

Product News

Viper 2435XP

Cost-effective automated disposition system for wafers and process tools

Fabs require accurate and rapid disposition decision making during manufacturing, as well as quick assessment of tool and process module output. Traditionally, operators at manual/semi-automated inspection stations performed this task. However, advanced 300mm manufacturing—involving smaller features, factory automation, and larger surfaces—now challenges the operators' ability to reliably and repeatably assess the wafer and lot. This puts large quantities of wafers at risk.

The Viper 2435XP automated 300mm wafer and tool dispositioning system captures a broad range of defect types at high throughput. Delivering quick go/no-go decisions, the system enables fab engineers to take corrective action early, when wafers can be reworked, or process tool problems can be repaired before additional lots are risked. Ideally suited for the lithography, CMP, etch, and films process modules, the Viper 2435XP can be rapidly and seamlessly integrated into a production environment.

Building on the strength of the Viper platform, the 2435XP boosts intra-lot throughput to 120 wph, enabling a denser lot sampling plan that delivers tighter control of process excursions. It also provides better inter-lot pipelining: The first wafer of the next lot is queued before the last wafer of the current lot has been unloaded. This increases tool utilization, thus lowering overall cost of inspection.

Questions about how the Viper 2435XP can address a specific use case or challenge? Please contact Bruce Johnson at bruce.johnson@kla-tencor.com

Viper 2435XP Benefits

Up to 120-wph throughput to enable statistically valid sampling and quick disposition

Sensitivity to broadest range of macro defect types

Enhanced nuisance suppression to minimize false alarms and reduce need for review

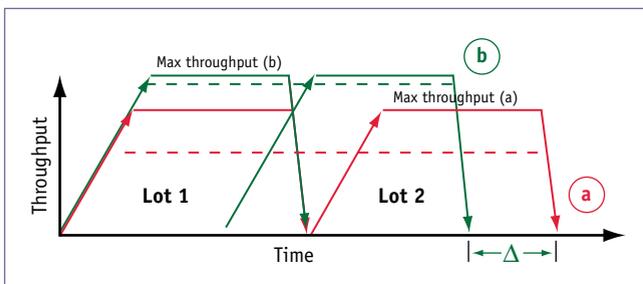
Easy setup and recipe creation to reduce time to production

Field-upgradable from any 243x inspector to protect capital investment

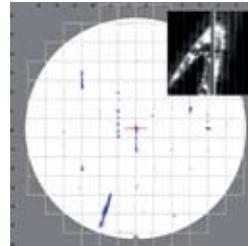
Consistent results from tool to tool, day to day, and fab to fab

Full 300mm factory automation to minimize costly human intervention

Field-proven ROI versus manual inspection



Historically (a), average throughput (dashed lines) was significantly below the maximum throughput spec because of the wafer loading/unloading time. Viper 2435XP (b) features both higher intra-lot throughput and more efficient inter-lot pipelining, enabling higher tool utilization and lower cost of ownership.



Poor coating and other low-contrast defects trigger dispositioning for rework.