Research India

Research India
M/Q-191, CWS Jayant, Singrauli (M P)
Tel.no-9425678895,9891048350
www.research-india.co.in
E-mail: sales@research-india.co.in

Education Automatic Ellipsometer REX2

1. Introduction

Ellipsometer REX2 is ellipsometer family for education purpose, which is based on the nulling ellipsometry sampling principle. It is an automatically operated instrument for the measurement of nano-film on substrate in educational field.

Ellipsometer REX2 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.
- The instrument is operated under RETEX software which has the functions of sampling and data analysis.
- Security of access management for users.
- The instrument can be expended easily for other polarization measurement experiments, such as the Malus law.

3. Applications

Ellipsometer REX2 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 REX2 can be used in many fields 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	REX2
Operation mode	Automatic
Sample placement direction	Horizontal
Light source	He-Ne laser, wavelength 632.8nm
Film thickness repeatability	0.5nm(for 100nm SiO_2 film layer on Si substrate)
Film thickness range	Transparent film:1-4000nm
Film refractive index range	1.3-10
Diameter of laser beam	Φ2-3mm
Angle of incidence	Manual goniometer (30°-90°, set in steps of 5°)
Scale range of polarizer and analyzer	0-360°
step Angle of polarizer	0.014°
Sample stage	Adjustable samples stage height: 16mm 2-D tilt adjustment: ± 4 °
Maximum sample size	Φ120mm or 120mm x 160mm
Software	Multiple measurements models; Multiple project items; Data analysis , Calculation, input and output
Dimensions	550*375*260mm (at AOI = 70°)
Weight	15Kg

5. Performance guarantee

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

6. Order Information

- Hardware Model: REX2
- Software Model: RETEX