

Wollam Ellipsometer Operation Manual



Coral name: Single Wavelength Ellips
Model: JA Wollam M-2000
Location: Nanofab, Building 215, Room B103

Overview

The Wollam Ellipsometer is a tool that is used to characterize thin films. The ellipsometer is able to extract sample film properties (thickness, n , k) by reflecting multiple polarized wavelengths of light onto the sample and measuring the polarized change of the reflected. Ellipsometry is a fast and accurate method to map out thickness values for many of the thin films in the lab.

Procedure

1. Determine if Wollam Ellipsometer is ready for measurements. Look to see if all three green power buttons are illuminating. If not, simply start from the bottom and press each of the power buttons.
2. Open up VASE Manger if it is not already running. There is no password – just enter.

3. Select a project (All users displays all the current recipes).
4. Select a recipe
5. Next you must estimate the film thickness
 - Click edit recipe and the “Recipe Editor” screen will appear
 - Select Edit/create strategies
 - Look for **Edit Layer (Thick=xxx)**, change value to estimated film thickness

- Save the Strategy and Return to Recipe Editor
- You may edit scan pattern if you wish as well.
6. Return to Recipe Screen
7. Enter a sample description
8. Click Measure
9. Mount Sample – be sure to turn on vacuum(pump switch) to hold sample in place and click OK
10. Align sample Tilt – use black tilt adjust knobs, adjust the tilt until the crosshair is inside the box then select continue
11. Adjust sample height MAX then select continue
12. The ellipsometer will then begin to acquire data
13. View data to see report and graph. The data will be stored in project folder selected.