

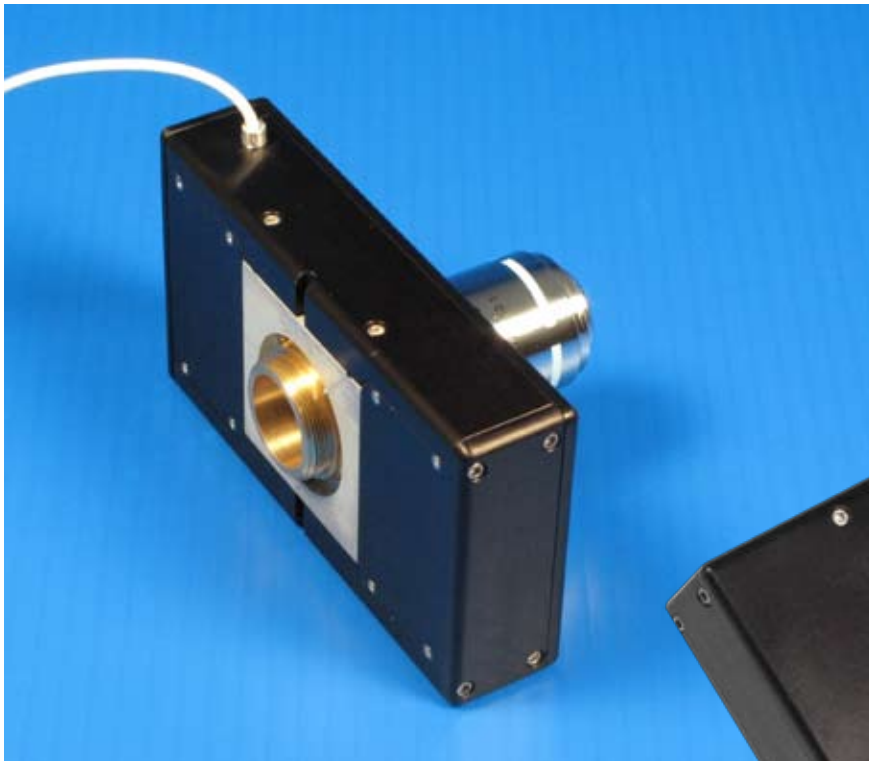
# Nano-F450

## Features

- ▶ 450  $\mu\text{m}$  travel - long range objective lens focusing element
- ▶ Interchangeable, quick mount adapters
- ▶ Compatible with all microscopes
- ▶ Closed loop control
- ▶ **pico** sensor technology

## Typical Applications

- ▶ Microscope focusing element
- ▶ Confocal imaging
- ▶ Auto focus
- ▶ STORM and PALM imaging








Nano-F450 constructed from aluminum.



Quick mount threaded adapters allow the Nano-F450 to be used with RMS, M25, and M26 lens threads.

**Compatible Software Packages**

 LabVIEW	 Image-Pro AMS Analog motion control	 <b>muManager</b> THE OPEN SOURCE MICROSCOPY SOFTWARE USB motion control
Examples, tutorial, and Nano-Route <sup>®</sup> 3D sup- plied with Nano-Drive <sup>®</sup> USB interfaces.	 MetaMorph <sup>®</sup> USB and analog motion control	 SLIDEBOOK 5.0 Analog motion control, 1 or 2 axes.

## Product Description

The Nano-F450 is the longest travel range piezo focusing element available for research microscopy. Ideally suited to high speed, long range confocal imaging, the Nano-F450 utilizes proprietary **pico** position sensor technology for absolute, repeatable position measurement and precise closed loop control. The Nano-F450 can be used as stand-alone system or in conjunction with other Mad City Labs nanopositioning stages. Quick mount adapters thread directly into the microscope turret, allowing the lens nanopositioner to be clamped onto

the adapter without having to rotate the entire assembly with the attached cable. Compatible with RMS, M25, and M26 quick mount threaded adapters, the Nano-F450 can be used on many different microscopes. The desired threads on the quick mount adapter are specified for each system when it is ordered. Extra adapters can be ordered separately.

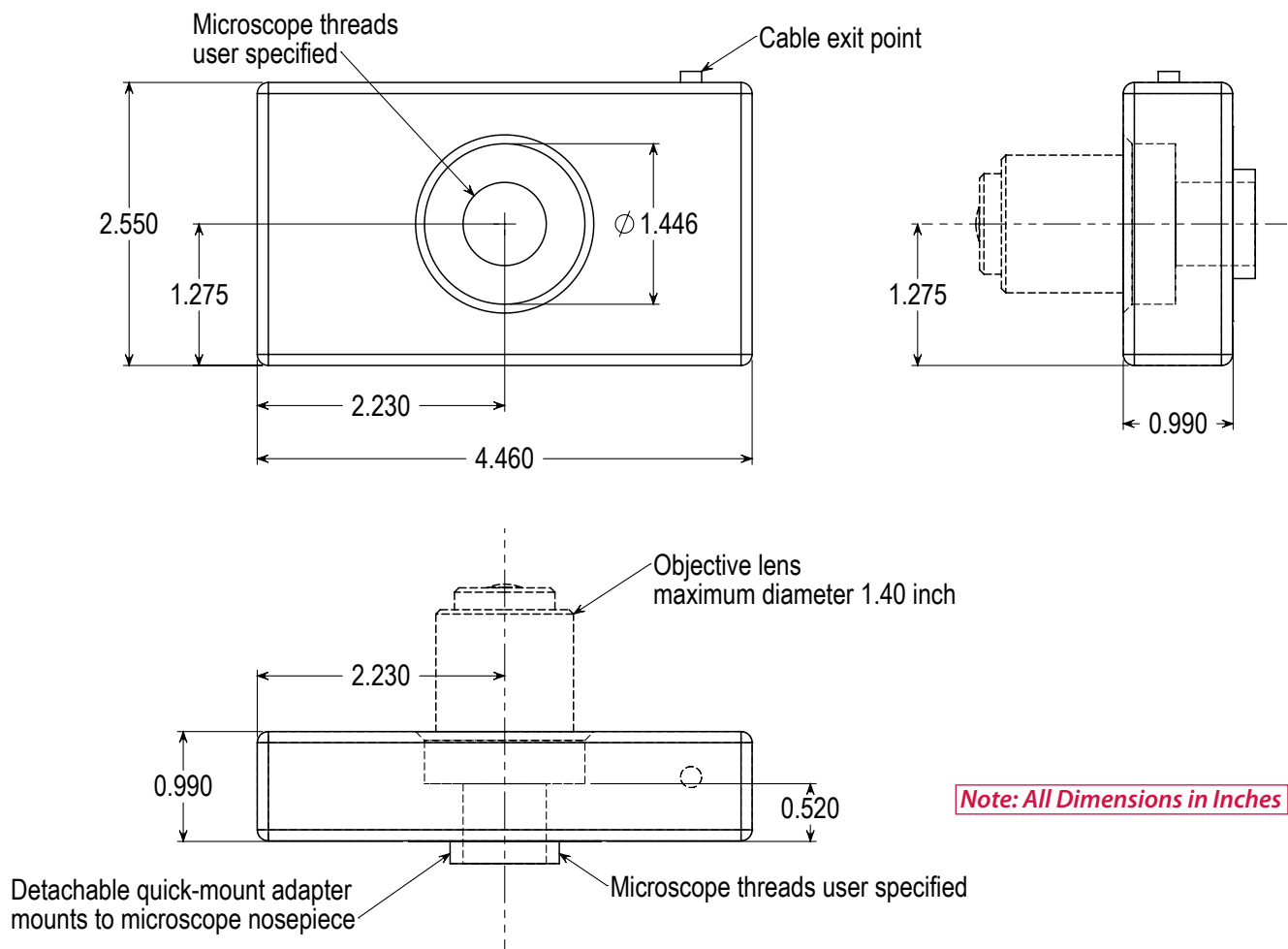
## Technical Specifications

Range of motion .....	450 $\mu$ m
Resolution .....	0.9 nm
Resonant Frequency (no load) .....	240 Hz $\pm$ 20%
Resonant Frequency (with 150 g lens) .....	160 Hz $\pm$ 20%
Resonant Frequency (with 250 g lens) .....	130 Hz $\pm$ 20%
Stiffness .....	1.0 N/ $\mu$ m
Recommended max. load* .....	0.5 kg
Body Material .....	Al and Brass
Threaded Adapters .....	RMS, M25, M26
Controller .....	Nano-Drive <sup>®</sup>

*Note: See page 15 for custom high speed lens positioning systems.*

\* Larger load requirements should be discussed with our engineering staff.

### Nano-F450 with RMS, M25, or M26 adapters



**Note: All Dimensions in Inches**