# Multiphoton Laser Startup (i880)

*If the Insight lasers (tunable and fixed) do not turn on when prompted from Zen, please follow instructions below:*
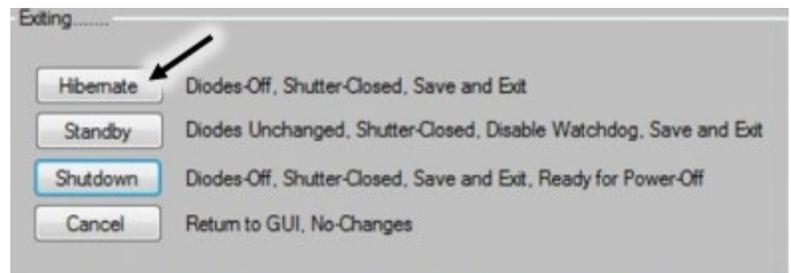
## Graphical User Interface (GUI) control software

1. Minimize Zen, go to the desktop and double click the GUI control program *Insight.*



2. The program looks for the Insight DS + laser system, and when found, the Main Display shows "Insight Detected" and "Initialization Proceeding".



GUI control software detecting/ initializing Insight DS + laser system

*If prompted for a COM port instead of the display showing Insight Detected, exit Insight by clicking the close (x) button in the upper right corner. This brings up the shutdown options (Hibernate, Standby, Shutdown, or Cancel).*



GUI shutdown choices. Choose Hibernate.

- Click *Hibernate*, then, reopen Insight.

*If GUI shows that the laser is in **Fault** condition:*

- *Click power button to turn off emission.*

- *Exit Insight. Click on Hibernate.*

- *Restart Insight.*



Standard system showing a Fault

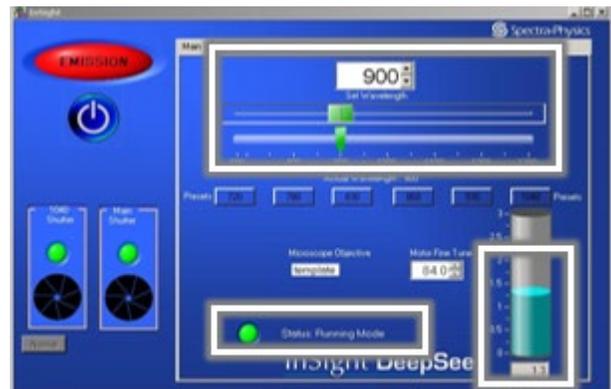3. The main tab display opens with 2 panels:

   *Left panel: contains the Emission indicator, the on/off diode laser control, the open/close shutter control, and the fault indicator.*

   *Right panel: shows the Main, Objectives, Diagnostics, and About tabs. The Main tab display allows the operator to monitor the laser, turn the laser on and off, open and close the shutter, and set the operation wavelength. It also displays laser output power, shutter position, and laser/controller communication.*



Insight Main Display window

4. Click and hold down the power button (shown under the *Emission* indicator) for 3 to 5 seconds until the emission light turns on (turns red).

5. Laser power climbs gradually and the system enters pulsing (mode-locked) operation.

6. When laser is *Ready*, a green light is turned on and laser status displayed is Running Mode.



Insight laser wavelength adjustment and laser power and status bar

7. Set the desired wavelength by typing it in or moving the upper horizontal slider, then wait for the lower Actual Wavelength slider to move to that same position. (You can also set wavelength using Zen software).

8. Keep GUI control software open and go back to imaging via Zen.

## When done…

1. Turn off multiphoton laser on Zen. Check GUI control software if laser is off, otherwise click power button to turn off laser.

2. Exit Insight and choose *Hibernate.*

3. Important: **Do not turn off the Main Laser Power Supply** located underneath the Vibration Table!