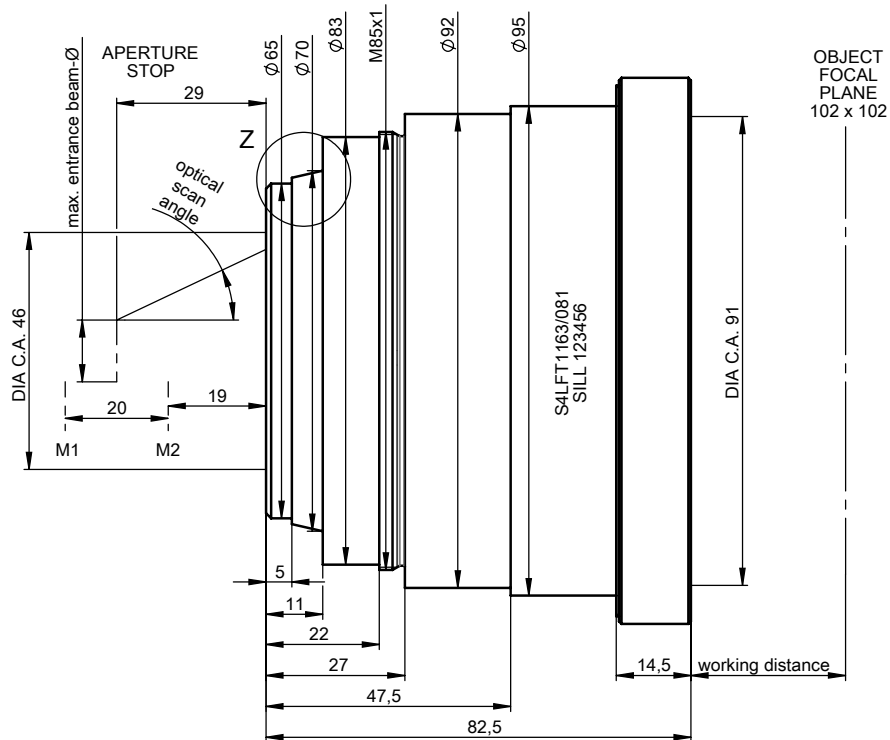


S4LFT1163/081

F-Theta
multi-spectral
532 + 1064 nm



outline drawing

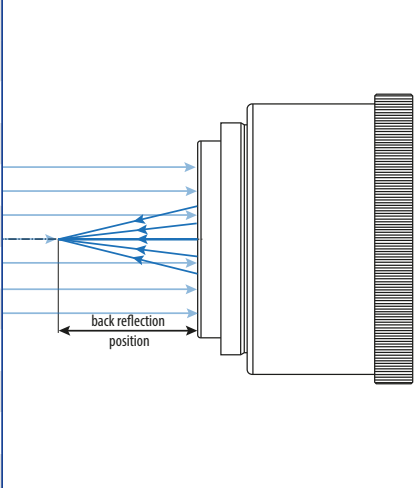


specifications

article number	S4LFT1163/081	
design wavelength [nm]	532	1064
effective focal length [mm]	163.1	163.1
max. entrance beam- \emptyset [mm]	12.0	
optical scan angle [\pm°]	25.3	25.3
scan length [mm] (1 mirror system)	144.3	
aperture stop distance [mm]	29.0	
working distance [mm]	159.9	159.0
scan area for a 2 mirror system with mirror distance from lens housing for mirror 2 / mirror 1	102 x 102 19.0 / 39.0	
max. telecentricity error [$^\circ$]	12.7	12.7
lateral color shift [μm]	181	
chromatic focal shift [mm]	0.87	
total transmission [%]	> 96	> 96
lens material	optical glass	
LIDT (coating)	2.5 J/cm ² per 1ns pulse at 50Hz	
SP and USP usable	no	
weight [kg]	1.3	
cover glass	S4LPG0090/081	
absorption [ppm]	not specified	
cleanliness	not specified	

back reflection position

back reflection [mm]	for 532 nm	for 1064 nm
	6.60	6.60
	16.05	15.77
	30.98	31.54
	31.86	32.02
	32.85	32.54
	98.73	85.94
	362.30	245.76
	0.00	0.00
	0.00	0.00
	0.00	0.00



The diagram illustrates a two-mirror scan system. Light rays from a source on the left are reflected by two mirrors, creating a scan field. The back reflection position is indicated by a dashed line and arrows pointing to the mirrors.

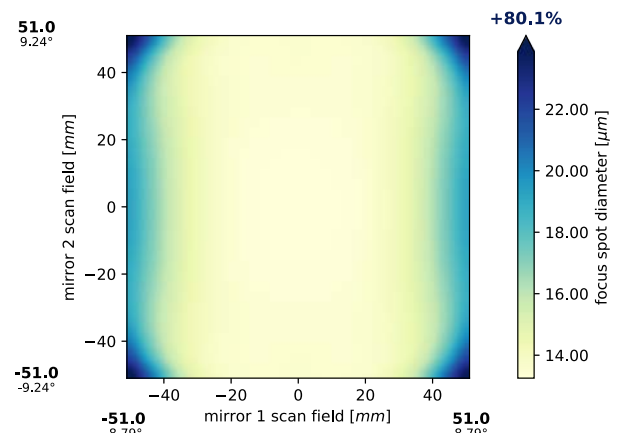
remarks

The stated values are based on a vignetting of less than 1 %.

Effective focal length and working distance have tolerance of +/- 1.5 %.

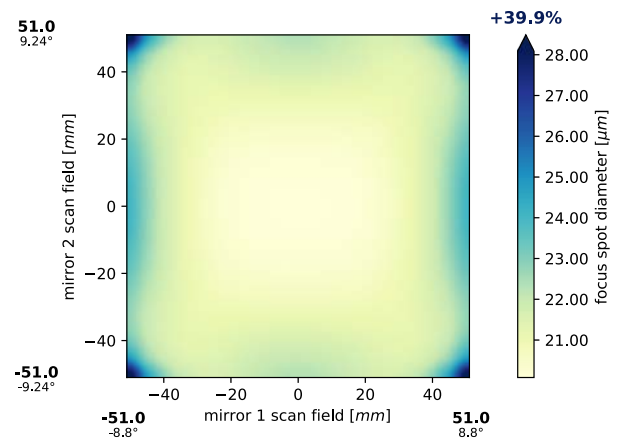
Absorption tolerance +/- 25 %. Absorption may increase. Correct cleaning establishes original condition.

spot for 532 nm



spot diameter at 86.5 % level for a Gaussian beam ($M^2 = 1$)
with 12.0 mm diameter at $1/e^2$, clipped at 12.0 mm
field size and mirror distances as given above for a two mirror scan system

spot for 1064 nm



spot diameter at 86.5 % level for a Gaussian beam ($M^2 = 1$)
with 12.0 mm diameter at $1/e^2$, clipped at 12.0 mm
field size and mirror distances as given above for a two mirror scan system