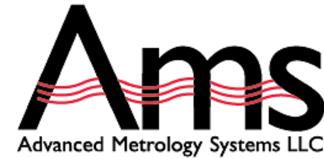

FOR IMMEDIATE RELEASE

Advanced Metrology Systems Announces the IR3100S for Small Spot on Product Measurements

Smaller Spot Size Provides DRAM Manufacturers with More Detailed and Uniform Measurements of 3D Etched Structures

NATICK, Mass. and SAN FRANCISCO, SEMICON WEST, July 16, 2007 – Advanced Metrology Systems (AMS), a leader in online measurement tools for semiconductor manufacturing, today announced the IR3100S small spot model-based infrared (MBIR) reflectance metrology solution for online measurement of 3D DRAM structures. The IR3100S is the latest development in AMS's successful line of MBIR products for the DRAM market. The IR3000S is a highly automated, online measurement system which uses a proprietary mid IR optics. Separately today, AMS announced the release of the IR3100N (See "Advanced Metrology Systems Launches IR3100N").

As process nodes advance, customers need measurement tools that can measure smaller spot sizes without sacrificing repeatability or data acquisition times. The IR3100S uses a new proprietary optical measurement system which results in a measurement spot size of less than 70 by 70 microns. When combined with the systems pattern recognition software and real-time auto focus capability, the IR3100S has the ability to do online measurements of product wafers in the scribe line or in the actual device. As a result, the new smaller spot size technology enables more detailed uniformity measurements within devices of 3D etched structures such as DRAM straight and bottle shaped trenches, recess measurements along with stacked DRAM contact capacitor profiling, and on product BPSG, BSG and PSG composition measurements.

"The launch of the IR3100S demonstrates our commitment to providing our customers with a robust metrology platform that can be customized to meet their specific requirements," said Tony Bonanno, director of product development at AMS. "As DRAM manufacturers move to smaller process nodes, the IR3100S provides them with an automated and non-contact measurement system that helps semiconductor manufacturers improve efficiency and yields. In addition, the IR3100S can grow with them as their measurement needs change and become more complex."

The IR3100S uses the same AMS series 3000 platform as the award winning IR3000. It uses a highly automated dual loadports system that can be configured for 200/300 mm or 150/200 mm mixed wafer size operation as well as standard dual 300 mm FOUP, 200 mm SMIF or open cassette systems. The platform can be changed in the field to allow reconfiguration of the wafer handling systems as customers change wafer sizes or automation needs. The automation backbone software is based on Peer Group's new advanced PTO3 automation solution and has been tested in fabs worldwide. The IR3100S is available for demonstrations at AMS headquarters in Natick, MA. The first IR3100S systems will ship in Q4 of 2007.

About AMS

AMS offers an extendable, scalable metrology platform that maximizes return on investment (ROI) by supporting multiple applications and processes. The platform offers fast and detailed results to characterize wafers, unique and comprehensive information on deep trench structures and thorough data analysis options. The AMS proprietary SurfaceWave™ technology provides rapid metal film thickness metrology for interconnect layers in advanced copper/low-k processes, while our unique Model-Based Infrared Reflectometry (MBIR) technology provides structural information on trench features of advanced DRAM devices. AMS has become the metrology solution of choice for DRAM etched structure metrology using the IR3000. In addition, the company's AMS 3300 is the preferred tool for copper metrology solutions to measure patterned ECD copper.

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