SECTOR TECHNOLOGIES

Products brochure 2016.2

Electrical Test

teseda — V550 — Tester for laboratories
- ▶ DFT
- ▶ Scan chain debug
- ▶ Curve Tracer, etc.

Mu-TEST — M-5S, M-21S — Multi-purpose ATE Tester
- ▶ High Performances

Up to 1344 channels, High speed 1.6 Gbit, APG for DDR2/3 test, mixed signal channels, VI channels

Focused Test, Inc. — FTI-1000
Power Discrete, IGBT, GaN-SiC, Analog IC Tester

Package/ Board FA

FEI — ELITE
- ▶ Resistive defects localization

Real Time Lock-in Thermography: Systems — Packages — Silicon (Through package; Silicon)
- ▶ Power Modules
- ▶ 3D localization
- ▶ Transient analysis
- ▶ Thermal mapping
- ▶ Improved sensitivity of the new camera (3X)

ZEISS xradia™ — VersaXRM 410, 510, 520
Packages are large — Defects are small

X-Ray Microscope
- ▶ **3D True resolution**
- ▶ 0.7 µm resolution at distance
- ▶ Best absorption and phase contrast
- ▶ 300 mm wafer capability
- ▶ 4D and in-situ analysis

TeraView — EOTPR

TeraHertz TDR
- ▶ Detect: opens, shorts; partial cracks, narrowings, constrictions
- ▶ 5 µm spatial resolution

Insight k.k. — IS-250, IS-350

Scanning Acoustic Microscope
- ▶ **Wide application range**
- ▶ 0.1 µm spatial resolution
- ▶ High speed technology
- ▶ Compact size

Sample Prep

Fiber Laser Ablation — Light RAY — Decap 10
20 W pulsed fiber laser
- ▶ For fast and reproducible package pre-opening

Acid Decapsulation — Nisene — JetEtch Pro, CuProtect, Total Protect
- ▶ Protect copper from corrosion
- ▶ Electrolytic chamber
- ▶ Temperature control

Plasma Decapsulation — Nisene — PlasmaEtch
- ▶ Acid-free, low temperature
- ▶ Focused/ isotropic etching
- ▶ Latest solution for silver wires and complex packages

Precision Milling — varioscale — VarioMill
- ▶ For ultimate silicon backside thinning

Metrology — varioscale — VarioMetric
- ▶ High precision laser-based thickness measurements

Optics, Silicon FA

NIR Imaging — SEIWA OPTICAL
- ▶ To improve sensitivity of your EMMI tools
- ▶ To optimize laser transmission
- ▶ For generic use (Microscopes, NUV/ IR lenses)

Lens	20x	50x	100x
NA	0.6	0.7	0.75
WD	10 mm	10 mm	10 mm
Transmission	>70% (1µm-2µm)	>70% (1µm-2µm)	>80% (1µm-1.6µm)

Silicon Die FA

FEI — EFA
✓Standard application (EMMI, OBIRCh)
✓New Technologies (LVx, High NA SIL)

Meridian IV, Waferscan WS-DP, Meridian M

The most comprehensive platform for Electrical Failure Analysis (EFA)
- ▶ Emission Microscopy, OBIRCh, Laser Voltage Imaging & Probing
- ▶ Down to 14nm technology node, High NA SIL imaging
- ▶ Low noise, high sensitivity, extended-wavelength "next generation" camera (DBx)
- ▶ Waferscan— Wafer level FA due to semi-automated wafer prober

FEI — Thermal Emission
✓Sensitivity & Resolution

ELITE

Lock-in thermography system for resistive defects localization
- ▶ SIL lenses
- ▶ High-Doped Silicon Lens
- ▶ Thermal mapping
- ▶ New high speed camera and SW

FEI — NanoProbing
✓Efficiency toward electrical analysis

Transistor probing on sub-14 nm nodes devices

nProber II
- ▶ up to 8 encoded nanoprobes, HR SEM imaging
- ▶ Electron Beam Induced/Absorbed Current (EBIC/EBAC)

Hyperion
- ▶ up to 8 encoded nanoprobes, HR AFM imaging
- ▶ PicoCurrent™, Scanning Capacitance modes
- ▶ Dynamic characterization capability (Pulsed IV)

FEI — Dynamic FA
✓Timing & Functional Analysis

Meridian V

Proven on 14 nm technology node
- ▶ Optimized dynamic LSM platform
- ▶ LVI, LVP, OBIRCh, Soft Defect Localization
- ▶ Design Debug
- ▶ Highest performance High NA SIL and imaging

FEI — Circuit Edit
✓Front-side / Back-side FIB

OptiFIB Taipan

Down to 10 nm technology
- ▶ Broadest range of chemistries
- ▶ New coaxial ion-photon column
- ▶ Excellent navigation and ion beam placement

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Providing Effective Solutions...