



D4525U-UND2 Series Application Note

Introduction

This application note is for D4525U-UND2 series products. It describes cleaning, storage, handling, assembly, operation conditions and safety caution.

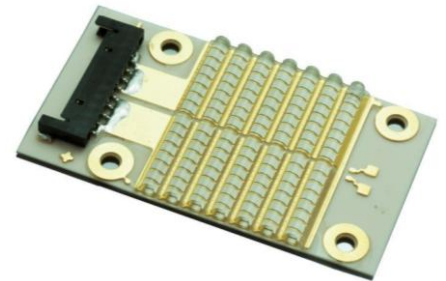


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Storage

Recommended storage conditions:

1. The storage conditions should have temperature maintained between 5 ~ 50 °C and relative humidity less than 60 %.
2. Do not stack boards on top of another. These boards may be damaged due to improper storage. The boards should remain in their original packaging prior to assembling.

Cleaning

Products were cleaned thoroughly before shipping, which means that in most normal cases there is no need to clean before using. In cases where it cannot be guaranteed that only a minimal amount of dirt and dust particles will come in contact with the product, it is advised to follow the following suggestions.

1. Try swabbing gently using a lint-free swab.
2. If needed, the use of lint-free swab and IPA (isopropyl alcohol) or ethanol used gently removes dirt from the surface. Do not use other solvents as they may directly react with the LED emitting region.
3. Do not use ultrasonic cleaning that the LED will be damaged.
4. Do not press on the emitting region during the cleaning.

Handling

If it is necessary to manually pick and place the product, keep the environment cleaning. And TSLC recommended to use plastic tweezers or plastic gloves. Do not touch the lens with tweezers or fingers. Gently grab the base of the COB using tweezers.

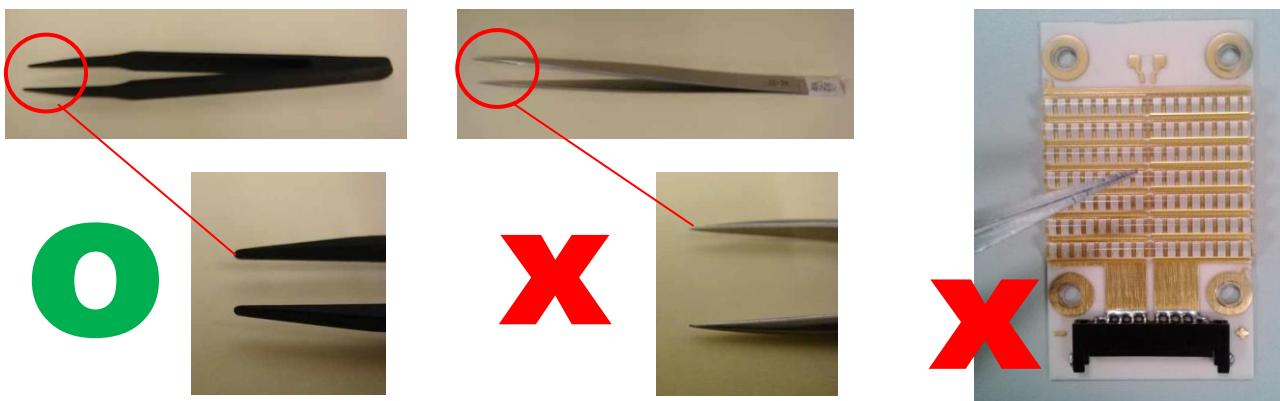


Figure 1. Recommended tweezers selection

Assembly

1. Do not touch emitting area during assembling, it could damage the product.
2. TSLC recommend assembly using M2 screw with washer to connect D4525U-UND2 and heat sink is shown below (Fig.2).
3. TSLC suggest thermal interface material using thermal grease. TSLC suggest two thermal pastes. One is Dow Corning® TC-5026, the other is Shin Etsu X23-7762. If it is possible, user can take X-ray to check if have void.
4. TSLC has found the flux, thermal paste, glue or solvents might damage the lens after you light the D4525U-UND2 up. Do not forget to clean the dirt on lens after you assembly the light board, even the dirt is not obviously. About the clean step please see the page 1. The concern positions with issues are like the broadside of D4525U-UND2, the interface between D4525U-UND2 and the ravines.

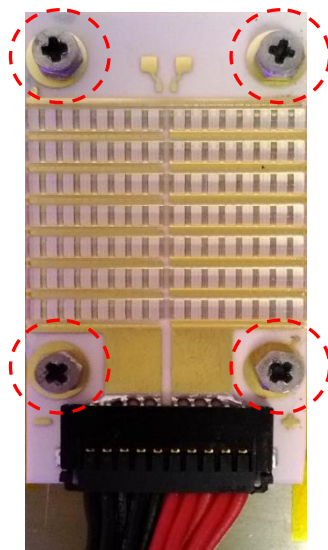


Figure 2. Recommended use M2 screw with washer to connector

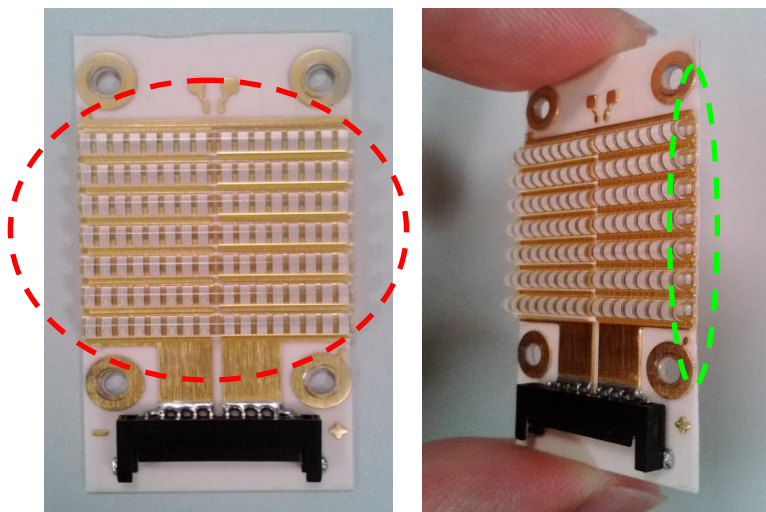


Figure 3. Concern positions: emitting area (red circuit), ravine(blue line), broadside (green circuit)

5. If user wants to disassemble connector wire, please push clamp pin of connector and pull connector back as figure 4a. Please don't pull wire directly. And if user wants to assemble connector, please push connector into the connector housing as figure 4b.

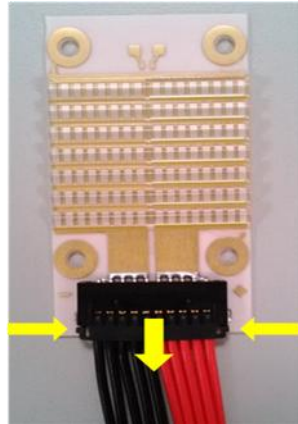


Figure 4a.

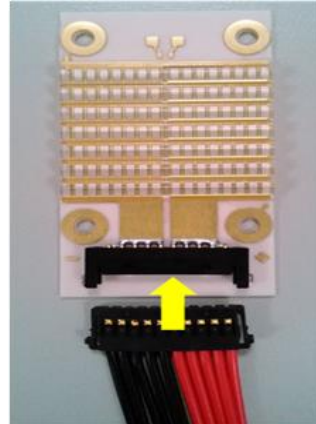


Figure 4b.

Operation condition

1. The LEDs are a kind of semiconductors, their voltage will vary with temperature. So, D4525U-UND2 must be driven by constant current power suppliers..
2. The LEDs are sensitive to any current over the maximum of specifications. It will cause damage or possible totally failure if the current exceeds the maximum current of D4525U-UND2.
3. Using a constant current driver to light up the LED module, please connect the power supply and the LED module before turn on the power supply. This can reduce the probability of surge current damaging the LED modules.
4. Clean the surface of D4525U-UND2 after each use if the D4525U-UND2 is exposure in the processes. About the clean step please see the page 1.
5. Do not light the D4525U-UND2 up immediately if you just clean the lens. The residue of solvent in the lens might vaporize and expand the silicone lens, it will cause damage the products or possible complete failure of products.
6. TSLC recommended the board temperature of D4525U-UND2 should be under 60 degree Celsius.

Safety Caution

1. Do not look directly at UV light as it is hazardous to your eyes.
2. Do not expose to UV light as it is hazardous to your skin.
3. Wear at least a UV-proof face shield and cover all exposed skin.
4. Do not block the air cooling outlet.
5. Do not splash water on the device.



About Us

TSLC Corporation is devoted to developing high-density, and multi-size emitters with powerful output to satisfy the needs of every customer.

TSLC Corporation is the leader in LED solutions. Unlimited design flexibility for interior and exterior spaces with high-end lighting effect; energy-efficient for UV curing to improve the quality of medical care; horticulture solutions create a better environment for everyone; high-intensity rotatable lightings for the entertainment industry, TSLC is always there for your lighting needs.

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