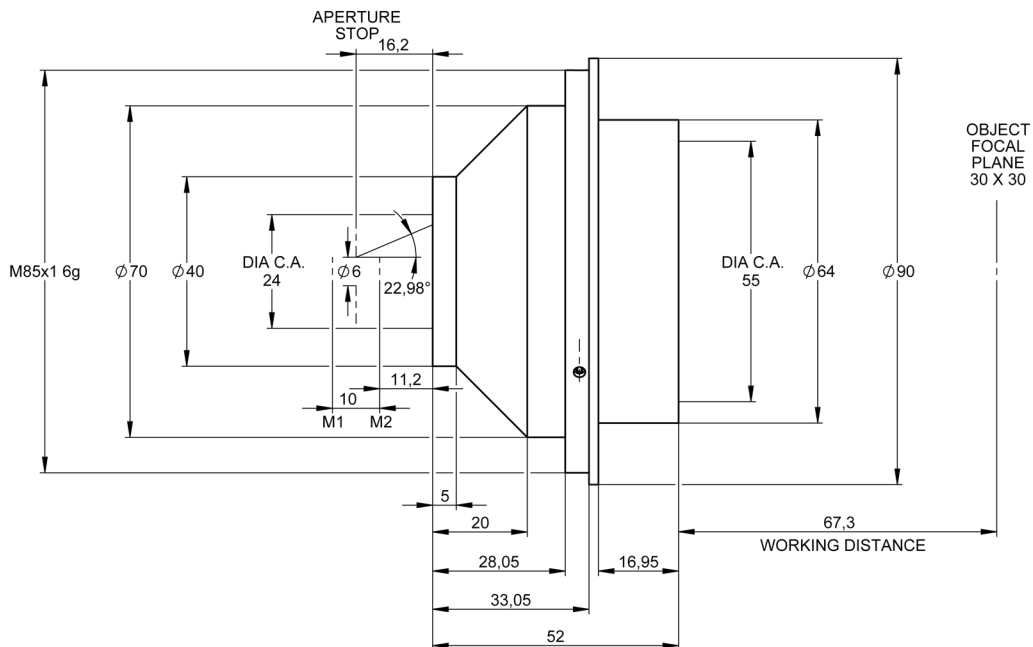


DATA SHEET

S4LFT8050/173

telecentric
f-Theta Lens
for 405 nm

no picture available



outline drawing

S4LFT8050/173

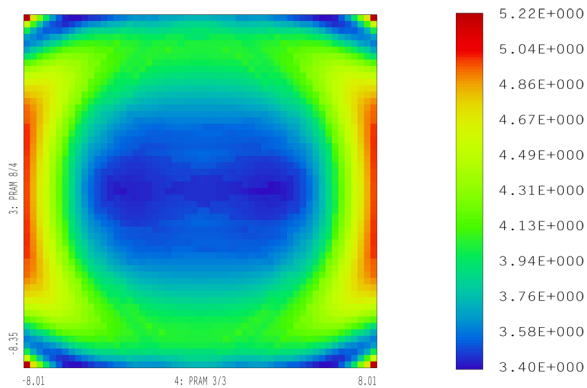
f-Theta Lens

Specifications

design wavelength [nm]	405
effective focal length [mm]	55.1
max. entrance beam-Ø [mm]	6.0
optical scan angle ±[°]	23.0
scan length [mm] (1 mirror system)	42.4
aperture stop distance [mm]	16.2
working distance [mm]	67.3
scan area for a 2 mirror scan system with mirror distance from lens housing for mirror 2 / mirror 1	30 x 30 11.2 / 21.2
max. telecentricity error [°]	2.1

total transmission [%]	> 96
lens material	fused silica
damage threshold	1.0 J/cm ² per 1ns pulse at 50Hz 1.0 GW/cm ² cw
weight [kg]	not yet weighed
cover glass	-
accessories	-

Spot diagram



- Spot radius in µm at 86% level for a Gaussian laser beam ($M^2=1$) with 6 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%