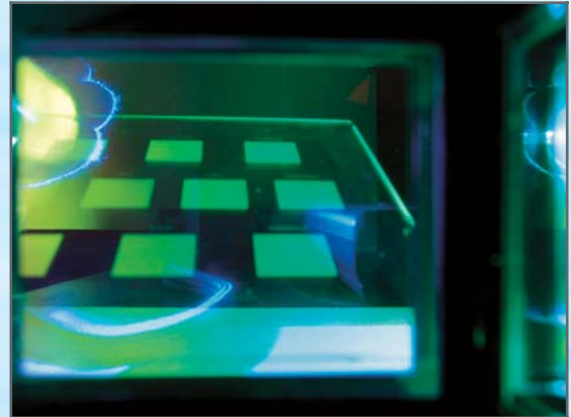




# DIFFRACTIVE OPTICS

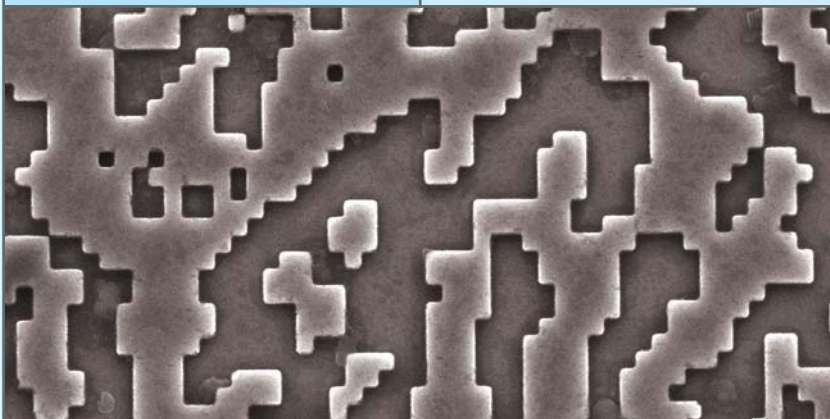
A diffractive optical element (DOE) is a "wavefront processor" capable of transforming a laser beam into an almost arbitrary complex output pattern. A DOE is an optical component characterized by a complex microstructure. The microstructure must be designed and fabricated in order to implement a desired optical function.



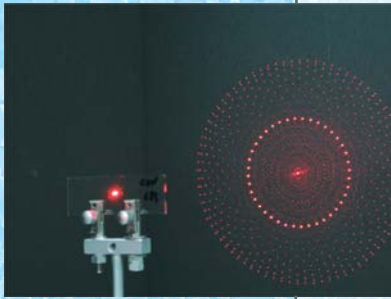
## Diffractive Optical Elements provided by HoloEye™

- Gratings (amplitude, phase, blazed)
- Diffractive Lenses (Fresnel Zone Lenses, Lens Arrays, Off-Axis and Cylindric Lenses)
- Beam Splitting Elements
- Beam Shaping Elements

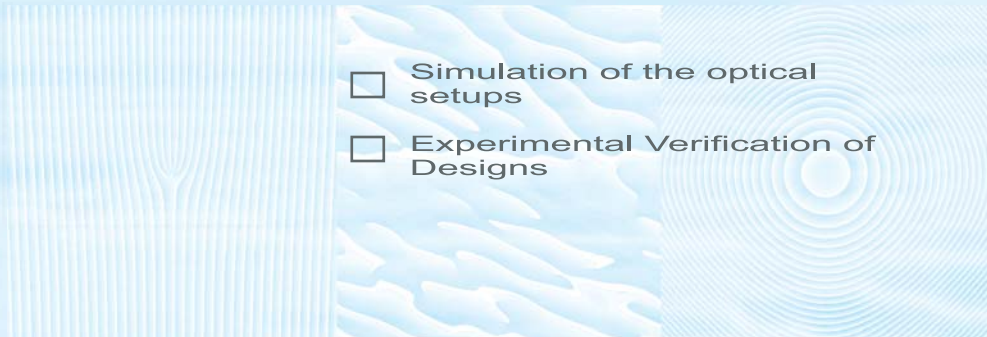
HoloEye™ offers services in design, origination and replication of diffractive optical elements.



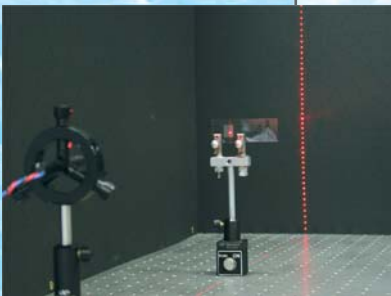
Diffractive optics systems add high value to laser systems because these systems incorporate optical components capable of "controlling" the shape of laser beams. This is of high relevance as laser beams have basically one and the same shape. Hence diffractive optics, which flexibly modify the shapes of laser beams according to the various requirements of applications, add a missing key feature to laser technology: flexible laser beam modification. Further, new developments of adaptive diffractive optics systems enable the change of laser beam shapes at real-time switching rates!



- Identification of applications of diffractive optics in industrial environments
- Feasibility studies and analyses
- Rapid prototyping of systems incorporating Diffractive elements



- Simulation of the optical setups
- Experimental Verification of Designs



- Shipment of test elements for your evaluation of the technology
- Custom design of diffractive elements for industrial applications according to customer specification
- Fabrication of the master structures for DOE replication

- Optical Performance tests
- Replication of diffractive elements



HoloEye™ Ltd. is committed to provide best services in diffractive optics and incorporate this young and promising technology into technical systems. We help our customers to identify areas of applications of diffractive optics by considering their business goals and we co-operate in the definition and realisation of new products. If you have further questions, please contact us at

[contact@holoeye.de](mailto:contact@holoeye.de)