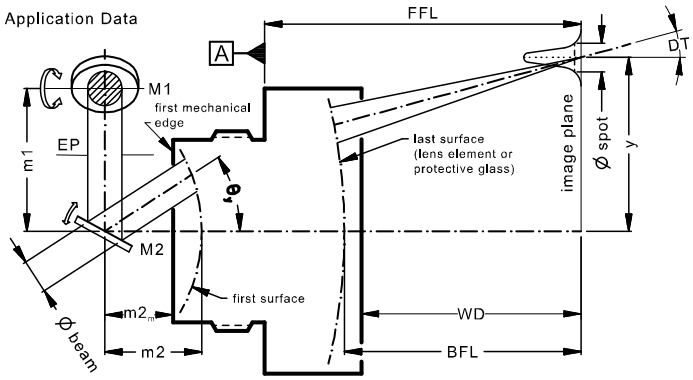
LINOS F-Theta-Ronar Lens

f = 420mm, 940-980nm



Part number	4401-525-000-21			
Design wavelength	λ	(nm)	980	
Effective focal length	EFL	(mm)	418.5	
Back focal length	BFL	(mm)	494.6	
Working distance	WD	(mm)	491.7	
Flange focal length	FFL	(mm)	546.3	
Beam diameter $1/e^2$ truncated	Øbeam	(mm)	20	30
Recommended mirror distance m1	m1	(mm)	25.6	37.0
Recommended mirror distance m2	m2	(mm)	27.5	30.0
Recommended mirror distance $m2_{mechanical}$	$m2_m$	(mm)	19.8	22.3
Scan angle	$\pm\theta_{x,y}$	(°)	±17.3	±12.2
Scan area	2x * 2y	(mm^2)	253 x 253	178 x 178
Spot diameter	Øspot	(µm)	37	26
Telecentric error (maximum deviation)	DT	(°)	15.5	10.8
Total transmission @ 940 - 980nm	T	(%)	97	
Focused back reflex positions from first surface		(mm)	1.9; 42.0; 61.1; 138.5; 139.7	
Weight		(g)	1500	
Protective glass	PG		4401-524-004-00	

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

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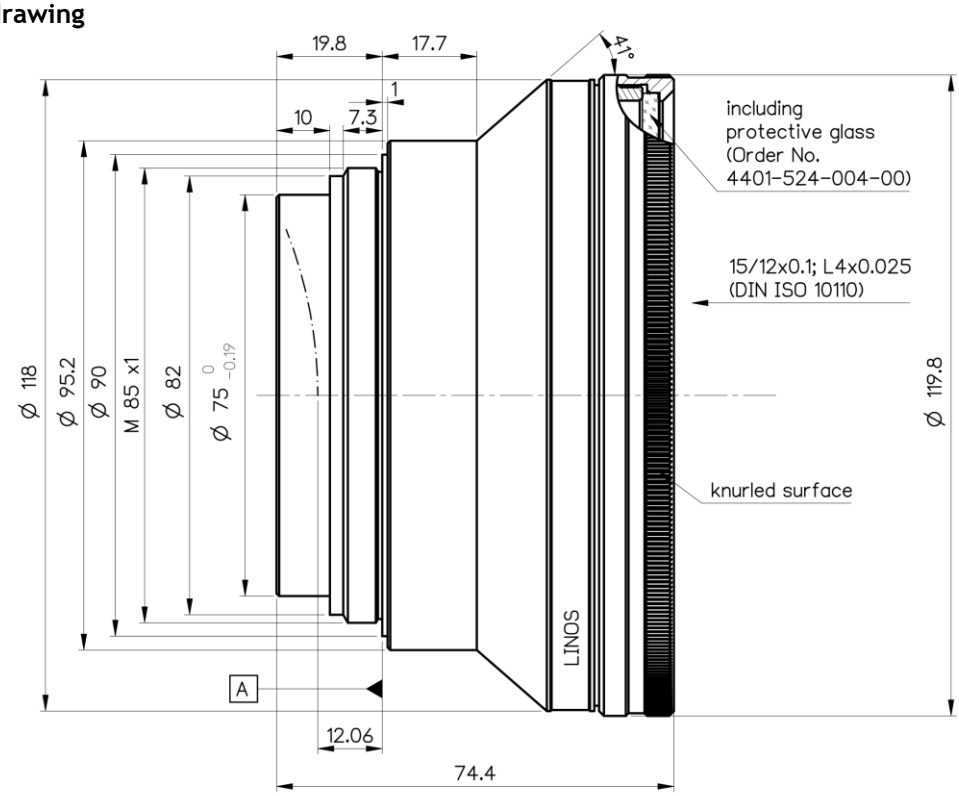
Mechanical drawing

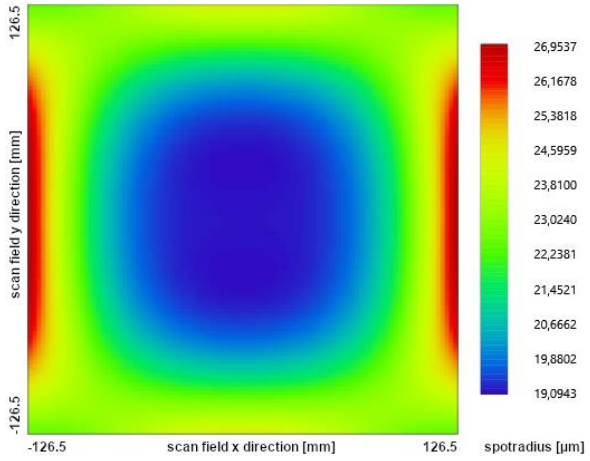


Dimensions without tolerances are nominal values and illustration not to scale

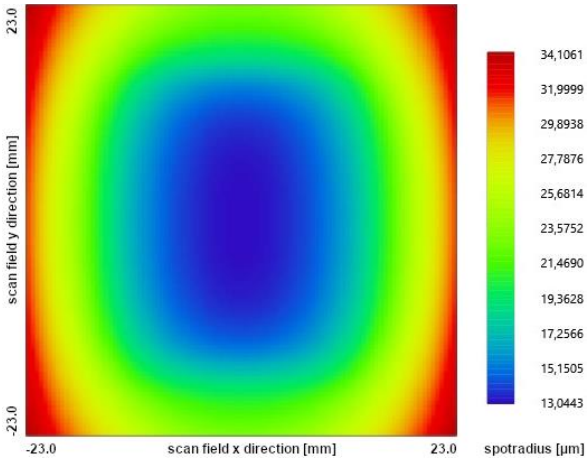
Spot variation over scanfield

Spot radius in µm 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

20mm diameter at $1/e^2$ truncated



30mm diameter at $1/e^2$ truncated



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.

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