



8452A Spectrophotometer

Lamp Replacement

The 8452A UV and UV-Vis spectrophotometers have a deuterium lamp. The 8452A Vis-SWNIR spectrophotometer has a tungsten lamp.

Deuterium Lamp

Due to a variety of factors, the radiation intensity of the deuterium lamp gradually decreases with use. In general, the lamp does not fail abruptly (burn-out) but its output will typically drop to one-half its original level in about 1000 hours of use.

You may have to replace your lamp more or less frequently depending on how much sensitivity your measurements require, the wavelengths in which you are interested and variances between individual lamps. Let the quality of your results be your primary guide.

The following procedure for replacing the deuterium lamp (P/N# 08452-60104) is simple and requires only a flat-blade screwdriver.

Tungsten Lamp

Generally, the tungsten lamp fails abruptly due to the filament breaking. The maximum decrease in output is only approximately 25% over the entire lifetime. The typical lifetime of the tungsten lamp is 3000 hours of use.

The following procedure for replacing the tungsten lamp (P/N# 08452-60121) is the same as the deuterium lamp.

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To replace a deuterium or tungsten lamp:

- 1). Remove the spectrophotometer cover according to the procedure outlined earlier in this section. Make sure the power is off and the power cord is disconnected.
- 2). Disconnect the lamp wiring connector from the lamp power supply board.
- 3). Remove the two screws that hold the lamp in place.
- 4). Hold the lamp base and carefully lift the lamp out of the lamp bridge.
- 5). Carefully unwrap the new lamp.
- 6). Align the slot on the new lamp with the pin on the lamp bridge and lower the new lamp into place.
- 7). Tighten the screws that hold the lamp in place.
- 8). Connect the lamp wiring connector to the socket on the lamp power supply board.
- 9). Write the replacement date on an adhesive label or piece of tape and affix it to the spectrophotometer cover.
- 10). Replace the spectrophotometer cover.
- 11). Reconnect the power cord and turn on the spectrophotometer. Allow the lamp to warm up for one hour.
- 12). Take an intensity measurement over the entire spectrum and save the results for future reference