Athena II – 385 nm COB Light Source Replacement

Beta Test Instructions

These instructions describe how to replace the existing 405 nm light source in the Athena II printer with the 385 nm COB light source. This procedure is intended for beta testers only.

Please read the entire guide before starting.

Before You Begin

Important:

- Remove the resin vat and build plate from the print chamber to prevent spills or damage, thoroughly clean any resin residue inside the build chamber.
- Power off the printer and unplug the power cable before starting.
- The UV light source can become hot after use, if a print was just completed, allow the printer to cool.
- Work on a clean surface and avoid touching optical components.
- Take photos before disconnecting cables if you want a reference during reassembly.

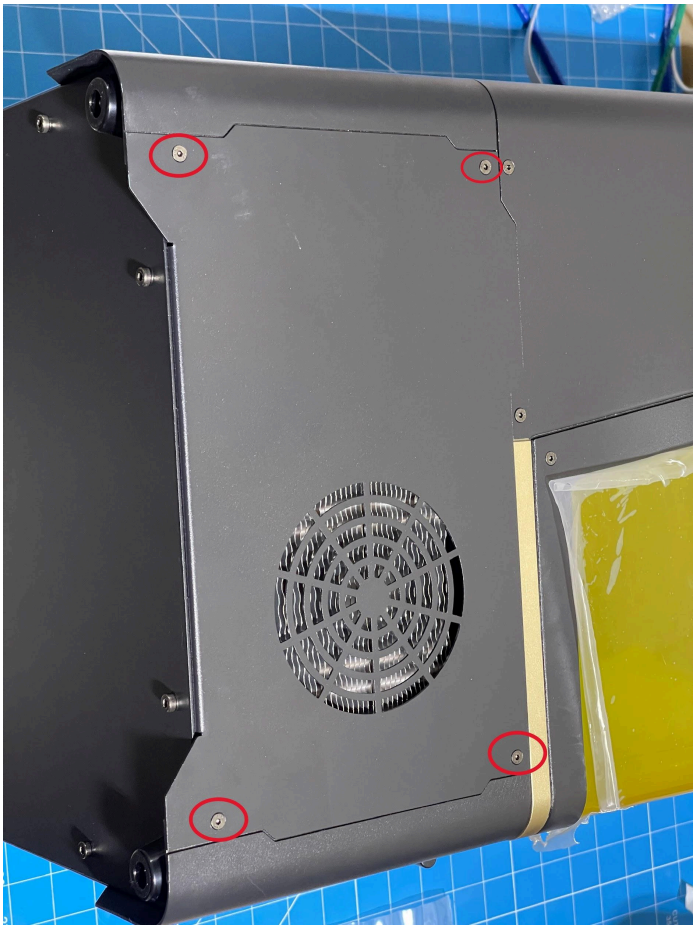
Required Tools

- 3 mm hex key
- 2 mm hex key

Step 1 – Remove the Bottom & Side Covers

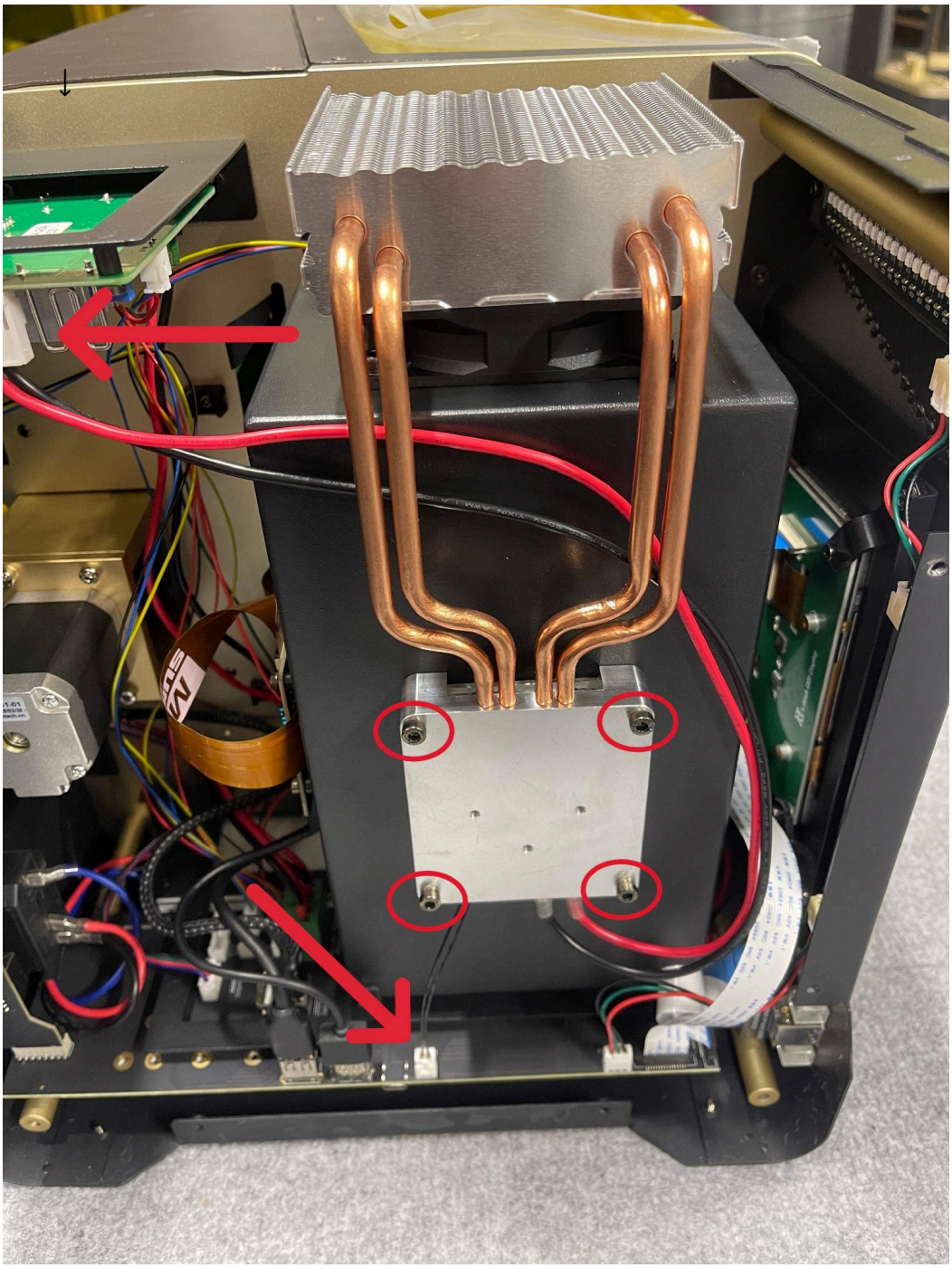
1. Lay the printer carefully on its right side to access the bottom panel.
2. Remove the feet from the printer.
3. Remove the 8) M4 socket head screws securing the bottom cover.
    a. These screws require a 3 mm hex key.

4. Remove the 4) M3 flat head screws securing the left side cover.
    a. These screws require a 2 mm hex key.



Step 2 – Remove the 405 nm Light Source

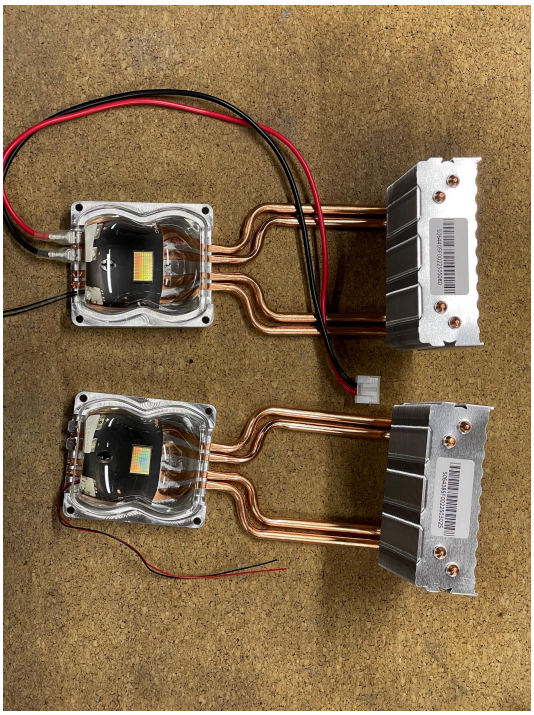
1. Unplug the thermistor and power wires from the mainboard and LED driver respectively.
    a. Some wiggling may be necessary to remove the thermistor wire from the mainboard.
2. Remove the 4) M4 screws securing the light source to the light box.
3. Carefully remove the 405 nm light source.



Step 3 – Transfer the Light Source Cables

The 405 nm light source has the following connections:

- Power cables
    - Red and black wires with female spade connectors
- Temperature sensor cable
    - Small white connector



1. Disconnect the power cables by pulling the spade connectors straight off.
    - Note the polarity of these wires while moving them to the new light source.

2. Disconnect the temperature sensor cable.
    - Note the orientation of the small white connector while moving it to the new source. A hex key can be used to push/seat the connector in its socket.

Step 5 – Install the 385 nm COB Light Source

1. Remove the protective film from the new 385 nm light source.
    - Do not touch the glass lens.
2. Position the new light source in the same orientation as the original.
3. Secure it using the same 4) M4 socket head screws.
4. Reconnect all cables; make sure that all connectors are fully seated.

Step 6 – Reinstall the Bottom and Side Covers

Reverse of disassembly.

Step 7 – Power On and Test

1. Plug the printer back in and power it on.
2. Run a display / light test to confirm the new light source is operating correctly.

If the light does not turn on or behaves unexpectedly, power off the printer and recheck all connections.

Important Notes for Beta Testers

- Resin exposure recalibration is required after switching to the 385 nm light source. Some resins do not perform well at 385 nm.
    - If a resin takes an excessive amount of time to cure, it may not be compatible.
    - Most resins are compatible, but results may vary.
    - If you have a resin profile for a resin with 405nm, you can use this as a starting point for exposure calibration with the 385nm light source

---

Support

If you encounter any issues during installation or testing, please stop and contact Concepts 3D support before continuing.

See help.concepts3d.ca for more guides and videos

Concepts3D