

DATA SHEET



S4LFT0253/126 standard F-Theta

- for 1064 nm
- optical glass
- standard coating

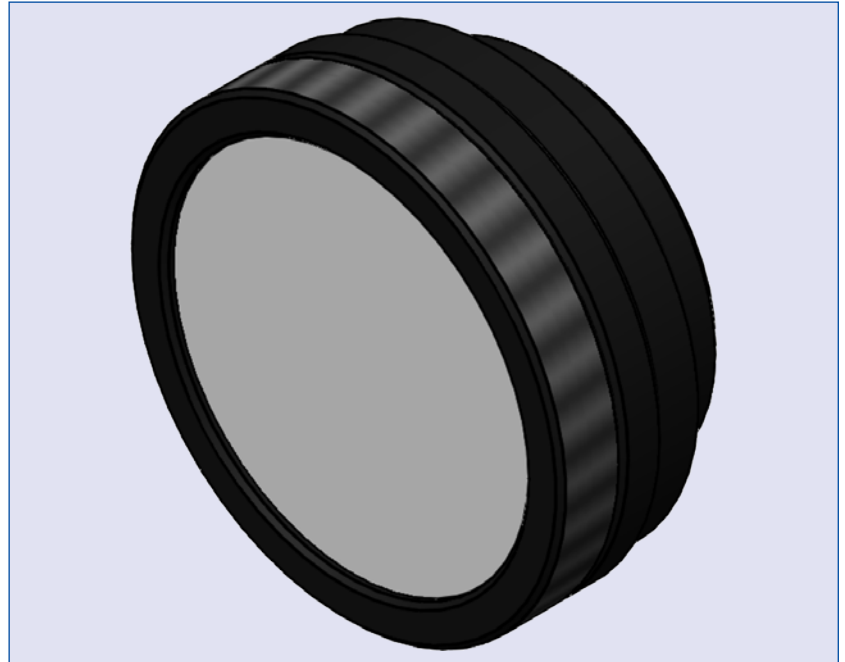
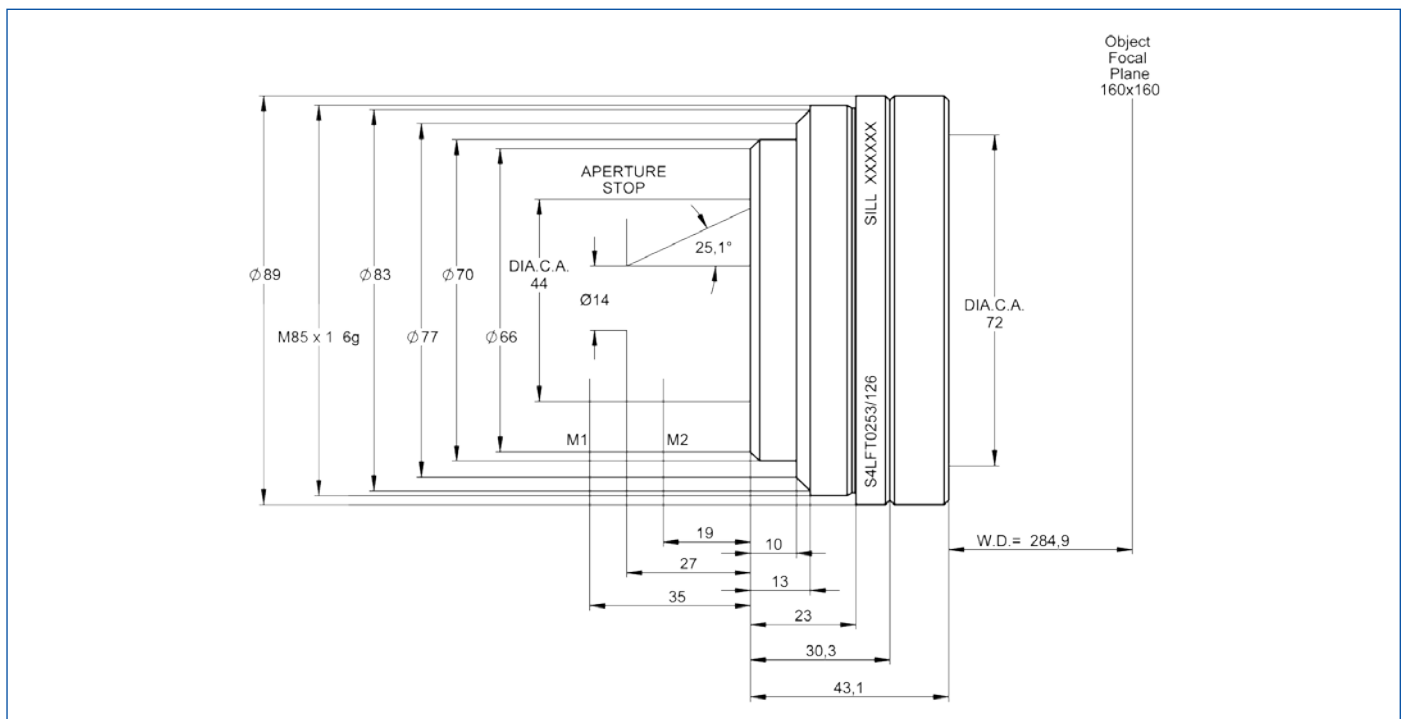


illustration only



outline drawing

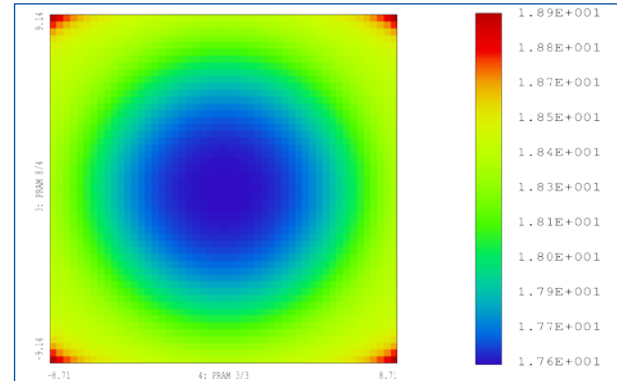
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specifications

article number	S4LFT0253/126
design wavelength [nm]	1064
effective focal length [mm]	254.4
max. entrance beam-Ø [mm]	14.0
optical scan angle [±°]	25.1
scan length [mm] (1 mirror system)	226.3
aperture stop distance [mm]	27.0
working distance [mm]	284.9
scan area for a 2 mirror system with mirror distance from lens housing for mirror 2 / mirror 1	160 x 160 19.0 / 35.0
max. telecentricity error [°]	16.7
total transmission [%]	> 97
lens material	optical glass
damage threshold	5.0 J/cm ² per 1ns pulse at 50Hz 0.5 GW/cm ² cw
weight [kg]	
cover glass	S4LPG0005/126
accessory	-

spot



- spot radius in μm at 86% level for a Gaussian laser beam ($M^2=1$) with 14 mm diameter at $1/e^2$, clipped at $1/e^2$
- field size and mirror distances as given above for a 2 mirror scan system
- PAR parameters: mechanical mirror scan angle

notes

The aperture stop given is the point where the scan mirrors should be placed symmetrically around in order to reach best performance. In a 1 mirror system it is the position of the scan mirror.
Aperture stop distance = front focal point in telecentric f-theta lenses

The calculations of the scan length and scan areas of our f-theta lenses are based on the geometric design of typical scan systems with a certain mirror spacing. The values given assume a vignetting of less than 1%. If used with non-typical scan systems or with scan systems which have been designed for larger or smaller laser beams, different scan lengths and scan areas will result.

Effective focal length and working distance have a tolerance of +/- 1.5%
Graphs given by design