# Competent & innovative for three generations



GUTSCHE has been family-owned for three generations and is one of the few independent manufacturers of micro-optical components. The majority of our customers have been loyal to us for decades. They appreciate our reliability and competence, which we are constantly expanding in line with the latest technological developments.

At GUTSCHE Microoptics work for you:

120

highly motivated microoptics specialists 3,000 m<sup>2</sup> of state-of-the-art production facilities

480 m<sup>2</sup>

since 1959
experience and competence

air particle-free clean rooms

- → State-of-the-art measuring methods
- → High-end hardware and software
- → Close exchange with the customer

For precise, accurately fitting, and perfect micro-optical components and systems, 100% made in Germany.

# The 3-point plan at GUTSCHE Microoptics

The individual customer needs are identified through **careful listening & analysis**. In doing so, we stand by our customers in an advisory capacity.

Our customers can rely on maximum transparency and open **communication** at every stage of production.

Every single lens is subjected to a meticulous quality inspection so that our customers always receive only an absolutely perfect product.

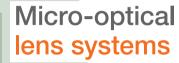
Whether standard or customised lenses, our customers can always rely on receiving products optimally tailored to their needs and maximum customer support from competent micro-optics specialists.

#### gutsche-feinoptik.de/en/

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Precise.

Accurate.

Perfect.

100 % made in Germany







# Our mission is the perfect product

We pursue this from the raw glass to the quality inspection of your micro-optical component and system. Thus, we offer individual lenses and high-precision micro-optical systems with a diameter of 0.8 mm to 12 mm that are precisely matched to your application.

We adapt the perfect lens in shape and composition exactly to your application and manufacture it with the utmost care.



Achromats and apochromats minimise the variation of the cut width with the wavelength and thus avoid colour errors.

**Negatives** widen the beam path. The black chrome coating suppresses stray light.

**Spherical**, **convex**, and **rod lenses** precisely focus the incident light rays and transport them over the distance specified in the application.

These and many other lens shapes as well as prisms and glass surfaces are part of our wide-ranging product programme, as is the creation of complex application-specific lens systems.

### Lens systems for your application

We combine the properties of different lenses and prisms in complex and high-precision systems to precisely meet the required specifications of your application. Such systems are indispensable in areas that require maximum precision combined with high flexibility.



# Highest quality and reliability



Our product range covers every batch size, from prototypes to small and large series. Whether standardised individual lenses, customised precision optical components, or complex lens systems – we adapt every product precisely to your needs. All production steps take place under one roof. This makes us your reliable supplier of products and systems: 100 % made in Germany.

#### GUTSCHE Microoptics' vertical range of manufacture

We **grind** and **polish** both by traditional by-hand method and with the most modern CNC machines. The fit is checked directly afterwards by means of an interferometer. The concentricity deviations are measured by computer-aided autocollimators, which enables us to achieve a centricity of **up to 5 \mum** for our optical assemblies.

For filter and anti-reflective coatings, dielectric mirrors, and many other finishing processes, we apply a precise fitting **coating** in an extremely thin and permanently stable manner.

The **bonding** and **assembly** of the individual elements of a lens system are automated with the highest precision and zero error tolerance.

The **cleaning** of the lenses is water-, air- & solution-based. To ensure the highest quality, cleanroom conditions are also created at the workplace by laminar flow boxes.

We check whether our mission "the perfect product" was successful in the final inspection. We have only achieved our goal if the lenses and lens systems are 100% flawless and perfect. This is how we ensure that we always provide you with the perfect micro-optics product for the perfect application.