



OPM-LD-yyy series assembly process

Scope: This document shows the assembly process of butterfly packaged laser-diodes into OPM-LD-yyy series circuit boards. The figures in this document are specific to the OPM-LD-Lin product. For other OPM-LD-yyy products there may be small variations in some details of the assembly.

1. Required tools are:
 - A fine screwdriver with X head.
 - An open-end-wrench for 4mm nuts.
 - Fine tweezers
 - Cutter
 - Soldering tool

Caution:

The laser diode and the electronic board are sensitive to Electrostatic discharge (ESD).
Use proper means to protect against ESD



2. The parts to be assembled are listed below – refer to figure #1:
 - A Circuit board
 - An aluminum heat sink
 - Two M2 / 6mm screws
 - Four M2 / 12mm screws
 - 14 Nylon washers with M2 holes.
 - 6 nuts with M2 holes.

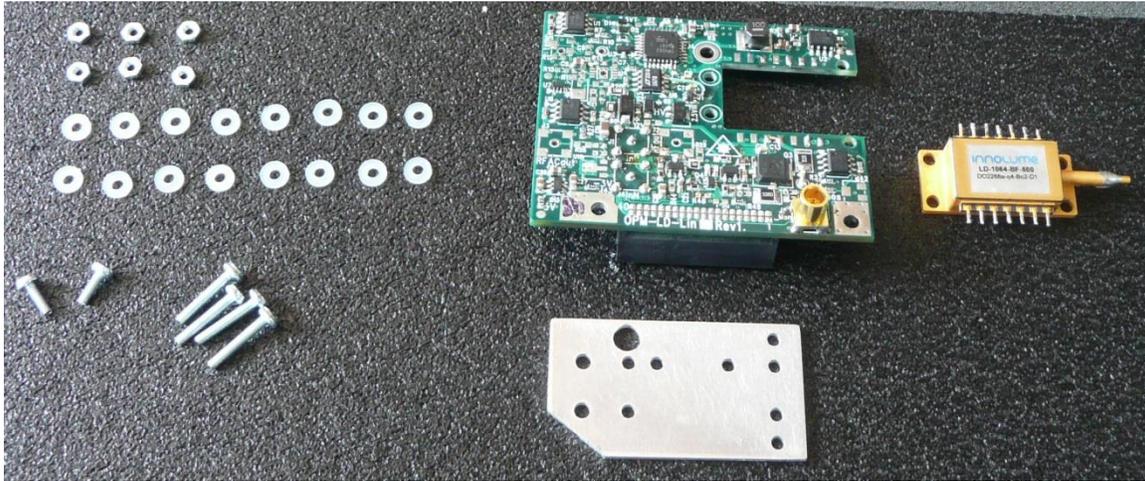


Figure 1

3. Trim the 14 leads of the laser diode to length of 3.5mm. Use a cutter.
4. Hold the PCB (printed circuit board) upside-down with main connector up. Place two nylon washers on the rear (left side) screw holes.
5. Put the laser diode (LD) on the washers – as shown in figure 2. Apply some thermal grease on the laser-diode's back for improved heat transfer to the heat-sink. Slide the heat-sink over the LD until holes match.

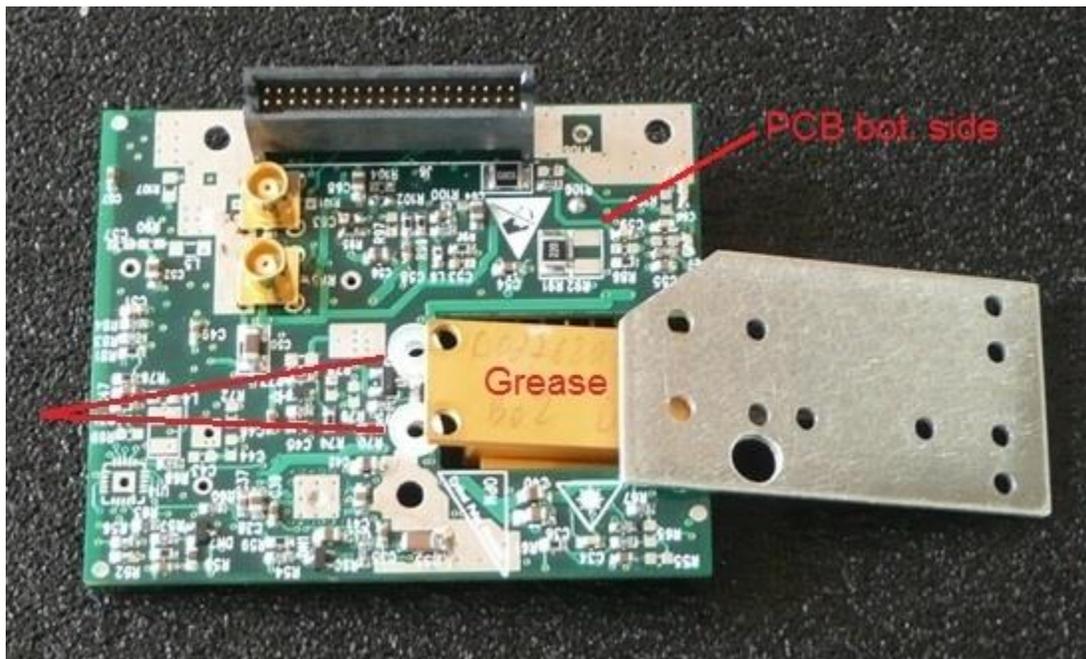


Figure 2

- Put two 12mm screws at the left side holes of the LD so that the screws head come from the heat-sink side. Refer to figure 3.

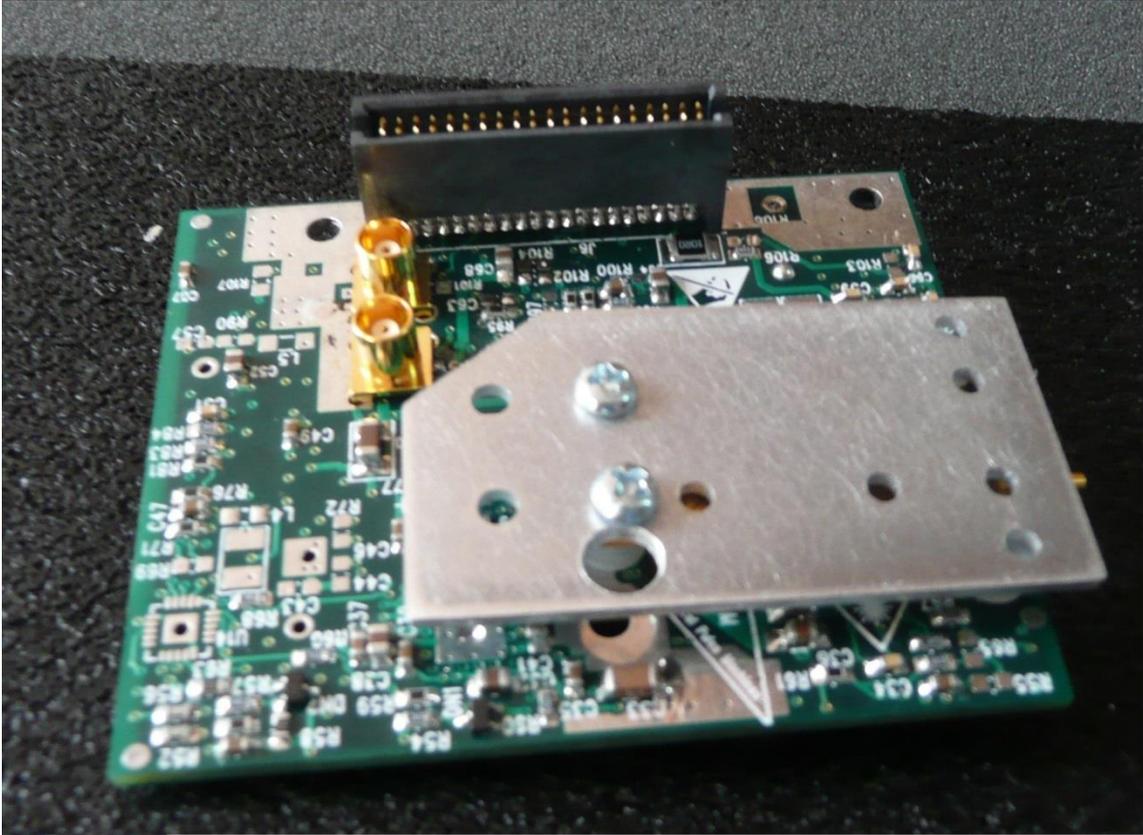


Figure 3

- On the opposite side (PCB's top side) add to each screw a nylon washer and a nut.
- Tighten the nuts slightly so that one may still adjust the location of the LD and the heat-sink.

9. Place three nylon washers on each of two front (right side) screw holes. These three washers fill the gap between the PCB and the heat-sink. Refer to figure 4.
10. Put two 12mm screws at the right side holes of the PCB so that the screws head comes from the heat-sink side. Refer to figure 4.

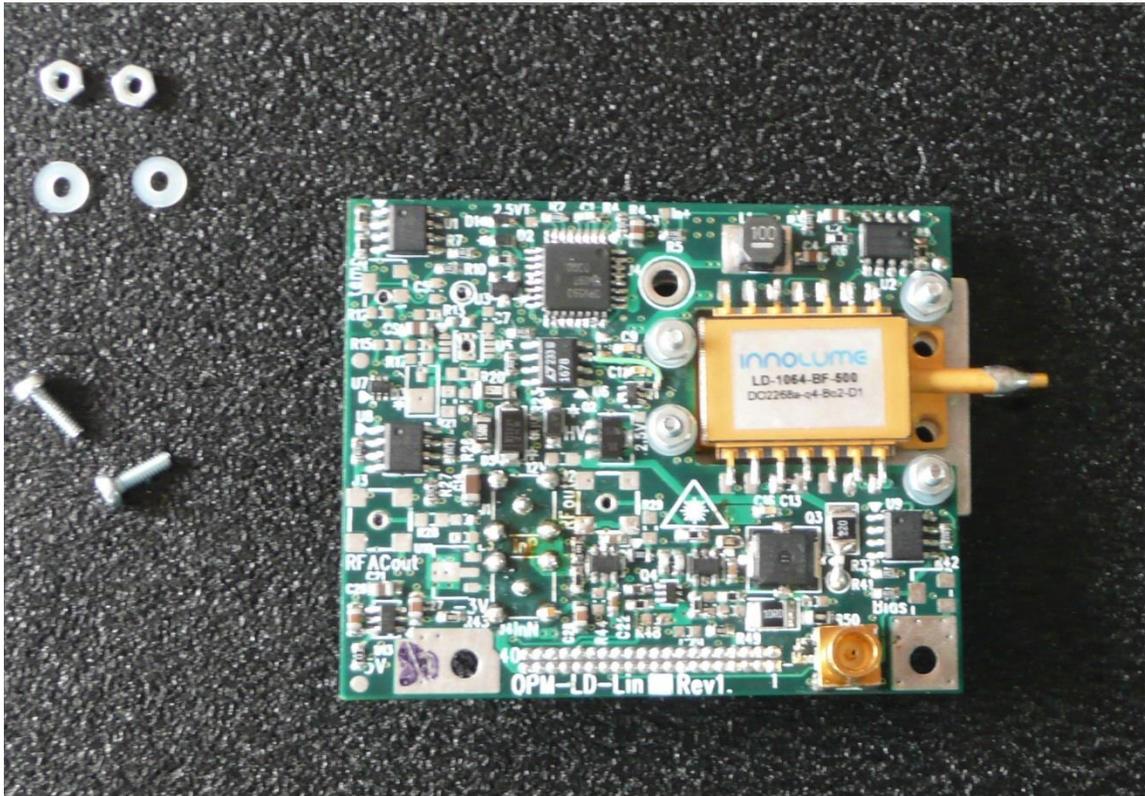


Figure 4

11. On the opposite side (PCB top side) add to each screw a nylon washer and a nut.
12. Tighten the nuts slightly so that one may still adjust the location of the LD and the heat-sink.

13. Hold the PCB top-side up (as in figure 5). Place two nylon washers on the screw holes in the front of the LD.
14. Use two 6mm screws and tighten the LD to Heat Sink. Refer to figure 5.

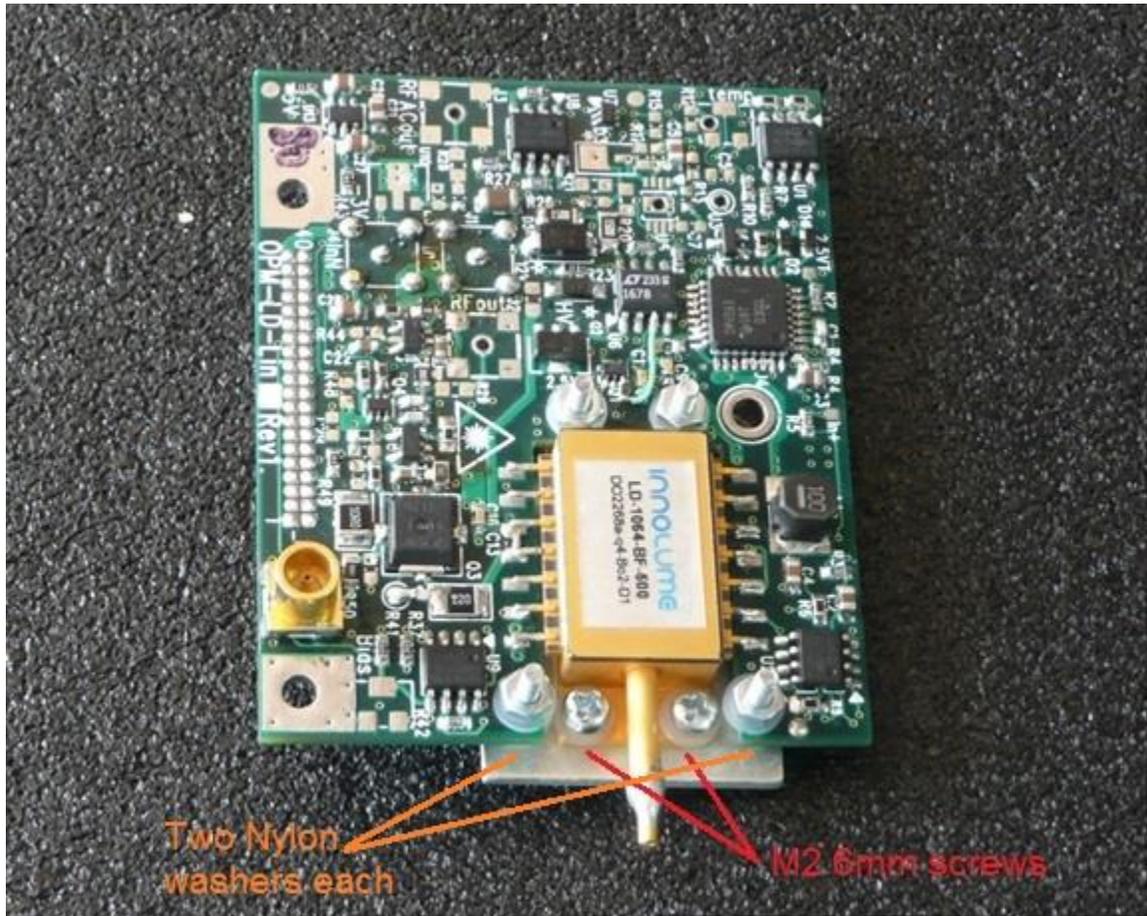


Figure 5

15. Align gently the LD in a way that the LD's leads will be centered over the pads of the PCB.
16. Tighten all screws using a screwdriver and an open-end-wrench.
17. Bend the 14 leads of the laser towards the PCB's pads.
18. Solder the 14 pins of the laser-diode.