
Changing the Lamp in Series I MAXline Microplate Readers

Warnings and Cautions

- ⊗ **BIOHAZARD:** Always wear gloves when performing any type of service, especially if it involves potential contact with spilled fluids or fluid residues of any kind.
- ⚠ **WARNING:** Always turn the instrument off and remove the power cord from the back prior to any maintenance or installation operation.
- ⚠ **WARNING:** Use only the tools described to perform the steps defined in the instructions.
- ⚠ **WARNING:** Never perform any operation on the instrument in an environment where liquids or potentially damaging gases are present.
- ⚠ **WARNING:** Risk of electrical shock, Refer servicing to qualified personnel.
- ⚠ **CAUTION:** Use of organic solvents (such as dichloromethane) may cause harm to the fiber optics in the microplate readers. Extreme caution is advised when using organic solvents. Always use a plate lid and avoid placing a plate containing these materials in the microplate reader for prolonged periods of time. Damage caused by the use of incompatible or aggressive solvents is NOT covered by the instrument warranty.
- ⚠ **CAUTION:** Never touch any of the fiber optic cables or their housing, manifold, or rotor connections. These fibers are extremely delicate and critical to the performance of the instrument.
- ⚠ **CAUTION:** Do not touch or loosen any screws or parts other than those specifically designated in the instructions. Doing so could cause misalignment and possibly void warranty.
- ⚠ **CAUTION:** Never touch the surfaces of the interference filters or optical lenses.

Instructions for THERMOmax

- 1) Switch the instrument off. Remove the power cord from the wall socket and then from the instrument's power port.
- 2) Turn the instrument around so you can reach the back of it easily. Remove the printer cable and/or computer cable (if connected) from the back of the instrument (it isn't essential to do this, but it does make it easier to change the lamp).
- 3) On the right hand side of the rear panel (as you face the back of the instrument) is a metal cover secured by two spring screws. Underneath the cover is the lamp assembly. Loosen the screws and gently slide the cover to the right, then pull it towards you to disengage it from the instrument (see Figure 1).

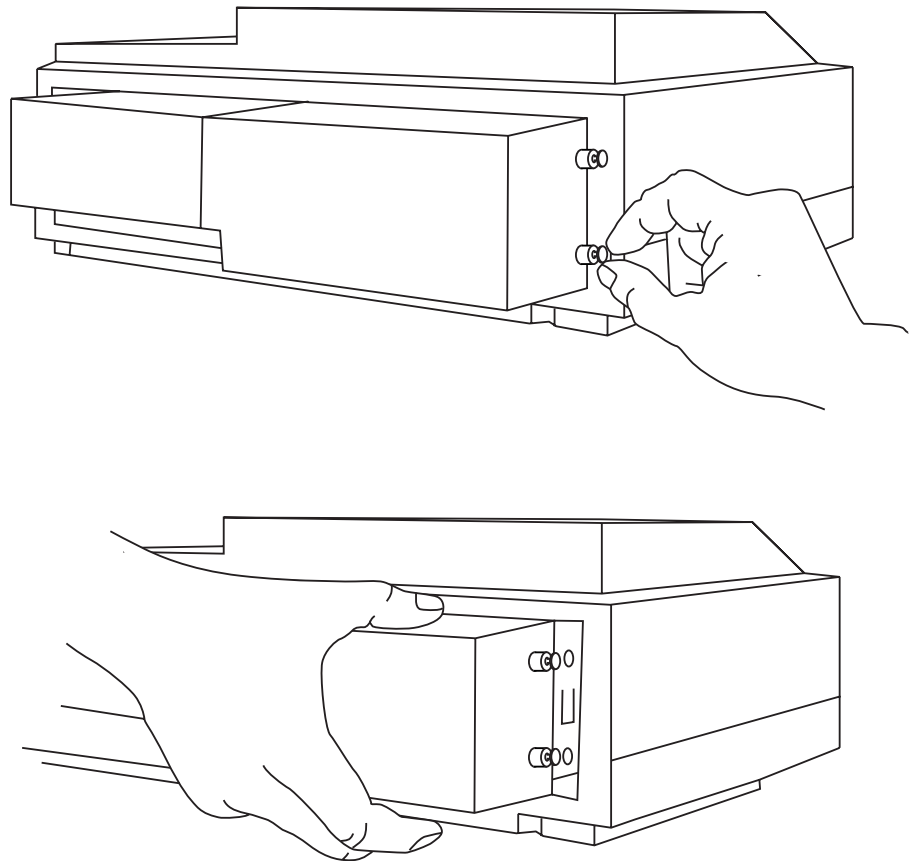


Figure 1: Removing the Lamp Cover

Examine Figure 2. Locate the lamp ejection lever on the right side of the lamp assembly. Gently depress the lever, then grasp the lamp by the white ceramic base as it is ejected.

⚠ **WARNING:** Do not touch the lamp bulb while removing the lamp!
The bulb may be hot.

Discard the burned-out lamp.

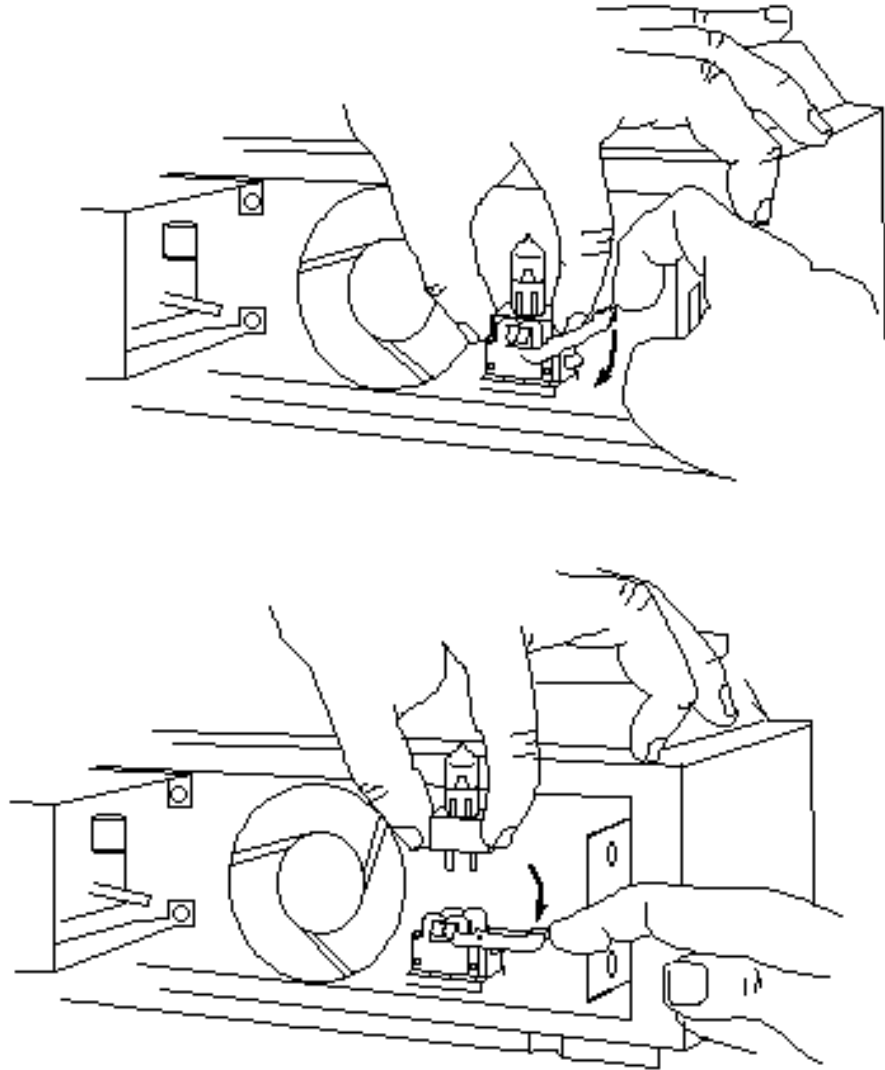


Figure 2: Removing the Burned-Out Lamp

4) Pick up the new lamp by its ceramic base.

⚠ **CAUTION:** Do not touch the glass portion of the new lamp,
because fingerprints will degrade the lamp's performance.

5) Note that the two pins that protrude from the base are of different thicknesses, and that the corresponding sockets for the pins are of different diameters. Orient the pins in the correct sockets and gently push the new lamp into place (Figure 3). The ejection lever will automatically move to its original position.

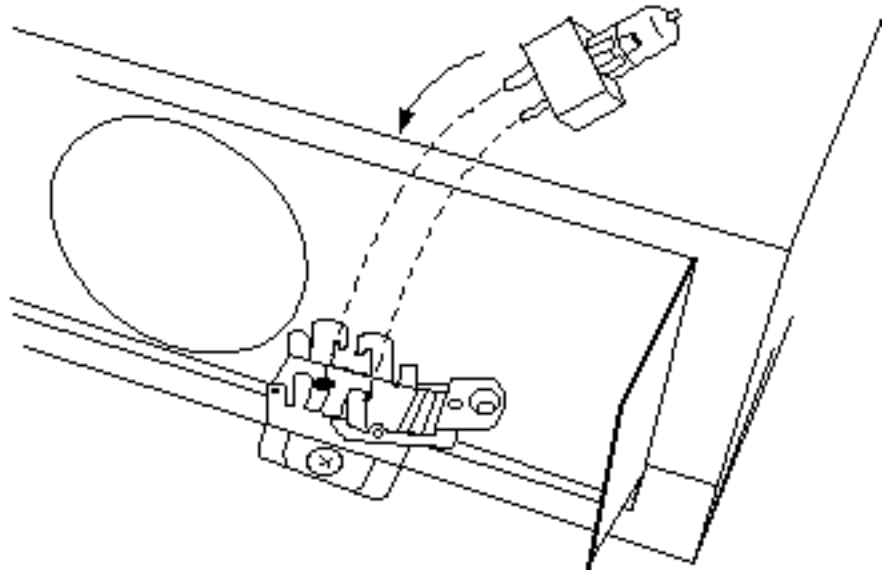


Figure 3: Installing the New Lamp

- 6) Reposition the metal cover over the lamp, then tighten the spring screws.
- 7) Reconnect the power cable to the instrument and the wall socket. If using the instrument with a computer/printer, reconnect their cables to the instrument.
- 8) Turn on the instrument (and computer, if using one), then test the new lamp by performing an endpoint read. Use the lowest available wavelength to ensure the most rigorous test of the new lamp.

Instructions for Emax and Vmax

- 1) Switch the instrument off. Remove the power cord from the wall socket and then from the instrument's power port.
- 2) Turn the instrument around so you can reach the back of it easily. Remove the printer cable and/or computer cable (if connected) from the back of the instrument (it isn't essential to do this, but it does make it easier to change the lamp).
- 3) Turn the instrument around so you can reach the back of it easily.
- 4) On the right hand side of the rear panel (as you face the back of the instrument) is a metal plate secured by two screws. The plate covers the lamp assembly (see Figure 4). Use a Phillips screwdriver to remove the screws, then remove the plate from the instrument.

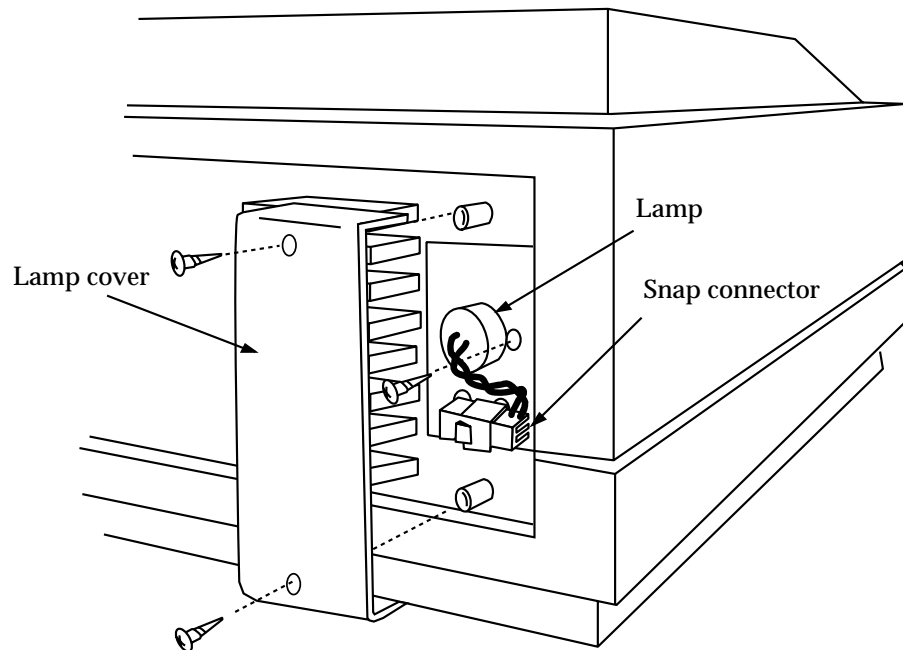


Figure 4: Removing the Lamp Cover (Emax/Vmax)

- 5) Remove the lamp screw (on the right side of the lamp, refer to Figure 4) then gently pull the connecting wires to remove the lamp from the body of the instrument.
- 6) Firmly grasp the snap connector beside the snap, then push the snap down with your thumb and pull the male and female halves of the connector apart (see Figure 5).

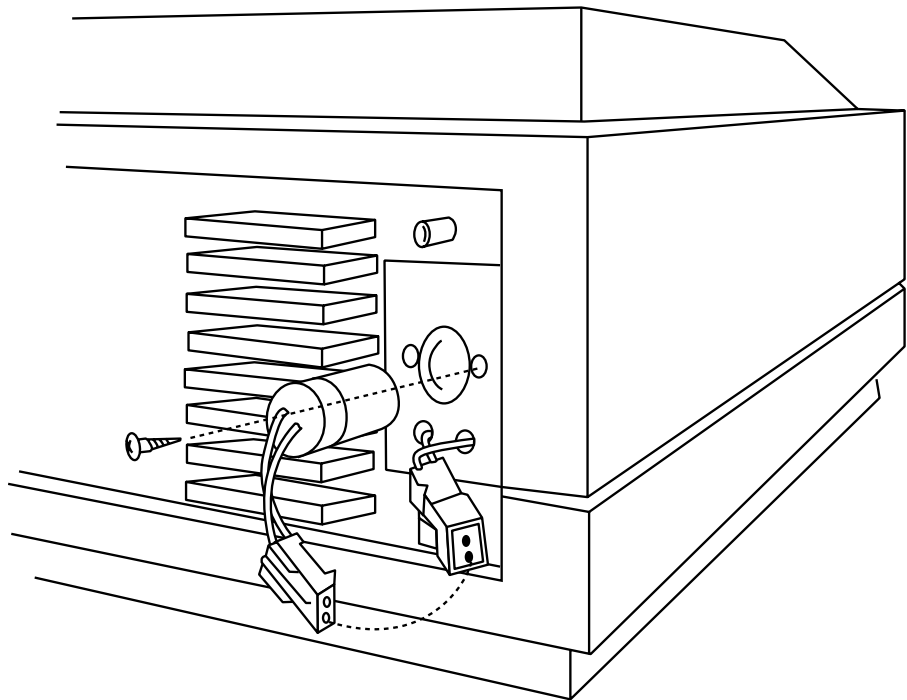


Figure 5: Removing the Burned-Out Lamp (Emax/Vmax)

- 7) Discard the burned-out lamp, then connect the new lamp to the snap connector.
- 8) Position the new lamp in the socket in the instrument, then secure it with the lamp screw.
- 9) Replace the lamp cover and secure it with the two Phillips screws. It's ok to bend the lamp wires to the side so that the cover fits.
- 10) Reconnect the power cable to the instrument and the wall socket. If using the instrument with a computer/printer, reconnect their cables to the instrument.
- 11) Turn on the instrument (and the computer, if using one), and then test the new lamp by performing an endpoint read. Use the lowest available wavelength to ensure the most rigorous test of the new lamp.