

UTD User's Guide for the J.A. Woolam Ellipsometer

1. You must have a NetID and password to log into Windows on the tool.
2. The CompleteEASE instrument software should launch automatically. Wait until system status reads "waiting to acquire data."
 - a. If at any point this message does not show up, or if the "Measure" button is greyed out and not functional, re-establish computer-instrument communication
 - b. Go to "Hardware" tab and click on "initialize"
3. Load a sample on the sample stage
4. Align optical source and detector
 - a. From the "Hardware" tab, click on "align sample"
 - b. Using the knobs on the sample stage (DO NOT TOUCH THE Z AXIS KNOB), align the red crosshair on the screen with the black crosshair. Verify that the value for Ave. Signal >1.
5. Perform measurement, collect spectrum
 - a. In the "Measurement" tab, in the "mode" drop-down menu, select "standard". From the "model" drop-down menu, select "none".
 - b. Click on "Measure"
6. A window to save the data automatically opens. Give the data a name and a file pathway.
7. Open "Analysis" tab.
 - a. Verify the correct file is indicated in the Data: field. In the Model: field, click load to open a model that makes sense for the user's sample. Verify the model has the correct substrate and layers. Layers may be added or deleted.
 - b. Indicate the film properties of the model layers that will be fixed and varied in order to fit the acquired spectrum to the model spectrum. Click on a parameter. Enter a "good guess" for the value. If this value is varied during the fit, click "fit."
8. Obtain fit parameters by clicking "fit". Calculated values for parameters that were varied will be displayed on screen.