



**Figure 1- figure supplement 1. Objective heating system.** Left, the objective heater consists in a heating band with a temperature feedback connected to a temperature controller. In all experiments, the temperature command was set to the maximum value (60 °C). In addition, a polyimide film (thermal isolator) was enwrapped around our 60X objective (NA=1.1). Due to its shape, the objective was not in tight contact with the entire band width and the glass temperature could not reach ~37 °C. Right, this was not the case with the large 25X objective (NA=1.05), which straight shape ensured a tighter contact with the band and a higher glass temperature.