

Instruction manual (Reflow model)



Improper handling of an LED can cause damage to the function or improper performance.

In this document, essential information with regard to the handling of the reflow type and precautions to be taken are introduced.

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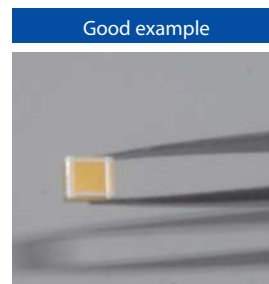
Ref_CE-0650P-202004

Please pay attention to avoid application of external force or static during handling and storage of LEDs.

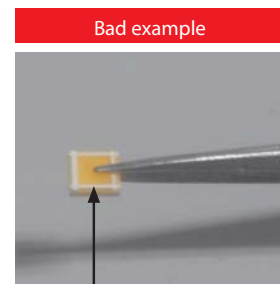
1. Handling precautions

In order to protect functions from damage

Product function such as optical characteristics and lifetime, etc. can be damaged by incorrect handling of the product. Please avoid applying any external force to the light emitting face of the sealing resin. In addition, in order to prevent external force to the sealing resin of the LED, please use a magazine rack when PWBs after mounting are stored. If circuit boards are piled directly on top of each other, they will be damaged because the sealing resin part of LED may come into contact with the substrate. Therefore, please do not pile circuit boards on top of each other.



Good example



Bad example

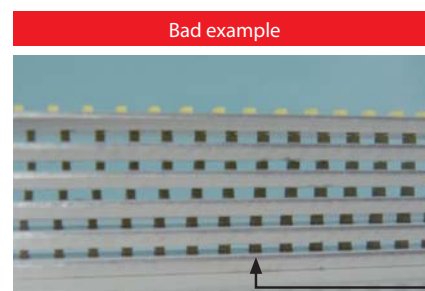
NG

Please do not touch the light emitting part.



Good example

magazine rack



Bad example

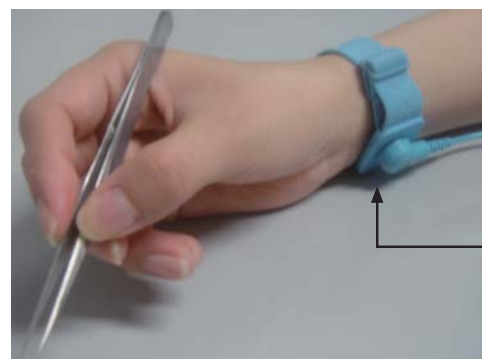
NG

Please do not stack PWBs on each other after mounting.

As this product is sensitive to static, please take antistatic measures such as wearing an antistatic wristband.

All devices, equipment and machinery related to the handling of this product are required to be properly grounded.

Please note that the product should not have any contact with other parts while it is fixed to a device. In addition, a lighting check shall be conducted after the product is fixed to a device to observe whether there is any damage due to static.



antistatic wristband

Recommended reflow conditions may differ by product.
Please confirm the specifications for each product.

2. Soldering

Operation after confirmation of the recommended conditions and the specifications

Reflow is not appropriate for this product. The conditions below are recommended for soldering.

Recommended soldering paste

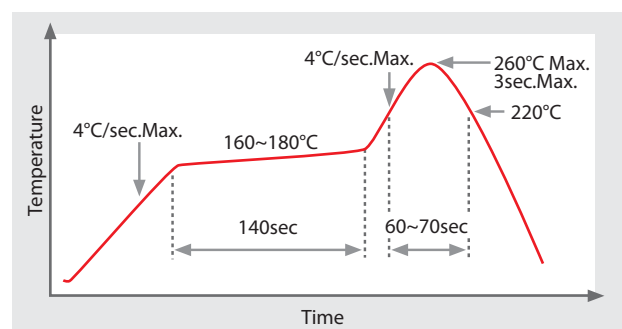
Melting point : 216°C~220°C

Composition : Sn / 3.5 Ag / 0.75Cu

An example of a reflow profile is shown. Recommended reflow conditions may be differ by product. Therefore, please confirm the specifications for each product.

Next process of reflow should be carried out after the product has returned to ambient temperature.

■ An example of a reflow profile



3. Washing after soldering

Operation after confirmation of the recommended conditions and the specifications

When washing after soldering is needed, the indicated conditions are required. Recommended conditions may differ by product. Therefore, please confirm the specifications for each product.

Example of washing conditions

Solvent : Purified water

Temperature and washing time :

1. Temperature : 50°C or lower / Time : 30 seconds or less
2. Temperature : 30°C or lower / Time : 3 minutes or less

Ultrasonic wave output : 300W or less

4. Circuit driving method

Driving with constant current circuit and precautions with regard to excess current

A constant current circuit is recommended for the driving method. Please design a circuit that prevents any reverse (excess current) from being applied to the product instantaneously as the circuit is switched ON or OFF.

In cases where this product is connected in parallel to a constant current circuit, current-limiting resister shall be applied to each product and confirmation made of whether they are within the rated current.

Regarding usage condition and storage methods, please confirm specifications for each product.

5. Heat generation

Optimization of heat dissipation design and driving conditions

This product is designed with consideration of the heat dissipation property of a module. Therefore, design for heat dissipation is required to use this product efficiently. Please ensure that the heat generation is not excess of the absolute maximum rating for each product.

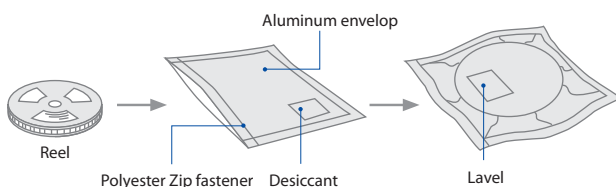
As there is heat generation caused by the ambient temperature and the power loss as a factor of the temperature rise, driving conditions should be taken into consideration depending on the ambient temperature.

6. Packing specifications

Specifications and label for each product

To prevent moisture absorption during transportation and storage, reels are packed in aluminum envelopes, which contain a desiccant with a humidity indicator. Specifications for taping or reels, and quantity per reel are different for each product. Therefore, please confirm the specifications for each product.

Packing specifications



Example of indication label

CUSTOMER	
TYPE	CL-824-U1N . . . ①
P. NO	XXX . . . ②
Lot No.	03D001 . . . ③
Q' ty	2500 pcs . . . ④
PASS	
CITIZEN ELECTRONICS	

- ① TYPE e.g. CL-824-U1N
- ② P.NO (Customer's P/N) e.g. XXX
- ③ Lot No. e.g. 03D001
 - First letter: Last digit of the year e.g. 0 → year 2010
 - Second letter: Production month e.g. 3 → March
 - Note: October, November and December are designated by X, Y and Z.
 - Third letter: CE's control number e.g. D001
- ④ Quantity e.g. 2500 pieces

7. Storage conditions

Storing in the dry box or under recommended conditions

To prevent moisture absorption, it is strongly recommended that reels are stored in the dry box as the most appropriate storage place. If not, the following environment is recommended.

Recommended storage conditions

Environment : 5°C~30°C

Humidity : 60°C or lower

The devices should be mounted as soon as possible after unpacking. If you store the unpacked reels, please store them in the dry box or seal them again into the sealed envelope.

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