



MDC PRODUCTS CATALOG



MDC is your best source for versatile systems and services for **semiconductor** and **photovoltaic** applications. Our 30 years of experience can help you with more precise measurements and faster throughput offering reliability and technical expertise.

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C-V, I-V MEASUREMENT SYSTEMS

The CSM/Win Semiconductor Measurement System family includes over phundred different instrument configurations. Powerful software packages under "windows" offer the most advanced C-V/I-V evaluations with quantitative analysis of critical material and device properties.



MERCURY PROBES

Mercury probes are precision instruments that enable rapid, convenient, and non-destructive measurements of semiconductor samples by probing wafers with mercury contact of well-defined area. No sample preparation, as mercury contact allows direct measurement of bare semiconductors. 150mm and 200mm platforms. Mapping option.



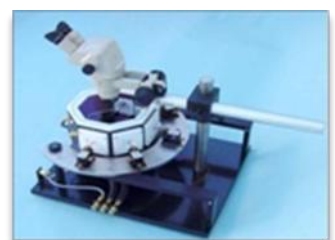
PROBE STATIONS – PROBES AND PROBE TIPS

A complete line of probe stations suits all measurement requirements from basic hot chuck systems (100mm to 300mm) with DC temperature controller from ambient temperature up to 600°C. Light tight enclosures with computer-controlled light flash. Various types of micromanipulators and probe tips meet all applications.



HOT-COLD TERMOCHUCK

CRYOGENIC PROBE SYSTEM with a cold chuck mounted in a sturdy aluminium light-tight dewar, holds up to 5 probes. Temp. range from -193°C to 200°C. MICROSCOPES with optical and video capabilities. WAFER AREA PROBER combined with a hot chuck for 300mm wafers.



COPPER DIFFUSION TEST SYSTEMS either glove box version with airlock, or completely hermetically sealed hermetic enclosure.

DC PARAMETRIC TESTERS - REEDHOLM

DC parametric systems used for process control, final test, wafer-level and package-level reliability test systems. Reedholm systems offer small footprint; PC control; software for data acquisition, formatting, analysis; graphical evaluation and display.

- Wafer Level Test Systems: for process control, device characterization, wafer level reliability, charge damage assessment, DC final tests, custom ATE
- Memory mapped instrumentation: 2x to 7x better speed
- Prober drivers for all popular probe station models.
- Three years MTF, perpetual upgrades.



MANUAL RESISTIVITY TESTERS

4-point probe manual sheet resistance tool for up to 200mm wafers and ingots. Key features are ease of operations and reliability.

- dedicated System Measurement Unit with combined current source and DVM (10nA - 100mA).
- Various types of probe stages (for wafers, small samples, variable heights...)
- Automatized probe arm systems

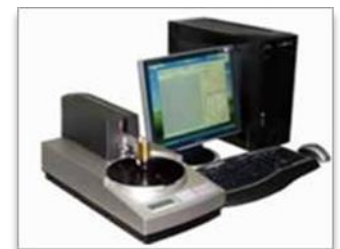


MAPPING FOUR POINT PROBE MEASUREMENT SYSTEMS

4PP systems measure sheet resistance, resistivity and calculate thickness for up to 300 mm wafer. Special PHOTOVOLTAIC version for 162mm square and 210mm wafer samples. 2-D & 3-D mapping, contour map, SEMI & ASTM patterns.

High precision FLAT PANEL SYSTEM up to 600mm x 720mm samples (LCD, ITO, TFT, thin film). Range 1mΩ/sq ~ 2MΩ/sq.

Customized probe head specs.



FOUR POINT PROBE HEADS NEW AND REPAIR SERVICE, ALL TYPES

Nine Probe Head Models (New, Refurbished, Repair)

- Cylindrical, Cartridge, Compact to fit all known resistivity measurement systems. (Prometrix, K&S, Napson, Veeeco, CDE a.o.) –

Customized probe spacing, load, tip.

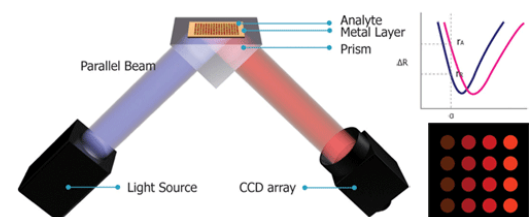


NON-CONTACT ANALYSIS - KMAC

- Compact, low cost and completely integrated UV and visible light optical spectrometer for research and didactics from K-Mac.

- Optical, non-contact thin film thickness measurement, color measurement, 3D metrology profile, bio-chip analysis.

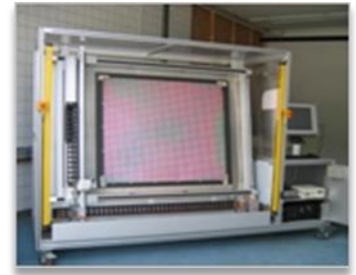
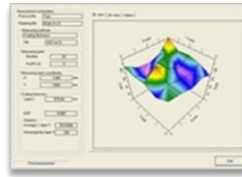
- Optical tools for PV cells defects analysis.



SHEET RESISTANCE & THICKNESS XZY MAPPING TABLE

Off-line tool for measuring THIN-FILM silicon SOLAR PANELS. It combines automated measurements of sheet resistance of the first TCO layer, of thickness of the a-Si layer and of the resistance of the second TCO layer.

- XYZ table, standard size 1150mm x 1350mm
- other table sizes upon request
- double measurement heads.



X-RAY METROLOGY EQUIPMENT FOR THE COMPOUND SEMICONDUCTOR INDUSTRY

Jordan Valley Semiconductors provides metrology solutions for thin films based on novel, rapid, non-contacting and non-destructive X-ray technology.

Jordan Valley equipment is designed for ultra high-throughput, mass production operation.

- Advanced, Enhanced HRXRD for LED, CPV and Epi-Layers wafer manufacturers
- Next-Generation technology HRXRD
- Highest Intensity in the market:
- Ultra-high throughput HRXRD for mass-production
- Fastest measurements with very-high accuracy & repeatability
- Designed to comply with SEMI standards (robot-ready, cleanliness)



CLEANING SYSTEMS (QUARTZ, CONTAINERS, CARRIERS, PADDLES)

Our partner, a well-reputed manufacturer of industrial, high-tech Cleaning Systems offering highest standards in workmanship and ease of operation.

SAFETY features exceed SEMI standards. A wide range of manual, semi-

automatic and automatic tools, with various cleaning methods from immersion, ultrasonic/megasonic, robotic agitation to all-spray offer highest cleaning standards and throughput.



- Diffusion Tubes, Quartzware, Epitaxial Bell Jars

- Etch & Deposition Chamber Parts
- Photoresist Coaters, Quartz Boats & Fixtures
- SMIF Pods, FOUPs & FOSBs, Low Cost Container Cleaner
- Optical Fiber Manufacturing Parts

BLENDING AND CHEMICAL DELIVERY SYSTEM (SLURRY)

The most sophisticated Slurry Feed, Blend and Distribution System for advanced CMP semiconductor processes used by the world's largest semiconductor manufacturer.



QUARTZWARE AND GLASS PARTS AND SUPPORTS

SemiQuarz offers “intelligent solutions made of quartz glass”. Services include a quartz shop able to manufacture products of any type meeting the highest industry quality standards, milling and grinding parts of quartz glass and technical ceramic and a lasershop (manufacture from technical drawings).

- repairing and rebuilding of quartzware
- cleaning (ISO 9001 certification)
- ready for cleanroom install product delivery



AMAT RTP REFURBISHING AND OPTICAL SPARE PARTS

- Refurbishing of reflector OEM parts. Polishing of the surfaces, nickel and multilayer reflection coating.
- High-precision production and assembly of mechanical and optical components.



WAFERS

- custom-designed quartz, glass and sapphire wafer products
- diameters of 4” up to 300mm (to 8” for sapphire)
- various substrate possibilities, blank, custom-designed structure wafers, custom-coated, glass-Si compound systems.
- ISO 4-6 certification



CLEANROOM CONSUMABLES

- Protection gloves and garments. Packaging and bags.
- Wipers, cleanroom paper, stationery items: cleanrolls, mouse pads.
- Products designed to respect cleanroom – class 10, class 100, class 1000 - regulations.



CONTACT US

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