

Cylindrical Lenses

Product information

Cylindrical lenses have a spherical radius in one direction only. For over 30 years, we have been producing cylindrical lenses by machining a great variety of different sizes, which, even in small thickness, maintain very tight curvature tolerances.

Independent of the glass types the radii will be manufactured with the highest precision, also in respect of convex radii from 1 mm to 10 mm. Even smaller rectangular elements can be centered with tolerances of 2 arc minutes. Additionally we offer high-quality in-house coating capabilities.

Applications

Cylindrical lenses can be used to generate line or beamshaping in

- Diode laser
- Gas laser

Advantages

- Good irregularity on cylindrical radius
- Custom design
- Coating inhouse

Materials

- All types of optical glass
- Fused Silica LITHOSIL®
- Glass ceramic ZERODUR®

Quality Assurance

Our quality control is based on self-checking during production and 100% final inspection. Measuring instruments used include 2D profile measurement (0.2 µm accuracy). An optional profilometry test (0.1 µm accuracy) is also available.



Forms of Supply

We supply cylindrical lenses with dimensions up to 200 mm x 200 mm and in three forms, namely, coated, uncoated or semi-finished (grinded) lenses.

Specifications

We produce customized cylindrical lenses according to ISO 10110, or MIL-specs, as well as customers' drawings.

Design Wavelength	350–2400 nm
Surface Quality (S-D)	40–20
Micro Roughness	standard 5 nm Rq to 2 nm Rq, depending on surface dimensions and material
Surface Flatness	$\lambda/2$ over 100 mm in the direction parallel to the cylinder axis, up to 2λ over 100 mm in the direction perpendicular to the cylinder axis
Convex Radius	from 1 mm–3000 mm Special technique for convex radii from 1 mm to 10 mm
Concave Radius	10 mm–3000 mm
Form Precision	up to 0.3 micrometer PV
General Precision	0.1 % of radius
Damage Threshold	$>10\text{J}/\text{cm}^2$ @ 1064 nm, single pulse, 650 ps
Coating	AR Coating

For more information please contact:

Advanced Optics
SCHOTT AG
Hattenbergstrasse 10
55122 Mainz
Germany

Phone: +49 (0)6131/66-1812
Fax: +49 (0)3641/2888-9047
info.optics@schott.com
www.schott.com/advanced_optics

SCHOTT
glass made of ideas