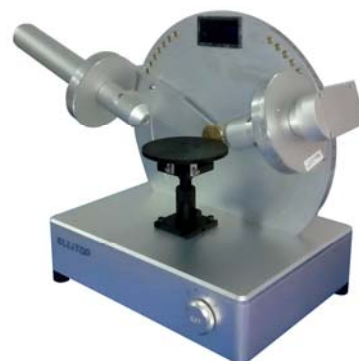


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## Education Ellipsometer REX1

### 1. Introduction

Ellipsometer REX1 is a ellipsometer for education purpose, which is based on the nulling ellipsometry sampling principle. It is a manually operated instrument for the measurement of nano-film on substrate in educational field.



Ellipsometer REX1 is designed for the demonstration of thickness and refractive index measurement of nano-film. It can be also used to measure the refractive index  $n$  and extinction coefficient  $k$  of bulk material (e.g. metal, semiconductor, dielectrics).

### 2. Features

- Nulling ellipsometry principle is adopted to demonstrate the basic measurement principle and process for operators.
- Horizontal direction sample stage is designed for putting samples easily.
- High-integrated and compact instrument is designed for convenient teaching and learning in educational.
- High performance He-Ne laser makes sure the measurement accuracy.
- Multi-functions of the instrument are useful, such as the measurement of thickness and refractive index of nano-film on substrate, and measurement of the complex refractive of bulk material.
- Manual operation is convenient for education purpose, and the software is most useful for ellipsometric data analysis.
- The instrument can be expended easily for other polarization measurement experiments, such as the Malus law.

### 3. Applications

Ellipsometer REX1 is suitable for teaching and learning in education field. It can be used to measure the single nanometer film thickness on substrate, also can be used to measure the refractive index  $n$  and extinction coefficient  $k$  of bulk material.

Ellipsometer REX1 can be used in many field involving nano-film, such as microelectronics, semiconductors , integrated circuits, display technologies , solar cells, optical film , life sciences , chemistry , electrochemistry, magnetic mass storage , flat panel display , polymers , metal surface treatment and so on.

### 4. Technical Specifications

Item	Description
Model	REX1
Operation mode	Manual
Sample placement direction	Horizontal
Light source	He-Ne laser, wavelength 632.8nm
Diameter of laser beam	$\Phi$ 2-3mm
Angle of incidence	Manual goniometer (30°-90°, set in steps of 5° )
Scale range of polarizer and analyzer	0-360°
Scale interval of polarizer and analyzer	1°
Minimum scale of polarizer and analyzer	0.05°
Sample stage	Adjustable samples stage, height: 10mm 2-D tilt adjustment: $\pm 4^\circ$
Maximum sample size	$\Phi$ 120mm
Software	Multiple measurements items Data analysis , calculation, input and output
Dimensions	566 x 286 x 405mm (at angle of incidence 70°)
Weight	13Kg

### 5. Performance guarantee

- ISO9001: 2008 International quality system certification
- Extensive experience in the development and manufacture of professional ellipsometer

### 6. Order Information

- Hardware Model: REX1
- Software Model: RETEX