NanoSpec® 3000

Advanced Film Thickness Measurement System

NANO metrics

- Precision film thickness measurements
- Advanced solid state, small spot reflectometer
- Manual stage
- Outstanding value
- Small footprint table top design
- Designed for cleanroom or engineering lab
- Rugged and reliable
- Optional auto loader

The NanoSpec 3000 film thickness measurement system is a state of the art, small spot spectroscopic reflectometer, built on a simple to use tabletop platform. A modern solid state linear diode array reflectometer is used to insure measurement speed and accuracy. Its Windows®98 software interface is simple to use, and is supplied with a suite of Nanometrics standard measurement programs that handle most semiconductor films. The flexible software design makes it simple for the engineer to customize measurement programs and recipe jobs for more advanced applications.

Equipped with similar measurement hardware as Nanometrics' more automated tools, the 3000 can handle complex semiconductor thin film processes. The software platform allows the creation of unique single and multiple layer programs for the proprietary films and film stacks utilized in modern semiconductor processes. With the ability to select film constants, scan ranges and substrate types, the 3000 is the ideal tool for rapid measurement program development.

The NanoSpec 3000 provides scanning from 480 to 800nm and can measure single-layer films such as oxide, nitride and photoresist, as well as multiple layer film stacks. Measurements can also be made on a wide variety of other substrates including silicon, aluminum and gallium arsenide.

The advanced software platform provides the process engineer with complete freedom and flexibility in creating custom measurement programs to meet the demanding needs of today's wafer fabs, especially during process startups. Data management features statistical analysis, histograms and the ability to export data files.

As with all Nanometrics' products, the NanoSpec 3000 is supported by a worldwide applications and service organization committed to helping customers realize maximum equipment performance and return on investment. These support services include technical applications, service/maintenance training and software updates.

NanoSpec® 3000 Series

NanoSpec® 3000

- Standard 3000 base unit includes 10X objective and manual stage for 75-150mm wafers

Options

- Color graphics printer
- Uninterruptable power supply (115VAC or 230VAC)
- Line conditioner (115VAC or 230VAC)
- NanoStandard* film thickness standard wafer (6")
  (serialized wafer with 6 thermal ox films grown on wafer surface)
- 4" silicon reference wafer
- Trade-in package on used equipment*

* Contact Nanometrics for quotation

SPECIFICATIONS

Performance	
Number of Films	Up to 3 layers
Wavelength Range	480 to 800nm
Film Thickness Range	250Å to 35µm
Reproducibility	< 2Å
Measurement Time	0.25 to 4 sec/site
Data Management	Statistical data analysis,data export (ASCII)
Hardware Configuration	
Wafer Sizes	75 to 150mm
Optics	10X
Spot Size	25µm
Computer	333 Mhz PC with 3.2G hard drive and 64M RAM
Facilitites	
Cleanroom Compatibility	Class 1
Dimensions	
Table Top Components: (Optics Stand, Monitor, Keyboard, Trackball)	46W x 22D x 29H inches
Weight	45 kg [100 lbs.]
Electrical Power	117 ±5% VAC, 50/60 Hz, 5A 230V, 50/60 Hz, 2.5A

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