

Technologies

Diamond turning

Ultra-precise cutting using monocrystalline diamond is the key technology for manufacturing virtually any optical functional surface with the utmost precision. This enables the processing of non-ferrous metals, nickel-phosphorus coatings, plastics, crystals and IR lenses.

Manufacturing dimensions [ISO 10110-1]		
Achievable diameters	mm	1 - 350
Center thickness	mm	from 0.5*
Surface shape [ISO 10110-1; 12]		up to
Shape accuracies PV	nm	100
Shape accuracies RMS	nm	20
Surface roughness - Rq	nm	1

* dependent on diameter

Available technologies	
<ul style="list-style-type: none"> = Diamond turning with 2 and 3 linear axes = Fly cutting = Slow tool servo 	
Processable materials	
<ul style="list-style-type: none"> = Copper, aluminum, brass, nickel silver, nickel = Nickel-phosphorus layers = Polycarbonate, PMMA = Silicon, germanium, zinc sulfide = IR lenses 	
Achievable optical component geometries	
<ul style="list-style-type: none"> = Aspheres = Spheres = Cylinders = Toroids = Microlenses = Fresnel structures = Diffractive optical elements = Freeforms 	

