



MS-WIS 200/300

Multi-Sensor Wafer Inspection System

Fast, accurate and reliable metrology module designed specifically for instantaneous measurement of wafer thickness and total thickness variation (TTV). This state of the art metrology tool utilizes MultiMetrix's proprietary new Resonance Sensor Technology (RST™). The innovatively designed measurement chamber is equipped with a built-in 49-points sensor to deliver full wafer characterization, including optional bow and warp, in 5 seconds per wafer.

Hardware Configuration

Measurement chamber with embedded sensors: 49 points for 200 mm and 300 mm wafers

Control Features

Computing – Pentium 4, RAM 2 Gb, HD 120 Gb, RS 232, special hardware, 4U rack mount
Line Voltage – 110/220 V and 50/60 Hz

Measurement Performance

Wafer Thickness Range 500 μm to 850 μm (optional 90 μm to 500 μm)

Accuracy $\pm 0.5 \mu\text{m}$ Total thickness
 $\pm 0.25 \mu\text{m}$ TTV

Optional

Warp Measurement (w/o gravity correction)

Max. Allowed Warp 800 μm

Accuracy $\pm 0.2 \mu\text{m}$ or 1% of reading

Repeatability $\pm 0.1 \mu\text{m}$ or 1% of reading

Resistivity in 49 points *(requires an additional chuck)*

Low 0.001 $\Omega\text{-cm}$ - 0.5 $\Omega\text{-cm}$

Middle 0.5 $\Omega\text{-cm}$ - 100 $\Omega\text{-cm}$

High 100 $\Omega\text{-cm}$ - 1,000 $\Omega\text{-cm}$

Repeatability 0.5% or better

Mapping Instantaneous
2D and 3D data representation

Time of measurement 0.25 sec per 49 points

Component Reliability

Uptime > 80%

MTBF > 20,000 hours

MTBA > 8,000 hours