

# Lam Research Corporation Customer First with Integrated HARC in Production

Lam Research Corporation Customer First with Integrated HARC in Production FREMONT, Calif., February 12, 2002-Lam Research Corporation (Nasdaq: LRCX) today announced that one of its customers is the first IC manufacturer to put into production a fully integrated (in situ) HARC (high aspect ratio contact) etch process. The process was developed on Lam's Exelan<sup>®</sup> High Performance dielectric etch system with Dual Frequency Confined<sup>™</sup> (DFC<sup>™</sup>) technology, the industry's only fully confined plasma technology.

This latest achievement follows Lam's productivity breakthrough for an integrated self-aligned contact (SAC) etch process announced last month. In an extensive customer evaluation, Lam's Exelan etcher demonstrated etch rates of up to 30 percent higher than rates for three competing systems. Lam has offered integrated processing capability for dielectric etch since 1995 and leads the industry in production experience.

Development of integrated processes is an important industry trend; these new processes can significantly lower capital costs and improve productivity. In a fully integrated HARC process, HARC etch, etch stop layer removal, and resist strip are all accomplished in one chamber-instead of up to three separate chambers. In this process, Exelan High Performance achieves greater than 15:1 aspect ratios with industry-leading etch rates while delivering the required vertical etch profiles, CD control, uniformity, and resist selectivity.

Lam's unique DFC technology coupled with a low residence time reactor design enables a wide process window, high throughput, high selectivity, and integrated process capability. DFC technology makes possible Clean Mode<sup>™</sup> operation, preventing chamber wall contamination and memory effects for wafer-to-wafer and chamber-to-chamber repeatable performance.

Customers worldwide employ Exelan High Performance for leading-edge integrated HARC, integrated SAC, low k, and other etch applications requiring advanced technology-and etch processes demanding high productivity and a low cost of ownership.

Lam Research Corporation is a leading supplier of wafer fabrication equipment and services to the world's semiconductor industry. Lam's common stock trades on the Nasdaq National Market under the symbol LRCX. The Company's World Wide Web address is <http://www.lamrc.com>.

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Center (left) and edge (right) high-aspect-ratio contact structures, 0.20-micron wide and 3.0-microns deep (15:1 ratio) in a multi-layer film stack.

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