

## PRODUCTS **Surface Mount Chip LED**

**SML010BAT** 

**PAGE** 

1. CONSTRUCTION GaN on SiC blue surface mount LEDs with reflector packaged with colorless epoxy.

**TYPE** 

2. USAGE Source of light for display unit.

3. DIMENSIONS See Figure.1

4. ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Power Dissipation P D 94mW Forward Current 20mA I F Peak Forward Current IFP 70mA (Notes 1) Reverse Voltage V R 5V - 30°C ~ + 85°C **Operating Temperature** Topr - 40°C ~ + 100°C

Tstg (Notes1 Duty 1/10 1KHz)

5. ELECTRO- CHARACTERISTICS (Ta=25°C)

Storage Temperature

DISCRIPTION	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNITS
Luminous Intensity	IV	IF=20mA	3.6	9.0	ı	mcd
Forward Voltage	VF	IF=20mA	1	3.8	4.7	V
Reverse Current	IR	VR=5V	1	ı	100	μΑ
Peak Wave Length	λР	IF=20mA	-	428	1	nm
Dominant Wave Length	λD	IF=20mA	ı	466	1	nm
Spectral Line Half Width	Δλ	IF=20mA	1	65	1	nm

6. LUMINOUS CLASSIFICATION (Ta=25°C, IF=20mA)

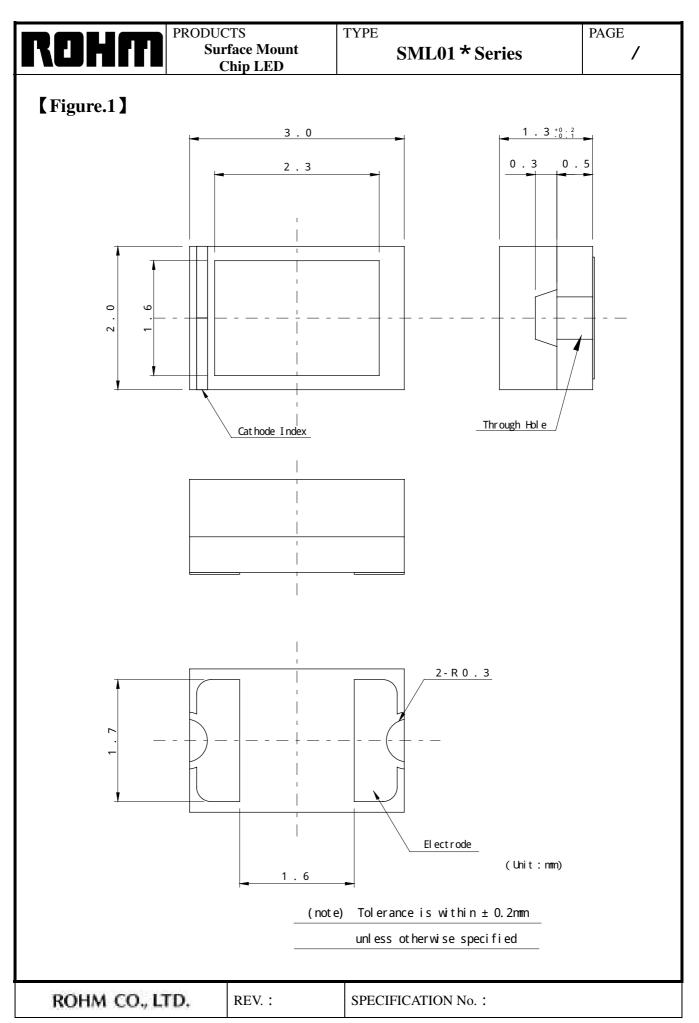
SYMBOL	LUMINOUS CLASSIFICATION RANGE			
"K"	3 . 6	~	5.6	mcd
"L"	5.6	~	9.0	mcd
"M"	9.0	~	1 4	mcd
"N"	1 4	~	(22)	mcd

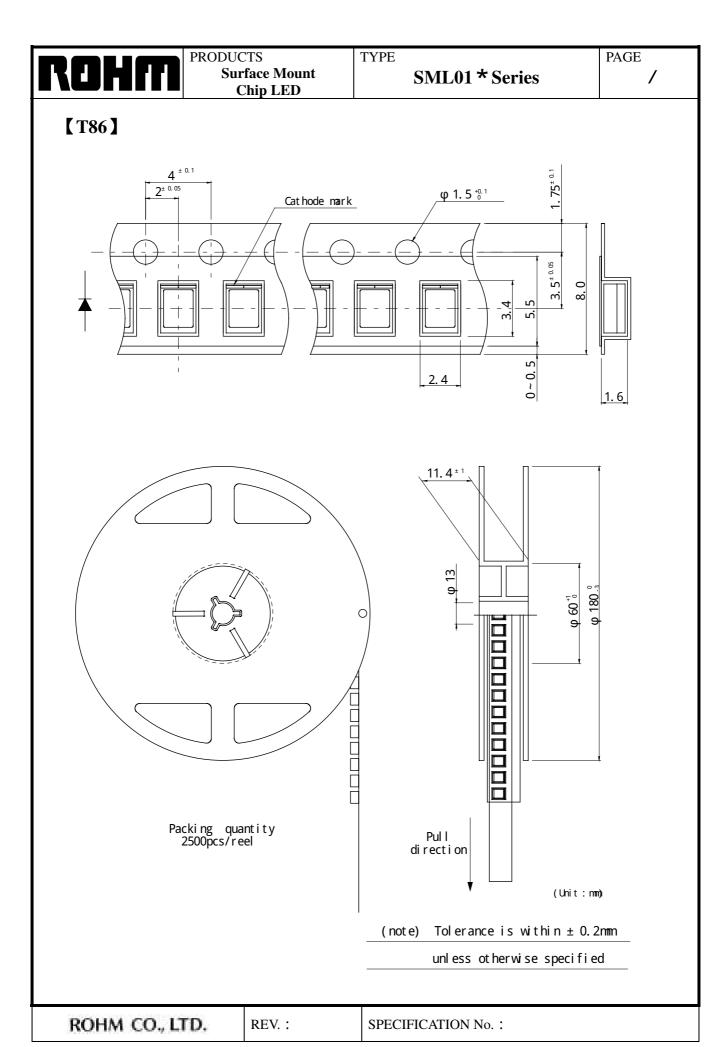
If rank shift occur, we may ask for re-approval of new rank when necessary.

Measurement tolerance:  $\pm 10\%$ , ( ): Reference

7. PRODUCT WEIGHT Product weight per piece, approx 0.015grm.

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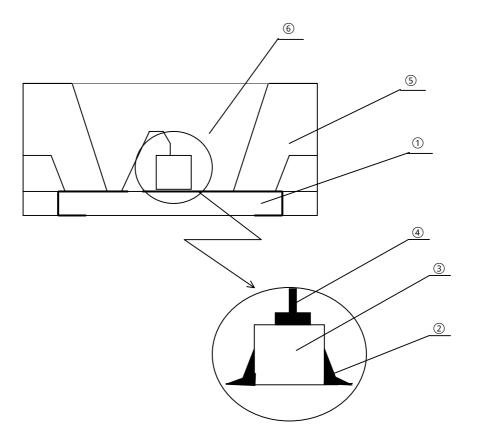


## **Surface Mount** Chip LED

# SML01 \* Series

PAGE

## [STRUCTURE • MATERIAL]



TYPE

No.	APPELLATION	MATERIAL
1	Printed Wiring Board	BT Resin
2	Die Bond	Ag Paste
3	Chip	010 : GaN on SiC 011,012 : InGaN on SiC
4	Bonding Wire	Gold
5	Reflector	Aromatic Polyester
6	Resin	Epoxy Resin

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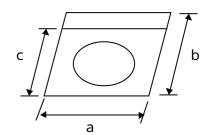
### **PRODUCTS Surface Mount Chip LED**

**TYPE** SML01 \* Series **PAGE** 

## **[PACKAGING REQUIREMENTS]**

#### 1. PACKING

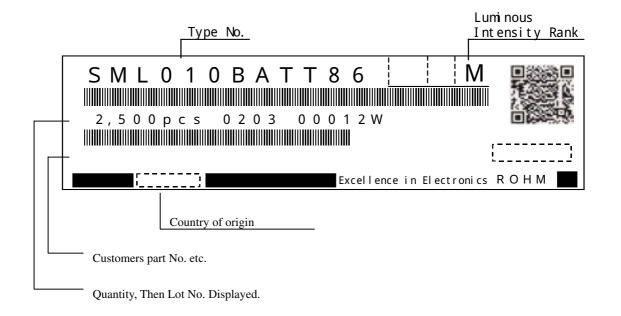
- (1) 2,500pcs are packed in one reel.
- (2) One reel is packed in aluminum bag. The size of aluminum bag is 240(a)× 250(b)mm. The size up to 230(c)mm is to zipper.
- (3) Aluminum bag is sealed by pressured for all directions.



#### 2. MARKING

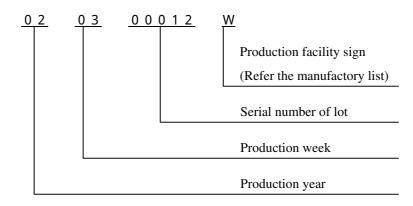
The following information shall be described on a box label: ROHM Type number, Packing quantity, Luminous intensity rank, Lot number.

### [FORMER LABEL SPECIFICATION]



Note) Indicates bar code expressed by code 39.

### 【EXAMPLE OF LOT NO. MARKING】



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**TYPE** 

## [ATTENTION POINT IN HANDING]

This product was developed as a surface mount LED especially suitable for soldering. Please take care of following points when using this device.

#### 1. DESIGNING OF PCB

As for a recommendable solder pattern, Please refer to Fig-1. The size and direction of the pad pattern depends on the condition of the PCB, So, please investigate about the adjustment thoroughly before designing.



This LED was designed to fit various mounting machines. A round type nozzle is recommended for a hollow lens surface.

#### 3. SOLDERING

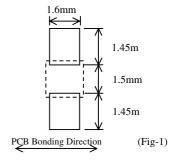
LED products do not contain reinforcement materials such as glass fillers.

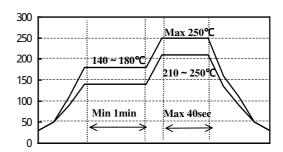
Therefore, thermal stress by soldering greatly influences its reliability.

The temperature condition for reflow soldering should therefore be set up according to the characteristic of this products. (See Fig.2)

Number of reflow process shall be max 2 times and these process shall be performed in a row.

Cooling process to normal temp. Shall be required between first and second soldering process.





### 4. WASHING

Please note the following points when washing is required after soldering.

4-1) WASHING SOLVENT

Isopropyl alcohol or other alcohol solvent is recommendable.

4-2) TEMPERATURE

Below 30°C, immersion time; within 3 minutes.

4-3) ULTRA SONIC WASHING

Below 15 / 1 litter of solvent tub.

4-4) CULING

Below 100°C within 3 minutes.

### 5.STRAGE

At reflow soldering, the reliability of this product is often influenced by moisture

absorption so we apply the packaging with moisture proof for better condition is use, please also note that

5-1) Not to be opened before using.

5-2) To be kept in our moisture proof packaging with some desiccant (SILICA GEL) after opening it.

To be baked in case the SILICA GEL indicator loses its blue color.

5-3) Please use within 168 hours after the package was opened. (Condition at 30°C, max.70%Rh.) In case it is not used within 168 hours, please put it back into our packaging.

5-4) BAKING

Please bake under reel condition at 60°C, 12 ~ 24 hours (max.20%Rh) after un-sealing.

While baking is done, the reel and emboss tape may be easily deformed.

Please be careful not to give any stress.

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# **Surface Mount** Chip LED

TYPE **SML Series**  PAGE

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## [MANUFACTORY]

FACTORY	SYMBOL
ROHM WAKO CO.,LTD. (KASAOKA CITY, OKAYAMA PREF.JAPAN)	W
ROHM-WAKO ELECTRONICS (MALAYSIA) SDN.BHD. (MALAYSIA)	D
ROHM ELECTRONICS WAKO (TIANJIN) CO.,LTD. (TIANJIN. CHINA)	N

ROHM CO., LTD.

REV.:

SPECIFICATION No.: