

MicroSense UltraMap C200A

Wafer Characterization for In Process Measurement

MicroSense new UltraMap C200 measurement system provides full wafer, high speed measurement of semiconductor material using fast accurate non contact capacitive sensors.

MicroSense capacitance sensor technology provides full high resolution mapping on sawn, lapped, single side polished, or double side polished wafers in the production environment.

UltraMap C200 systems are available in both a low cost bench top system as well as a fully automated sorting configuration with up to six cassettes.



Complete Coverage:

- Thickness
- TTV/TIR/LTV/LTIR
- Bow/Warp

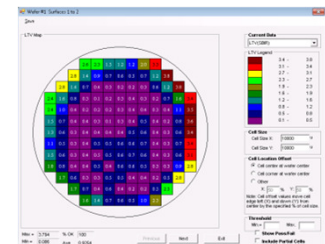
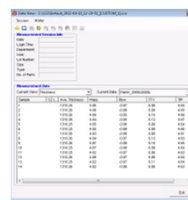
Fast, Accurate Measurements

- Throughput up to 90 wafers/hour 150mm
- >100,000 measured points
- 0.05 μ m TTV Repeatability
- 2D & 3D mapping capability

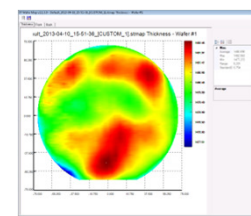
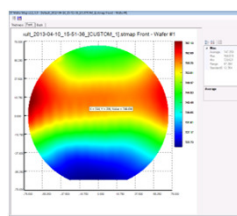
Production Friendly

- Sawn, Lapped and Polished wafers
- Non clean room environment
- Automated calibration

Flexible Reporting



Hi Resolution Wafer Mapping



UltraMap C200A System

Measurement Parameters	Accuracy ¹	Repeatability ² One Sigma	Display Resolution
Thickness: Center, Minimum, Maximum, Average	± 0.10 µm	0.05 µm	10 nm
Global Flatness: TTV TIR FPD	± 0.05 µm	0.05 µm	10 nm
Local Flatness ³ : Local Thickness Variation (LTV) Local Total Indicator Reading (LTIR) Local Focal Plane Deviation (LFPD)	± 0.05 µm	0.05 µm	10 nm
Bow and Warp Bow Warp Sori		0.5 µm + 0.5% of reading	10 nm

1 Accuracy to a known standard. Multiple C200 metrology systems will match to within the accuracy spec.

2 Repeatability one sigma specification based on ten passes, wafer load and unload.

3 LTV = SBIR, LTIR = SFQR, LFPD = SFQD

Measurement Throughput (Wph)	50mm	100mm	150mm	200mm
	150	120	90	60
Data Analysis	Measurement Parameters: Thickness, TTV, TIR, LTV, Bow, Warp Wafer Maps: Contour, 3D Surface, Site LTV			

Wafer Specifications

Diameters: 50mm, 100mm, 150mm, 200mm
 Diameter Tolerance: ± 0.5mm
 Thickness Range: 300 to 1400 µm
 Dynamic Range:
 Thickness: ± 50 µm
 Bow/Warp: ± 250 µm
 Surfaces:
 Sawn, Lapped, Polished
 Fiducials: Semi Flat, Notch

System Configuration

Wafer Handling: Robotic
 Measurement Positioning: Precision Air Bearing
 Pre-aligner: Optional
 OCR Reader: Optional
 SECS/GEM: Optional
 Cassette Stations: Up to 6
 Calibration: Automated
 Reliability (MTBF): 10,000

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