

## Micro Focus Optics series 13M

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 Ø 25 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 Ø 25 mm Schäfter+Kirchhoff offer Micro Focus Optics with focal lengths in the range f 25 mm - 1000 mm.

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

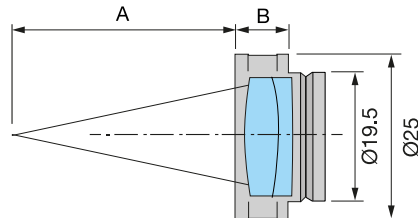
### Adjustment:

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										
			25 mm	30 mm	40 mm	50 mm	60 mm	75 mm	100 mm	125 mm	250 mm	500 mm	1000 mm
390 - 670 nm	33	Monochromatic					X						
630 - 980 nm	10	Monochromatic					X			X			
630 - 1080 nm	54	Monochromatic			X								
980 - 1550 nm	08	Monochromatic					X						
400 - 700 nm	01	Achromatic	X	X									
400 - 1000 nm	24	Achromatic			X	X	X	X		X			
420 - 700 nm	26	Achromatic				X		X		X			
450 - 700 nm	04	Achromatic							X				
750 - 1550 nm	37	Achromatic	X	X									
390 - 670 nm	33	-									X	X	X
600 - 1060 nm	05	-									X	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?](#)

## DOWNLOADS



[940130018200.pdf \(Dimensional drawing\)](#)

**This downloads section only includes general downloads for the complete series.**

Please access the individual product pages (using the product configurator, the product list, order options or the search button if you have a complete order code). Here you will find specific downloads including technical drawings or stepfiles.

This is a printout of the page

<https://sukhamburg.com/products/fiberoptics/fibercoupler/accessories/attachmentoptics/microfocus/13m.html> from 5/3/2024

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