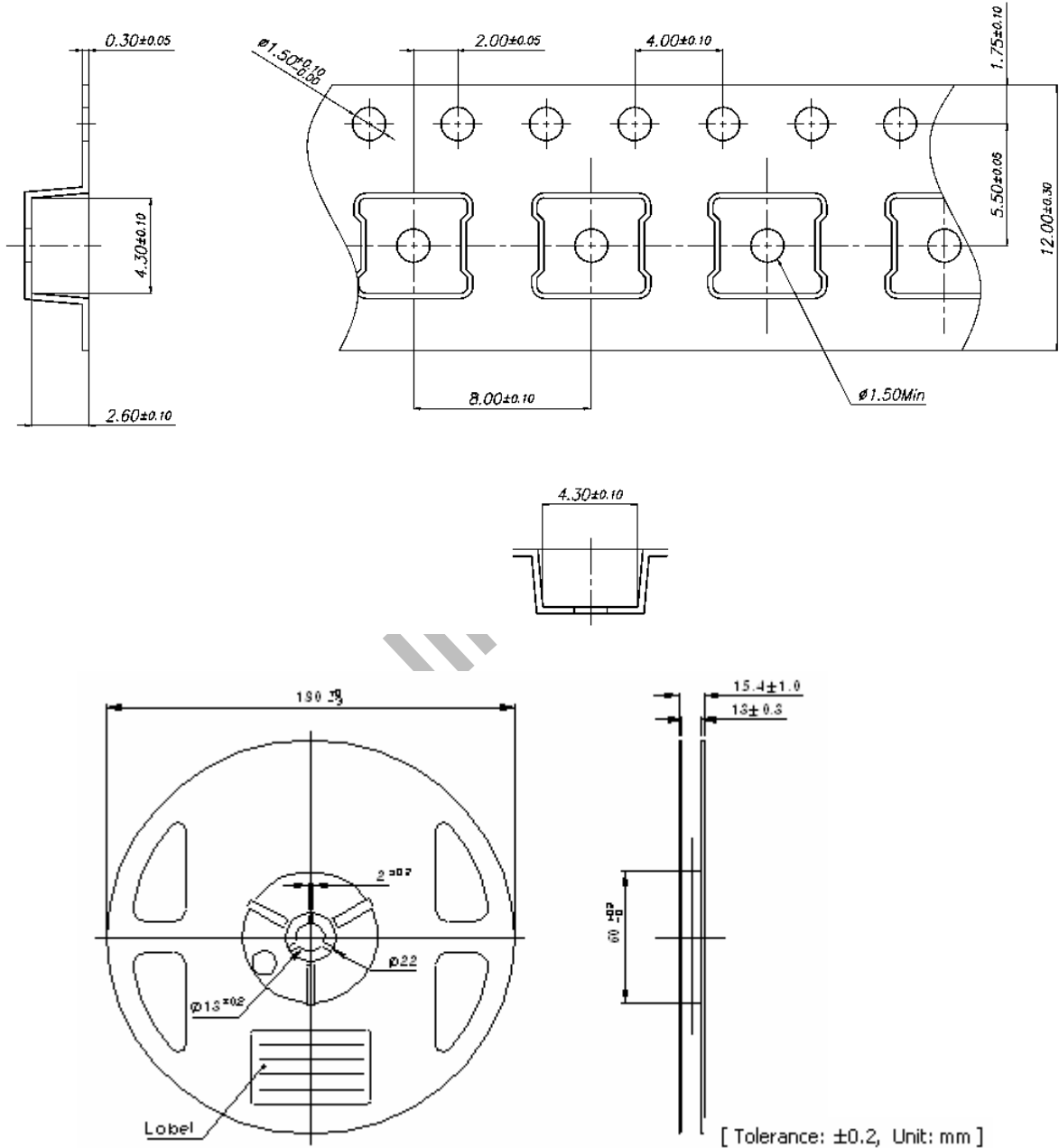 [1] Acrich series maintains a tolerance of ±10% on flux and power measurements.
  [2] Φ_V is the total luminous flux output as measured with an integrating sphere.
  [3] Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram.
       CCT ±5% tester tolerance

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Binning structure graphical representation

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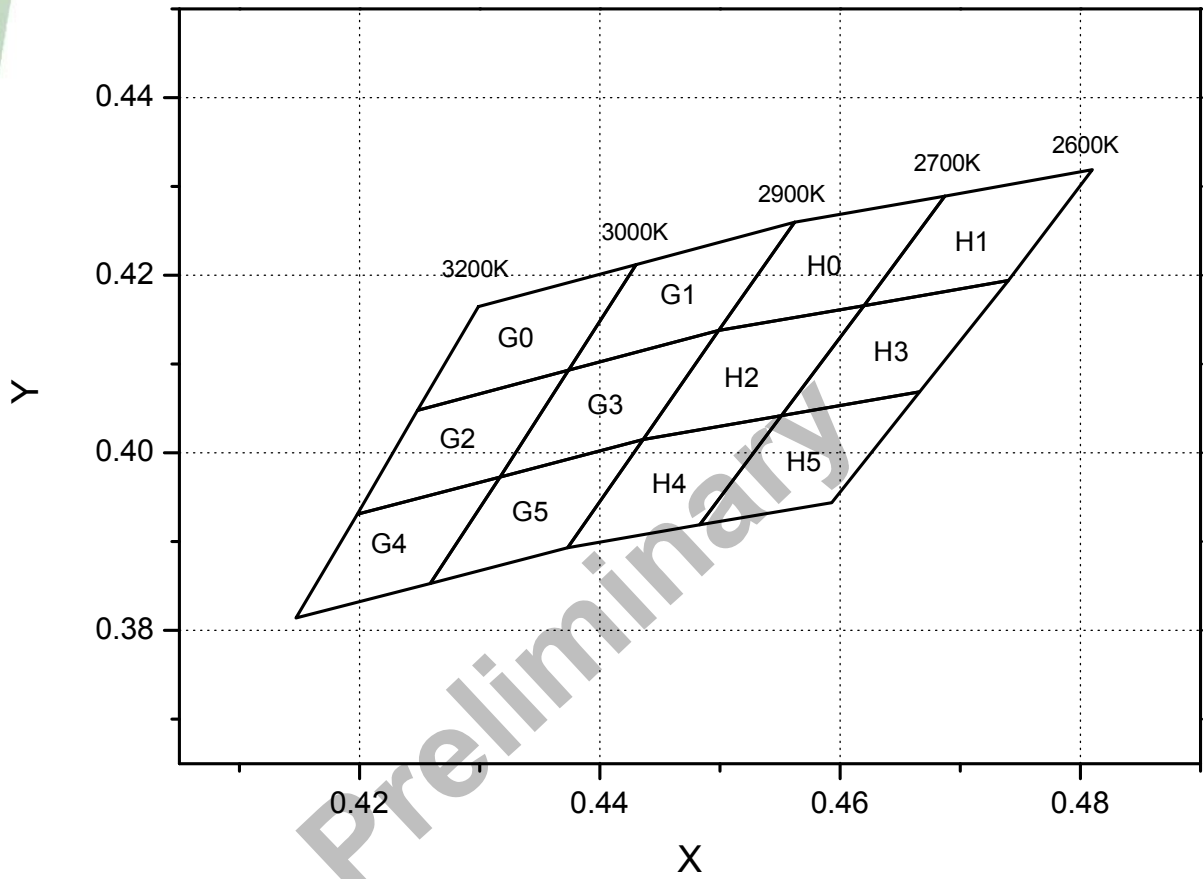
Emitter Carrier & Reel Packaging

Notes :

[1] Cumulative Tolerance : Cumulative Tolerance/10 pitches to be ±0.2mm

[2] Adhesion Strength of Cover Tape : Adhesion strength to be 0.1-0.7N when the cover tape is turned off from
the carrier tape at the angle of 10º to the carrier tape

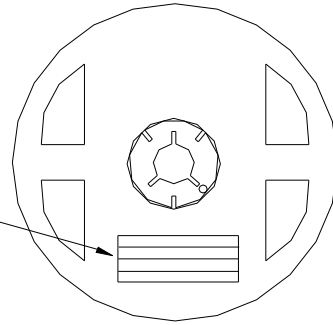[3] Package : P/N, Manufacturing data Code No. and quantity to be indicated on a damp proof Package
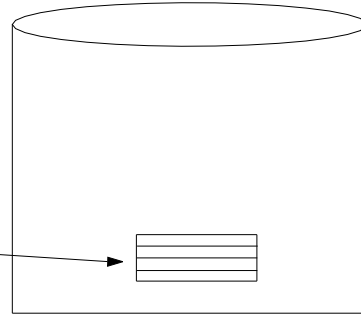
Rev. 00

Aug. 2012

Packing

Reel

RANK: XXX
||||||||||

QUANTITY : XXXX
|||||||||| |||||||| |||||||| ||||||||||||

LOT NUMBER : XXXXXXXXXX
|||| ||||| |||||||||||| |||||||||||| ||||||||||||

PART NUMBER :
|||| ||||| |||||||||||| ||| XXXXXX

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HUMIDITY INDICATOR
10% 20% 30% 40% 50% 60%

DESI PAK

Aluminum Vinyl Bag

RANK: XXX
||||||||||

QUANTITY : XXXX
|||||||||| |||||||| |||||||| ||||||||||||

LOT NUMBER : XXXXXXXXXX
|||| ||||| |||||||||||| |||||||||||| ||||||||||||

PART NUMBER :
|||| ||||| |||||||||||| ||| XXXXXX

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Outer Box Structure

Material : Paper(SW3B(B))

TYPE	SIZE (mm)		
	ⓐ	ⓑ	ⓒ
7inch	245	220	142

① SIDE

RANK: XXX
||||||||||

QUANTITY : XXXX
|||||||||| |||||||| |||||||| ||||||||||||

LOT NUMBER : XXXXXXXXXX
|||| ||||| |||||||||||| |||||||||||| ||||||||||||

PART NUMBER :
|||| ||||| |||||||||||| ||| XXXXXX

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RoHS

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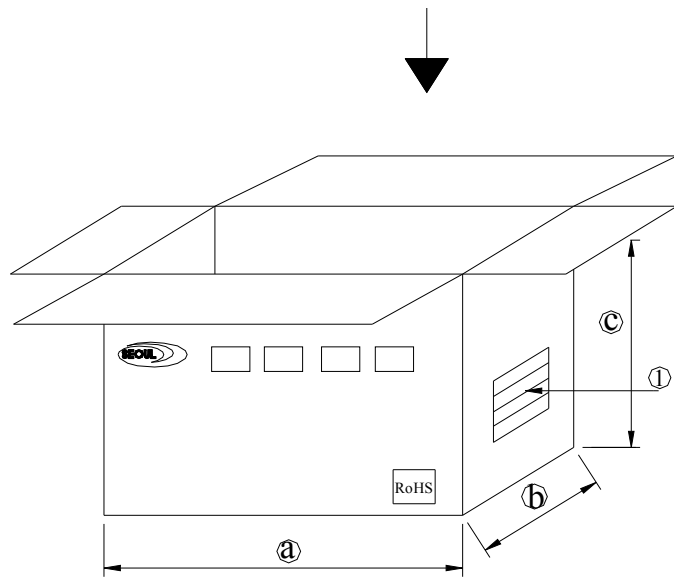
Soldering
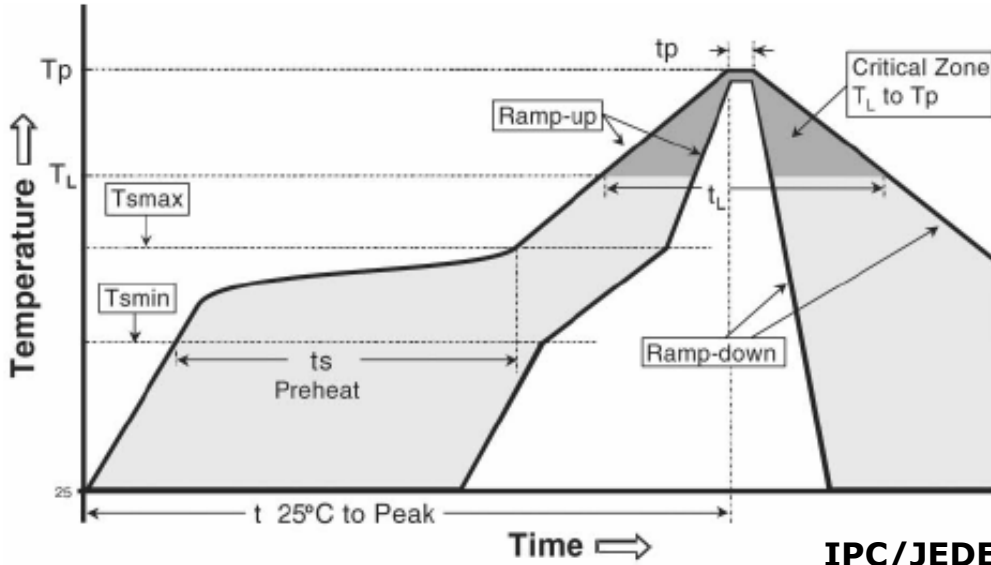
IPC/JEDEC J-STD-020

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average ramp-up rate (Tsmax to Tp)	3° C/second max.	3° C/second max.
Preheat - Temperature Min (Tsmin) - Temperature Max (Tsmax) - Time (Tsmin to Tsmax) (ts)	100 °C 150 °C 60-120 seconds	150 °C 200 °C 60-180 seconds
Time maintained above: - Temperature (TL) - Time (tL)	183 °C 60-150 seconds	217 °C 60-150 seconds
Peak Temperature (Tp)	215℃	260℃
Time within 5°C of actual Peak Temperature (tp)2	10-30 seconds	20-40 seconds
Ramp-down Rate	6 °C/second max.	6 °C/second max.
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.

* Caution
   1. Reflow soldering is recommended not to be done more than two times.
    In the case of more than 24 hours passed soldering after first, LEDs will be
    damaged.
   2. Repairs should not be done after the LEDs have been soldered. When
      repair is unavoidable, suitable tools must be used.
   3. Die slug is to be soldered.
   4. When soldering, do not put stress on the LEDs during heating.
   5. After soldering, do not warp the circuit board.

Precaution for use

(1) Storage

   To avoid the moisture penetration, we recommend storing Acrich LEDs in a dry box
with a desiccant . The recommended storage temperature range is 5C to 30C and a maximum
humidity of RH50%.

(2) Use Precaution after Opening the Packaging

Use proper SMD techniques when the LED is to be soldered dipped as separation of the lens
may affect the light output efficiency.

   Pay attention to the following:

   a. Recommend conditions after opening the package

      - Sealing

      - Temperature : 5 ~ 40℃ Humidity : less than RH30%

   b. If the package has been opened more than 4 week(MSL_2A) or the color of the
desiccant changes, components should be dried for 10-12hr at 60±5℃

(3) Do not apply mechanical force or excess vibration during the cooling process to normal
 temperature after soldering.

(4) Do not rapidly cool device after soldering.

(5) Components should not be mounted on warped (non coplanar) portion of PCB.

(6) Radioactive exposure is not considered for the products listed here in.

(7) Gallium arsenide is used in some of the products listed in this publication. These products are
dangerous if they are burned or shredded in the process of disposal. It is also dangerous to
 drink the liquid or inhale the gas generated by such products when chemically disposed of.

(8) This device should not be used in any type of fluid such as water, oil, organic solvent and etc. When
washing is required, IPA (Isopropyl Alcohol) should be used.

(9) When the LEDs are in operation the maximum current should be decided after measuring the
package temperature.

(10) LEDs must be stored properly to maintain the device. If the LEDs are stored for 3 months or more
after being shipped from SSC, a sealed container with a nitrogen atmosphere should be used for
storage.

(11) The appearance and specifications of the product may be modified for improvement without notice.

(12) Long time exposure of sunlight or occasional UV exposure will cause lens discoloration.

(13) The slug is isolated from anode electrically.

   Therefore, we recommend that you don't isolate the heat sink.

(14) Attaching LEDs, do not use adhesives that outgas organic vapor.

(15) The driving circuit must be designed to allow forward voltage only when it is ON or OFF.

If the reverse voltage is applied to LED, migration can be generated resulting in LED damage.

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(16) Please note Acrich runs on high voltage so use caution when near the leads
or if a dome is inadvertently removed while circuit is active.

(17) Please do not touch any of the circuit board, components or terminals with
bare hands or metal while circuit is electrically active.

(18) Please do not add or change wires while Acrich circuit is active.

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Handling of Silicone Resin LEDs

(1) During processing, mechanical stress on the surface should be minimized as much as possible. Sharp objects of all types should not be used to pierce the sealing compound.

(2) In general, LEDs should only be handled from the side. By the way, this also applies to LEDs without a silicone sealant, since the surface can also become scratched.
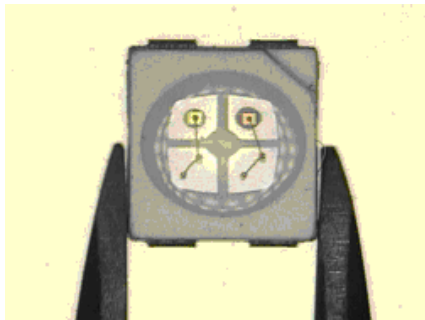
(3) When populating boards in SMT production, there are basically no restrictions regarding the form of the pick and place nozzle, except that mechanical pressure on the surface of the resin must be prevented.
This is assured by choosing a pick and place nozzle which is larger than the LED's reflector area.

(4) Silicone differs from materials conventionally used for the manufacturing of LEDs. These conditions must be considered during the handling of such devices. Compared to standard encapsulants, silicone is generally softer, and the surface is more likely to attract dust.
As mentioned previously, the increased sensitivity to dust requires special care during processing. In cases where a minimal level of dirt and dust particles cannot be guaranteed, a suitable cleaning solution must be applied to the surface after the soldering of components.

(5) SSC suggests using isopropyl alcohol for cleaning. In case other solvents are used, it must be assured that these solvents do not dissolve the package or resin.
Ultrasonic cleaning is not recommended. Ultrasonic cleaning may cause damage to the LED.

(6) Please do not mold this product into another resin (epoxy, urethane, etc) and do not handle this product with acid or sulfur material in sealed space.

(7) Avoid leaving fingerprints on silicone resin parts.

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Handling of Silicone Resin LEDs

No	Change Date	Change Issue	Version
00			
01			
02			
03			
04			
05			
06			
07			

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