

Spectroscopic reflectometer

NanoCalc 2000

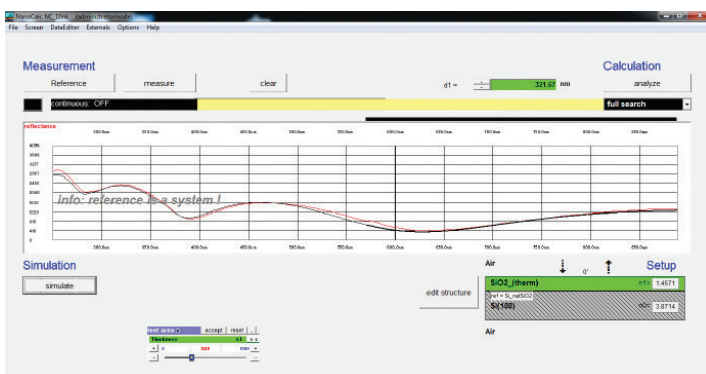
DESCRIPTION

NanoCalc is reflectometry thin film measurement system. It is based on spectroscopic reflectometry to accurately determine optical or non-optical thin film thickness in the range of a few nanometers up to hundreds of micrometers with resolution of 0.1 – 1 nm. It is suitable for applications in a variety of semiconductor applications, such as resist thickness and oxide film thickness measurement. NanoCalc system measures anti-reflective coatings, anti-scratch coatings and rough layers on substrates such as steel, aluminum, brass, copper, ceramics and plastics. Big advantage of this type of measurement is fast observation of thickness of these films.

FEATURES

- » UV/VIS/NIR and high resolution configurations
- » accuracy to 1 nm, resolution to 0.1 nm
- » measure up to 10 layer stacks
- » measurement of transparent metallic layers down to 1 nm thick
- » adaptors for complex geometries and accessories for thickness mapping
- » sophisticated algorithms enable defect and roughness tolerant measurements
- » large database ensures accuracy over a broad range of materials

APPLICATIONS

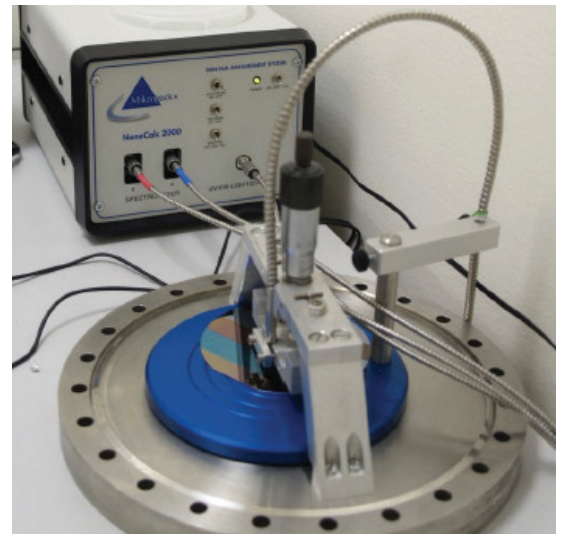


Measuring software

MORE INFO

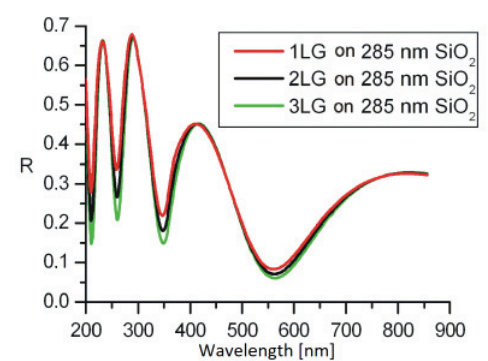
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Web: <http://nano.ceitec.cz/spectroscopic-reflectometer-ocean-optics-nanocalc-2000-nanocalc/>



SPECIFICATION

Spectral Range	250 – 1100 nm
Total thickness range	10 nm – 100 um
Resolution	0.1 nm
Repeatability	0.3 nm
Absolute accuracy	< 1 % (100 nm – 10 um)
Number of layers	up to 10 layers
Distance with fiber	1 – 5 mm
Distance with optic	5 – 100 mm
Angle with optic	90° (nominal incidence)
Spot size	400 um



Comparison of reflectivity measurement on single, double, and triple layer of Graphene on SiO₂ [with permission of Zuzana Lišková]

