

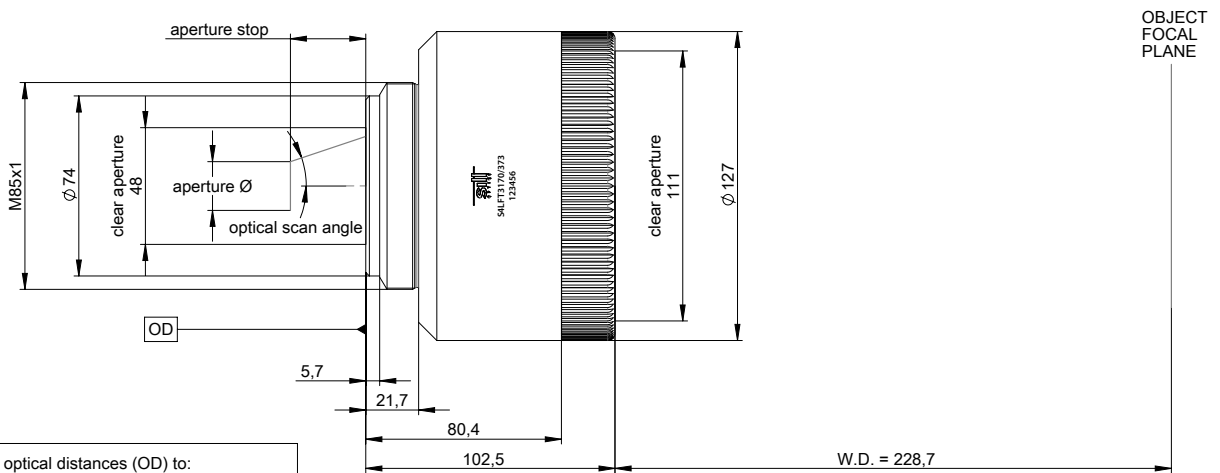
## S4LFT3170/373

**F-Theta**  
**telecentric - fused silica**  
**420 - 480 nm**



illustration only

### outline drawing

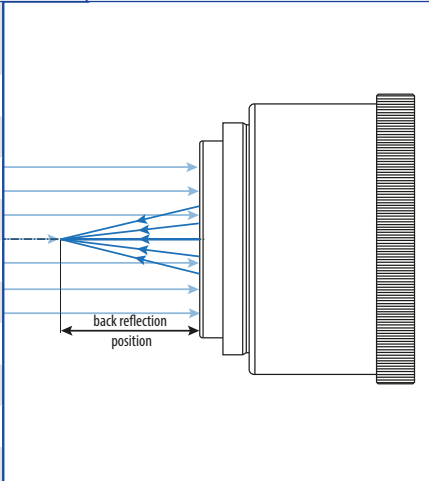


optical distances (OD) to:		
	for aperture Ø20	for aperture Ø30
mirror 1	44	64
mirror 2	18	28
aperture stop distance	31	46
optical scan angle	18,5°	10,9°
back reflection 1	5,8	5,8
back reflection 2	6,3	6,3
back reflection 3	230,9	230,9
scan area	75x75	45x45

## specifications

article number	S4LFT3170/373	
design wavelength [nm]	450	
effective focal length [mm]	168.0	
max. entrance beam-Ø [mm]	20.0	30.0
aperture stop distance [mm]	31.0	46.0
working distance [mm]	228.3	228.3
scan area for a 2 mirror system with mirror distance from lens housing for mirror 2 / mirror 1	75 x 75	45 x 45
max. telecentricity error [°]	3.1	1.7
total transmission [%]	> 98	
lens material	fused silica	
LIDT (coating)	not specified	
SP and USP usable	yes	
weight [kg]	1.86	
cover glass	S4LPG4160/373	
absorption [ppm]	not specified	
cleanliness	not specified	

## back reflection position

back reflections [mm] for 450	
5.54	
6.06	
230.87	
0.00	
0.00	
0.00	
0.00	
0.00	
0.00	
0.00	

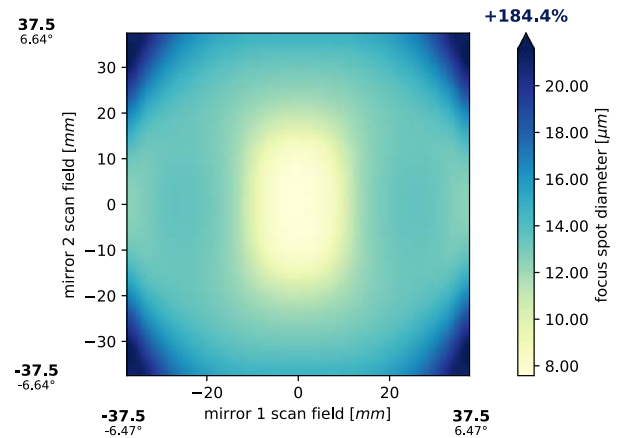
## remarks

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

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

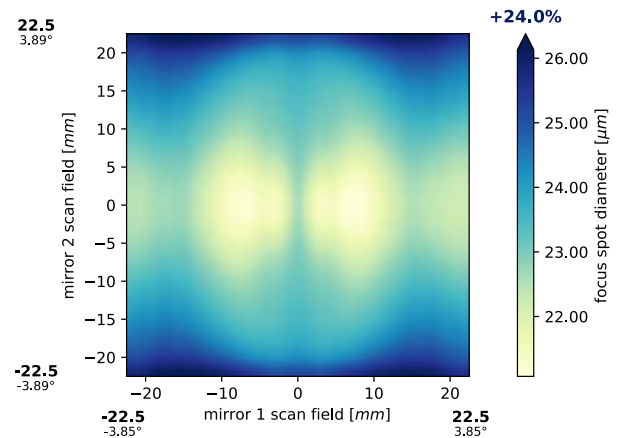
Absorption tolerance +/- 25 %. Absorption may increase. Correct cleaning establishes original condition.

## spot for 20.0 mm beam diameter



spot diameter at 86.5 % level for a Gaussian beam ( $M^2 = 1$ ) with 20.0 mm diameter at  $1/e^2$ , clipped at 20.0 mm field size and mirror distances as given above for a two mirror scan system

## spot for 30.0 mm beam diameter



spot diameter at 86.5 % level for a Gaussian beam ( $M^2 = 1$ ) with 30.0 mm diameter at  $1/e^2$ , clipped at 30.0 mm field size and mirror distances as given above for a two mirror scan system