

Precision, Purity, Performance.

Manufacturing Supply Chain

Powering Semiconductor Excellence



ADVANCED TECHNOLOGY



SMART AUTOMATION



CONTAMINATION CONTROL



MAXIMIZED YIELD

Smart Fab - AI



Automated Inventory Management



Risk Mitigation



Robotics

TEL
TOKYO ELECTRON

HSC-EYE-5000

APPLIED MATERIALS

VECTRA®

We prevent Supply Chain Disruption!

**"The future isn't built in plain sight.
It's engineered... at the atomic level.**

**Every breakthrough—
artificial intelligence, mobility, global connectivity—
begins with a single semiconductor.**

**But precision at this scale demands more than
innovation.
It demands perfection... across an entire supply chain.**

**At Manufacturing Supply Chain,
we manage the world behind the wafer—
with absolute accuracy, speed, and control.**

**From raw materials to fabrication...
& with custom designed 5.0 solutions...
we prevent supply chain disruption!**

**So the world's most advanced technologies
never slow down.**

**Manufacturing Supply Chain LLC.
*Powering semiconductor excellence."***

MSC's goal is to Prevent Supply Chain Disruption in Semiconductor Manufacturing...

I

*AI enabled platform that controls and manages raw materials and equipments -
Currently active*

Best Pricing
w/worldwide vendors



On-time delivery
(Superior logistics)



Best Quality
(Quality metrics)



II

This will help to prevent supply chain disruption – Coming soon

Adv. (AI) Analytics For Risk Mitigation



Automated Inventory Management
(RFID & IOT)



PRODUCT PORTFOLIO

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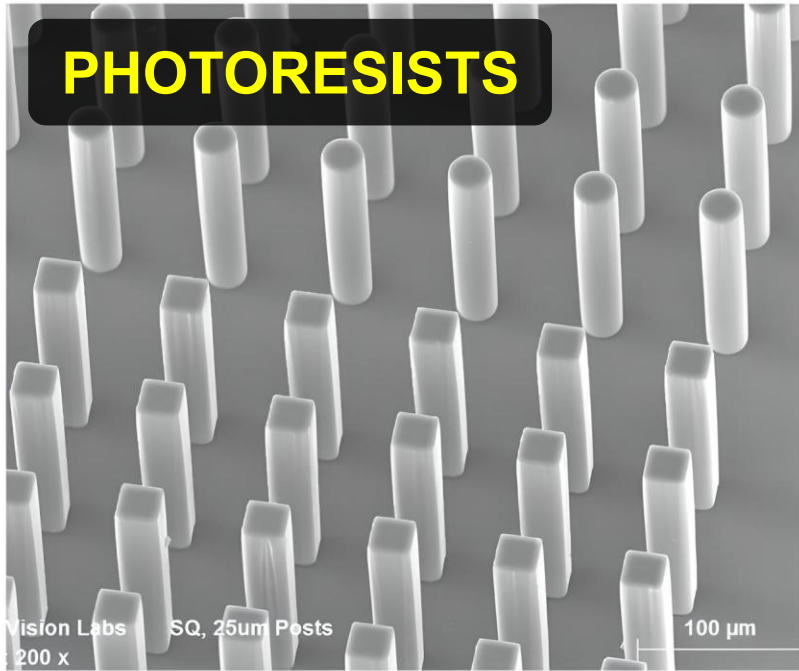


ELECTRONIC GRADE CHEMICALS



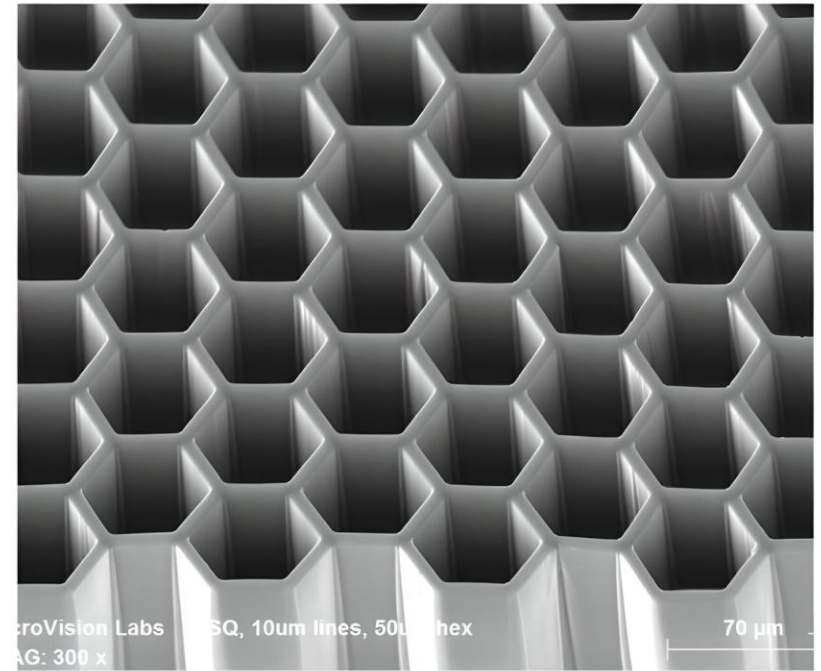
ACIDS **BASES** **SOLVENTS** **ETCHANTS**

PHOTORESISTS



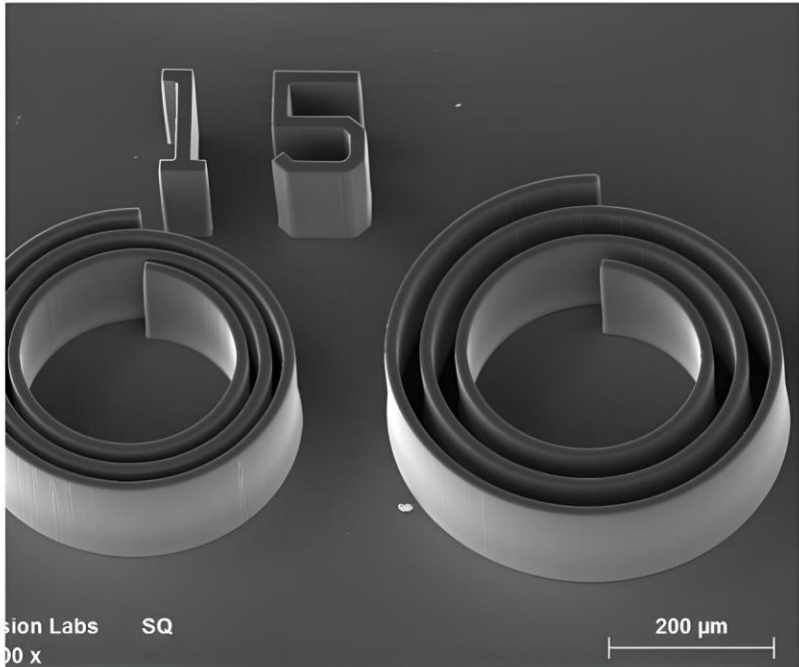
MicroVision Labs SQ, 25um Posts
MAG: 200 x

100 μ m



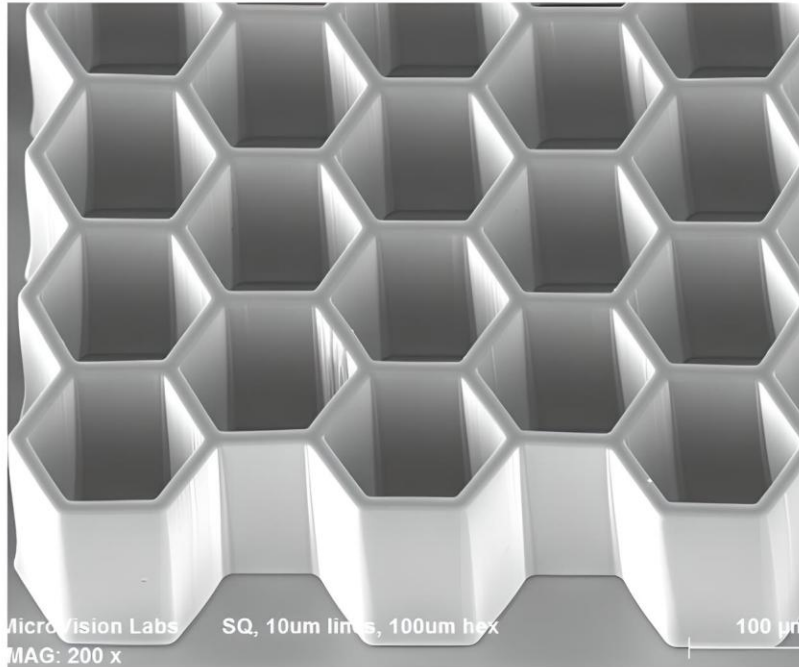
MicroVision Labs SQ, 10um lines, 50um hex
MAG: 300 x

70 μ m



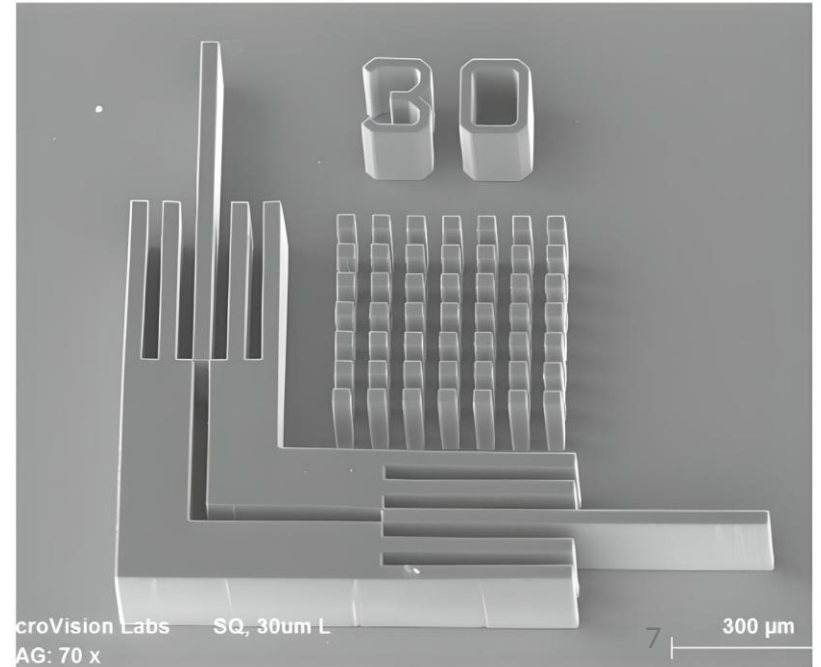
MicroVision Labs SQ
MAG: 200 x

200 μ m



MicroVision Labs SQ, 10um lines, 100um hex
MAG: 200 x

100 μ m



MicroVision Labs SQ, 30um L
MAG: 70 x

300 μ m



EVAPORATION MATERIALS



SPUTTERING TARGETS

Si, SiC, GaN, III-V & Others



APPLICATION-SPECIFIC WAFER PROBING SOLUTIONS FROM SEMIPROBE

www.mansupplychain.com



PROBE SYSTEM FOR LIFE - PS4L

MODULAR



All component parts are interchangeable

CUSTOMIZABLE



Open hardware and software designs enable simple integration of custom options and capabilities

UPGRADEABLE



Field retrofit upgrades from a manual to semiautomatic through to fully automatic system

WAFER PROBING SOLUTIONS: MEMS



WAFER PROBING SOLUTIONS: MEMS



Manual 200mm Probe Station:

- Test Multiple Technologies in One System
 - Customized to Specific User Requirements
 - Image Capture of Devices Under Test
 - High Accuracy Rapid Align Wafer Stage
 - Test Devices Ambient, Heated, or Cooled
 - Test Die and Wafers from 50 to 200 mm
 - Handle Wafers on Frames
 - Use individual Manipulators or Probe Cards
-

WAFER PROBING SOLUTIONS: MEMS



Manual 200 mm Vacuum Chamber Probe Station:

- Test Multiple Technologies in One System
 - Semiautomatic or Fully Automatic Configurations
 - Customized to Specific User Requirements
 - Adaptive Vacuum Chamber Architecture
 - Gas-Backfill and Overpressure Capability
 - Test Die and Wafers from 50 to 200 mm
 - Test at Ambient, Heated, or Cooled Temperatures
 - Integrate a Range of Third-Party Instrumentation
-

WAFER PROBING SOLUTIONS: MEMS



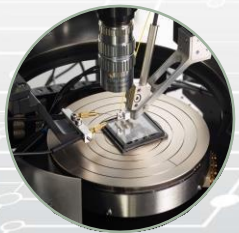
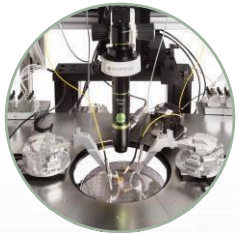
Manual 200 mm Probe Station:

- Test Multiple Technologies in One System
 - Customized to Specific User Requirements
 - Integrate a Range of 3rd Party Instrumentation
 - Field Upgradeable as Requirements Develop
 - High Accuracy Rapid Align Wafer Stage
 - Equipped with a Polytec Motion Analyzer
 - Test Die and Wafers from 50 to 200 mm
 - Use Individual Manipulators or Probe Cards
-

WAFER PROBING SOLUTIONS: OPTOELECTRONIC / SILICON PHOTONIC



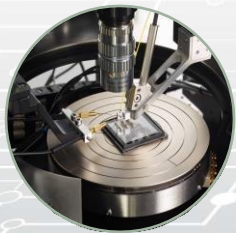
WAFER PROBING SOLUTIONS: OPTOELECTRONIC / SILICON PHOTONIC



Fully Automatic 200 mm Probe Station:

- Test LEDs VCSELs C Silicon Photonic Devices
- Customized to Specific User Requirements
- High Accuracy Fiber Alignment Positioners
- Programmable Hexapod Manipulators
- Cassette Load/Unload with Robot Handling
- Dual End Effector Robot for 150 C 200 mm Wafers
- Test at Ambient or Heated Temperatures
- Manual Wafer Load-Unload Capability

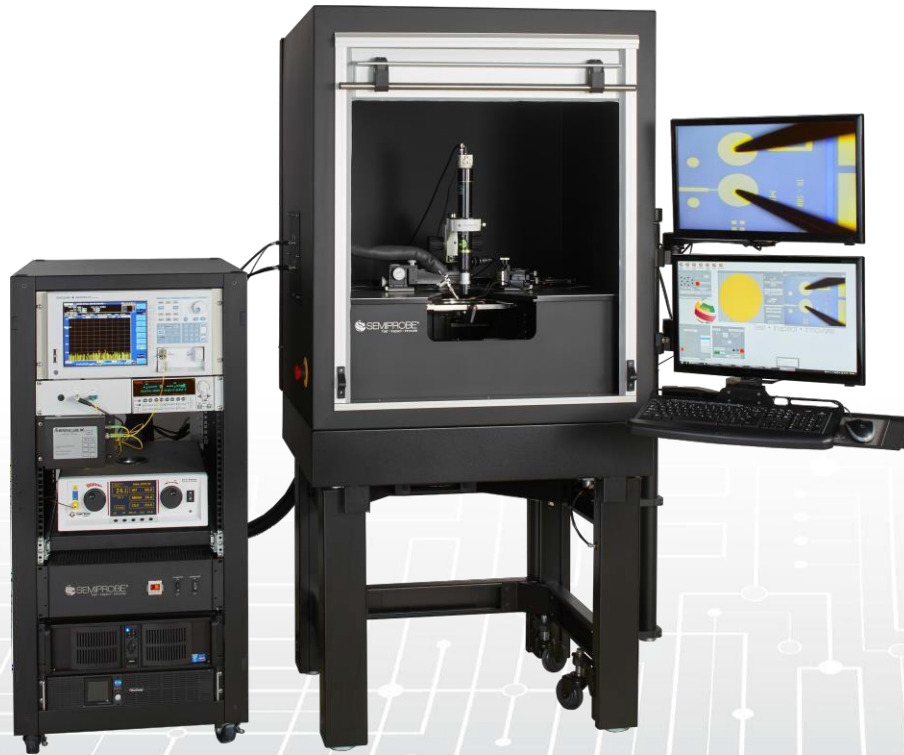
WAFER PROBING SOLUTIONS: OPTOELECTRONIC / SILICON PHOTONIC



Semiautomatic 100 mm Probe Station:

- Test LEDs, VCSELs C Silicon Photonic Devices
- Customized to Specific User Requirements
- Programmable Gantry to Switch Optics
- High Accuracy Fiber Alignment Positioners
- Test Die and Wafers from 50 to 100 mm
- Integrating Sphere Options
- Non-Contact Wafer Height Measurement
- Equipped with SemiProbe PILOT Software Suite

WAFER PROBING SOLUTIONS: OPTOELECTRONIC / SILICON PHOTONIC



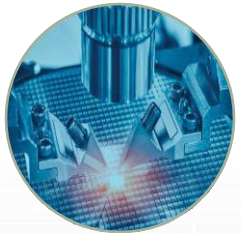
Semiautomatic 200 mm Probe Station:

- Turnkey Integrated Optoelectronic System
 - Single- or Double-Sided Probing Capability
 - Customized to Specific User Requirements
 - Test Die, Partial Wafers C Wafers up to 200 mm
 - Dark Environment with Custom Feed-Throughs
 - Customized Chip Carrier for Double Side Probing
 - Probing by Individual Manual Manipulators
 - Image Capture of Devices Under Test
-

WAFER PROBING SOLUTIONS: HIGH FREQUENCY



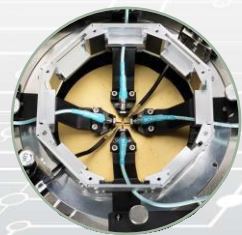
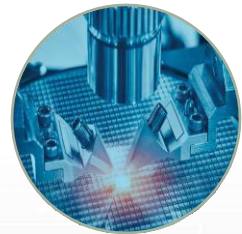
WAFER PROBING SOLUTIONS: HIGH FREQUENCY



Semiautomatic 200 mm Probe Station:

- DC to Over 750 GHz
- Keysight Vector Network Analyzer
- Chuck with separate Calibration Substrates
- High Frequency and DC Manipulators
- Test Die and Wafers from 50 to 200 mm
- Test at Ambient, Heated or Cooled Temperatures
- Customized to Specific User Requirements
- Field Upgradable

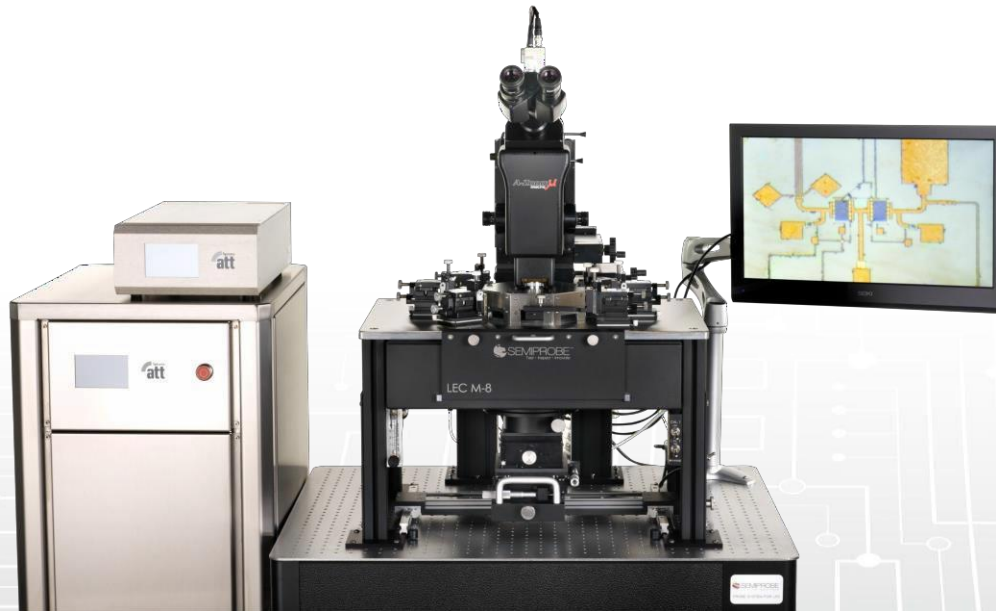
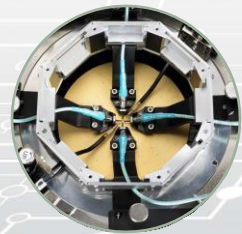
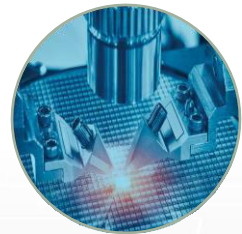
WAFER PROBING SOLUTIONS: HIGH FREQUENCY



Manual 150 mm Probe Station:

- High Accuracy Rapid Align Wafer Stage
 - Customized to Specific User Requirements
 - Test Die and Wafers from 50 to 150 mm
 - High Accuracy, HF/MW Positioners
 - Test at Ambient or Heated Temperatures
 - Low Cost of Ownership
 - Field Upgradable to Semiautomatic Configuration
 - Platen Allows up to 20 Individual Manipulators
-

WAFER PROBING SOLUTIONS: HIGH FREQUENCY



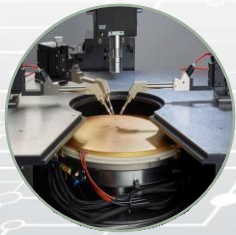
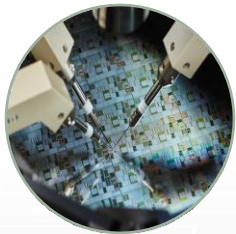
Manual 150 mm Probe System:

- Test Devices Heated Up to 400°C
 - Test Devices Cooled Down to -65°C
 - Localized Environment Prevents Frosting
 - Liquid and Air-Cooled Chillers Available
 - Top-Hat Allows Multiple Manipulator Access
 - Customized to Specific User Requirements
 - Test Die and Wafers up to 150 mm
 - Multi-Contact Wedges
-

WAFER PROBING SOLUTIONS: HIGH POWER



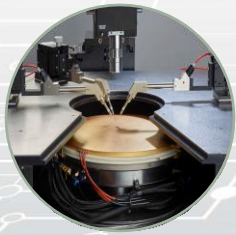
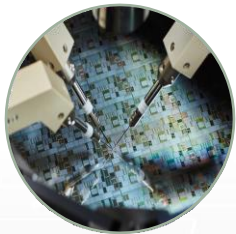
WAFER PROBING SOLUTIONS: HIGH POWER



Semiautomatic 300 mm Probe Station:

- Test Power Devices up to 10 KV, 200 A
 - Integrated Keysight B1505A Instruments
 - Fully Guarded with Interlocked Safety
 - Light Curtain or Dark Box Configurations
 - Customized to Specific User Requirements
 - Test at Ambient, Heated or Cooled Temperatures
 - High Stability Manipulators
 - Manual or Programmable Manipulator Options
-

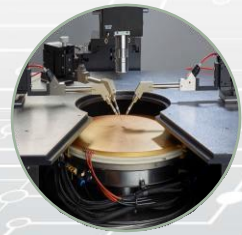
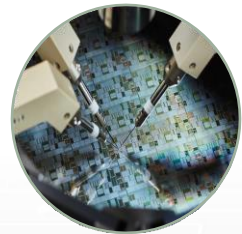
WAFER PROBING SOLUTIONS: HIGH POWER



Vacuum Chamber 300 mm Probe Station:

- Test Power Devices up to 10 KV, 200 A
 - Vacuum Chamber or Open-Air Test Modes
 - Manual or Programmable Manipulator Options
 - Semiautomatic Configuration
 - Test Die and Wafers from 50 to 300 mm
 - Fully Guarded with Interlocked Safety
 - Custom Feed-Throughs and Interconnects
 - Integrate a Range of Third-Party Instrumentation
-

WAFER PROBING SOLUTIONS: HIGH POWER



Manual 150 mm Probe Station:

- Test Power Devices up to 3 KV
 - High Stability Manual Manipulators
 - Customized to Specific User Requirements
 - Test Die, Partial Wafers C Wafers up to 150 mm
 - Fully Guarded Using a Dark Box Enclosure
 - Interlocked for Operator Safety
 - Wide Range of Optics Available
 - Interface with Multiple Brands of Test Instruments
-

WAFER PROBING SOLUTIONS: VACUUM



WAFER PROBING SOLUTIONS: VACUUM



Semiautomatic 150 mm MEMS Vacuum Probe Station:

- High Vacuum to 10^{-4} Torr
- Customized to Specific User Requirements
- Turn-Key Probing C Test Solution
- Test Die and Wafers from 50 to 150 mm
- Long Working Distance Optics
- Use Probe Cards or Individual Manipulators
- Image Capture of Devices Under Test
- Equipped with SemiProbe PILOT Software Suite

WAFER PROBING SOLUTIONS: VACUUM



Semiautomatic 200 mm MEMS Vacuum Probe Station:

- Turn-Key Probing C Test Solution
- Programmable Gantry for Multiple Optics
- High Vacuum to 10^{-4} Torr
- Integrated Chamber View Port
- Test Die and Wafers from 50 to 200 mm
- Thermal Options from -65 to 300°C
- Ideal for MEMS, Sensors C Microbolometers
- Programmable Manipulators

WAFER PROBING SOLUTIONS: VACUUM



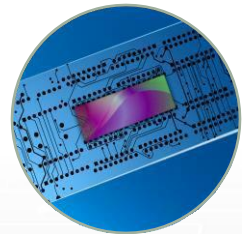
Fully Automatic 200 mm Vacuum Probe Station:

- High Vacuum to 10^{-4} Torr
- For Testing Thin Wafers using Carrier Plates
- Dual End Effector for 150 mm and 200 mm
- Integrated Test Instrumentation
- Manual or Programmable Manipulators
- Long Working Distance Optics
- Patented PS4L “Adaptive Architecture”
- Interchangeable Modules for all Applications

WAFER PROBING SOLUTIONS: MICROFLUIDIC



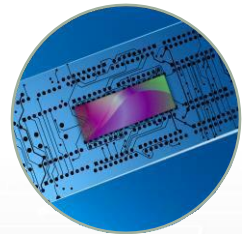
WAFER PROBING SOLUTIONS: MICROFLUIDIC



Fully Automatic 300 mm Probe Station:

- Multi-Functional Probing Solution
- Test Multiple Technologies in One Device
- Environmentally Controlled Environment
- FOUP Port Loading and Unloading
- Test Wafers from 200 to 300 mm
- Thermal Options from -65 to 300° C
- Custom Dispense Solution
- Individual Programmable Manipulators

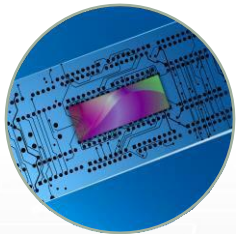
WAFER PROBING SOLUTIONS: MICROFLUIDIC



Microfluidic 200 mm Probe Station:

- Semiautomatic System
- Interfacing with Keithley S-500
- Customized Microfluidic Dispense System
- Pump with Two Dispense Units
- Test Die and Wafers from 50 to 200 mm
- Fine Theta Adjustment Probe Card Holder
- Long Working Distance Stereo Microscope
- Manual or Programmable Manipulators

WAFER PROBING SOLUTIONS: MICROFLUIDIC



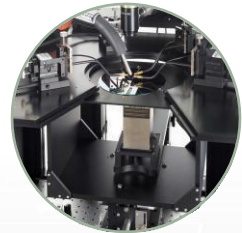
Manual 150 mm Probe Station:

- Test MEMS and Sensors Devices
 - Upgradable to Semi or Fully Automatic Systems
 - Customized According to User Requirements
 - Individual Manual Manipulators
 - Test Die and Wafers from 50 to 150 mm
 - High Accuracy Rapid Align Wafer Stage
 - Integrate a Range of Third-Party Instrumentation
 - Thermal Probing at Elevated Temperatures
-

WAFER PROBING SOLUTIONS: MAGNETIC STIMULATION



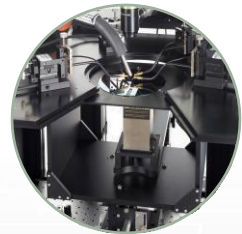
WAFER PROBING SOLUTIONS: MAGNETIC STIMULATION



Manual 150 mm MSS Probe Station:

- Turnkey Magnetic Stimulation Solution
 - Integrated OEM Magnets
 - Vertical Projected Magnet
 - Interchangeable Poles
 - Topside and Bottomside Magnet Mounting
 - Customized to Specific User Requirements
 - Thermal Stream System, Ambient to 255 °C
 - Test Die and Wafers from 50 to 150 mm
-

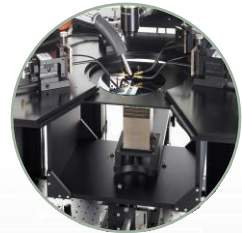
WAFER PROBING SOLUTIONS: MAGNETIC STIMULATION



Semiautomatic 150 mm MSS Probe Station:

- Magnetic Stimulation and High Voltage Solution
- Integrated OEM Magnets
- Vertical Projected Magnet
- Interchangeable Poles
- Topside and Bottomside Magnet Mounting
- Customized to Specific User Requirements
- Low and High Voltage Triaxial Probe Arms
- Test Die and Wafers from 50 to 150 mm

WAFER PROBING SOLUTIONS: MAGNETIC STIMULATION



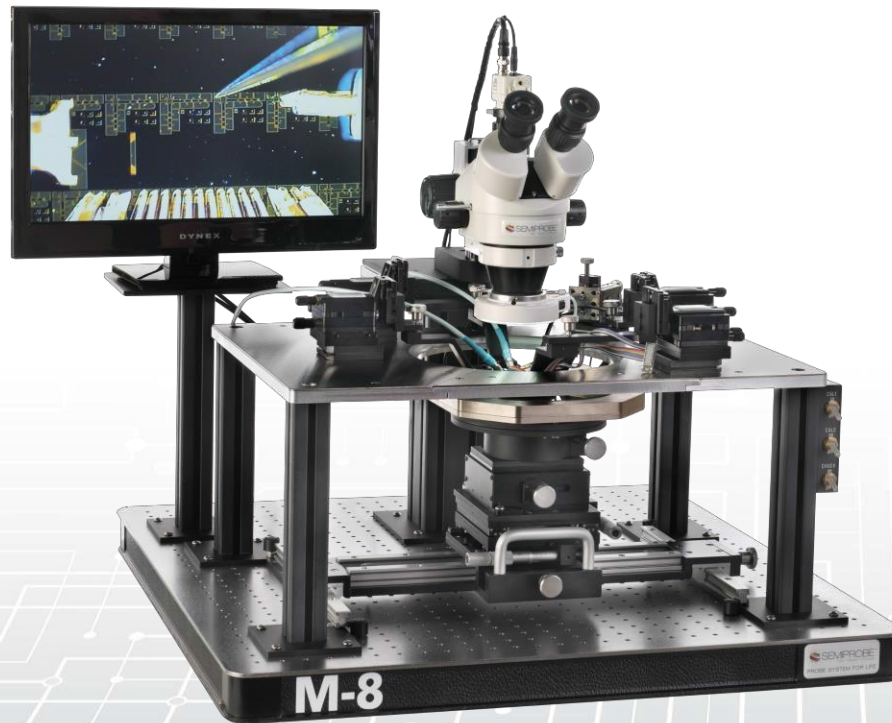
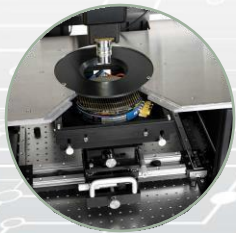
Manual 100 mm MSS Probe Station:

- Small Footprint Manual System
 - Customized to Specific User Requirements
 - Low cost of ownership
 - Test Small Samples C Wafers up to 100 mm
 - Interchangeable Carrier Plates
 - Vertical Magnetic Field
 - Manipulators with Vacuum Bases
 - Magnet Cooling Unit
-

WAFER PROBING SOLUTIONS: MANUAL PROBE STATIONS



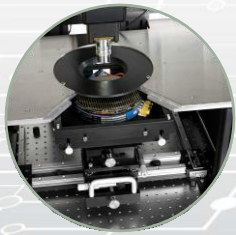
WAFER PROBING SOLUTIONS: MANUAL PROBE STATIONS



Manual 200 mm PS4L Probe Station:

- Perpetual Field Upgrade Path
- High Accuracy Rapid Align Wafer Stage
- Customized to Specific User Requirements
- Thermal Options from -65 to 300° C
- Test Die and Wafers from 50 to 200 mm
- Manual or Programmable Manipulators
- Vacuum or Mechanical Wafer Chucks
- 360° Manipulator Placement

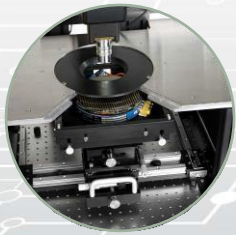
WAFER PROBING SOLUTIONS: MANUAL PROBE STATIONS



Manual 200 mm PS4L Probe Station:

- Dark Box for Controlled Environment
 - Test Die and Wafers from 50 to 200 mm
 - Thermal Options from -65 to 300° C
 - Customized to Specific User Requirements
 - Modular Design for Easy Upgrade
 - Manual or Programmable Manipulators
 - Suitable for Low Volume Test Requirements
 - Course / Fine Rapid Align Wafer Stage
-

WAFER PROBING SOLUTIONS: MANUAL PROBE STATIONS



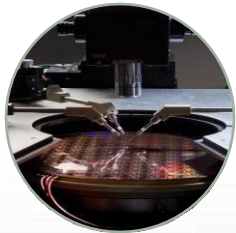
Manual 150mm PS4L Probe Station:

- High Power Probing up to 3KV
- Customized to Specific User Requirements
- Test Die, Wafers and Packaged Parts to 150mm
- Compound Optics with CCTV System
- Laser Light Curtain (LLC) as a Safety Enclosure
- Fully Guarded with Interlocked Safety
- High Accuracy Rapid Align Stage System
- 360° Manipulator Placement

WAFER PROBING SOLUTIONS: SEMIAUTOMATIC PROBE STATIONS



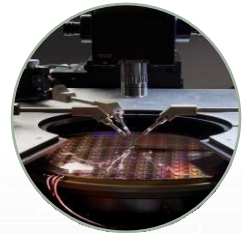
WAFER PROBING SOLUTIONS: SEMIAUTOMATIC PROBE STATIONS



Semiautomatic 200 mm PS4L Probe Station:

- DC to Over 750 GHz
- Keysight Vector Network Analyzer
- Chuck with Separate Calibration Substrates
- High Frequency and DC Manipulators
- Test Die and Wafers from 50 to 200 mm
- Test at Ambient, Heated or Cooled Temperatures
- Customized to Specific User Requirements
- Perpetual Field Upgrade Path

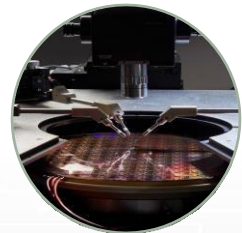
WAFER PROBING SOLUTIONS: SEMIAUTOMATIC PROBE STATIONS



Semiautomatic 300 mm Probe Station:

- A-Zoom Compound Microscope
- Customized to Specific User Requirements
- Probe Card Holder or Individual Manipulators
- High Accuracy Fiber Alignment Positioners
- Test Die and Wafers from 50 to 300 mm
- Equipped with SemiProbe PILOT Software Suite
- Device Characterization and Failure Analysis
- Perpetual Field Upgrade Path

WAFER PROBING SOLUTIONS: SEMIAUTOMATIC PROBE STATIONS



Semiautomatic 150 mm PS4L Probe Station

- Test LEDs, VCSELs C Silicon Photonic devices
- Customized to Specific User Requirements
- Programmable Gantry to Switch Optics
- Ambient to 200°C Testing
- Test Die and Wafers from 50 to 150 mm
- Integrating Sphere Options
- Non-Contact Wafer Height Measurement
- Hexapod Manipulators for Fiber Placement

WAFER PROBING SOLUTIONS: FULLY AUTOMATIC PROBE STATIONS



WAFER PROBING SOLUTIONS: FULLY AUTOMATIC PROBE STATIONS



Fully Automatic 200 mm PS4L Probe Station:

- Test LEDs, VCSELs C Silicon Photonic devices
- Customized to Specific User Requirements
- High Accuracy Hexapods For Fiber Alignment
- Manual DC C RF Manipulators
- Cassette Load/Unload with Robot handling
- Dual End Effector Robot for 150 C 200 mm Wafers
- Test at Ambient or Heated Temperatures
- Manual Wafer Load-Unload Capability

WAFER PROBING SOLUTIONS: FULLY AUTOMATIC PROBE STATIONS



Fully Automatic 300 mm PS4L Probe Station:

- Single- or Double-Sided Probing
- Customized to Specific User Requirements
- High Accuracy Bottom Side Fiber Alignment Stage
- Test from -20 to 225°C Inside an LEC
- FOUP Load/Unload with Robot Wafer Handling
- Dual End Effector Robot for 200 C 300 mm Wafers
- Fully Certified SEMI System
- Manual Wafer Load-Unload Capability

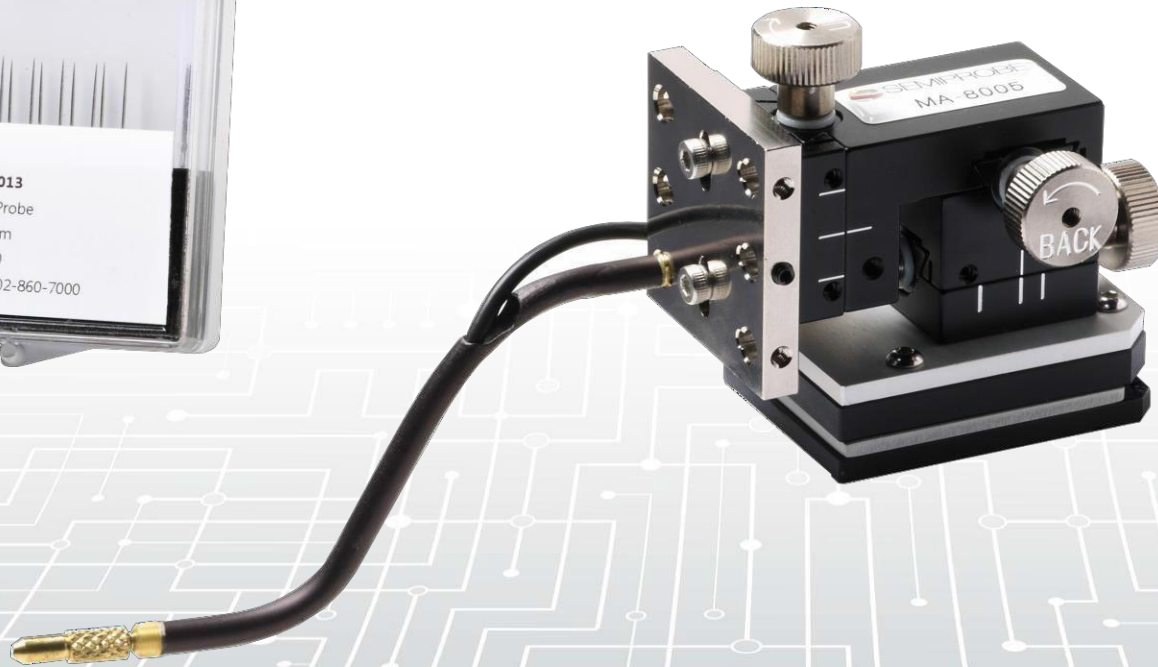
WAFER PROBING SOLUTIONS: FULLY AUTOMATIC PROBE STATIONS



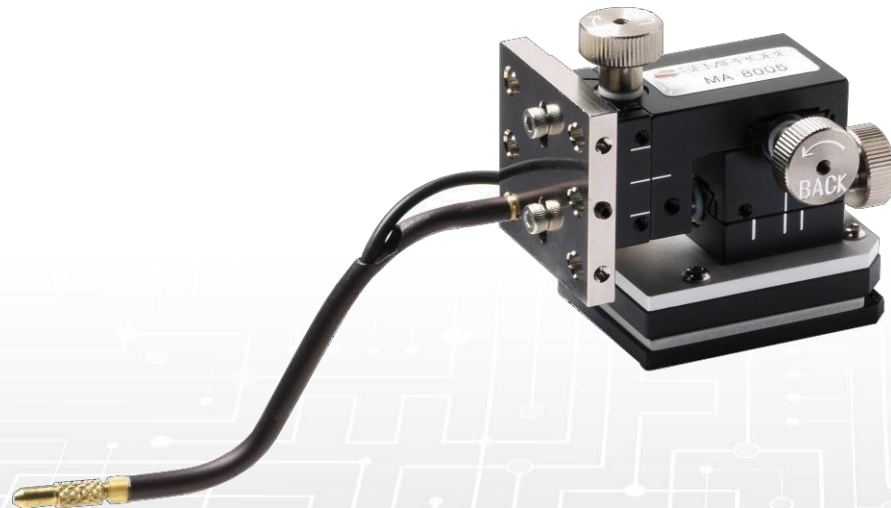
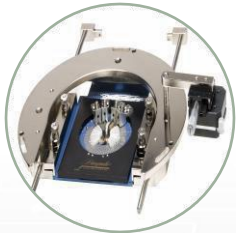
Fully Automatic 200 mm PS4L Probe Station:

- Device Characterisation and Failure Analysis
- Customized to Specific User Requirements
- Cassette Load/Unload with Robot handling
- Test at Ambient, Heated or Cooled Temperatures
- Dual End Effector Robot for 150 C 200 mm Wafers
- Manual Wafer Load-Unload Capability
- High Power Testing up to 3 KV
- Fully Guarded with Safety Interlocks

WAFER PROBING SOLUTIONS: ACCESSORIES



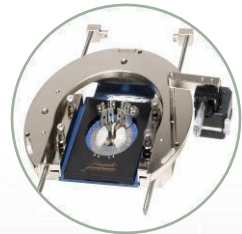
WAFER PROBING SOLUTIONS: ACCESSORIES - MANIPULATORS s PROBE ARMS



Small Footprint Manipulators:

- Axis Control by Micrometers or Thumbscrews
 - Control of X, Y, Z, Pitch, Roll and Yaw
 - 40, 80, or 100 or Threads per inch (TPI)
 - Motorized Programmable Versions Available
 - Magnetic, Vacuum or Bolt-down Bases
 - Universal Face Plate
 - Multiple Probe Arm Compatible
 - Fiber Optic, HF C Multi-Contact Wedge Adaptors
-

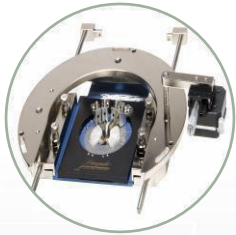
WAFER PROBING SOLUTIONS: ACCESSORIES - PROBE TIPS



Probe Tips:

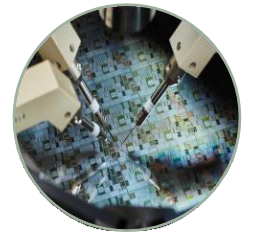
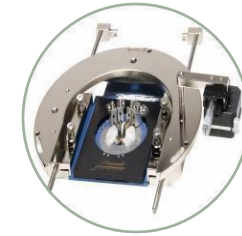
- Multiple Materials available:
 - Tungsten, Beryllium Copper, Gold Plated Tungsten
- Tip Radius Options from 0.1 to 50.0 μm
- Range of Taper Styles and Shapes
- Typically Packs of 10 Probe Tips
- Tip Length to Meet Customer Requirements

WAFER PROBING SOLUTIONS: ACCESSORIES - WAFER CHUCKS



Wafer Chucks:

- Round or Square Chucks
 - 50 - 450 mm with Vacuum Rings or Vacuum Holes
 - Nickel or Gold plated
 - Thermal Chucks from -65 to 400°C
 - High Frequency with Calibration Pads
 - High Voltage up to 3 KV or 10 KV
 - Lift Pin Chucks for Automation
 - Double Side Probing Chucks and Carriers
-



MODULAR



CUSTOMIZABLE



UPGRADEABLE




WAFER PROBING SOLUTIONS FROM SEMIPROBE

PRICING LIST & CONTACT

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