

Handling Precautions for Chip Dot Matrix

The LUM/LPM series Chip Dot Matrix models are precision products mounted with semiconductors. Unlike ordinary lamp products, they require special handling precautions. Designed for high reliability, the Chip Dot Matrix is made with an aluminum-core substrate and an aluminum die-cast base for effective cooling.

Almost all electronic components used in our products are manufactured in-house by Rohm. The parts were developed based on a uniform design concept and produced by Rohm's original production system, thus offering exceptional levels of reliability.

When designing and assembling a device using a Chip Dot Matrix, it is necessary to observe special handling precautions. It is also important to pay close attention to the operating conditions, as well as to product storage and maintenance.

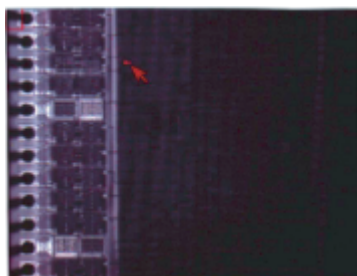
(The delivery specifications describes all precautions to be observed. The following lists particularly important precautions.)

1. Static electricity can damage the product!



The internal IC can withstand static electricity of only 200 to 300 V because it uses a C-MOS chip. Therefore, handling the product without wearing a grounding wrist band or taking other anti-static measures can cause the static electricity built up in your body to discharge through the IC and damage the internal wiring of the IC.

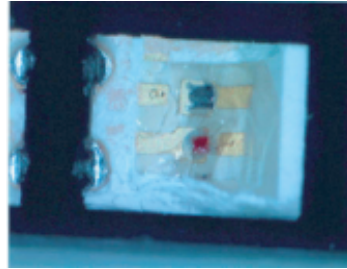
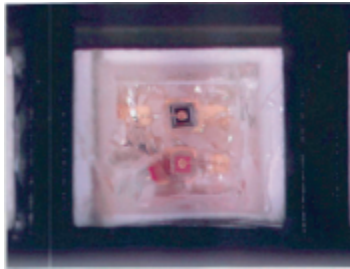
Before connecting or disconnecting the connectors during assembly or maintenance, be sure to wear a grounding wrist band or take other anti-static measures to remove static electricity from your body.





2. Do not hit the LED chip mounted on the surface! (For chip LED)

- (1) LEDs (Light Emitting Diodes) can be easily damaged by external forces, e.g., impact. Since the matrix display device weighs about 190 g on average, accidentally hitting it on its corner when handling the product can apply great force to the LED unit. To prevent damage to the product, handle the product carefully during assembly. (The potting type products also require the same careful handling.)



- (2) The product is very likely to be damaged while taking it out of the box. Exercise utmost caution when taking the product out of the box to make sure nothing impacts on it.



3. Keep the product away from water and heat!

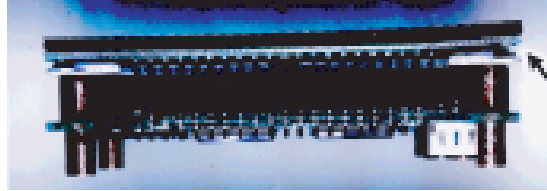
- (1) The chip dot matrix is not water-resistant. Therefore, you must take measures to waterproof the casing
- (2) Provide appropriate measures for ensuring effective cooling in order to prevent the product from being exposed to high temperatures. Although the product is designed for effective heat conduction and heat dissipation, abnormally high temperatures inside the casing should be prevented.





4. Do not tighten the mounting screws with excessive force!

(1)The product has tapped holes for the mounting screws. Since the material around the holes is either aluminum or brass, the screw hole sections can become stripped or loose if the screws are tightened with excessive force. Observe the maximum tightening torque of 0.5 Nm.



(2)In the process of manufacturing, electrical conduction tests and aging processes were repeatedly conducted, and the product was subjected to stringent inspection and thorough aging (for 24 hours) to ensure high product reliability.

Our comprehensive quality assurance system assures that our products are free from lighting failures or other defects.

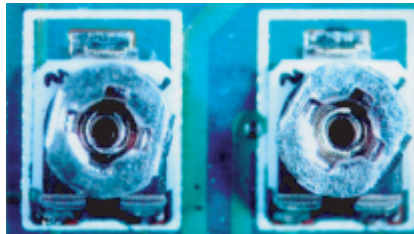


5. Do not turn the brightness adjustment VR!

Careless disconnection/connection of the socket can result in an accidental contact with the VR, causing the brightness adjustment to deviate from the proper setting. To prevent this, be especially careful when disconnecting and connecting the socket.

Note that brightness adjustments require a dedicated tool or measuring instrument.

An experienced person may be able to make the adjustment manually, but do not attempt to make manual adjustment since it can adversely affect the reliability.



6. Regarding mounting screws and effective thread length

The LED dot matrix (LUM/LPM series) has four or six holes (aluminum or brass) for mounting screws. These screw holes are necessary not only for the physical support of the product but also for cooling. Therefore, install screws into all holes. If the mounting screws are too short, they can strip the tapped holes. If the screws are too long, they can damage the mounting shaft or plate due to incomplete screwing.

Be sure to use screws whose effective thread section measures at least 3.0 mm but not more than 3.5 mm.

(* Be sure to check the product specifications literature.)