New Ultra Precision Machining Capabilities

Wielandts UPMT has invested in a state-of-the-art three-axis diamond turning lathe and associated metrology equipment to offer its customers machining of lens arrays using its patent pending Dynamic Part Indexing (DPI) technology as well as for on-axis turning of optical surfaces.

DPI dynamically shifts the workpiece to align any chosen point with the spindle axis. Any features which can typically be machined using 2 or 3-axis turning can then be cut in an array without any added complexity! And all while maintaining spindle balancing.
Lens arrays, wafer optics and monolithic molds

- Diameter up to 200 mm
- Spherical, aspherical, Fresnel and diffractives

Single lenses

- Diameter up to 450 mm
- Planar, spherical, aspherical, Fresnel, diffractives
- Torics, biconics, off-axis aspheres and freeforms

- Brass, Cu, Al, NiP, Ge, ZnS, ZnSe, CaF, PMMA
- Form accuracy 0.1 µm PV, surface roughness 1-5 nm Ra

Our metrology equipment includes:

- Fizeau interferometer for measurement of flats, spheres and mild aspheres
- Non-contact confocal profilometry for aspheres and other freeforms
- White light interferometer for measurement of surface roughness
- 3D touch probe and combined 3D touch probe/optical CMM for dimensional measurements

Wielandts UPMT will be showing its Dynamic Part Indexing (DPI) technology at the 2016 Optatec trade fair in Frankfurt, Germany on the booth of Moore Nanotech. The system will be shown live on a 3-axis Nanotech 450UPL diamond turning lathe.
Please drop by the booth (G31) to discuss your applications for ultra precision machining!