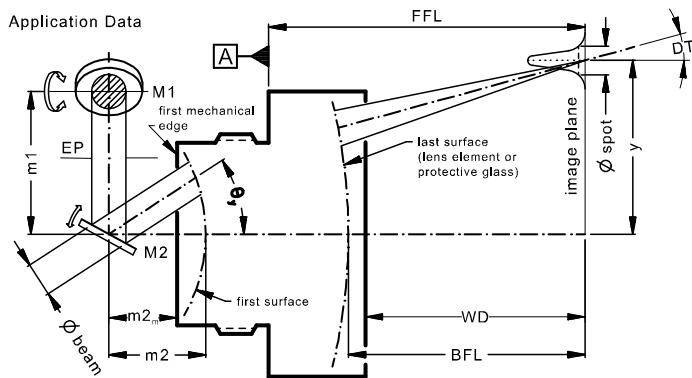


## LINOS F-Theta-Ronar Lens

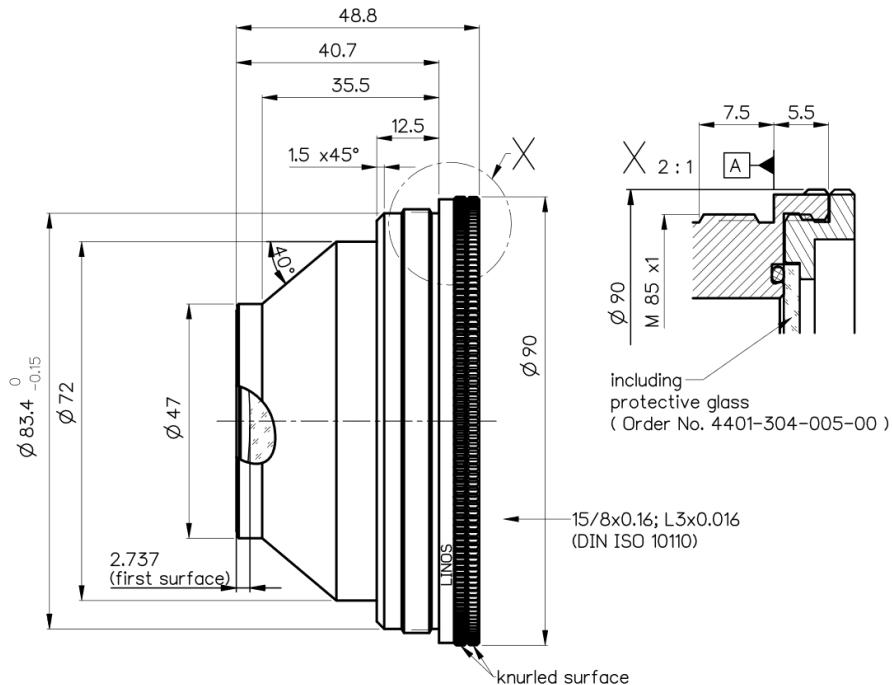
f = 160mm, 532nm



| Part number  | 4401-305-000-21      |                      |                             |
|--|----------------------|----------------------|-----------------------------|
| Design wavelength                                    | $\lambda$            | (nm)                 | 532                         |
| Effective focal length                               | EFL                  | (mm)                 | 159.5                       |
| Back focal length                                    | BFL                  | (mm)                 | 181.8                       |
| Working distance                                     | WD                   | (mm)                 | 176.1                       |
| Flange focal length                                  | FFL                  | (mm)                 | 184.4                       |
| Beam diameter 1/e <sup>2</sup> truncated             | $\varnothing_{beam}$ | (mm)                 | 10.0                        |
| Recommended mirror distance m1                       | m1                   | (mm)                 | 16.0                        |
| Recommended mirror distance m2                       | m2                   | (mm)                 | 12.0                        |
| Recommended mirror distance m2 <sub>mechanical</sub> | m2 <sub>m</sub>      | (mm)                 | 9.3                         |
| Scan angle   | $\pm\theta_{x,y}$    | (°)                  | 17.7                        |
| Scan area (edge length of scan field)                | 2x * 2y              | (mm <sup>2</sup> )   | 98 x 98                     |
| Spot diameter  | $\varnothing_{spot}$ | (μm)                 | 16                          |
| Total transmission @ 532nm                           | T                    | (%)                  | > 96                        |
| LIDT coating @ 532nm, 6ns, 100Hz                     |                      | (J/cm <sup>2</sup> ) | 6                           |
| Focused back reflex positions from first surface     |                      | (mm)                 | 9.2; 16.0; 43.9; 44.2; 44.6 |
| Weight   |                      | (g)                  | 355                         |
| Protective glass                                     | PG                   |                      | 4401-304-005-00             |

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

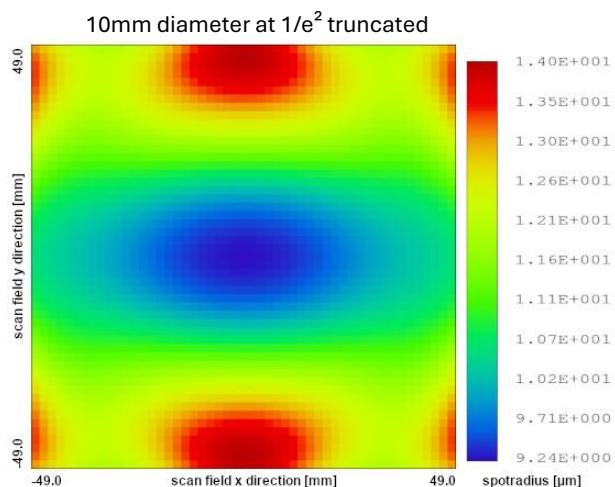
## Mechanical drawing



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.

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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.

The actual LIDT of the lens, as well as effects such as thermal focus shift, depend on the specific system setup and laser parameters. We recommend testing the respective optical components before use. We are happy to support and advise you in selecting the right F-Theta lens!