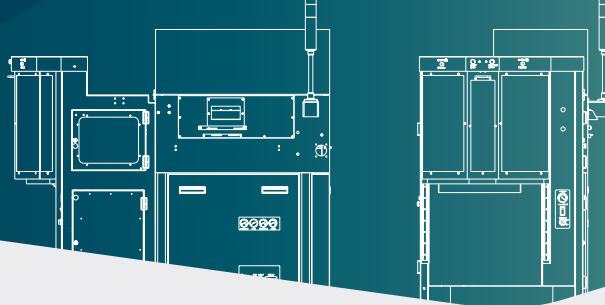


Active IC Trim System



M350 Wafer Trim™

An advanced new platform for high precision, high throughput wafer-level optimization of linear and mixed-signal IC devices.



Wafer Trim™ M350

Specifications

System Specifications

- Closed Loop X/Y/Z, Theta stage
- X/Y Resolution | 0.02 μm
- X/Y Accuracy | $\pm 2.0 \mu\text{m}$
- Z Range | 10 mm (0.39")
- Z Resolution | 0.13 μm
- Z Accuracy | $\pm 0.5 \mu\text{m}$
- Theta Range | $\pm 5^\circ$
- Theta Resolution | 1.4 μrad
- Chuck Size | Supports 100 – 200 mm wafers
| 50 μm (10 μm spot)
- Chuck Material | Choice of Al, Ni or Au finish

Probing system

- Card Size | 4.5 to 9" standard,
| 12" optional
- Probe Vision (optional)
 - High and low viewing magnification of probe pins
 - Probe alignment to pads | $\pm 4 \mu\text{m}$

Beam Positioner

- Type | Galvanometer-based,
stationary optics
- Positioning Accuracy | $< 1 \mu\text{m}$ (3 sigma)
- Positioning Resolution | $< 0.06 \mu\text{m}$
- Beam Field Size | 14 mm (0.55") diameter
- Minimum Spot Size | 6.5 – 12 μm
| 5 μm optional
- Depth of Focus | 25 μm at 6 μm spot
- Laser Type | Diode-pumped YAG
- Laser Energy | 0.1 to 3 μJ @ 6.5 μm
spot size, 7 ns version
- Laser Energy Stability | 1.0 % rms @ 1 KHz
- Laser Pulse Width | 1.0 % rms @ 1 KHz
- Viewing
Dual CCD camera operation-separate hi-mag
viewing integrated vision processing sub-system
simplifies setup and improves reliability and
throughput of automatic wafer alignment

Wafer Handler (optional)

- 3-axis servo-controlled robot and pre-aligner
- Capacity | Up to 50 wafers
(two cassettes)
- Control | Manual or Automatic
for unattended operation
- Wafer Support | 100 mm – 200 mm wafers
with ability to process
partial wafers
- Mapping End Effector
(optional): | Detects presence, absence
or cross-slotted for all wafer
and substrate types
- OCR and bar-code
reader (optional): | SEMI character font with
checksum and barcode

Tester (ATE-Measurement Instrumentation)

- Enhanced tester interface (ETI) and stop trim I/O
integrates to industry-standard automatic test
equipment (ATE)
- Integrates easily with VXI, PXI and GPIB
instrumentation and custom test solutions
- Optionally available with TS910 VXI-based
High Speed resistor test system

Physical

- System Unit
 - Dimensions | 920 mm x 864 mm x 1575 mm
(30.2" x 34" x 62")
 - Weight | 1500 lbs trimmer only
 - Power | 115 VAC, 20 A single phase,
100 – 240 VAC, 10 A (optional)
 - Air | 4 SCFM @ 60 psig minimum,
clean, dry
 - Vacuum | Internally generated
- Wafer Handler
 - Dimensions | 762 mm x 864 mm x 1448 mm
(30" x 34" x 57")
- Operating Temperature | 16 – 27°C (60 – 80°F)
- Operating Humidity | $< 60\%$ non-condensing

System Compliance

- Class 1 Laser Safety
- CE Mark

System Control

- Industrial PC
- Interfaces: Ethernet, RS232, RS485, USB
- Windows® 10 OS
- GUI based trim/test part set-up

The New Standard for Wafer-Based IC Optimization

The WaferTrim™ M350 laser trim system is the solution for active IC trim (trimming while probing and measuring). Built on proven technologies and principles, the M350 also features technical refinements that dramatically increase overall system throughput and enable the processing of smaller and more complex device types. In addition to active trim, the system's versatility provides link cutting, passive trim, and linear trim capabilities, allowing you to best address your process needs.

An Advanced & Robust Platform

All aspects of the M350 reflect the focus on providing a highly advanced platform with reliability for production. The vision, motion, laser, probe frame, and chuck assembly subsystems provide more accuracy and speed, with better system isolation.

Enhanced Tester Interface

The WaferTrim Series has a history of seamless integration with automated test equipment. Our Enhanced Tester Interface (ETI) responds to a library of commands that allow you to take full or partial control of the trim system through the tester. New hardware and software interface improvements provide even more flexibility and capability.

WaferTrim Software

The WaferTrim software runs under Windows 10 and is easier to program and use. The software provides both compatibility with your existing data/setup files and new features to increase your efficiency.

Worldwide Support

Throughout the semiconductor world, our applications engineers continue to develop new solutions in step with semiconductor process advancements. Our service technicians are trained in every aspect of maintenance and troubleshooting.

Benefits

- Fully integrated state-of-the-art Laser Trimmer and Wafer Prober system
- Seamless integration to today's ATEs via Group's Enhanced Tester Interface software and real-time tester interface hardware
- Proven superior laser control ensures process consistency & highest yields
- Advanced vision and motion subsystems provide dramatically improved positioning and alignment capability
- WaferTrim™ software improves efficiency