Wafer Sapphire Thickness

MPT1000 Non-Contact Thickness Measuring System

The MPT1000 is Chapman Instruments' non-contact wafer thickness measurement system. It can be used to measure a variety of materials, from Silicon to Sapphire, GaAs and many others. Sapphire wafer thickness and roughness can be measured with the same Chapman tool. The MPT1000 utilizes sophisticated non-contact measurement technology for both thickness and roughness. Thickness and Roughness data at multiple points are provided with just the touch of one button. Chapman’s registration software provides extra flexibility in accurate wafer positioning relative to die site location. Automation is available with robotic wafer handling.

A data output of a Sapphire wafer. The data consists of a 3-D thickness contour chart and thickness statistics

**MPT1000 Features and Benefits:**

- Non-contact, providing non-destructive thickness and roughness measurements
- 0.1µm thickness resolution, providing thickness uniformity and Q/C control
- 0.01nm surface roughness resolution, providing excellent measurement capability for the smoothest surface.
- 1 µm laser spot size on both top and bottom wafer surfaces, providing the ability to distinguish between small features, e.g. bumped wafers
- Registration included, providing accurate repeatable positioning of the measurement location relative to a die site.
- Wafer Bow and Warp measurements, providing capability for examining small changes in the wafer shape and stress.
- Crisp Viewing System for both thickness and roughness, provides high definition examination of small features on the wafer surface. Also useful to examine edge chipping.
- Measurement through tape, provides direct feedback for production wafers
- Customized measurement sequences with optional robotic handling, SECS/GEM and pattern recognition, provides easy operator interface.