Veeco DEKTAK 150 Profilometer

The Dektak 150 from Veeco is a surface profilometer that takes surface measurements using contact profilometry techniques. The Dektak 150 uses stylus profilometry technology, which is the accepted standard for surface topography measurements, roughness and step size.

The Dektak 150 is an accurale, reliable, repeatable, inexpensive device that measures properties such as surface roughness, topography and step heights.

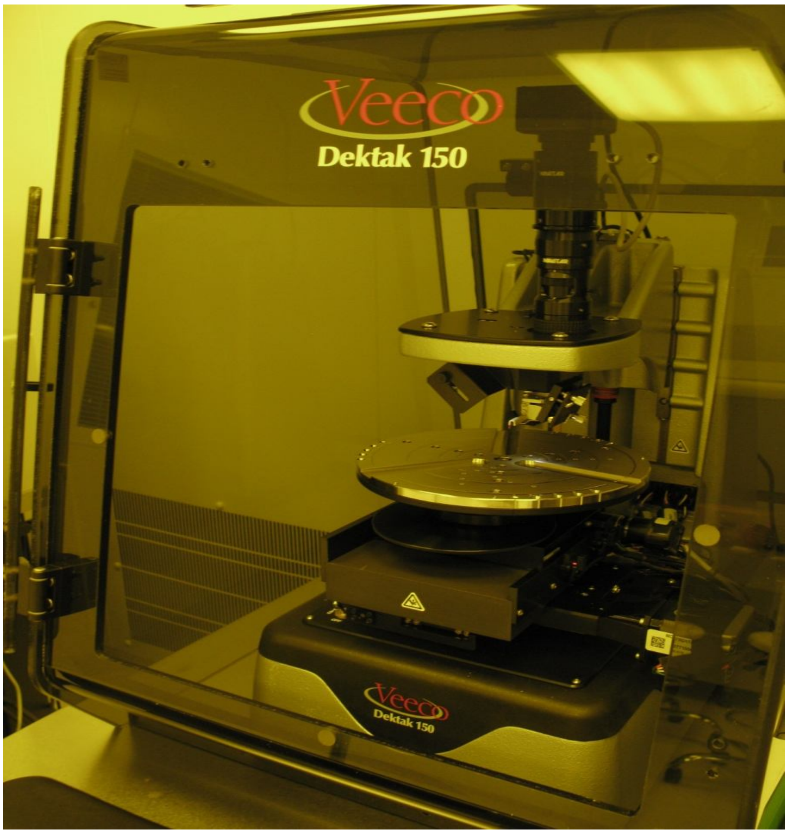

Figure 1:Dektak

Benefits:

- Cost-effective, complete solution for numerous research and industry applications
- 3D mapping capability
- sample flexibility
- 4-angstrom repeatability
- Industry's lowest noise flor

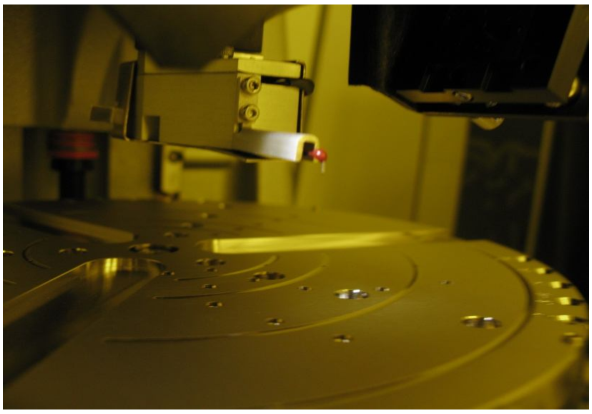

Figure 2:Dektak Stylus

Techinical Specifications and Accessories of DEKTAK

- Large standard Z range of 1 millimeter enables larger step measurements
- Optional X-Y and Y automated stage delivers programmability of over 200 locations
- Cast aluminum frame and rigid support elements
- Easy measurement setup
- 200 mm wafer support

SPECIFICATIONS	
Measurement Technique	Contact Stylus Profilometry
Measurement Capability	Two-dimensional surface profile measurements
Sample Viewing	640X480 pixel camera 100x to 644x magnification 0.67 to 4.29 mm HFOV (high field of View)
Stylus Sensor	Low Inertia Sensor (LIS3)
Stylus	1.25 □m
Stylus Force	1mg to 15 mg
Sample Stage	Manual X/Y/□ , 100X100 mm X-Y translation,360 ^{o} rotation, manual leveling, X-Y auto stage, 150 mm travel, 1 □□m repeatability
Vibration Isolation	Vibration Isolation Table
PERFORMANCE	
Scan Lenght Range	55mm to 200mm
Data Points Per Scan	Max. 120,000
Max. Sample Thickness	Up to 90 mm
Max. Wafer Size	200mm
Step Height Repeatability	$\leq 6A^{o}$
Vertical Range	1mm
Vertical Resolution	Max. $1A^{o}$
Lateral Accuracy	< 0.1 % (on 55mm scan)