Nanotech®

Ultra-Precision Machining Systems for Single Point Diamond Turning, Micro-Grinding, Micro-Milling and Glass Press Molding

Application Report

Calcium Fluoride (CaF2)

Moore Nanotech® 250UPL

Objective: To quantify surface finish and form results obtainable on CaF2 using the Nanotech 250UPL.

Process:

- 2-Axis Single Point Diamond Turning

Part Configuration:

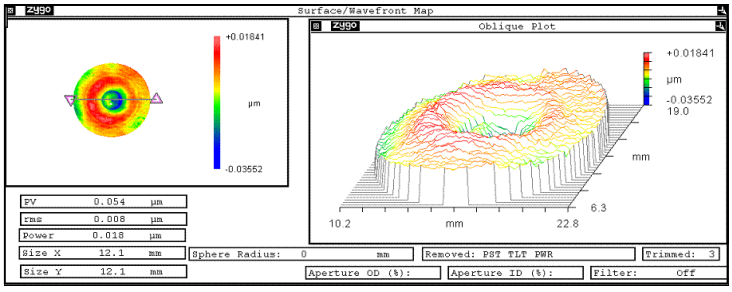
- **Material:** CaF2
- **Diameter:** 24 mm
- **Radius:** 200 mm
- **Surface Type:** CX Sphere

Machining Parameters:

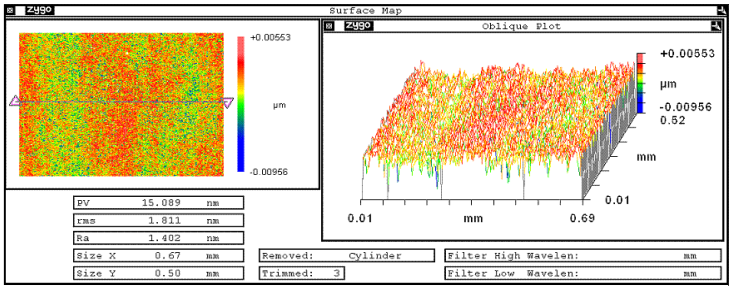
- **Spindle RPM:** 2000
- **Finish Feedrate:** 2.5 mm/min
- **Finish Depth of Cut:** 1 µm
- **Coolant:** Odorless Mineral Spirits

Tool Configuration:

- **Radius:** 0.635 mm
- **Top Rake:** - 25 Degree



Form Accuracy: PV = 0.054 µm



Surface Finish: Ra = 1.402 nm

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