



Applied Materials

Line of Business

Metrology and Inspection solutions for the global semiconductor industry

Established

1997

Leading Executive

Itai Rosenfeld
Vice President and
General Manager, Process
Diagnostics and Control

Appplied Materials, Inc. is the global leader in providing innovative equipment, services and software to enable the manufacture of advanced semiconductor, flat panel display and solar photovoltaic products. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. At Applied Materials, we turn today's innovations into the industries of tomorrow. In Israel, Applied Materials develops, manufactures, markets and supports process diagnostics and control equipment designed for semiconductor processes. Located in Rehovot and employing around 1,000 people, Applied Materials Israel plays a significant role in enabling the production of the next generation of microchips.



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the capabilities of existing dark field tools in detecting extremely small particle sizes on patterned wafers.

- **SEMVision – SEM defect review**

Applied SEMVision G6 defect analysis system combines unprecedented high-resolution, multi-dimensional imaging capabilities with revolutionary machine learning intelligence of the Purity™ Automatic Defect Classification (ADC) system that sets new performance benchmarks and brings first-of-a-kind DR SEM technology to the semiconductor industry.

- **VeritySEM – CD SEM metrology**

Designed for sub-32nm metrology, the Applied Materials CD-SEM system - VeritySEM4i, delivers high SEM resolution on the order of 1.5nm, high detection efficiency, powerful image processing and metrology algorithms and extremely accurate navigation. The system offers industry-leading Fleet Matching and Precision down to 0.3nm.

- **Aera3 – Mask inspection**

The Applied Aera3 Mask Inspection system introduces unique capabilities for qualifying the full range of masks used for 22nm logic/32nm memory technology nodes and for early learning EUV mask inspection. It is a third generation production-worthy inspection tool that uses true aerial imaging with a 193nm source for inspecting the reticle as it will appear in the wafer plane to predict defect printability.

Process Diagnostics and Control's product portfolio includes:

- **UVision – Bright-field wafer inspection**

The UVision® 5 system is the newest member of the UVision wafer inspection product family, supporting the core technology of deep ultraviolet (DUV) laser illumination, with simultaneous dual channel [brightfield (BF) reflected light and grayfield (GF) scattered light] collection optics.

- **Dfinder – Dark-field wafer inspection**

TheDFinder is intended primarily for metal interconnect inspection applications at 45nm and below and is the first darkfield inspection tool on the market to use deep ultraviolet (DUV) light. This pioneering system exceeds