KLA-Tencor Introduces New High Numerical Aperture Reticle Inspection Tool for 0.18-Micron Production and Early 0.13-Micron Development

San Jose, CA, JULY 12, 1999 - KLA-Tencor Corp. (Nasdaq: KLAC) today unveiled the 365UV-HR - its new high numerical aperture (NA) reticle pattern inspection tool for deep ultraviolet (DUV), sub-wavelength lithography. The industry's most sensitive UV reticle inspection tool available today, the 365UV-HR provides the advanced reticle inspection capabilities necessary for both high-volume manufacturing of 0.18-micron devices and for early development of 0.13-micron processes.

As reticle critical dimensions (CDs) and defect specifications become tighter due to sub-wavelength lithography, more sensitive reticle inspection equipment is needed to detect yield-killing defects. "Incorporating high NA optics, the 365UV-HR provides defect detection as low as 120 nm and exceptional CD defect detection as low as 60 nm, making it an ideal tool for sub-wavelength lithography," stated Ed Grady, general manager of KLA-Tencor's Reticle and Photomask Inspection Division (RAPID). "These capabilities will help our customers develop advanced reticles and stay ahead of the Semiconductor Industry Association's (SIA) roadmap through innovative, leading-edge defect inspection technology." According to Grady, KLA-Tencor shipped its first 365UV-HR system in the second quarter of this year to a large U.S. captive mask shop on the East Coast.

Enhancement techniques such as optical proximity correction (OPC) and phase shift masks (PSMs) have further increased the complexity of the reticle manufacturing process and have impacted the ability to manufacture defect-free masks. The 365UV-HR utilizes superior OPC, PSM and CD defect detection algorithms to enable better detection of reticle defects associated with these techniques.

Based on KLA-Tencor's widely adopted 353UV reticle inspection platform, the 365UV-HR uses a brightfield, transmitted light, laser-scanning technology to compare patterns on the reticle with either an identical pattern on an adjacent die, or with its matching database. It is designed to inspect reticles for such integrated circuit (IC) pattern defects as pinholes, chrome spots, edge extensions and patterned writing errors. The 365UV-HR will be available with an enhanced data prep option for the large files associated with advanced ICs. Customers can easily upgrade existing KLA-Tencor 300UV and 300 Series reticle inspection tools to the new 365UV-HR model.

The new 365UV-HR can be seen at KLA-Tencor's Booth #426 at the Moscone Center in San Francisco during SEMICON West 99 from July 12-14.

About KLA-Tencor: KLA-Tencor is the world leader in yield management and process control solutions for semiconductor manufacturing and related industries. Headquartered in San Jose, Calif., the company has sales and service offices around the world. An S&P 500 company, KLA-Tencor is traded on the Nasdaq National Market under the symbol KLAC.

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