

Prism Scanning

Executive Summary

Optimet's ConoProbe MK10 with a 25 mm focal lens was used in the application of prism scanning. The tests were performed to demonstrate measurement capability. Four different samples were scanned using spray¹: transparent prism, coated prism and two circle samples.

1. Optimet's Advantages over Other Technologies:

1. Optimet's technology is most suitable for roughness measurements
2. Unique collinear technology
3. Capability to measure sharp angles in minimum clearance
4. High lateral resolution
5. High sampling rate with no need for averaging

2. Application Description

Scanning of four different samples using Optimet's ConoProbe MK10 with a 25 mm focal lens.

Test settings:	Measurement Rate (kHz)	X-Step (μm)	Y-Step (μm)	Laser Power
Transparent prism	9	20	100	10
Coated prism	9	20	100	10
Circle samples (55% and 65%)	9	30	30	9

3. Results and Observations

Transparent Prism

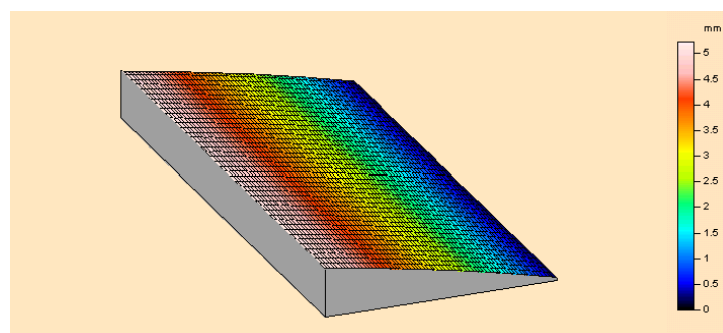


Figure 1 – 3D representation of transparent prism

¹ Optimet's technology now has the ability to scan transparent objects without spray



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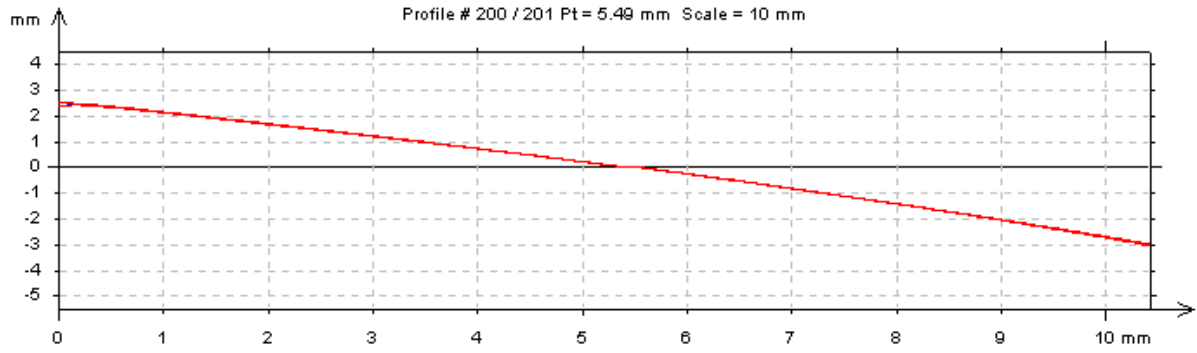


Figure 2 – Profiles series

Coated Prism

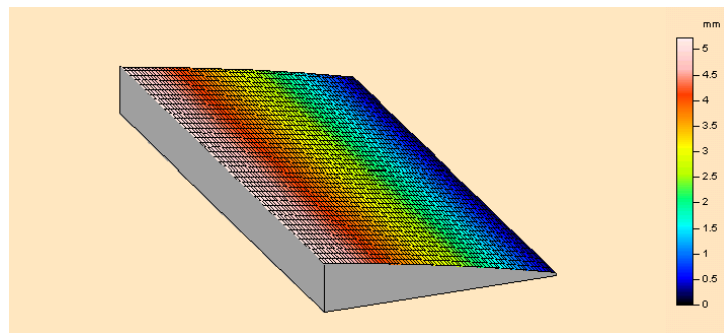


Figure 3 – 3D representation of coated prism

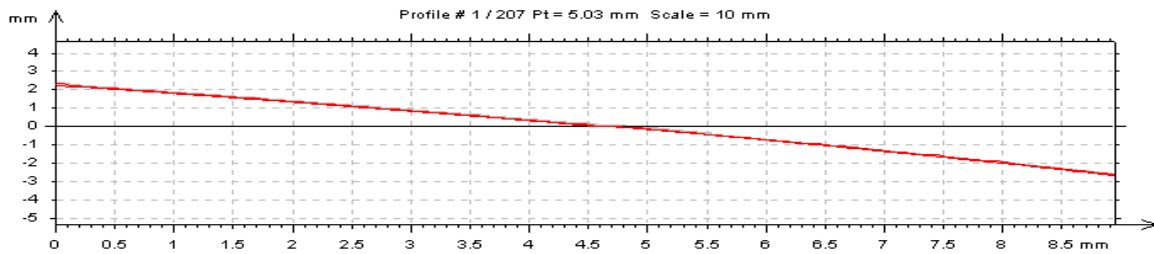


Figure 4 – Profiles series

Circle Samples (55% and 65%)

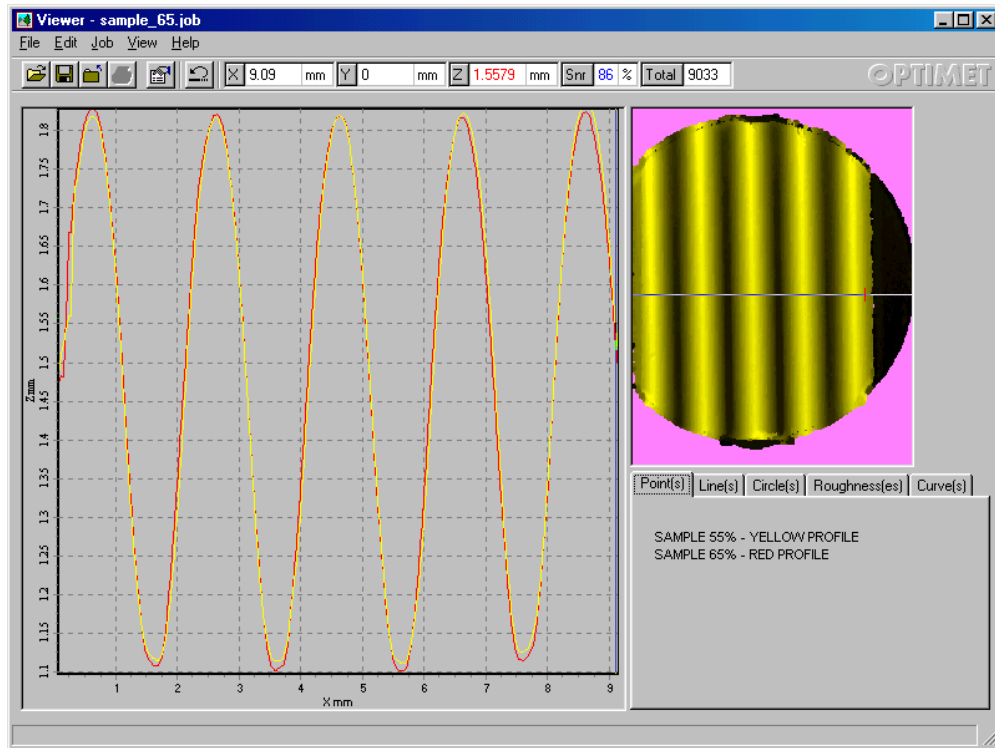


Figure 5 – Measurements from both profile superposed

4. Data:

(For 25mm and 50mm focal lenses)

Parameter	Value
Reflective/Diffusive/Transparent/Translucent	Transparent
Working Range (mm)	1.8/8
Precision (µm)	3/6
Stand Off (mm)	15/35
Max. Data Rate (Hz)	9KHz
Lateral Resolution	-
Z Resolution	-
Application Category	-