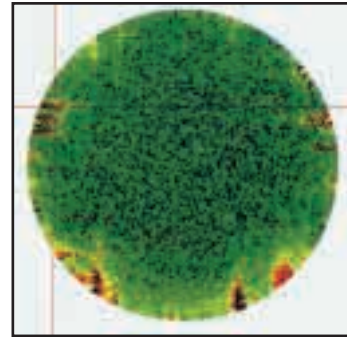
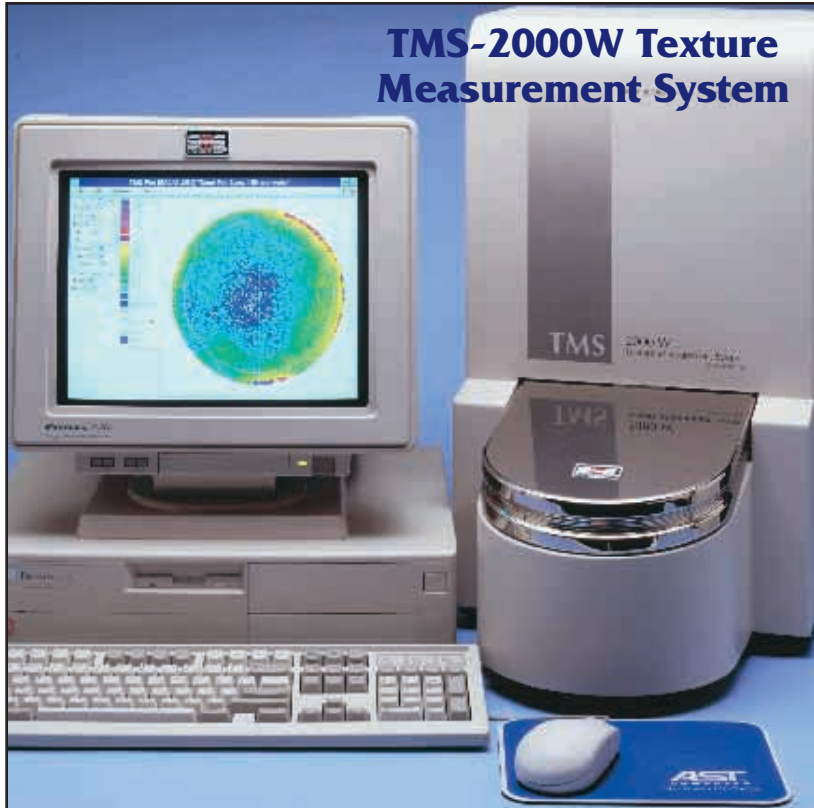


New

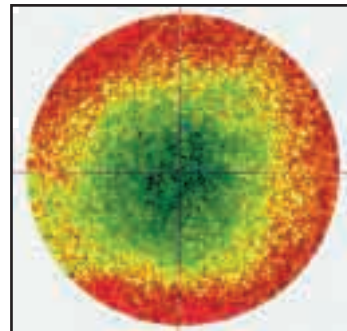
The Ultimate Measurement System

Non-Contact • Fast • Accurate • Repeatable



WAFER SLIP
Average Roughness 2.4 Å

RMS [Å] - Avg 2.4 - STD 0.5
Max 20.8 - Min 1.5



WAFER FULL PLOT
Average Roughness 2482 Å

RMS [Å] - Avg 2482.0 - STD 104.5
Max 2832.2 - Min 2134.0

REVOLUTIONIZING WAFER MANUFACTURING TECHNOLOGY

The fastest, most accurate, non-contact texture measurement system in the world. Laser technology of today for the future. Currently being used successfully by major wafer manufacturers. Discover the ultimate solution to fast, accurate measurements in wafer manufacturing.

FEATURES:

- **NON-CONTACT MEASUREMENTS** cannot harm test surfaces
- **RESULTS** - RA, RMS roughness from .2Å to 5000Å
- **COST** - Lower costs than Profilometer, AFM or Interferometers
- **PRECISION** - Resolution of 0.1Å, reproducibility +/- 0.5Å or 1% and repeatability +/- 0.2Å
- **SPEED** - Typically 50 test points per second

BENEFITS:

- Quadruple Production Throughput
- Measures Haze and Emissivity
- Increase Performance/Quality
- Unaffected by outside environmental conditions
- Minimal operator training required
- Lowest cost per measurement of any system
- Correlates to other measurement instruments

**THE TECHNOLOGY PREFERRED
BY MANUFACTURES
WORLDWIDE**



(503) 227-5178
FAX (503) 227-5040

Schmitt Measurement Systems, Inc. ■ 2765 N.W. Nicolai Street ■ Portland, OR 97210

The Ultimate in Metrology Roughness Characterization

The fastest, highest resolution, most stable non-contact microroughness measurement system in the world. Advanced laser-based system ideally suited for quantifying and mapping full surface, interrupted, and zone scans. Now used

by major disk and wafer manufacturers. Discover the ultimate answer to fast, reliable microroughness measurements in disk and wafer manufacturing, with systems that simplify lab to manufacturing correlation.

TYPICAL SPECIFICATIONS

(At Factory Setup)

MEASUREMENTS

Source:	Class II Laser, 670 nm
Spot Size:	~1mm diameter
Number of Spots:	Programmable (full sample to single test point)
Primary Results:**	Ra or RMS (Rq) Microroughness
Secondary Results:	P-V, RMS Slope, TIS, Diffuse Reflectance, Specular Reflectance, Haze, Gloss, Emissivity
Speed:	50 Measurements per second*
Range:	From 0.2Å up to 5000Å (RMS or RA)

Resolution:	0.1Å
Repeatability:	±0.2Å or 0.5% (whichever is greater) (same sample, same machine)
Reproducibility:	±0.5Å or 1% (whichever is greater) (same sample, different machine)
Spacial Filtering Frequency:	(wavelength)

Low Band:	0.026 to 0.129 μm^{-1}	(7.8 to 38 μm)
High Band:	0.129 to 1.14 μm^{-1}	(0.88 to 7.8 μm)
Full Band:	0.026 to 1.14 μm^{-1}	(0.88 to 38 μm)

* varies with Scan and User Setup

** for specifications on secondary results, contact SMS

ROTARY STAGE

Repeatability:	±0.01°
Accuracy:	±0.05°

LINEAR STAGE

Repeatability:	±0.0005 inch (±0.01 mm)
Accuracy:	±0.0010 inch (±0.03 mm)

DATA GENERATION

ASCII Data Files (Detailed), SPC Data Files (Production Statistics), Color Plots, Sample Statistics

COMPUTER

P166 Personal Computer – Optional Color Printer

SAMPLE – HOLDERS

Standard Wafers: 125mm, 150mm, 200mm

MATERIALS

Bare Silicon (etched, ground, polished, etc.) and various coated silicon

INSTALLATION

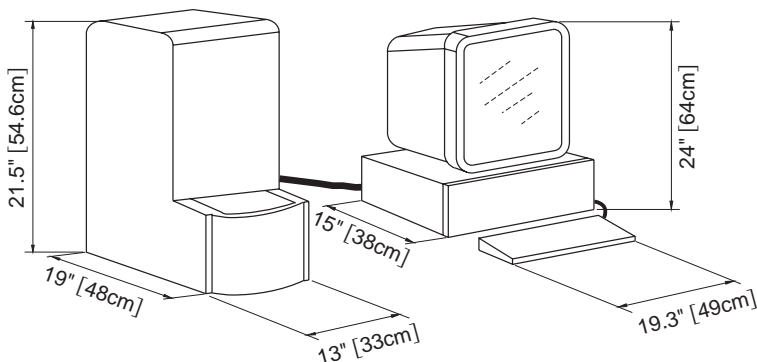
Electrical Requirements: 100-240 VAC – 50/60hz
Total System: 950W Max

SHIPPING WEIGHTS

Computer:	85 lbs/ 39 kg
TMS-2000-W:	85 lbs/ 39 kg
Total w/packing:	180 lbs/ 82 kg

TMS-2000-W

P166 Computer



Safety Considerations: Complies with all applicable laws for the manufacture of laser devices. This system is classified by the Center for Devices and Radiological Health (CDRH) as a class II laser device. Class II systems: do not stare directly into the laser source or point the laser at another's eye.



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