



Application Note 2: Bioptechs Objective Heater (Zeiss Elyra)

To start . . .

- 1) Before you turn on the objective heater controller (electronics box), string the objective heater through the tray on the bottom right of the microscope black box. Put the objective heater on the inner column of the objective.
- 2) Turn on the objective heater controller.
- 3) Is the red LED out? If not, tighten controller using the set screw on the objective heater (5/64 hex key). When the red LED is on, the objective heater is not making good contact with the objective.
- 4) The select button determines which temperature is being displayed. Use the up and down arrows to adjust the setpoint. Heating will happen when objective temp < setpoint. The reference wire (blue) is just an extra thermocouple for measuring wherever you want to measure.
- 5) Suggested setpoint (measured using 2 mls of PBS in a Matek dish using the 100x/1.46 objective): Setpoint = 37.0°C -> Results in a temperature at the center of the dish = 36.1°C. (Note that it is better to err 1°C low than 1°C high!)



When you are done . . .

- 1) *Turn off the objective heater controller BEFORE you remove the objective heater. Otherwise the objective heater attempts to heat air and can burn itself out.
- 2) Clean off your objective.
- 3) Remove objective heater and bring it back outside the box.
- 4) Clean off the reference probe if you used it.