

# Laser / Pulse Compression Gratings

## Customer-specific



Order number 263232-8099-935

We offer design and manufacturing as well as characterization of customer-specific gratings for laser applications. Some typical specifications are found in the table below, but only serve as a guide and can be discussed case by case.

### Grating specifications

<b>Grating type</b>	Reflective or transmissive master gratings, GRISM
<b>Groove density</b>	Arbitrary, up to 3600 l/mm
<b>Groove profile</b>	Optimized according to efficiency specifications
<b>Diffraction grating area</b>	Up to 200 x 200 mm <sup>2</sup> or 300 mm circular diameter
<b>Coatings</b>	Anti-reflective or functional, dielectric materials, metals
<b>Wavelengths</b>	250 - 2000 nm
<b>Bandwidths</b>	15 - 150 nm
<b>Efficiencies</b>	95 % (typical), up to 99 % possible
<b>Polarization</b>	Typically TE, TM, unpolarized possible, depending on SPECS
<b>Substrate material</b>	Typically Fused Silica; other glass, Zerodur, Silicon possible

Our long-term experience in grating design and manufacturing will allow to find a solution even for the most challenging tasks.

### In particular ZEISS offers the following services:

- Grating design using rigorous electromagnetic methods
- Substrate manufacturing
- Lithographic recording
  - Patterning using two-beam interference lithography
  - Pattern transfer using reactive ion beam etching
- Functional or anti-reflective coating
- Characterization (e.g. diffraction efficiency, wave front error)

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