



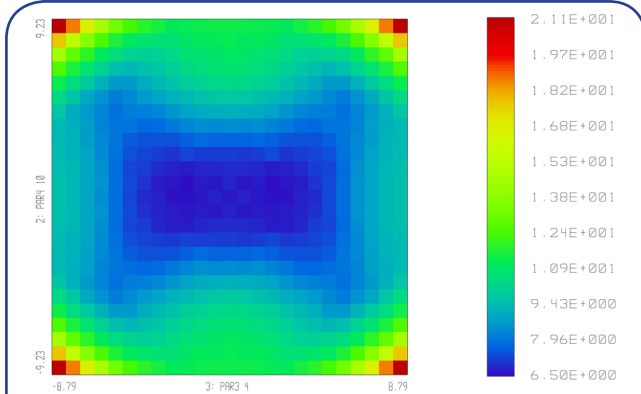
## S4LFT8163 f-Theta Lens

### Specifications

design wavelength [nm]	808 - 980
effective focal length [mm]	163.0
max. entrance beam-Ø [mm]	20.0
optical scan angle [±°]	26.4
scan length [mm] (1 mirror system)	150.7
aperture stop distance [mm]	22.0
working distance [mm]	153.6
scan area for a 2 mirror scan system with mirror distance from lens housing for mirror 2 / mirror 1	102 x 102 9.0 / 35.0
max. incident angle [°]	13.9

total transmission [%]	> 96
lens material	optical glass
damage threshold	5.0 J/cm <sup>2</sup> per 1ns pulse at 50Hz 5.0 GW/cm <sup>2</sup> cw
weight [kg]	not yet weighed
cover glass	S4LPG0090/094 included
accessories	-

### Spot diagram



- Spot radius in µm at 86% level for a Gaussian laser beam with 20 mm diameter at 1/e<sup>2</sup>, clipped at 1/e<sup>2</sup>
- 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%