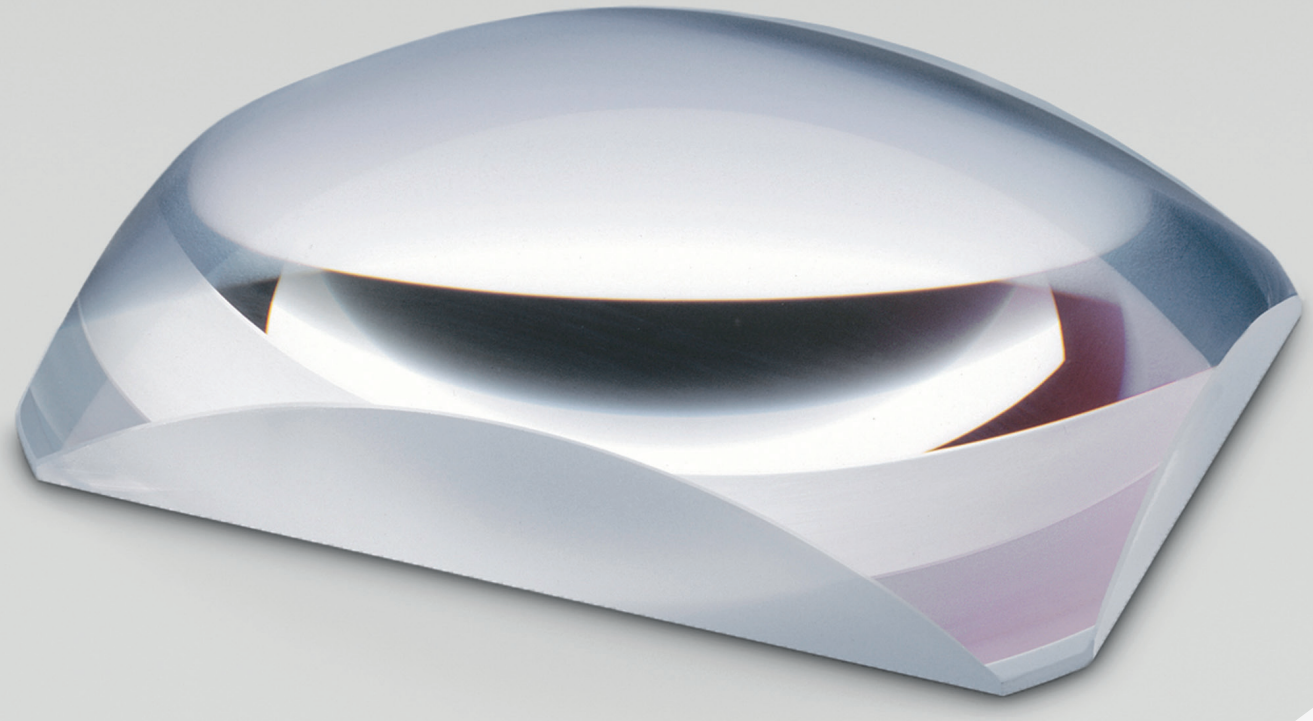
SPHERICAL OPTICS
ULTIMATE IMAGING AND BEAM QUALITY



SWISSOPTIC
A member of the JENOPTIK Group

SPHERICAL OPTICS

SwissOptic, a Jenoptik Group company, manufactures precision spherical optics (lenses, achromatic lenses, encapsulated systems, mirror) for applications in laser technology, medical technology, semiconductor, metrology, research and other fields.

SPECIFICATIONS*

Material	optical glass, quartz, glass ceramics, borosilicate glass and filter
Dimensions	Ø 10–350 mm
Radii	5 mm up to ∞
Centering accuracy	10"
Defects in shape	λ/100 PVr, measured at 546 nm
Micro roughness	0.2 nm rms
Surface defects	5/1 x 0.013
Center thickness tolerance	±3 µm
Diameter tolerance	±3 µm
Laser damage threshold	20 J/em²

QUALITY ASSURANCE

In addition to permanent process and production control there is a final inspection for which sophisticated measurement devices are available.

NOTES

SwissOptic offers a special know-how in optical cementing, lacquered diaphragms, lacquered circumferences and special shaping of contours.

METROLOGY

Wavefront	interferometer (4–12"), radii metrology, multiple area metrology, stitching-interferometer
Form deviation	3D coordinate measuring devices, caliper, CCD micrometers, interferometer
Angle precision	goniometer, interferometer, autocolimators
Transmission/reflection	spectral photometer, diode array
Surface defects	various microscopic methodes
Micro roughness	white light interferometer
Imaging/performance/resolution	computer-supported MTF measurement, microscopic image resoltuion
Centering	objective metrology system, laser centering station
Fine correcting procedure	mechanical fine correction, robotic polishing
Additional functional measurement	enviromental/climatic test acc. to ISO and MIL standards, abrasion and adhesion, various chemical and resistance testing, autoclaving, surface measurement, resistance measurement, assembly-specific metrology station

* The following error and tolerance data indicates possible limit values. Specified and assessed according to ISO/MIL/DIN

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