

## Micro Focus Optics series 25M

for transforming a collimated beam into a micro focus spot



### FEATURES

Micro focus optics used for focussing the collimated radiation of a fiber collimator.

- Attachment optics for fiber collimators type [60FC-L](#) or [60FC-T](#) with outer diameter  $\varnothing$  32 mm
- Choice of achromats or singlet lenses
- Various optics for UV - IR
- Amagnetic housing made from Titanium on request

## DESCRIPTION

Micro Focus Optics are used in order to generate small laser spots from the collimated radiation of a fiber collimator.

For spots  $< 10$  times the mode field MFD of the fiber, a good quality spot can no longer be achieved by [simply refocusing](#) the collimation optics. Instead, a combination of collimation and focusing optics is needed. The size of the spot and its [Rayleigh](#) range is [determined](#) by the fiber properties and by the focal lengths of the fiber collimator and of the micro focus optics. For single-mode fibers the Gaussian intensity distribution and beam shape are maintained.

For the fiber collimators series [60FC-L](#) or [60FC-T](#) with an outer diameter  $\varnothing$  32 mm Schäfter+Kirchhoff offer Micro Focus Optics with focal lengths in the range  $f'$  35 mm - 500 mm.

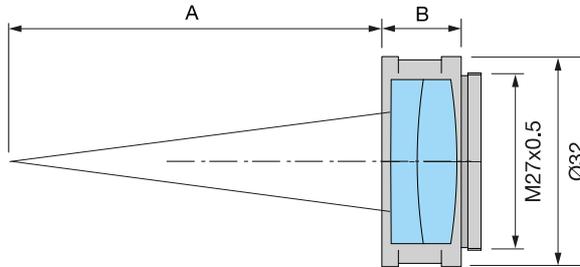
There is a large variety of [duplet](#) or [singlet](#) optics with AR coatings from the UV to the IR wavelengths range.

### Adjustment:

In order to change the working distance of the Micro Focus Optics the lens position of the adjacent collimator has to be readjusted.

**Housing material:**

As standard the housing of the Micro Focus Optics is made of nickel silver. For amagnetic fiber collimators Schäfter+Kirchhoff offers Micro Focus Optics with housings made of titanium.



## ORDER OPTIONS

Wavelength Range	AR Coating	Correction	Focal Length							
			35 mm	50 mm	75 mm	100 mm	150 mm	200 mm	300 mm	500 mm
420 - 700 nm	26	Achromatic	X	X	X	X	X	X	X	
750 - 1550 nm	37	Achromatic	X	X	X	X	X	X		
420 - 700 nm	26	-								X
750 - 1550 nm	37	-							X	X

## TECHNOTES

- [Producing spots \(3\)](#)  
[When can you produce a spot by simply refocusing the fiber collimator and when is a micro focus optics necessary?](#)
- [Refocusing the collimator to produce a focus spot](#)  
[Beam divergence of a collimated beam exiting a single-mode fiber](#)
- [Producing spots by using a fiber collimator and a micro focus optics](#)  
[Calculation of spot diameter for single-mode fibers](#)
- [Rayleigh range](#)  
[What is the depth of focus of my spot?](#)

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1/21/2022

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