

WYKO NT1100 Optical Profiler

NOTE:

Optical Profiler is not meant to measure the step height of transparent features (ie: certain photoresists)

Powering On:

1. Log into the computer using Operator, password: fabwyko1
2. Turn on the Power to the Optical Profiler on the front of the machine. To the left of the screen is a button that says Power.

Scanning a Sample:

1. Make sure that the first objective over the stage is x5
2. Place your sample in the middle of the stage
3. On the computer desktop, click the Vision program.
4. Adjust it your objective to the magnification desired
5. Click Hardware, then Measurement Options
 - a. Fix your parameters according to what objective and scan length that you are using.
 - b. When the correct parameters are set, and then click okay.
6. Adjust the focus (knob on the right and posterior of the machine) so that your image you want measured is clear, and on the screen of the Optical Profiler.
7. When the sample is completely in focus, there should be an interference pattern (stitching) that appears.
 - a. Adjust the lines using the focus knob and X & Y Tilt knobs to the front of the machine and the left side.
 - b. When looking to measure, these interference patterns should be covering one of the surfaces you are trying to measure.
 - c. Adjust the interference lines so that there are one to three bright fringes that are visible.
8. Click the intensity icon (Sun Icon) on the tool/menu bar at the top of the application.
 - a. Adjust the intensity of the light so that your sample is not saturated with light (Too bright) ie: redness throughout your measurement
 - b. To adjust the intensity, turn the bottom-most knob on the front of the machine to the left or right to turn down or up of the intensity respectively

9. Click New Measurement. If you see the light being saturated whilst the sample is being measured, turn down the intensity and try another new measurement until it is clear.

Analyzing the Sample:

1. The new measurement will appear in the center window of your Vision application on the monitor.
2. Click the Analysis Tab. Click Processed Options.
 - a. Under Terms Removal (first menu screen), click and select Modal Tilt Only.
 - b. Click OK
3. Click the Analysis Tab. In the drop down menu, click Processed, and choose a type of analysis (usually the 2D Profile)
4. Using the X and Y profiles, find two different, vertical spots on each respectively and record the Z value (Height) that separates them.
5. If your profile looks correct, save it in a new folder with the Substrate and resist used, date, and initials.

Shutting Down:

1. Exit out of the Vision Program
2. Turn off the Optical Profiler from the button next to the screen near the top of the machine
3. Log out on the computer
4. Remove your sample from the stage
5. Record in the Log Book:
 - a. Date
 - b. Name
 - c. Time period using the Optical Profiler
 - d. Magnification