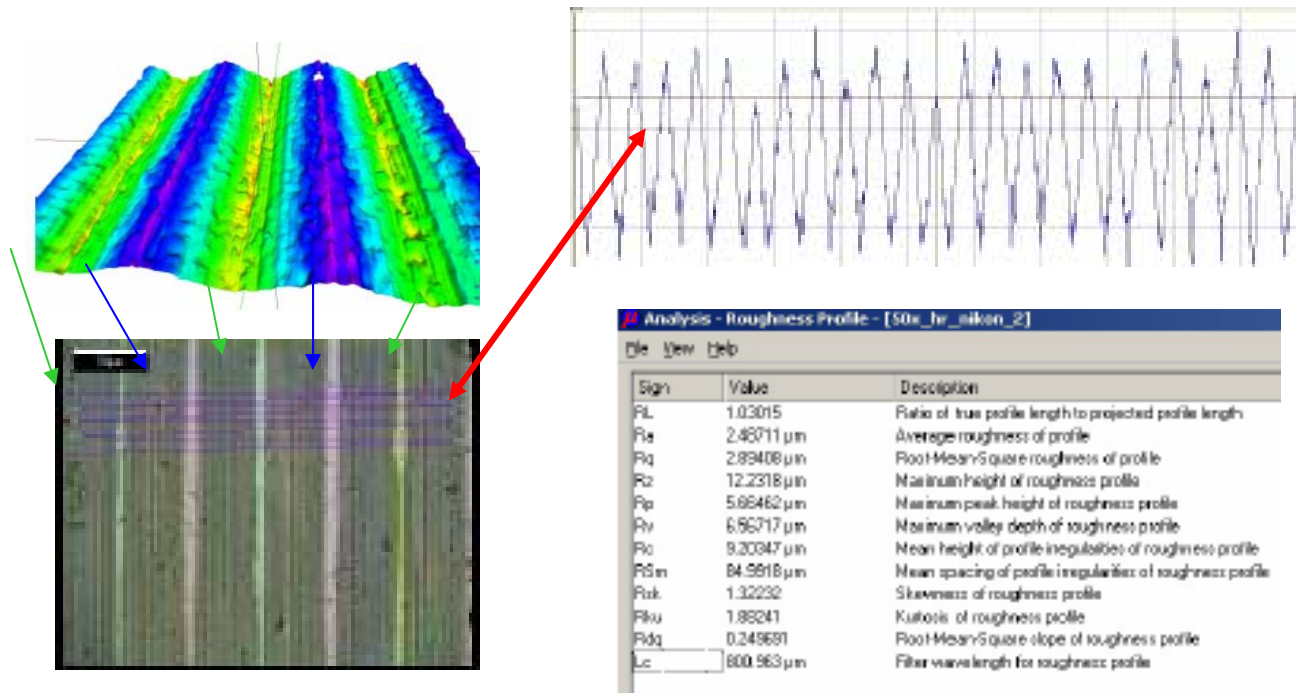


Topomicroscopy – We bring topography to microscopy

Diamond Tip: Surface roughness and profile determination



Results of the measurement of a Roughness Test Specimen are expressed numerically as sets of roughness (R_) parameters and profile (P_) parameters. All roughness and profile data corresponds to current ANSI-ASME and ISO internationally-recognized standards.

Traditional methods for surface measurement employ a mechanical stylus, typically equipped with a diamond tip, which traverses the surface of the specimen. In stylus-based profilometry, the roughness parameters and profiles are extracted and calculated from the 2D traverse data set. Limitations to the traditional method involve the uncertainty of the *exact location* associated with stylus placement, and mechanical "filtering" of true surfaces caused by the stylus tip as it passes across surfaces finer than the stylus tip's geometry.

Benefits of the non-tactile 3D measurement device InfiniteFocus

- ▶ Unlike traditional stylus-based methods, the Alicona technology produces a true 3D image (with several different depictions shown above) and the corresponding 3D data set.
- ▶ With great ease and power, the user is free to interactively select the exact location on the microscopic image for placement of the data intercept line. This intercept line can be a simple straight line or a poly-line (shown above) drawn precisely, *and exactly*, where the user wishes to extract surface roughness and profile data.

InfiniteFocus unites the benefits of microscopy and metrology. The user receives the microscopic image as well as the according depth information.