



## Photonics for Industrial Solutions: Coatings.

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The listed coatings show only a part of our coating options. We also develop customized solutions and advise you.

# Coating.

## Substrate:

- ◆ As substrate optical glass, flat glass, borosilicate glass, gray glass, quartz, glass and ceramic filter is used.
- ◆ Contract coating on customer substrates is possible.

## Specification\*:

### Mirror coating

- ◆ HR laser mirror for one or more wavelengths
- ◆ Laser mirror
- ◆ Broadband HR for high reflection
- ◆ Broadband HR (cold light mirror, dichroitic mirror)
- ◆ Metallic mirror (Ag, An, Al, Cr, Cn, Ni – with or without protective coating, increased dielectric protective coating)
- ◆ Front surface and back surface mirror
- ◆ Wavelength range approx. 190 – 5,000 nm
- ◆ Angle 0° - 60° s. p. pol.
- ◆ IR up to 50 µm

### Antireflective coating

- ◆ Wavelength range approx. 190 – 5,000 nm
- ◆ Angle 0° - 45° un-/polarized
- ◆ Residual reflection < 0,1% depending on the bandwidth, incident angle and polarization
- ◆ Single coating
- ◆ AR for single and multiple wavelengths
- ◆ Broadband AR
- ◆ Broadband AR for several areas
- ◆ IR up to 45 µm

### Filter

- ◆ Edge filter
- ◆ Band-pass filter
- ◆ Narrow-band filter
- ◆ Dichroitic filter
- ◆ Gradient filter (neutral density filter)

### Beam splitter

- ◆ Cemented/uncemented
- ◆ Polarizing or unpolarizing
- ◆ Beam splitter for single and multiple wavelengths and with different division ratios
- ◆ IR up to 40 µm

### Holographic gratings

- ◆ Dimensions: up to Ø 63.5 mm
- ◆ Grating constants: up to 3,600 lines per mm (3 lines per µm)
- ◆ Wavelength: from 120 nm
- ◆ Material with low thermal expansion

### Microstructuring

- ◆ Reticles
- ◆ Masks
- ◆ Coded and analog circles

### ITO coating

### Structured coating

### Functional- and abrasion protective coating

### Customer specific coating

### Coating design

## Metrology:

Wavefront	Interferometer (4-24"), Shack-Hartmann-wavefront sensor (UV, DUV, VIS, NIR)
Form deviation	3D coordinate measuring devices, caliper, CCD micrometers, Stitching-interferometer
Angle precision	Goniometer, interferometer, auto-collimators
Transmission/reflection	Spectral photometer
Surface defects	Traveling microscopes
Micro roughness	White light interferometer, atomic force microscope
Imaging performance/resolution	Computer-supported MTF measurement, microscopic image resolution
Centering	Objective metrology system, laser centering station
Additional functional measurement	Assembly-specific metrology station
Fine correcting procedure	Ionic beam process, robotic polishing, magnetorheological process

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