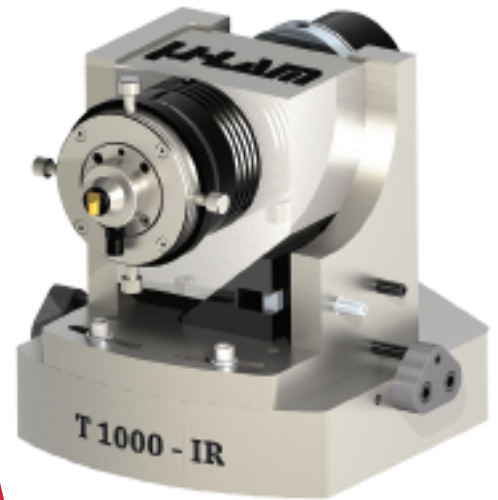


Zinc Selenide

Type	Optical grade ZnSe
Crystal Orientation	N/A
Hardness	1.5 GPa
Fracture Toughness	0.90 MPa.m ^{0.5}
Density	5.27 g/cc
Thermal Limit	1520 °C
Young's Modulus	67.2 GPa
Poisson's Ratio	0.28



◆ Machine	Moore Nanotech 450
◆ Resolution	1 nm positioning

◆ Laser Wavelength	1064 nm
◆ Laser Beam Diameter	50 μm

Part Configuration

Diameter	25 mm
Surface Type	Plano

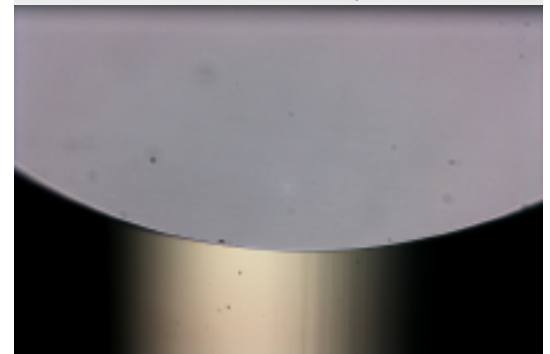
Machining Parameters

Spindle Speed	2500 RPM
Roughing Feed	8 μm/rev
Semi-finish Feed	2 μm/rev
Finishing Feed	0.5 μm/rev
Finish Depth of Cut	2 μm
Cutting Fluid	OMS

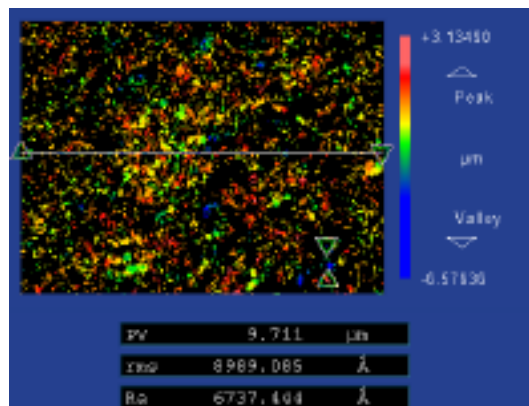
Tool Configuration

Radius	0.5 mm
Top Rake	-45 degree

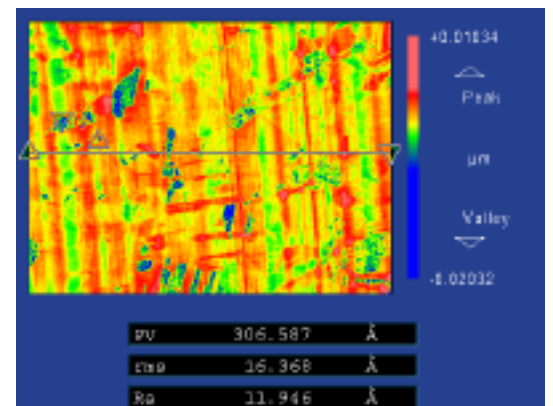
Optical Microscope Analysis at 200 X



Total tool track length covered: **31 km**
Note: No tool wear detected



Unmachined Ra = 675 nm



μ-LAM Ra = 1.2 nm

