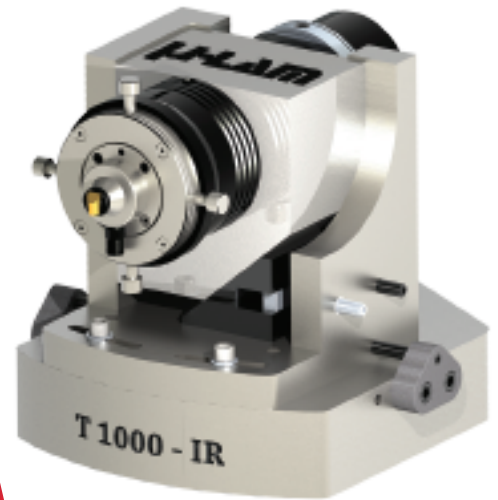


Silicon Carbide

Type	Poco Graphite SUPERSiC
Crystal Orientation	Polycrystalline <111> normal to surface
Hardness	27 GPa (micro) 65 GPa (nano)
Fracture Toughness	3 MPa.m ^{0.5}
Density	3.17 g/cc
Thermal Limit	2830 °C
Young's Modulus	466 GPa
Poisson's Ratio	0.17



◆ Machine Moore Nanotech 350
 ◆ Resolution 10 nm positioning

◆ Laser Wavelength 1064 nm
 ◆ Laser Beam Diameter 50 μm

μ-LAN

Part Configuration

Diameter 25 mm
 Surface Type Plano

Machining Parameters

Spindle Speed 2000 RPM
 Roughing Feed 10 μm/rev
 Roughing Depth of Cut 5 μm
 Semi Finish Feed 4 μm/rev
 Semi Depth of Cut 2 μm
 Cutting Fluid OMS

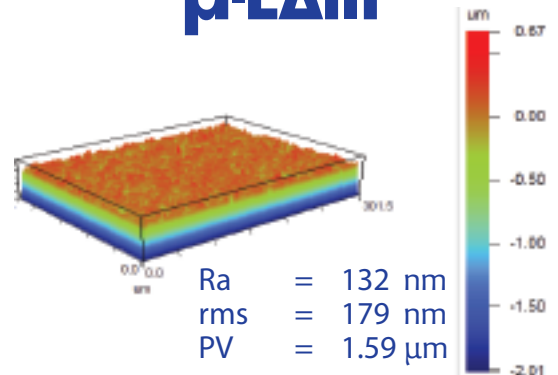
Tool Configuration

Radius 1 mm
 Top Rake -25 degree

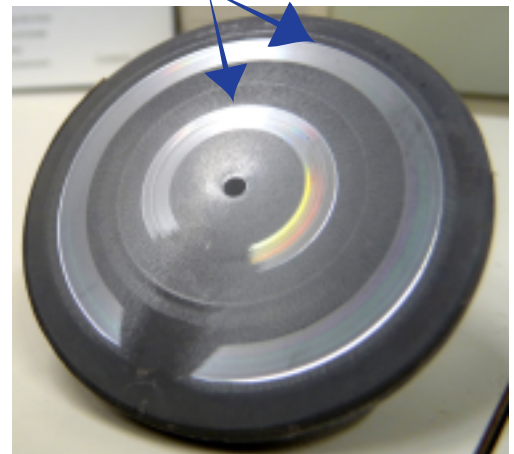
Note

The following are first test results to evaluate machining feasibility of this material.
 Ongoing development work to improve surface finish and minimize tool wear is currently in progress.

μ-LAN



μ-LAN machined regions



Unmachined Ra = 1.6 μm