



# IIT Bombay Nanofabrication Facility

**Tool Name: Sentech Ellipsometer**

**Standard Operating System (SOP)**

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### Tool's Overview

## Checklist (Before starting the tool)

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

## System Information

1. Make: SENTECH Instruments
2. Model: SE 800
3. Software: Spectra Ray
4. Specifications:
5. Spectral wavelength range: 240nm - 930 nm
6. Angles for Measurement: 40° - 90°, 5° steps
7. (Manually changeable angle, by default it is fixed at 70°)
8. 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.
9. Parameters can be extracted
10. Thin film thickness
11. Refractive index
12. Uniformity of films
13. Allowed Materials: Dielectrics and Polymers
14. Sample Preparation
15. Substrate : Si substrate or transparent substrate
16. 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 authorized user.
2. The user has to do three independent measurement runs in the presence of authorized user. (Independent measurement runs includes all steps starting from switching ON to switching OFF the tool)
3. Authorization test will be taken by System owner.
4. Violation policy  
Not allowed to use the system for next 2 weeks
5. Reauthorization of the tool  
Complete whole training procedure excluding step 2.