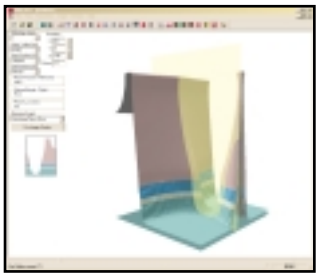
Product News



PROLITH etch modeling and analysis module

The PROLITH Etch Modeling and Analysis Module, an option available on the industry-leading PROLITH lithography simulation tool, gives users greater control over the entire pattern-transfer process, allowing them to specify etch rates for each layer in the film stack to determine the impact of the lithography process on after-etch critical dimension (CD). This module performs 2D and 3D calculations in multiple etch stages to allow for anti-reflective coating (ARC), film, and substrate etch processes, as well as bilayer resist simulations.

Process Window Monitor™ (PWM) series

The Process Window Monitor Series of CD metrology systems is a monitoring tool for the shrinking and unstable process windows of sub-wavelength (low k_1) lithography. 8x50–PWM and SpectraCD™–PWM automate the measurement, analysis, archiving, and reporting of process window data, providing fully automated, web-based monitoring and matching for multiple lithography tools and processes in high-volume manufacturing environments. This capability allows offloading of a variety of exposure tool-based diagnostics to KLA-Tencor's 8250/8450 CD SEM and SpectraCD metrology systems, increasing production capacity and overall equipment effectiveness (OEE) of lithography cells.

Quantox XP

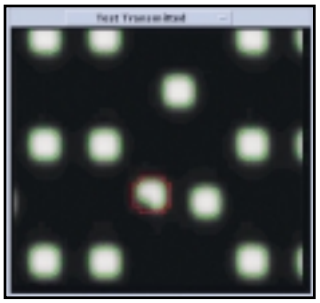
Quantox XP is KLA-Tencor's next-generation non-contact, in-line electrical monitoring and characterization system for controlling advanced gate dielectric processes at the 90 nm node. Quantox XP features ACTIV™ technology, which provides highly accurate and comprehensive information on both the physical and electrical properties of advanced gate dielectric materials—as well as vital transistor performance data—in real time. Quantox XP data also enables prediction of transistor performance inline by providing better than 95 percent correlation to device electrical test data, thus avoiding the two to three-week wait for end-of-line test results.

SpectraFx 100

SpectraFx 100, KLA-Tencor's next generation thin film metrology solution, offers cutting-edge capabilities that meet advanced thin film process control requirements for the 90-nm node, including 193-nm deep ultraviolet (DUV) lithography processes. This fifth-generation spectroscopic ellipsometry system incorporates KLA-Tencor's newly developed Resolution™ optics, which enables unprecedented tool-to-tool matching, measurement accuracy, stability, and precision for a wide range of transparent films. Resolution optics, with a small resolution spot, enables product wafer monitoring to significantly lower chip-manufacturing costs.

TeraFlux figure energy measurement capability

KLA-Tencor's TeraStar advanced reticle inspection system now features TeraFlux, a revolutionary algorithm for inspection of square or rectangular designed "closed" features. Available as an upgrade on TeraStar, TeraFlux extends TeraStar's pattern inspection capability, enabling it to detect reticle defects in the highly susceptible contact and via layers. This algorithm provides detection of very small energy flux variations on the reticle, enabling fabs to disposition small errors that usually require the use of a CD SEM due to resolution and precision requirements.



iPartner™ Portfolio of Customer Support Programs

Based on KLA-Tencor's proven iSupport™ technology, iPartner teams KLA-Tencor support engineers with customer engineers, forming a unique support partnership to reduce customer support cost and improve the uptime of inspection and metrology tools. This revolutionary program reduces these costs for KLA-Tencor tools by enabling customers to go online and enjoy the immediate benefit of increased coverage and faster response time. The more they go online, the more they save. iPartner features offerings tailored to meet evolving customer manufacturing and process needs:

- **iPerformance**, which maximizes tool performance for the most critical applications, combines 7x24 online coverage with 7x8 onsite support.
- **i724**, which reduces cost while providing higher uptime for complex tools, provides a combination of round-the-clock online response with 5x8 onsite support (select hubs receive 7x8 onsite support).
- **iValue** provides comprehensive support with an economical response time to achieve balanced cost/performance support for less critical needs. The online response time is four hours, so problems can be addressed in a timely fashion.
- **iShare** is designed to save customers more through shared responsibility for fabs with trained staff. iShare optimizes the resources of the customer engineering staff and KLA-Tencor support engineers to further reduce service costs. Customer maintenance staff performs regular PM services and works online with KLA-Tencor engineers (available 7x24) to resolve many tool issues, including diagnostics and repair.

There used to be a time when high-yield copper interconnects only existed in your imagination. But now, they can be a reality. KLA-Tencor has the tools and strategies to help you find, analyze, and fix the defects that most greatly impact device yield – such as via voiding, opens and shorts, and copper CMP corrosion. But that's only part of the story. We also enable you to accurately and reliably measure film uniformity, giving you what you need for inline parametric control of copper/low-k film stacks. The result? A copper interconnect yield so high, you'll want to shout it to the world.

AIT XP The production workhorse for critical copper CMP, films and etch applications.

23XX The highest sensitivity and speed for resolving pattern transfer defects.

eS20XP Ultimate sensitivity for killer electrical defect identification.

µLoop eDo Inline electrical defect monitoring for the fastest root cause analysis.

Surfscan SP1 Front and backside unpatterned wafer inspection in a single scan.

Viper 24XX Automated capture of critical macro defects on product wafers.

eV300 The SEM root cause analysis tool for HAR structures.

SpectraFx 100 Highest measurement precision for inline control of complex dielectric stacks.

For solutions and strategies to accelerate copper yield, visit our Cu Xpress website at **www.kla-tencor.com/CuXpress**

KLA-Tencor

Accelerating Yield