

System Information



- 1) Make: SENTECH Instruments
- 2) Model: SE 800
- 3) Software: Spectra Ray
- 4) Specifications:
 - a. Spectral wavelength range: 240nm - 930 nm
 - b. Angles for Measurement: 40° - 90°, 5° steps
(Manually changeable angle, by default it is fixed at **70°**)
- 5) General: It is a non-destructive and contact less measurement tool for the characterization of thin film. An optical model and fitting procedure are necessary to obtain film thickness and optical refractive index.
- 6) Parameters can be extracted
 - a. Thin film thickness
 - b. Refractive index
 - c. Uniformity of films
- 7) Allowed Materials: Dielectrics and Polymers
- 8) Sample Preparation
 - a. Substrate : Si substrate or transparent substrate
 - b. Sample size: Min - 1cm* 1cm and Max- 6 inch * 6 inch

Training Procedure Steps

- 1) User should complete their training on tool from any of the authorised user.
- 2) The user has to do three independent measurement runs in the presence of authorised user.
(Independent measurement runs includes all steps starting from switching ON to switching OFF the tool)
- 3) Authorisation test will be taken by System owner.
- 4) Violation policy
Not allowed to use the system for next 2 weeks
- 5) Reauthorisation of the tool
Complete whole training procedure excluding step 2.

Flow Chart

Procedure for Turning ON

- 1) Turn **ON** main power (red switch on the main cabinet)
- 2) Turn **ON** CPU power
- 3) Turn **ON** lamp power (green LED should glow)
- 4) Load sample on the Chuck
- 5) Focus
 - Hight focus
 - Tilt focus
- 6) Open Spectra Ray software window
- 7) For Measurement (click )
- 8) Turn **OFF** lamp power as soon as the measurement done
- 9) Create Model
- 10) For Fitting (click )
- 11) Save your experiment in Documents/users/folder_name/

Procedure for Turning OFF

- 1) Exit the Spectra Ray window
- 2) Shut down PC
- 3) Turn **OFF** CPU power
- 4) Check if lamp power is **OFF**
- 5) Turn **OFF** main power
- 6) Unload sample
- 7) Make an entry in the log-book in following format

Log- Book entry

- Date:
- Time In:
- Name:
- Department:
- Last Lamp Reading:
- New Lamp Reading:

- Non standard procedure (i.e. changes in the measurement setup, like Angle, wavelength, backside reflections, scan type, Module):
- Time Out

Check List

- 1) If Lamp Power is OFF
- 2) If CPU power is OFF
- 3) If Main power is OFF
- 4) Log book entry
- 5) Put Twizzer in box after use
- 6) Put back the Lens cap
- 7) Measurement angle is in **70°**
- 8) If any problem encountered during measurement, don't forget to mention it in the log book with your name and date