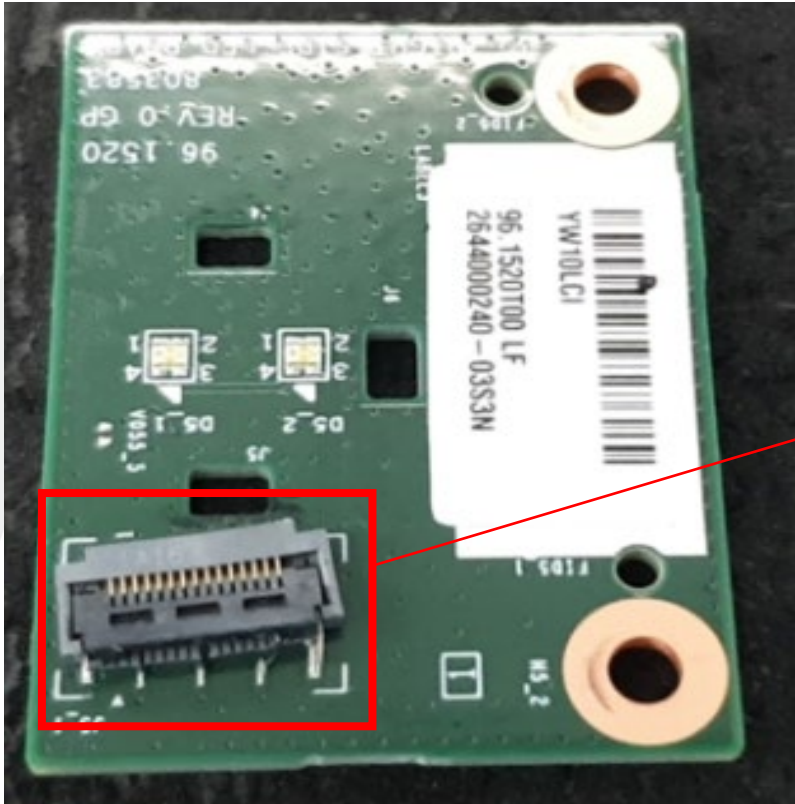


SWAN R-LED connector interference

2021/10/1

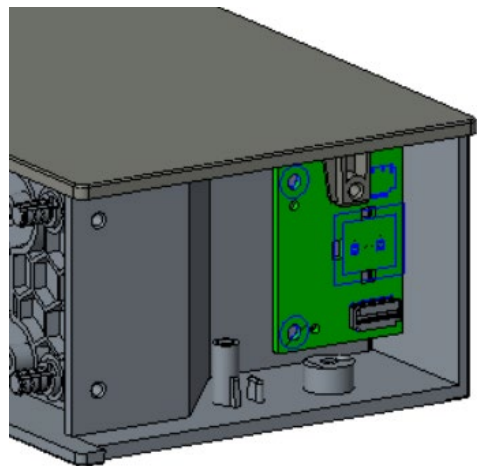
Defective phenomenon

The FFC connector on right side LED PCBA was crooked.

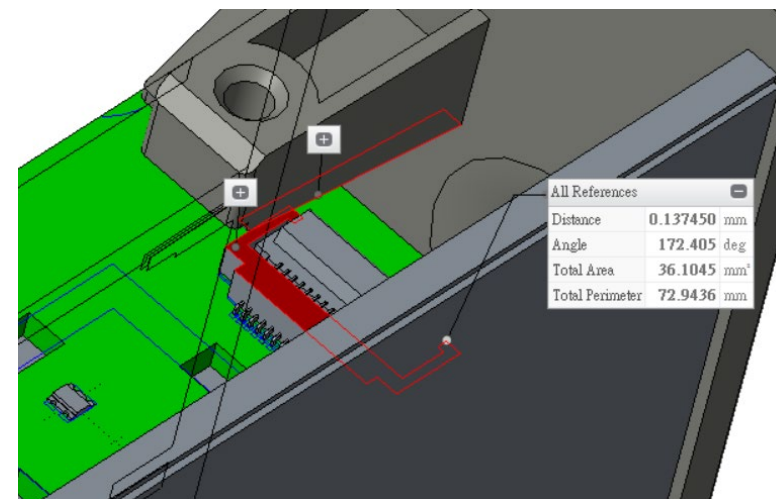
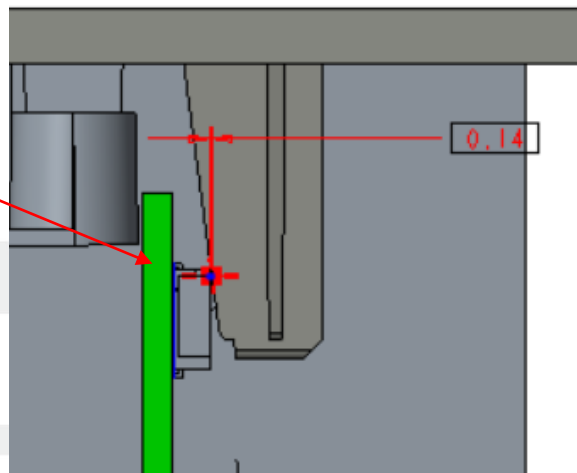
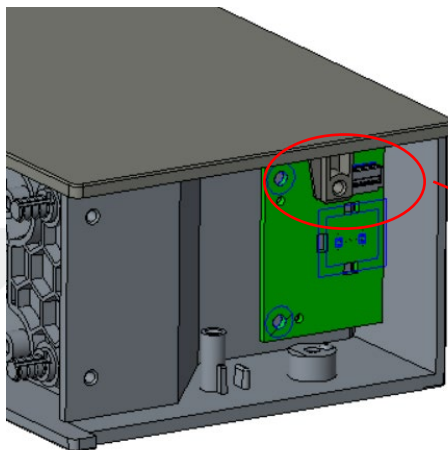


FFC connector was crooked

DVT1 & DVT2



DVT3 & PerMP



1. Open the defected DUT to analyze the problem. We found out the crooked issue is come from extrusion between the connector and top cover screw boss.
2. RD confirmed that we changed the right side LED PCBA FFC connector from bottom side to top side for the convenience of assembly FFC cable from DVT3. The gap between connector and top cover screw boss is 0.1~0.2mm only.
3. Considering material (housing, connector, PCB)/SMT/assembly tolerance, it's high risk to get interference problem.

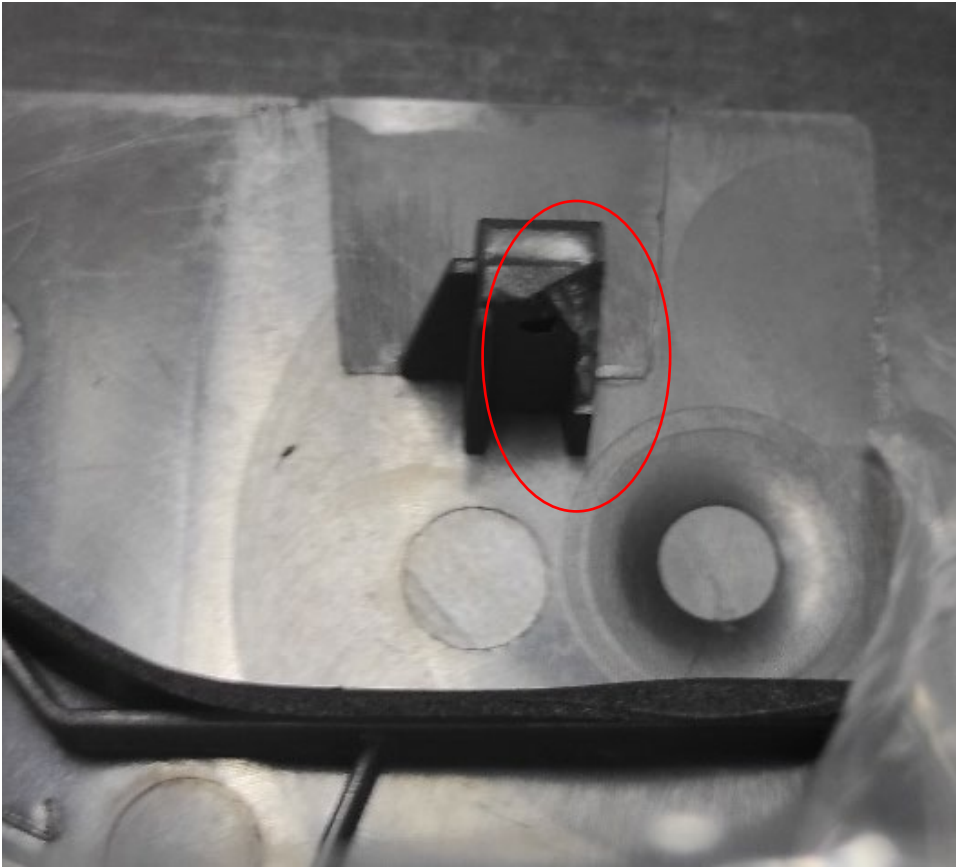
1. Short-term solution

- Factory is cutting the rib to prevent interference issue.

2. Long-term solution

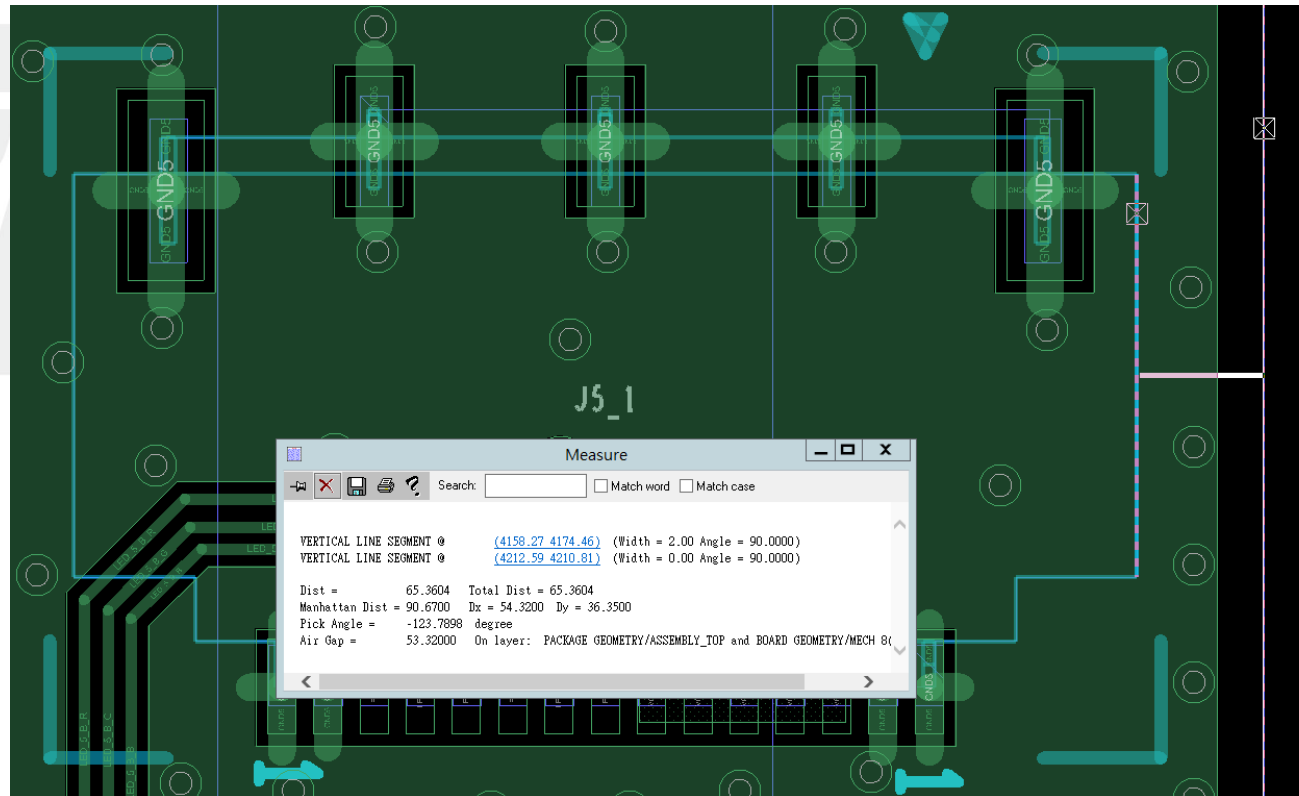
- Check the possibility to re-layout LED PCBA.
- Check the possibility to modify the screw boss on top cover.

Short-term solution - cutting the rib of screw boss



Long-term solution - possibility to re-layout LED PCBA

1. The current distance between FFC connector (J5_1) and board edge is 53.2 mil,
2. If Fii to move FFC connector (J5_1), the limitation is right shift 33 mil based on SMT rule (greater than 20 mil).
3. However, the problem cannot be solved by re-layout because factory needs 80mil assemble tolerance between FFC connector and screw boss.



Long-term solution - possibility to modify the screw boss on top cover

1. We checked the current 3D drawing of top cover. The screw boss of right side has space to modification.
2. To solve the problem and keep the product quality, Fii suggest to modify the right side screw boss as the left one.

