

## Nanotech 250UPL<sup>v2</sup> Objective

To characterize absolute machine performance on monocrystalline germanium in terms of both surface finish and form accuracy

## Process

2-Axis Single Point Diamond Turning



## Application Summary

### Part Configuration

Material: Ge  
 Diameter: 60 mm  
 Radius: 250 mm  
 Surface Type: CX Sphere

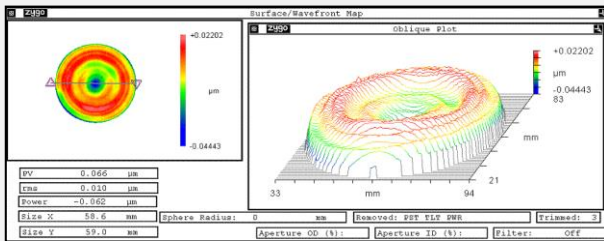
### Tool Configuration

Radius: 0.635mm  
 Top Rake: -25 Degree

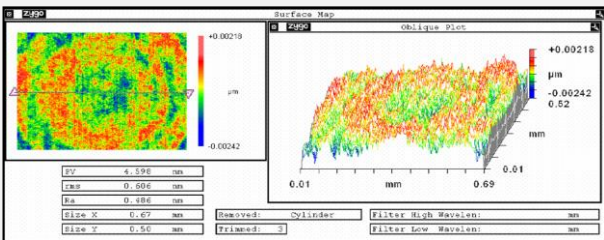
### Machining Parameters

Spindle RPM: 2500  
 Finish Feedrate: 2 mm/min  
 Finish Depth of Cut: 2  $\mu$ m  
 Coolant: Odorless Mineral Spirits

## Metrology Results



**Form Accuracy: PV = 0.066  $\mu$ m**



**Surface Finish: Ra = 0.486 nm**

