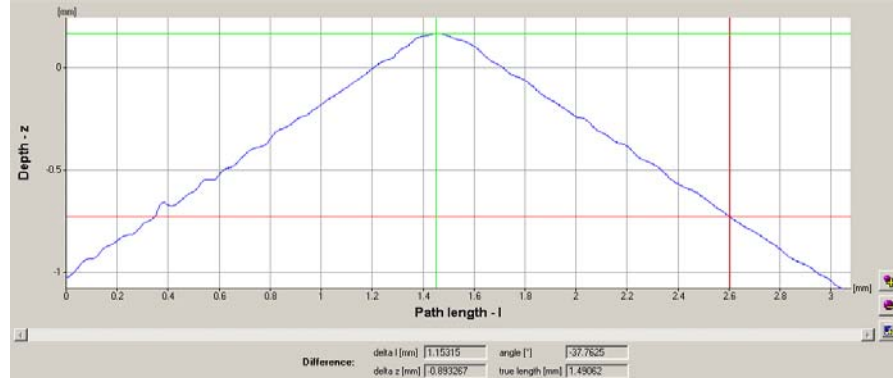
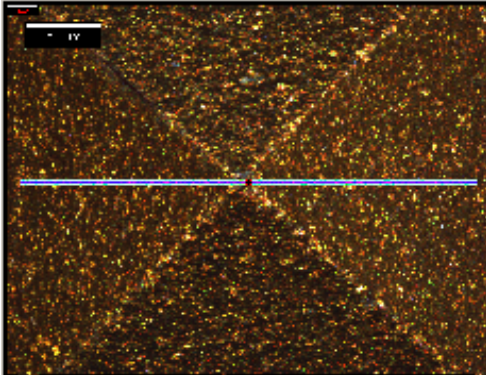


## Alicona Application Notes:

### Surface roughness and angle determination

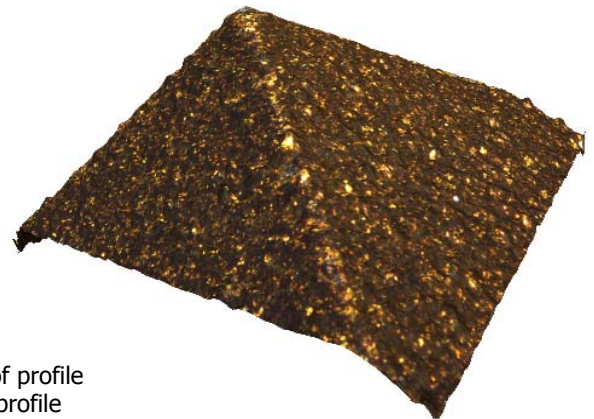
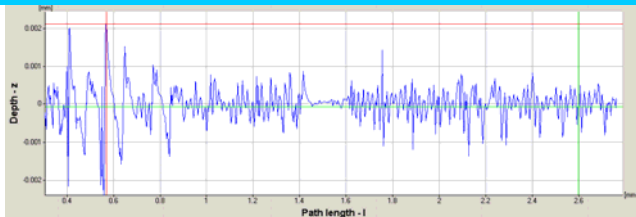
#### Angle measurement with profile analysis



Results of a surface measurement are given as a set of roughness parameters and profiles. Traditional methods for this determination employ a mechanical stylus that traverses across the surface of the specimen, tracking the lateral and vertical displacements. Actual roughness parameters and profiles are extracted and calculated from the 2D data set. Further limiting the traditional method is the uncertainty of the exact location associated with stylus placement

Unlike the traditional stylus-based instruments, the Alicona technology produces a 3D image and corresponding 3D data set. With great ease and power, the user is free to interactively select the exact location, *on the 3D image*, for placement of the data intercept line. This intercept line can be a simple straight line (as illustrated) or a poly-line drawn precisely, and exactly, where the user wishes to extract surface roughness and profile data. All roughness and profile data corresponds to current ANSI-ASME and ISO internationally-recognized standards.

#### Roughness Profile



Ra	291 nm	Average roughness of profile
Rq	418 nm	Root-Mean-Square roughness of profile
Rz	4253 nm	Maximum height of roughness profile

