

Nano-F Series

Features

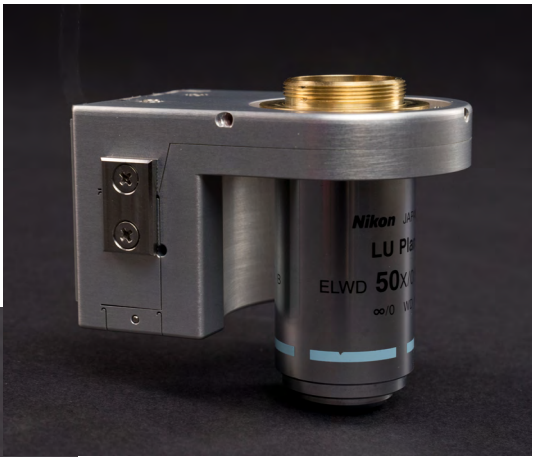
- ▶ Compact, piezo lens nanopositioner
- ▶ Interchangeable, quick mount adapters
- ▶ 100 μm or 200 μm ranges of motion
- ▶ Compatible with all microscopes
- ▶ Closed loop control
- ▶ **pico** sensor technology

Typical Applications

- ▶ Microscope focusing element
- ▶ Confocal imaging
- ▶ Auto focus
- ▶ Super resolution microscopy



▲ Nano-F100S



▲ Nano-F200W in upright microscope orientation.

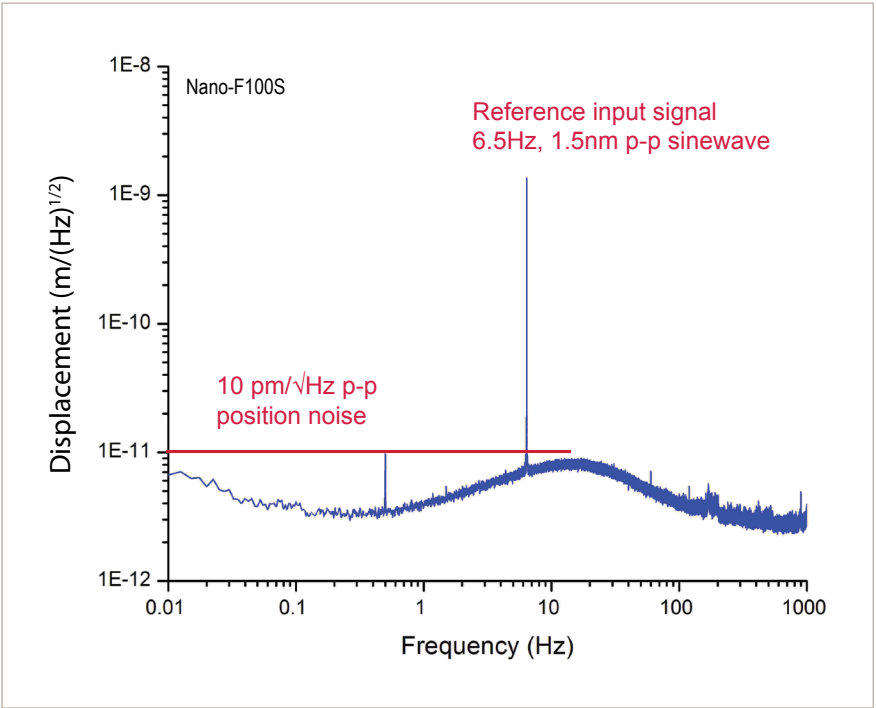
◀ Nano-F200S



Product Description

The Nano-F Series are piezo lens nanopositioners with 100 or 200 microns of travel. Internal position sensors utilizing proprietary PicoQ® technology provide absolute, repeatable position measurement for precise closed loop control. Extensive computer modeling (FEA) of the Nano-F Series mechanical structures has resulted in designs with very low off-axis motion (see runout specifications) - which means that microscope images will remain stable throughout the entire range of motion. The Nano-F Series can be used as stand-alone systems or in conjunction with other Mad City Labs nanopositioning stages. Quick mount adapters thread directly into the microscope turret and the nanopositioner can then be clamped onto the adapter without having to rotate the entire assembly with the attached cable. A variety of quick mount adapter threads allow the Nano-F Series to be used on all microscopes. The desired threads on the quick mount adapter are specified for each system when it is ordered. Extra adapters can be ordered separately.

Low Position Noise



Related products

- Nano-F25HS
- Nano-F450
- Nano-F3D
- Nano-OP Series

Compatible Software Packages



Technical Specifications

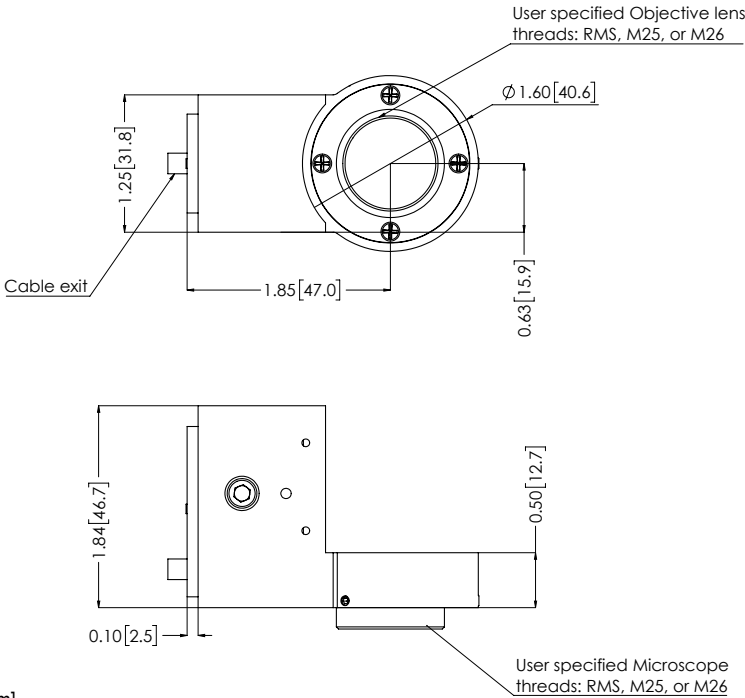
Range of motion (Nano-F100S and F100W)	100 μm
Range of motion (Nano-F200S and F200W)	200 μm
Resolution (100/200 μm)	0.2 / 0.4 nm
Resonant Frequency (S models)	600/500 Hz $\pm 20\%$
Resonant Frequency (W models)	480/450 Hz $\pm 20\%$
Runout (θ_x)	6 μrad (100 and 200 μm ranges)
Runout (θ_y)	10 μrad (100 μm), 25 μrad (200 μm)
Recommended max. load*	0.5 kg
Body Material	Al and Brass
Threaded Adapters†	
Nano-F100S/F200S	RMS, M25, M26
Nano-F100W/F200W	M25, M26, M27, M32
Controller	Nano-Drive®

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

† Threaded adapter specified at time of order. Additional adapters may be ordered separately.

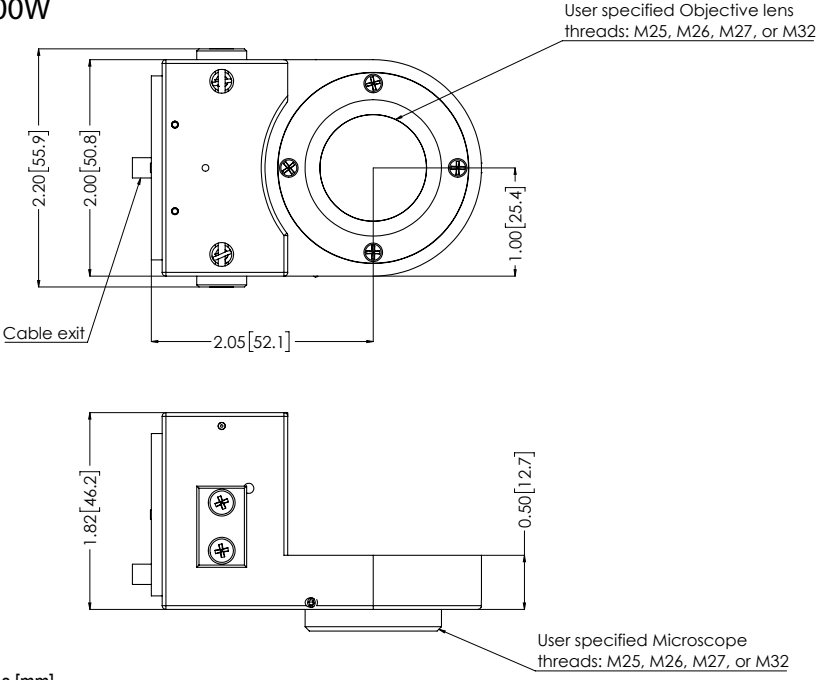
Nano-F Series

Nano-F100S



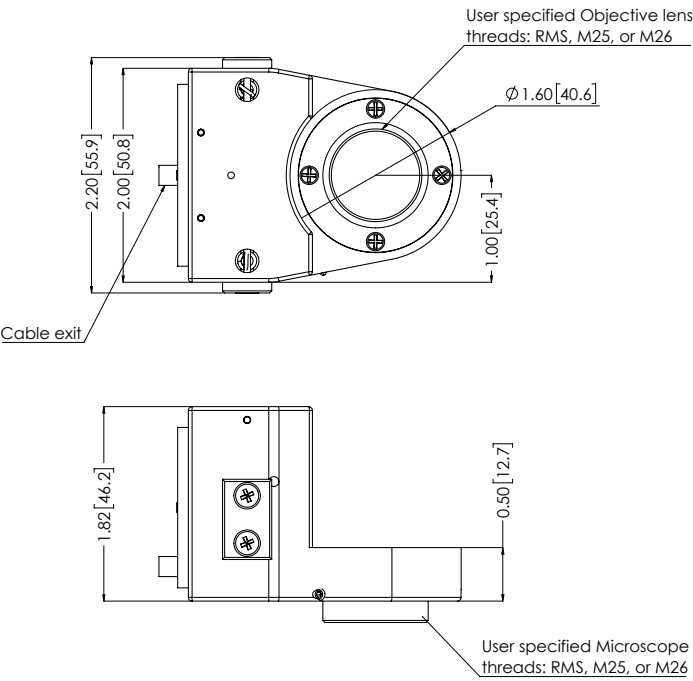
Note: All Dimensions in Inches [mm]

Nano-F100W/F200W



Note: All Dimensions in Inches [mm]

Nano-F200S



Note: All Dimensions in Inches [mm]

Quick mount adapter
(shown for Nano-F100S)

