The Surface Topography Standard, shown at right, consists of an etched silicon dioxide “waffle pattern” on a silicon substrate.

PRODUCT DESCRIPTION
The Surface Topography Standard consists of a 12 mm x 8 mm silicon die with a pitch cluster patterned in a layer of silicon dioxide. The pitch cluster contains three distinct grid patterns. Each grid pattern measures approximately 270 µm x 270 µm and consists of an array of alternating bars and spaces with an extremely uniform pitch in both the X and Y direction. Two models are available: the STS2 has pitches of 1.8 µm, 3 µm, and 5 µm; the STS3 has pitches of 3 µm, 10 µm, and 20 µm. Each model is available with vertical step heights of either 18 nm, 44 nm, 100 nm or 180 nm. Our precise manufacturing technique ensures a very regular topographic pattern, allowing accurate measurement across the entire working area of the standard.

PRODUCT SPECIFICATIONS

- **Dimensions**
  12 mm x 8 mm silicon die

- **Materials**
  Silicon Dioxide on Silicon coated with Platinum (except STS2-1000S & STS2-1800S models)

- **Nominal Pitch Values (X and Y)**
  STS2: 1.8 µm, 3 µm, and 5 µm (all on one standard)
  STS3: 3 µm, 10 µm, and 20 µm (all on one standard)

- **Nominal Height Values (Z)**
  18 nm, 44 nm, 100 nm, 180 nm

- **Traceability**
  Traceable to SI units through NIST