

UltraMap UMM-BP1-X30

Thickness Measurement System

MicroSense's UltraMap UMM-BP1-X30 measurement system utilizes MicroSense proprietary auto-positioning backpressure, probe technology to measure wafers of any material up to 350mm in diameter.

The system can measure wafers ranging from 10 μ m to 20mm thick without mechanical adjustment of the probe position.

Using manual sample positioning, the system achieves lowest-possible cost while maintaining high flexibility.

Wide Measurement Range

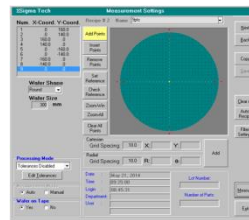
- 50 μ m to 20mm thickness
- Warp range 100 μ m

Precise, Accurate Measurements

- 0.5 μ m absolute accuracy
- Available verification standards
- Available reference standards for high-thickness samples

Production Friendly

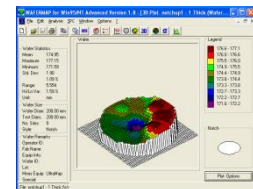
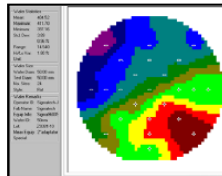
- Sawn, Lapped and Polished wafers
- Non clean room environment
- Easy data export



Flexible Recipe Setup



NIST Traceable
Verification Standards



2D / 3D Wafer Mapping

UltraMap UMM-BP1-X30 System

Measurement Parameters	Accuracy ¹	Repeatability ² One Sigma	Resolution
Thickness: Flat Wafers (<100um Bow) Thickness: Center, Minimum, Maximum, Average	0.5µm	+/- 0.15 µm	0.1µm

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

2 Repeatability one sigma specification using flat, polished wafers, operator positioning uncertainty excluded.

Measurement Technology

The UltraMap-BP systems use an exclusive patented backpressure sensing probe for precise measurement of all materials, whether conductive or non-conductive. The advantages of this sensing probe technology include:

- Autocalibration of backpressure sensors (no need for master wafers)
- No need to adjust for different materials
- Automatic adjustment to material thickness over a 2000µm range

Wafer Specifications

Wafer Size: Any, including, and Custom and Saw-frame mounted.

Thickness Range:

Bare: 50µm - 3000µm

Sawframe Mounted: > 10µm

Surfaces:

- Wafers - As Sawn, Lapped, Polished
- Tape

System Configuration

Wafer Handling: Manual

Measurement Positioning: Manual

Calibration: Automated

Reliability (MTBF): 50,000 Samples

Facilities Requirements

Dimensions: 30" width, 34" depth, 20" height. Separate PC, Monitor, Keyboard, and Mouse

Weight: 150lbs

Voltage: 110V for US, 200 – 250V options available. Single phase grounded polarized outlet required.

Frequency: 50/60 Hz

Current: 2A nominal, 10A peak

Circuit Breaker: 10A UL489A certified breaker

Air supply: Clean dry air or Nitrogen 40 – 60 PSI

Fittings: ¼" compression fitting

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