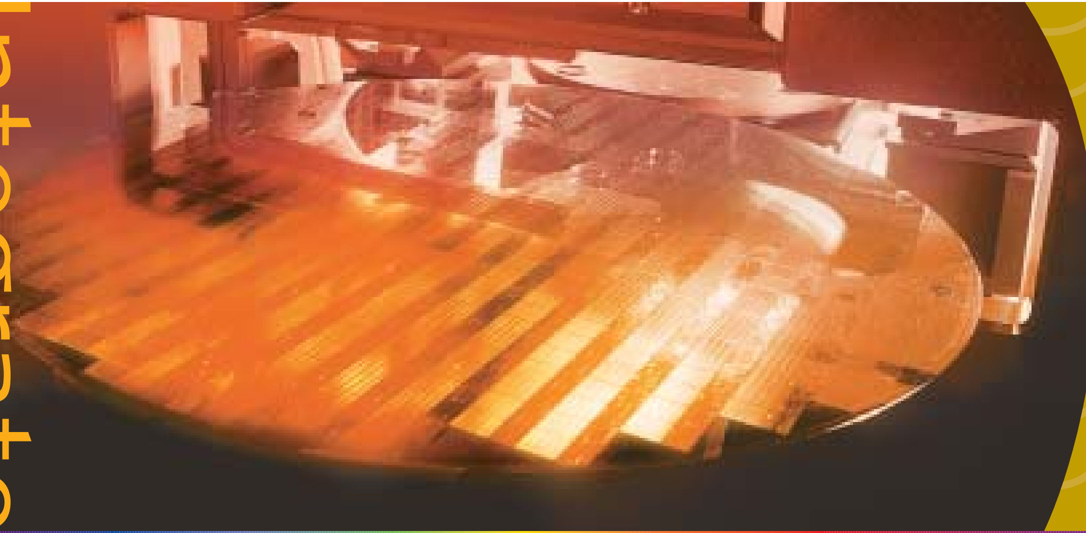
NOVA®
partnering for process control

NovaScan 3090Cu

Integrated Metrology Solutions



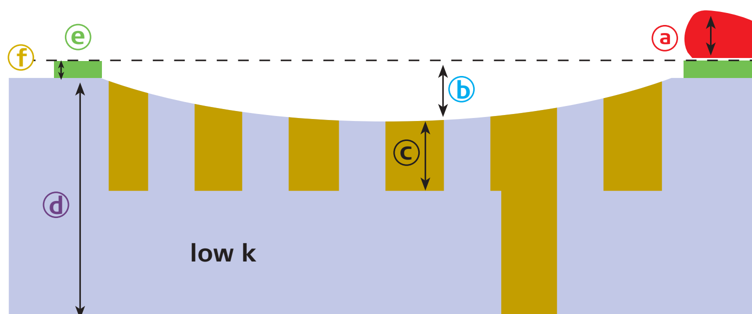
Enabling APC for high-end copper CMP applications

Non-contact, non-intrusive optical measurement technology

- The only integrated metrology solution for closed loop control of oxide and low-k loss and cap layer control
- Delivers full DUV polarization, enabling monitoring and measurement of copper line thickness
- Dense erosion array and field oxide thickness
- Helps maintain the balance between under-polish and over-polish
- Catches process drifts and excursions early on, then activates polisher responses accordingly
- Enhances throughput of the CMP cell

The Integrated Metrology unit is built-in to the process tool, utlizing the system's dedicated wafer handlng mechanism

Cu CMP Parameters Measured By NovaScan



- **a** residues
- **b** erosion
- **c** remaining metal-line thickness
- **d** remaining field oxide thickness
- **e** cap/hard mask thickness
- **f** Delamination peeling