

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.



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

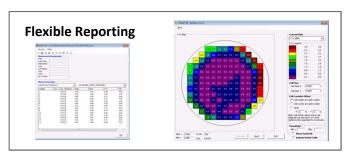
Fast, Accurate Measurements

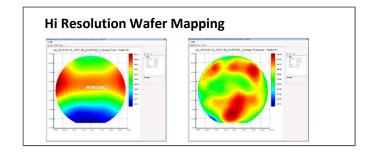
- Throughput up to 90 wafers/hour 150mm
- >100,000 measured points
- 0.05µm TTV Repeatability
- 2D & 3D mapping capability

Production Friendly

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







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.

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

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

Wafer Specifications

System Configuration

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

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