

# a|VariColl

NEW

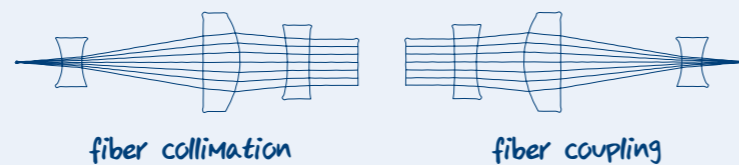
Discover asphericon's latest fiber collimation device, the a|VariColl - generating the perfect input conditions for all following beam shaping optics. The adjustable EFL allows compensation of variations in the fiber NA. Thanks to the most precise optics as well as a sophisticated optical and mechanical design, modifications of beam size and divergence angle can be performed independently and without any effort. The a|VariColl impresses with a compact design and allows finest adjustments for output beam diameter and divergence.



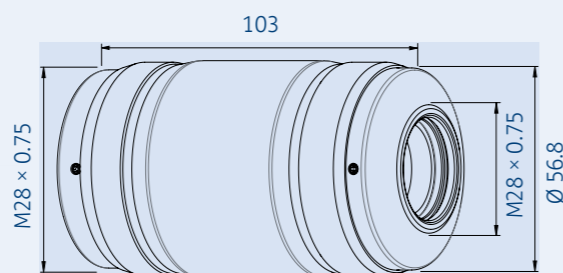
- = Effective focal length 47 – 99 mm
- = Obtain collimated beam with 10 mm diameter for fiber NAs in range of 0.055 to 0.12
- = Available in four design wavelengths [532 nm / 632 nm / 780 nm / 1064 nm]
- = Large spectral range: 500 nm to 1200 nm  
*Wavelength range for diffraction-limited collimation see page 23.*
- = Generation of collimated diffraction-limited beams up to 11 mm  $1/e^2$  with RMS wavefront error < 50 mλ
- = Adjustable beam diameter while keeping constant divergence at design wavelength
- = Precise adjusting of divergence is also possible
- = Perfect for illumination of a|TopShape, a|AiryShape and a|SqAiryShape, as separate adjustment of divergence and beam diameter allows perfect input conditions
- = Laser induced damage threshold: 12J/cm<sup>2</sup>, 100Hz, 6ns, 532nm

## APPLICATION

Easily use the a|VariColl to collimate and couple fibers while separately adjust divergence and beam diameter.

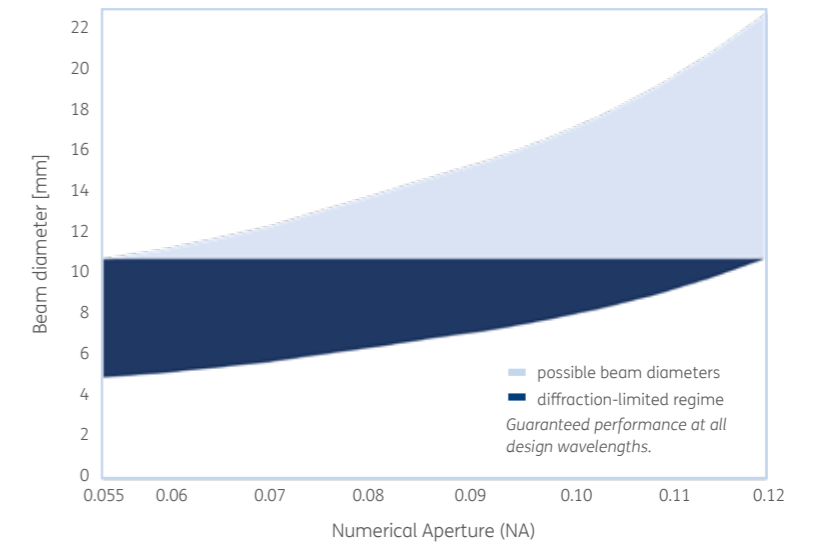


## TECHNICAL DIMENSIONS



## FLEXIBILITY

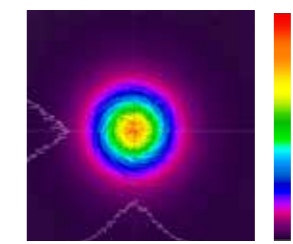
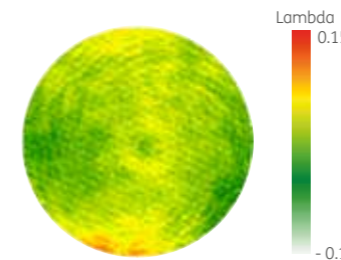
The a|VariColl is designed to compensate for variations in the numerical aperture of fibers due to their manufacturing process. For NAs from 0.055 to 0.12 an output beam with a  $1/e^2$  maximum diameter of 11 mm can be achieved in diffraction-limited quality. For NAs below 0.12 this can also be achieved for smaller beam diameter.



## PERFORMANCE

Looking for a solution to smoothly change the EFL of your fiber collimator while still easily connecting the patch fiber to your set-up? Shown are the measured wavefront and intensity profile of an a|VariColl 532 nm. Use the a|VariColl to precisely tune the beam diameter. One of its key features is that a once collimated beam stays collimated, no matter which beam diameter you chose. The a|VariColl generates a diffraction-limited wavefront and is thus fully companionable with the BeamTuning line. It is a perfect match for the a|TopShape, the a|AiryShape and the a|SqAiryShape, as it can create flawless input beam conditions due to the separate adjustment options.

Measurement equipment:  
Phasics SID4-HR-307c,  
207x207 pts  
Wavelength: 532 nm



Measurement equipment:  
Ophir SP90320  
Wavelength: 532 nm