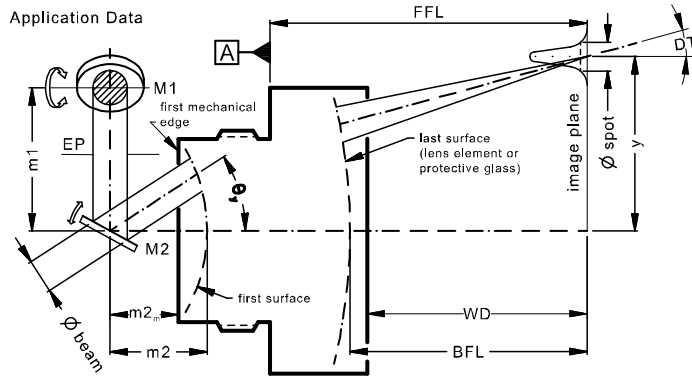


# LINOS F-Theta-Ronar Lens

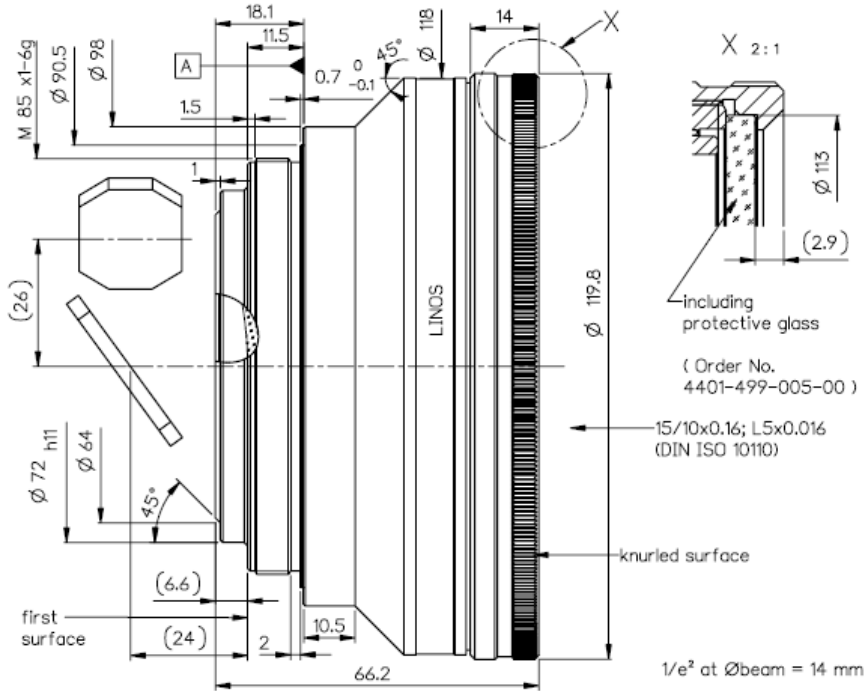
f = 420mm, 1030-1080nm, fused silica, low absorption



art number	4401-508-000-26			
Design wavelength	$\lambda$	(nm)	1064	
Effective focal length	EFL	(mm)	420.6	
Back focal length	BFL	(mm)	513.7	
Working distance	WD	(mm)	510.9	
Flange focal length	FFL	(mm)	558.9	
Beam diameter 1/e <sup>2</sup> truncated	$\varnothing_{\text{beam}}$	(mm)	14.0	20.0
Recommended mirror distance m1	m1	(mm)	17.0	25.6
Recommended mirror distance m2	m2	(mm)	29.5	24.0
Recommended mirror distance m2 <sub>mechanical</sub>	m2 <sub>m</sub>	(mm)	22.9	17.4
Scan angle	$\pm\theta_{x,y}$	(°)	17.7	17.3
Scan area (edge length of scan field)	2x * 2y	(mm <sup>2</sup> )	259 x 259	254 x 254
Spot diameter	$\varnothing_{\text{spot}}$	( $\mu\text{m}$ )	59	42
Telecentric error (maximum deviation)	DT	(°)	15.6	15.4
Total transmission @ 1030 - 1080nm	T	(%)	> 96	
Group delay dispersion at $\lambda$	GDD	(fs <sup>2</sup> )	864	
LIDT coating @ 1064nm, 12ns, 100Hz		(J/cm <sup>2</sup> )	40	
LIDT coating @ 1030nm, 291fs, 5kHz		(J/cm <sup>2</sup> )	0.9	
Focused back reflex positions from first surface		(mm)	37.6; 67.5; 140.6; 141.3	
Weight		(g)	1000	
Protective glass	PG		4401-499-005-00	

Optical parameters calculated for a 1-mirror system  
 Subject to technical change

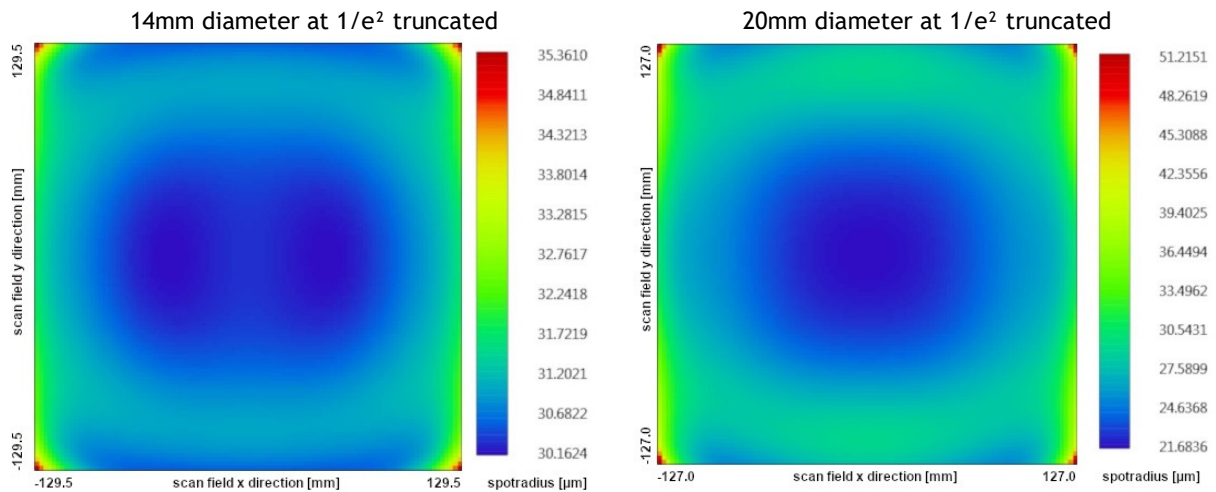
## Mechanical drawing



Dimensions without tolerances are nominal values and illustration not to scale

## Spot variation over scanfield

Spot radius in  $\mu\text{m}$  at  $1/e^2$  level for a Gaussian laser beam ( $M^2=1$ )  
field size and mirror distances as given above for a 2 mirror scan system



## Notes:



For technical explanations, see our homepage.

In a 1-mirror system, the entrance pupil (EP) is the position of the scan mirror. In a 2-mirror system, it is the point where the scan mirrors should be placed around symmetrically to reach specified performance.