

# ADE 9500 UltraGage



*UltraGage benchtop wafer thickness metrology system*

## Wafer thickness and shape metrology for CMP and Stress Applications

### Product Highlights:

Multi-tool functionality including thickness, shape stress, global and site flatness

Measures 8,700 data points in under 60 seconds

**Thin film stress** on patterned or monitor wafers

Wide range of options including wafer typing

ADE's 9500 UltraGage is a versatile, multifunctional tool that measures wafer thickness, shape and flatness. Monitor wafer quality in **chemical mechanical planarization (CMP)** and **thin film deposition** processes. Using ADE's industry standard E Gage technology, the 9500 is ideal for characterizing wafers used by mature fabrication processes. Applications include outgoing wafer quality checks at silicon wafer manufacturers, sampling **incoming wafer quality** at IC fabs, **thin film stress measurements** and shape of wafers used in **thermal processes**.

High data density, non-contact measurements and fully automated operation make the 9500 an ideal full functional analysis, development and control tool. A wide selection of optional capabilities including wafer typing, **stress measurement** and off-line analysis software allow the 9500 to be used in a wide variety of applications.

### Multi-Tool Functionality

As either a standalone gage or with its optional cassette handler, the 9500 offers a variety of measurements not usually found in a single tool. Thickness, shape, global and site flatness can be used in many applications from **incoming quality control** to **background**. Moreover, stress and off-line analysis software can be added eliminating the need to purchase a separate stress measurement tool.

### Site Flatness

Standard on the 9500, real time site flatness measurements can be used to qualify wafers for their suitability for lithographic processes. Site size and offset can be

varied to qualify the flatness of user specific image layouts, preventing out of specification wafers from entering the IC fabrication process.

### **Stress**

The 9500's optional **stress measurement** is not sensitive to film type, reflectivity or other optical aberrations found in optically based stress measurement systems. The large number of data points results in highly detailed stress measurements to within 3 mm from the edge.