

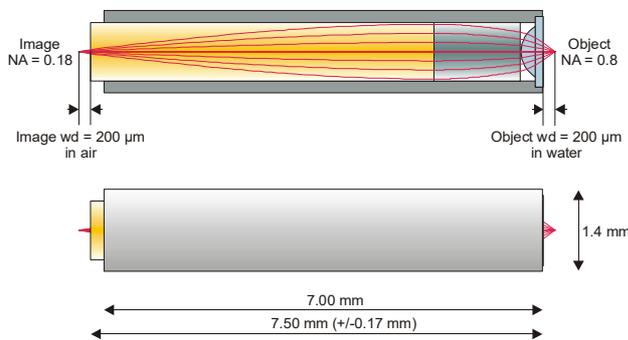
High-NA Endoscopic Imaging Objective for 2-Photon Microscopy

GRINTECH's high-NA Endoscopic Imaging Objectives cascade the optical power of a plano-convex lens and a GRIN lens with aberration compensation to achieve an object NA of 0.8.

Applications: In vivo endomicroscopy, 2-photon microscopy, deep brain and tissue imaging, flexible fluorescence microscopy, NA conversion

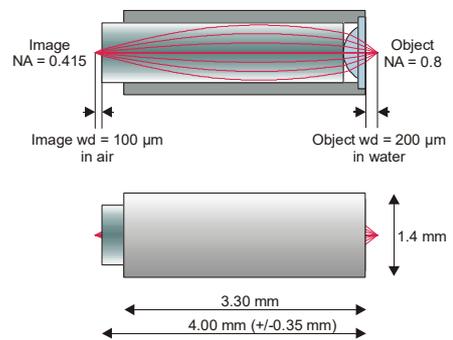
Product Code: GT-MO-080-018-810

- Features:**
- Object NA = 0.80
 - Object working distance 200 μm (water)
 - Image NA = 0.18
 - Magnification 4.8 x
 - Recommended Excitation 800 – 900 nm
 - Mounted in stainless steel holder

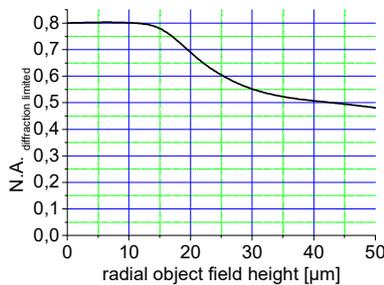


Product Code: GT-MO-080-0415-810

- Features:**
- Object NA = 0.80
 - Object working distance 200 μm (water)
 - Image NA = 0.415
 - Magnification 1.92 x
 - Recommended Excitation 800 – 900 nm
 - Mounted in stainless steel holder

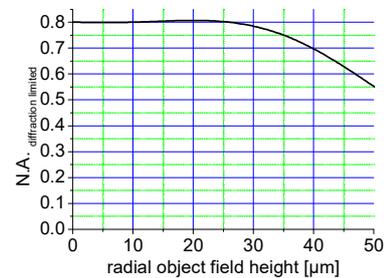


Diffraction limited NA versus Field



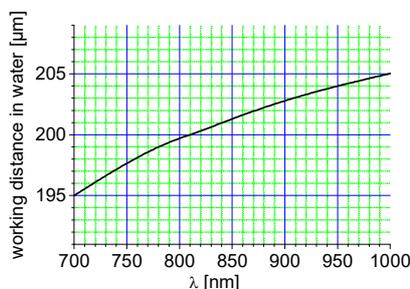
(from optical design simulation according to Marechal criterion @ 810 nm, wavefront RMS $\leq 0.07 \lambda$)

Diffraction limited NA versus Field

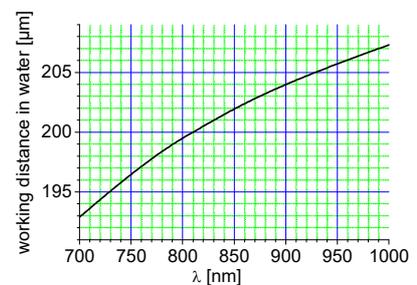


(from optical design simulation according to Marechal criterion @ 810 nm, wavefront RMS $\leq 0.07 \lambda$)

Chromatic Aberration in Object Space



Chromatic Aberration in Object Space

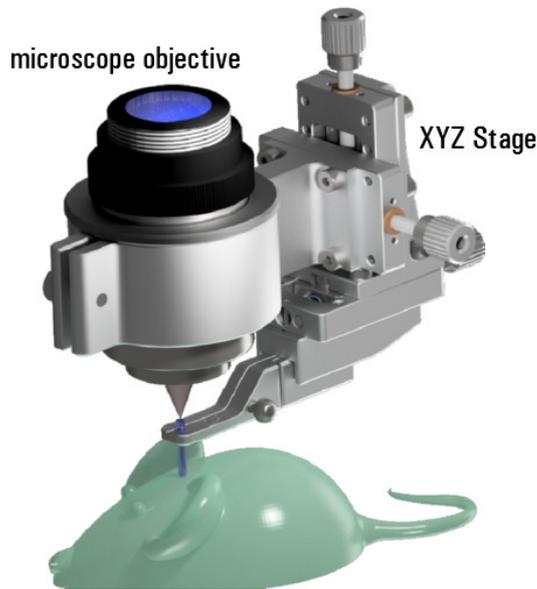


Variations due to modifications of the production process are possible. It is the user's responsibility to determine suitability for the user's purpose.

Pat. US 7,511,891

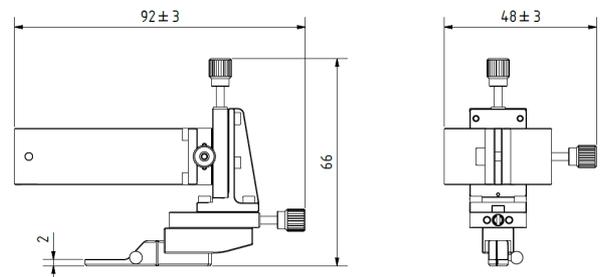
Positioning Stage for GRIN-Needle Endomicroscopes and High NA objectives

XYZ Stage and objective mounting to connect and align to microscope objectives



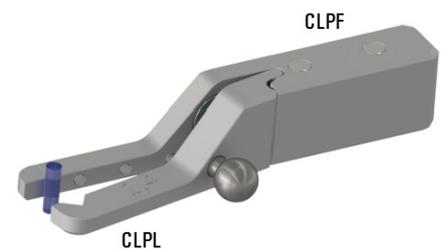
Applications and properties:

- holding, handling and three-axis-positioning of GRIN-microsystem relative to microscope objectives
- mounting for microscope objective diameter 30 mm (standard)
- smaller microscope objectives diameters are possible with assistance of an adapter ring (for ordering see table below)
- stable and reliable construction of the XYZ-stage
- adjustment travel: X - 7.5 mm, Y - 6.5 mm, Z - 6.5 mm
- thread pitch 0.2 mm
- easy pick and drop of the jaws with magnetic pull
- durable anodized aluminum surface



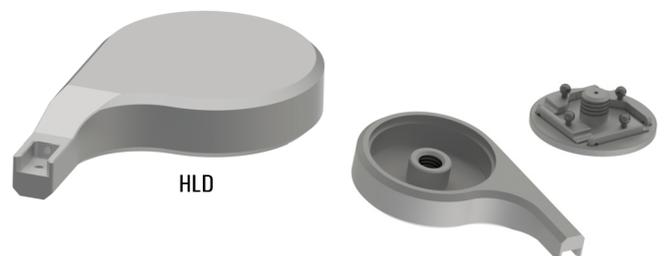
Clamping unit (CLPF + CLPL)

- consisting of fixed and loose jaw (CLPF+CLPL)
- holding and fixation of GRIN-microsystems
- different movable jaws for diameter: 0.5 / 0.7 / 1.0 / 1.2 / 1.4 mm
- easy change of movable jaw due to magnetic pull
- ball handle for moving the movable jaw for picking and dropping the microsystem



Holder for clamping unit (HLD) with movable jaw magazine

- holding and handling of the jaws including the GRIN-microsystem
- easy pick and place of the jaws because of magnetic pull
- allows the one-hand-usage to pick and drop the GRIN-microsystems
- magazine with four places for the not used movable jaws inside the handlebar
- anodized aluminum



Set includes:

- XYZ Stage (XYZSTG)
- fixed jaw of the clamping unit (CLPF)
- holder for clamping unit inclusive magazine for three jaw of different diameters (HLD)
- one movable jaw of your choice (CLPL)
- other movable jaws for different diameter can be ordered separately

XYZSTG-B	XYZ Stage (B=blue)
CLPLXX-B	Loose jaw (XX = 1.4 / 1.2 / 1.0 / 0.7 / 0.5 mm; B=Blue)
CLPF-B	Fixed jaw (B=blue)
ADPXX	Adapting for microscope objective XX=Diameter
HLD-B	Holder for clamping unit (B=blue)

Variations due to modifications of the production process are possible. It is the user's responsibility to determine suitability for the user's purpose. Please ask for customized solutions.