NEW High-NA chromatic and field corrected Endomicroscopic Imaging Objectives with enhanced curvature (MO-ACR-REDUCURV)

GRINTECH's new variant of high-NA Endomicroscopic Imaging Objectives with object Numerical Apertures of 0.7 are offered in a broad achromatic and field corrected version to significantly increase the usable field of view. A combination of four micro lenses achieves the same chromatic and off-axis performance as our MO-ACR-series with reduced field curvature which allows for acquisition of smaller image stacks and addressing more applications.

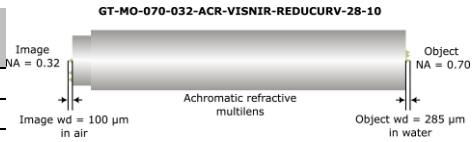
Applications:

In vivo endomicroscopy, single photon fluorescence microscopy, nonlinear optical imaging modalities (SHG, TPF), tissue imaging, flexible fluorescence microscopy, NA conversion, especially all applications that require less curvature

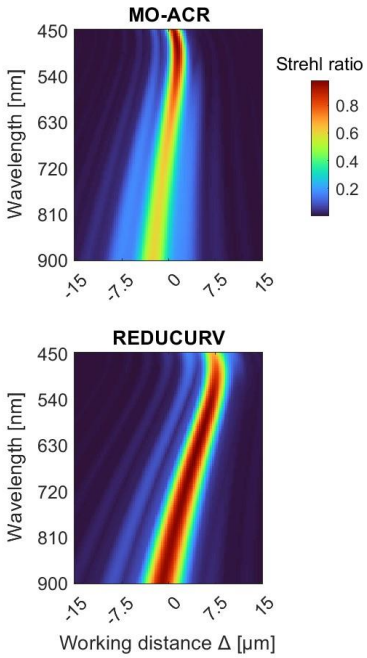
GT-MO-070-032-ACR-VISNIR-REDUCURV-xx-xx represents high resolution field and color corrected objectives with a magnification of 2.2. The image side NA of 0.32 matches to imaging fiber bundles. Color correction is achieved from 450 nm to 900 nm with an optimal performance from 488 nm to 900 nm. The objectives are assembled in stainless steel mounts.

The new micro objective type with reduced field curvature is offered so far as a version for usage without cover glass. Here you can compare with our MO-ACR series. Please note also the different mechanical dimensions.

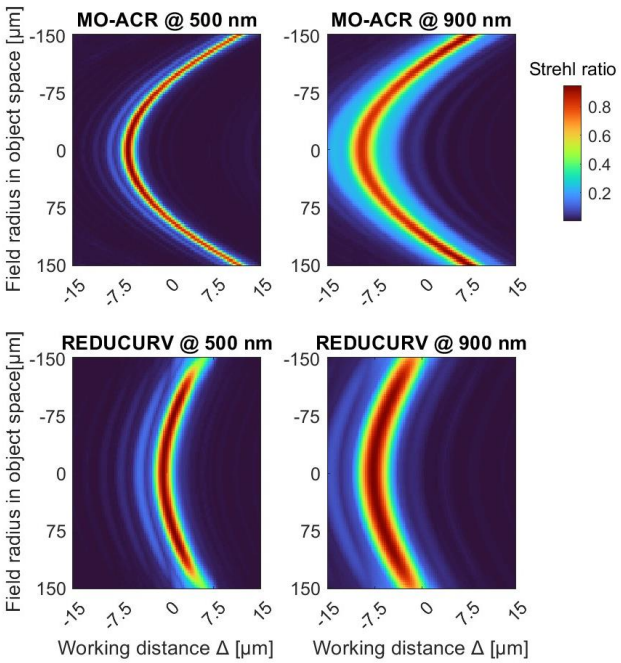
	GT-MO-070-032-ACR-VISNIR-**REDUCURV**-28-10	GT-MO-080-032-ACR-VISNIR-08-20
Object NA	0.70	0.79
Object WD in water [µm]	285	80
Designed for cover glass [µm]	none	none
Image NA	0.32	0.32
Image WD in air [µm]	100	200
Magnification	2.2	2.3
Field curvature radius [mm]	**2**	**0.55**
Dimensions Ø / L [mm]	2.2 /13	1.3 / 4.7



Chromatic Aberration in Object Space



Field Dependent Strehl Ratio in Object Space



Variations due to modifications of the production process are possible. It is the user´s responsibility to determine suitability for the user´s purpose.
For tolerances, handling and storage see page 26

More information can be found here: Stark, S. L., et al. (2023). "Field curvature reduction in miniaturized high numerical aperture and large field-of-view objective lenses with sub 1 µm lateral resolution." Biomedical Optics Express **14**(12).