

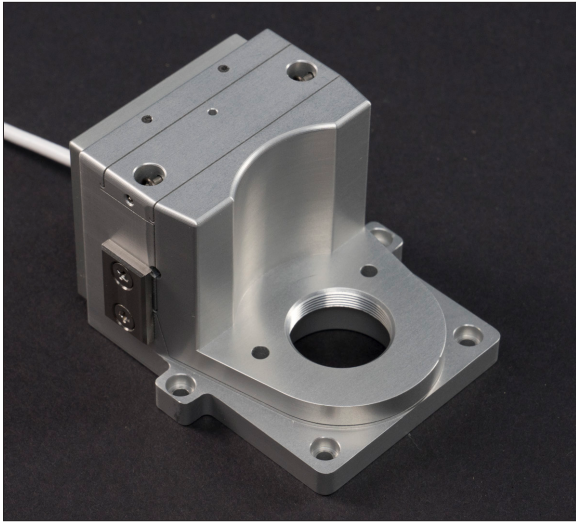
Nano-F200z1-RMS

Features

- ▶ Compact, piezo lens nanopositioner
- ▶ Integrated lens thread
- ▶ 200 μm range of motion
- ▶ Precision alignment design
- ▶ Closed loop control
- ▶ **picoQ** sensor technology

Typical Applications

- ▶ Microscope focusing element
- ▶ Imaging
- ▶ Auto focus
- ▶ Super resolution microscopy



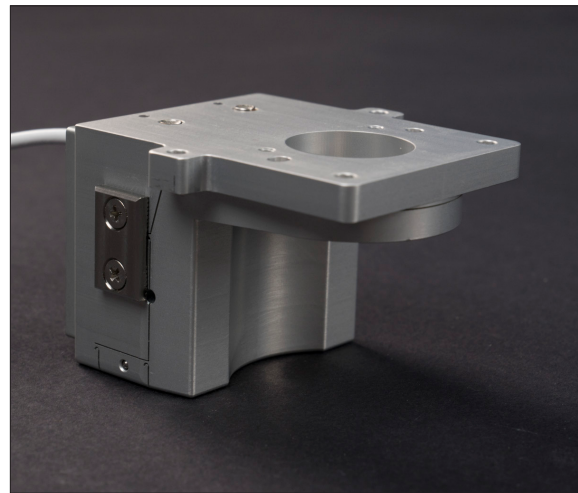
Nano-F200z1-RMS shown in the inverted optical microscopy mounting orientation (above).

Nano-F200z1-RMS shown in the upright optical microscopy mounting orientation (right).

Compatible Software



C, C++ compatible languages



Product Description

The Nano-F200z1-RMS is a piezo lens nanopositioner with 200 microns of travel. Internal position sensors utilizing proprietary PicoQ® technology provide absolute, repeatable position measurement for precise closed loop control. Extensive FEA of the mechanical design has resulted in a nanopositioning stage with very low off-axis motion (see runout specifications). Further design choices, such as an integrated objective lens thread and slotted mounting locations make this the ideal choice for demanding imaging applications.

The Nano-F200z1-RMS includes a calibrated control board. The board includes the high voltage amplifier, closed loop feedback control, and on-board memory. The control board may be integrated into an enclosure of your choice and interfaces with Mad City Labs nanopositioning API. The API is compatible with LabView, C, C++, and Python.

Range of motion	200 μ m
Resolution.....	0.4 nm
Resonant Frequency (unloaded)	600Hz $\pm$ 20%
Resonant Frequency (150g).....	250Hz $\pm$ 20%
Runout (θ_x)	3 μ rad
Runout (θ_y).....	20 μ rad
Maximum load.....	150 g
Body Material	Anodized Al
Lens Thread.....	RMS
Mounting orientation.....	Upright/Inverted
Stage connector	DB-15 (male)
Compatible controller	Nano-Drive® board module
Controller Connectors	USB 2.0 compliant, full speed DB-15 (female)
Included Accessories.....	USB-A to USB-B cable DC Power Supply
Operational Temperature.....	60°-80°F
Storage Temperature.....	70°-160°F

