QIOPTIQ
Photonics for Innovation
An Excelitas Technologies Company

The Highest Precision in Every Shape

Diamond Turning | Diamond Milling

DIN EN ISO 9001:2008
DIN EN ISO 13485:2007

Our know-how

We manufacture
- spherical surfaces
- Aspherical surfaces
- Freeform surfaces
- Diffractive structures
- Ultra-precise functional surfaces with fiducials

up to a component size of ø 600 mm x 200 mm (weight max. 30 kg) as directly produced functional parts or as precision mouldings for replication processes.

Competent and fast for a fair price!

Diamond Turning

Over 30 years of experience, skilled employees and up to date machines are our success factors for manufacturing diamond turned surfaces.

Our machinery

- Moore Nanotech 250UPL, 3 axes
- Moore Nanotech 350FG, 5 axes + milling spindle
- Moore Fast Tool Servo NFTS-6000

Rotation-symmetric multiple aspherical surface, aluminium.

Rotation-symmetric aspherical surface, PMMA.

Diffractive elements.

Freeform mirror, aluminium.

Material	Surface deviation down to	Surface roughness down to
Aluminium	λ/10	2 nm
Non-ferrous metals	λ/10	3 nm
Steel	3λ	40 nm
PMMA	2λ	5 nm
Topas®/Zeonex®	2λ	5 nm
Silicon	λ/5	4 nm
Germanium	λ/10	2 nm
Ceramics	3λ	n.a.
Zinc Sulphide	λ/5	4 nm
More materials on request		

Diamond milling

Our know-how in high precision optics and an excellent understanding of material behaviour enable us to manufacture plane surfaces of highest quality.

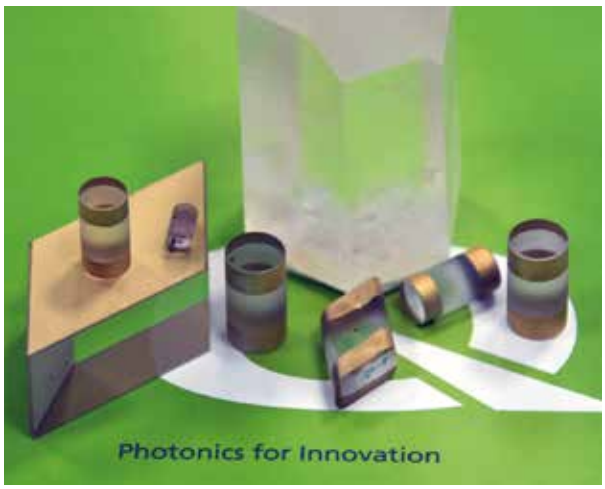
Our machinery

- 2x LT Ultra Milling Machines SMMC 600 XC

Our know-how

We manufacture high precision plane surfaces up to a component size of max. 100 mm x 100 mm x 100 mm.

Material	Surface deviation down to	Surface roughness down to
Aluminium	λ/2	2 nm
Non-ferrous metals	λ/2	4 nm
Crystal materials (e.g. KDP, ADP)	λ	4 nm



Crystal components for laser applications

Metrology

Up to date equipment combined with the experience of many years in optical metrology guarantee our high quality standards, also for manufacturing freeform surfaces.

Procedure	Machines	Type	Measurement	Accuracy
Tactile	3D-coordinates measuring machines	Zeiss Prismo 7, Contura 0-Inspect	Shape deviation	0.9 µm + L /400
	Profile measuring device	Form Talysurf PGI 1240	Surface deviation	0.2 µm
Non-contact	Interferometrical measurements, if applicable with CGH	Zygo Verifire XPZ 4"	Surface deviation	λ/10
	White light interferometer	Bruker Contour GTI	Micro roughness	1 nm
	Measuring microsope	Nikon MM-400	Dimensions	1 µm

Photonics for Innovation

Qioptiq, an Excelitas Technologies Company since 2013, designs and manufactures photonic products and solutions that serve a wide range of markets and applications in the areas of medical and life sciences, industrial manufacturing, defense and aerospace, and research and development.

Qioptiq and Excelitas together, have 6000 employees in North America, Europe and Asia, serving customers across the world.

Your Contact

Roman Loose
Qioptiq Photonics GmbH & Co. KG
Hans-Riedl-Str. 9
85622 Feldkirchen (Munich)
Tel. 089-25 54 58 - 324
Roman.Loose@excelitas.com

www.qioptiq.com | www.excelitas.com

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