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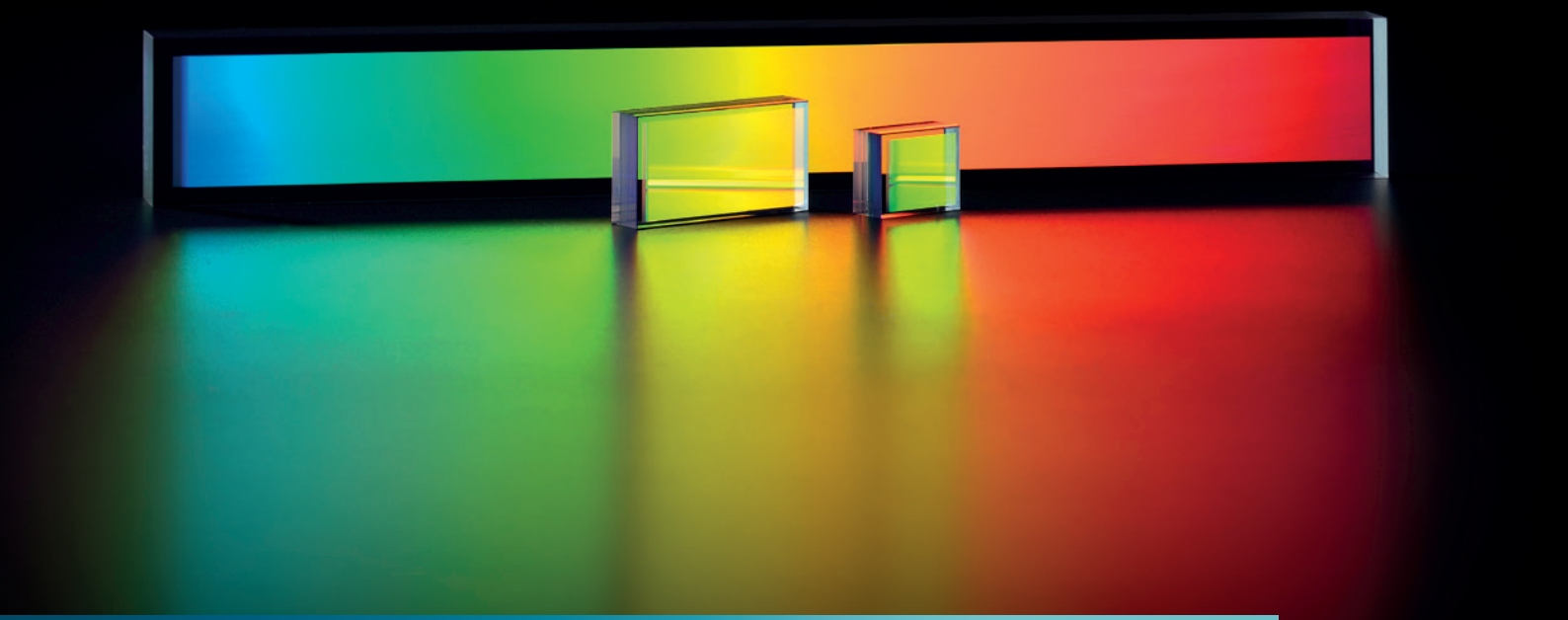

Dielectric reflection gratings with 275 mm width before slicing

Demanding applications. Customized solutions.

Dielectric reflection gratings with 275 mm width before slicing

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Cover: Diffraction gratings.

Top: Dielectric reflection gratings during a full size measurement scan of diffraction efficiency.

Description

Customized diffraction gratings for laser applications are designed, fabricated with lithographic technologies and characterized with respect to their optical parameters.

Parameters

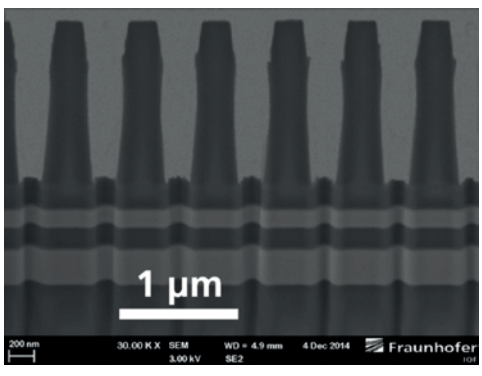
- Reflection (R) or Transmission (T)
- Line density: up to 3500 l/mm
- Polarization: TE or TM
- Wavelength: 266 – 2100 nm
- Bandwidth: 20 – 100 nm
- Angle of incidence: Littrow (T)
  < +/– 5° off Littrow (R)
- Efficiency: > 95 % over bandwidth
  > 99 % possible
- Element size: < 275 x 120 mm² or
  < 200 x 200 mm²
- Substrate: fused silica

Service / technology

- Grating design
- Lithographic wafer-level processing:
  - Electron beam lithography
  - Reactive ion etching
- Characterization
  - Diffraction efficiency
  - Wave front error
- Dicing / machining of grating elements
- Backside anti-reflection coating (T)

Applications

- Laser pulse compression
- Phase gratings for FBG-Inscription
- DWM-components
- Beam shaping



SEM micrograph (post processed) of a grating profile cross section. Grating etched into a dielectric layer stack.

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scan for more info