

Micro-optics for ASTRONOMY

Thanks to ever more performing optical instrumentation (adaptive optics, interferometry, spectrometry,...) and simulation tools, astronomers are going even further and more finely in observation with space and ground-based telescopes.

Keeping up this steady improvement, SILIOS Technologies offers state-of-the-art micro-optical components:

Examples:

Atmospheric turbulence simulation

SILIOS' **turbulence phase screens** are optical elements whose surfaces present an encoded bi-dimensional aberration. The encoded phase map is a spatial distribution typical of atmospheric turbulence.

Multi-segment telescope co-phasing

SILIOS provides **micro-components for simulators and phasing sensors** that enable the alignment of the different segments of giant telescope mirrors.

Exo-planet detection

SILIOS realizes **specific coronagraph masks** that reduce the central high intensity coming from a star to allow the observation of a very lower intensity object close to it. The available types of components are:

- phase masks with single circular zone, dual circular zone, four quadrants,...
- binary amplitude masks with single circular zone, segmented zone,...

Corrective lenses for imaging systems

SILIOS provides **custom Fresnel diffractive lenses** that correct the chromatism aberration in astronomy imaging instruments.

Technical specifications:

Optic type :	phase or amplitude component
Material :	fused silica, BK7,...
Beam diameter :	up to 4" diameter
Wavelength range:	from UV to middle IR

