

## Surface-Analyzer

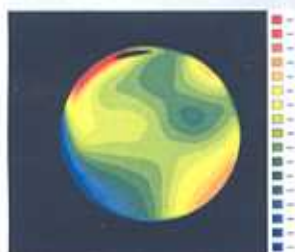
High resolution optical reflectometry for surface analysis on reflective surfaces. Ideally suited for process development and process control in ophthalmic lens surfacing

## Features



Distorted image of projected fringe image on surface to be measured

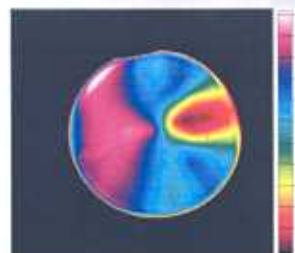
- Very high resolution, touchless determination of surface geometries on ophthalmic lenses
- 3D mapping of optical power or height profile
- Display of errors against calculated free form data file for shape evaluation
- All surface geometries like spheric, toric and free-form shapes possible
- Measurement accuracy  $\pm 0,01\text{dpt}$  at 1mm lateral resolution
- Resolution of height profiles for cosmetic control at nanometer level
- Cosmetic control of the measured surface
- Archiving of measuring results
- Short measurement cycle: 0,3 to 3 minutes depending on resolution
- Easy to use and to calibrate with single camera configuration
- Powerful analytic software
- Small foot print



Error plot of measured sag height versus data file

## Application

- Powerful tool for process development and process control in direct surfacing of ophthalmic lenses, for instance:
  - use for daily release procedures of free-form generators
  - release of new process parameter settings
  - analysis of surface structures for failure analysis
  - control of free form design
- Advantage over CMM systems:
  - much faster
  - higher accuracy of optical power mapping
  - higher lateral resolution
  - easier to set up and calibrate



Optical surface power mapping

## Technical Information

- Area of measurement: 90 x 120 mm
- Measuring range:
  - $\pm 16^\circ$  at center of object
  - (with 80 mm object: +10dpt, -6dpt
  - with 35 mm object: +20dpt, -16dpt)
- Lateral resolution 87 $\mu\text{m}$
- Accuracy in surface power measurement 0.01dpt at 1mm lateral resolution
- Dimensions: 660 x 578 x 860mm (w x d x h)



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