

IUVCOB

APPLICATION NOTE

Product: IUVCOB series and IUVCOBS series

Brief: This application note is for IUVCOB series products. It describes cleaning, storage, handling, assembly, operation conditions and safety caution.

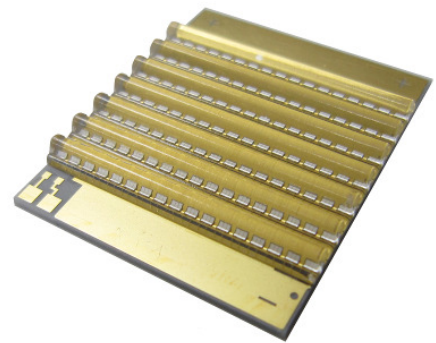


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Storage

Lumeniche recommend storage conditions:

- Temperature 5 ~ 50 °C, Relative humidity less than 60 %.
- Avoid exposing to air with corrosive gas. If exposed, electrode surface would be damaged, which may affect soldering.

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

Recommended Handling

If it is necessary to manually pick and place the product, keep the environment cleaning. And Lumeniche 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.

Tweezers

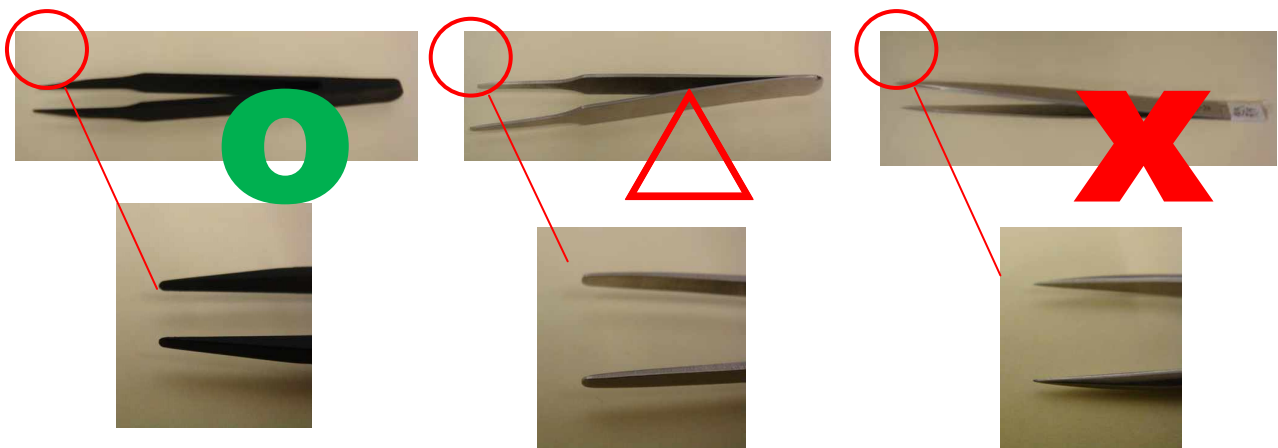


Figure 1. Recommended tweezers selection

Assembly:

1. Do not touch emitting area during assembling, it could damage the product.
2. Assembly guide line: Lumeniche don't suggest solder the wire on the IUVCOB. Lumeniche recommended assembly with clamp to connect IUVCOB and power supplier is shown below (Fig.2).
3. Wire: Lumeniche suggested to use branded conductors to prevent the wire was broken if you choice solid conductors.
4. Thermally conductive compound: Lumeniche has qualified and suggest using the indium sheet to replace the thermal paste; it prevents the paste from polluting. If the thermal paste must be used, Lumeniche suggest two thermal pastes. One is Dow Corning® TC-5026, the other is Shin Etsu X23-7762.
5. Lumeniche has found the flux, thermal paste, glue or solvents might damage the lens after you light the IUVCOB 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 IUVCOB, the interface between IUVCOB and the ravines.

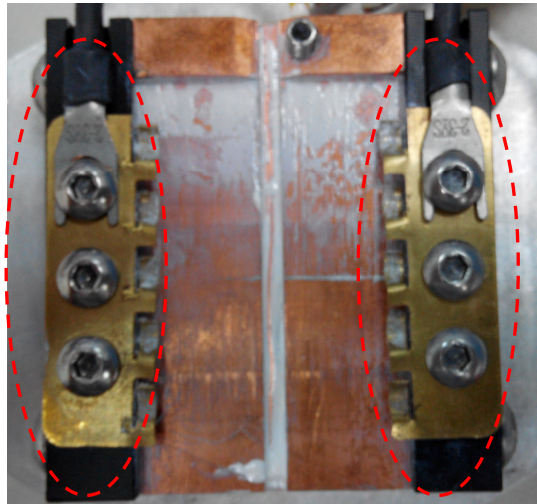


Figure 2. Recommended connector

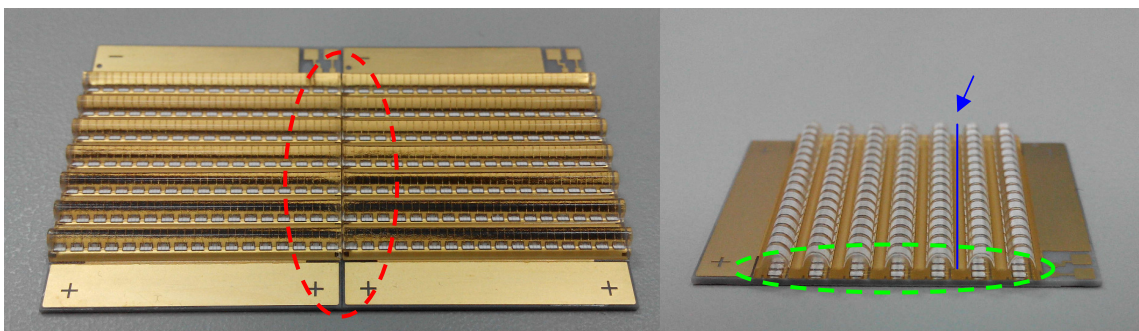


Figure 3. Concern positions: interface(red circuit), ravine(blue line), broadside (green circuit)

Operation conditions

1. The LEDs are a kind of semiconductor, their voltage will vary with temperature. So, IUVCOB 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 IUVCOB.
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 IUVCOB after each use if the IUVCOB is exposure in the processes. About the clean step please see the page 1.
5. Do not light the IUVCOB 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. Lumeniche recommended the board temperature of IUVCOB 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.

