Nano-OP Series

Features
- High speed, direct drive
- Stackable for multi-axis motion
- 30, 65, and 100 µm ranges of motion
- pico sensor technology
- Closed loop control

Typical Applications
- Interferometry
- Nanomanipulation
- High speed lens focusing
- Fiber optics
- NSOM

Product Description
The Nano-OP Series is a versatile group of compact nanopositioners which can be configured to fit into a wide variety of applications. Individual, single axis stages may be combined to form multi-axis systems. The Nano-OP Series are available with 30, 65, and 100 micron ranges of motion. They can be constructed from aluminum, invar, or titanium and can be customized to suit unique requirements. Internal position sensors utilizing proprietary pico technology provide absolute, repeatable position measurement with picometer resolution under closed loop control.

www.madcitylabs.com  sales@madcitylabs.com  phone: 608-298-0855  fax: 608-298-9525
Technical Specifications

Range of motion (Nano-OP30) ..................... 30 µm
Range of motion (Nano-OP65) ..................... 65 µm
Range of motion (Nano-OP100) ................... 100 µm
Resolution (30/65/100 µm) .................... 0.06/0.13/0.2 nm
Resonant Frequency ............................... 4 kHz ±20%
Resonant Frequency (100g load) .............. 2 kHz ±20%
Stiffness ............................................. 3.0 N/µm ±20%

θ_roll, θ_pitch (typical) .......................... ≤1 µrad
θ_yaw (typical) ...................................... ≤2 µrad
Recommended max. load (horizontal)* ........ 1.0 kg
Recommended max. load (vertical)* ............ 0.5 kg
Body Material ..................................... Al, Invar or Titanium
Controller .......................................... Nano-Drive*

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

Low Position Noise

Nano-OP30

Nano-OP High Speed Lens Positioners

Two Nano-OP25’s combined to form an ultra high speed objective lens focusing device.

Nano-OP100 with custom bracket configured to position an objective lens in a high speed optical scanner.

Note: All Dimensions in Inches