Optical Design
Made Simple

ANAX
OPTICS

Anax Hyperion™

ANAX Hyperion™ gives you the power to design and simulate optical systems without the need for prior knowledge of optics

Why choose Hyperion™?

Suitable for absolute beginners in optics

- Simple and intuitive graphical user interface
- Design and simulate a system in a few easy steps
- Low investment cost, but powerful design capabilities
- Design optical systems from lens catalogs
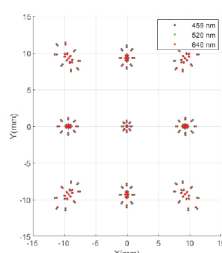- Export your optical systems to STEP, STL or even CNC

Software Features

Simple user interface with few buttons!

- Optical elements table
- Light sources table
- System layout plot
- Catalog of more than 600 lenses (Edmund Opt., Thorlabs, …)
- Catalog of more than 1 500 lens materials (Ohara, Schott, …)

RAY TRACING SIMULATION
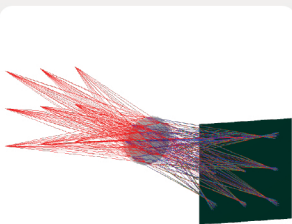
SPOT DIAGRAM
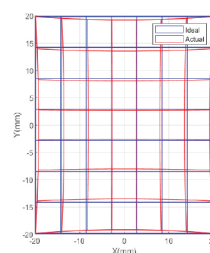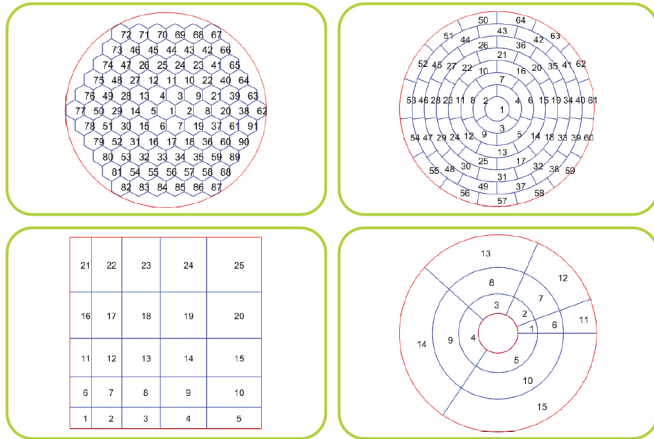

DISTORTION DIAGRAM

IMAGE SIMULATION
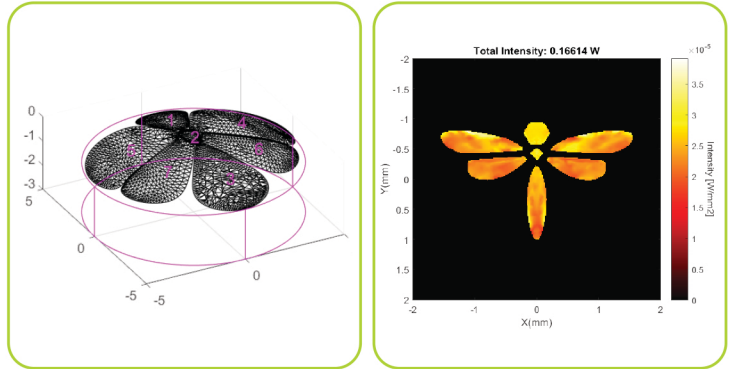
Lens Array Module

Geometric Lens Arrays

- Generate regular and non-regular lens arrays

- Hexagonal, annular, rectangular segments

- Define light input/output for each segment, and get the surface shape in 1-click!

Example of geometric segments layouts

Topological Lens Arrays

- Produce complex illumination patterns with topological lens arrays

- Import the illumination pattern from raster graphic files

- Segment layout and surface shapes computed automatically

Topological lens array generated by automatic construction

Simulation of resulting illumination pattern

AI Module

- Proposes optical layouts for a given focal length, numerical aperture and field of view

- Adjustable parameters including lens assembly size, number of elements and total cost

- Choice of fully custom and/or catalog lenses in the generated design
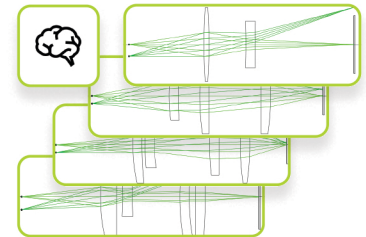

Typical Case Studies

- **Case 1**

  University researcher A wants to design a new non-contact thermometer that measures temperature at different distances from a heat source. Combining a multi-focal lens array and aspheric condenser lens in the software, the resulting optical system can measure temperature with ~0.1°C accuracy.

- **Case 2**

  Company engineer B wants to design a new microscope objective for a micro-fluidic experiment, that will allow him to measure the velocity of particles moving in three dimensions. The automatically generated geometric lens array allows simultaneous acquisition of images from 6 slicing planes.
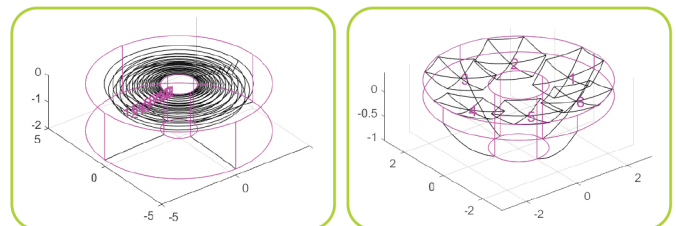
Multi-focal lens array (Case 1)

3D imaging lens array (Case 2)
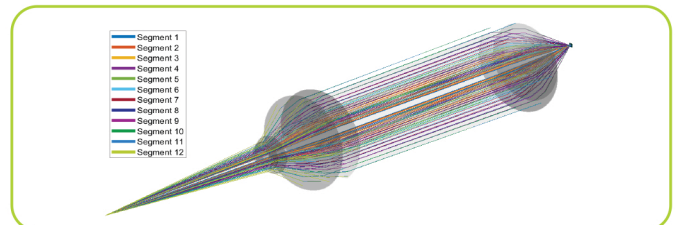
Ray tracing of composite lens system (Case 1)