

Nanotech 250UPL^{v2} Objective

To characterize absolute machine performance on Calcium Fluoride in terms of both surface finish and form accuracy

Process

2-Axis Single Point Diamond Turning



Application Summary

Part Configuration

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

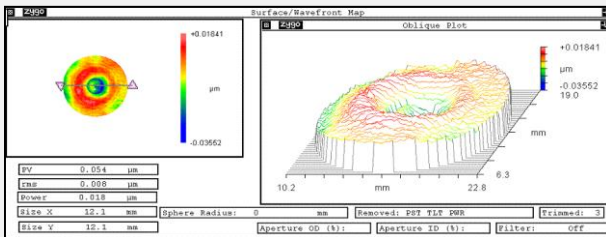
Tool Configuration

Radius: 0.635mm
 Top Rake: -25 Degree

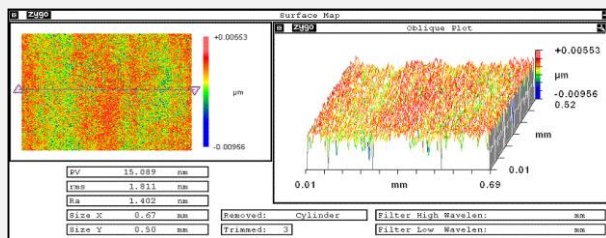
Machining Parameters

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

Metrology Results



Form Accuracy: PV = 0.054 µm



Surface Finish: Ra = 1.402 nm

