

IN SITU CONTAMINATION IDENTIFICATION DURING WAFER PROCESSING

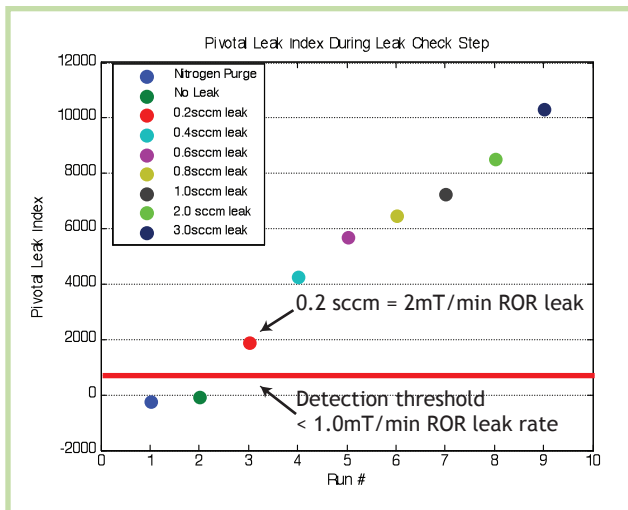
As technology nodes shrink, a majority of wafer processes are susceptible to significant yield loss due to trace contaminants that exist within the chamber. Examples include:

- ▶ Atmospheric micro-leaks during CVD, ALD or batch furnace processes
- ▶ Contaminated or leaky gas lines, or valves
- ▶ Excessive moisture
- ▶ Residual fluorine post dry clean
- ▶ Corrosive chlorine contamination

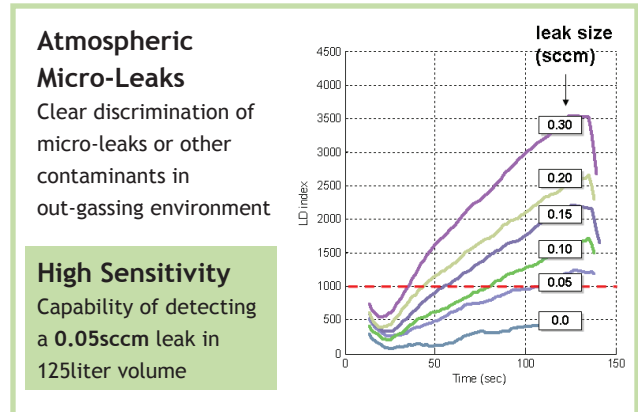
Pivotal's Sensor X Contamination ID system provides a highly accurate in-situ fault detection system for all types of contaminants that are not expected within the chamber during wafer processing, thereby avoiding costly yield-loss events.

PROVEN PRODUCTION RESULTS (300MM HDP CVD AND FURNACE LEAK DETECTION)

HDP CVD Atmospheric Leak Detection



Batch Furnace Atmospheric Leak Detection



Benefits

- ▶ Avoid catastrophic scrap events by detecting micro-contaminants immediately
- ▶ Reduce defect density and particles by effectively troubleshooting sources of contamination