

General

Phase Screens are transmissive or reflective optical elements whose surfaces present an encoded bi-dimensional aberration. The encoded phase map is a spatial distribution typical of atmospheric turbulence. A plane wavefront passing through emerges distorted according to the encoded aberrations.

Specifications ⁽¹⁾

Substrate

<i>Diameter :</i>	up to 100 mm (150 mm on demand)
<i>Thickness :</i>	from 0.5 mm to 10 mm (up to 20 mm on demand)
<i>Material :</i>	fused silica (high transmittance from 0.5 to 2.5 microns, very low refractive index change versus wavelength)

Encoded Phase Map

<i>Data :</i>	phase Map data provided by customer.
<i>Pixel size :</i>	from 10 x 10 microns ² to more than 100 x 100 microns ²
<i>Encoded Phase Profile :</i>	etched multilevel profile (up to 512 levels)
<i>OPD PTV :</i>	up to 10 microns (transmissive plates), up to 40 microns (reflective plates)

⁽¹⁾ Please contact us for other specifications.

Reflective Phase Screen

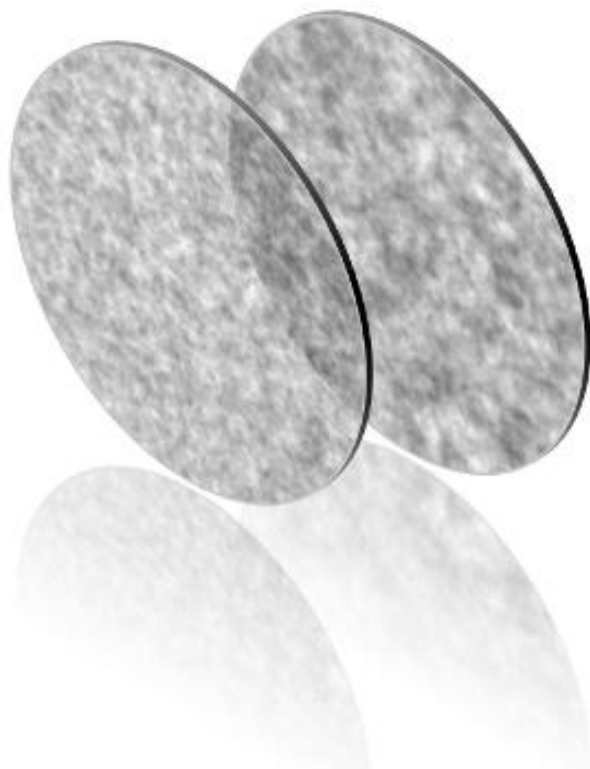
Phase Screens are also available with aluminium or gold coating for reflective applications.

Fields

Astronomy
Laser propagation applications

Category

Phase component

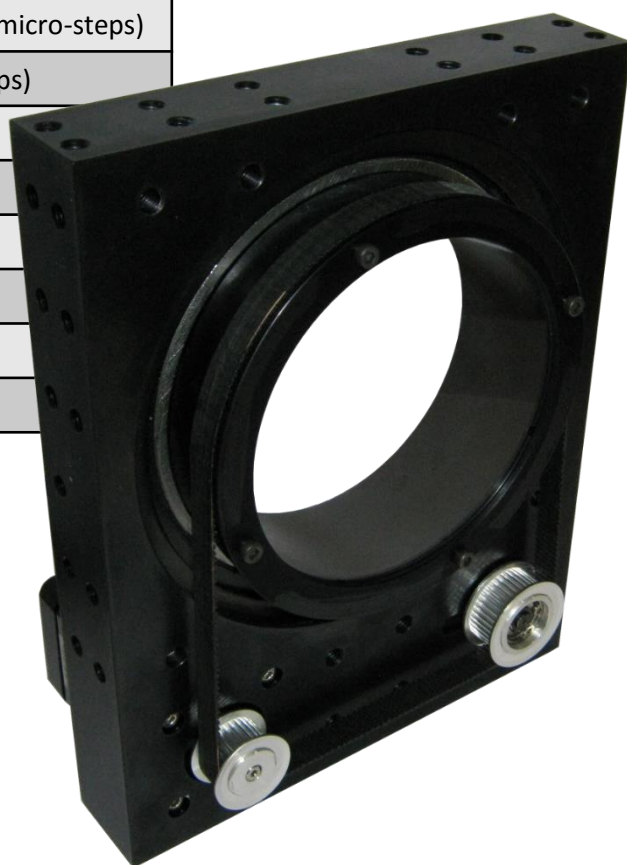


General

SILIOS proposes a versatile and low cost phase screen rotating mount for turbulence phase screens operation. The system is controlled by PC via any USB port. The full set of parameters (speed of rotation, step increments, ...) is tuneable thanks to a simple software interface. Smooth and perfectly controlled rotation can be achieved with the system.

Specifications

Reduction ratio	6:1
Number of steps / rotation	1200
Max number of micro-steps / rotation	307 200 (256); 76 800 (64)
Motor torque (N.m)	0.44
Motor size	Nema17, 42mm
Micro-step resolution	1, 2, 4, 8, 16, 32, 64, 128, 256
Guaranteed speed range (rpm)	0.01 to 97.6 (256 micro-steps)
Typical max speed (rpm)	390 (64 micro-steps)
Rotation (°)	360
Weight (Kg)	2.5
Useful aperture (mm)	95.5
Dimensions (mm)	160 x 205 x 85
Supply voltage	24V, 1A
I/O port	USB



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