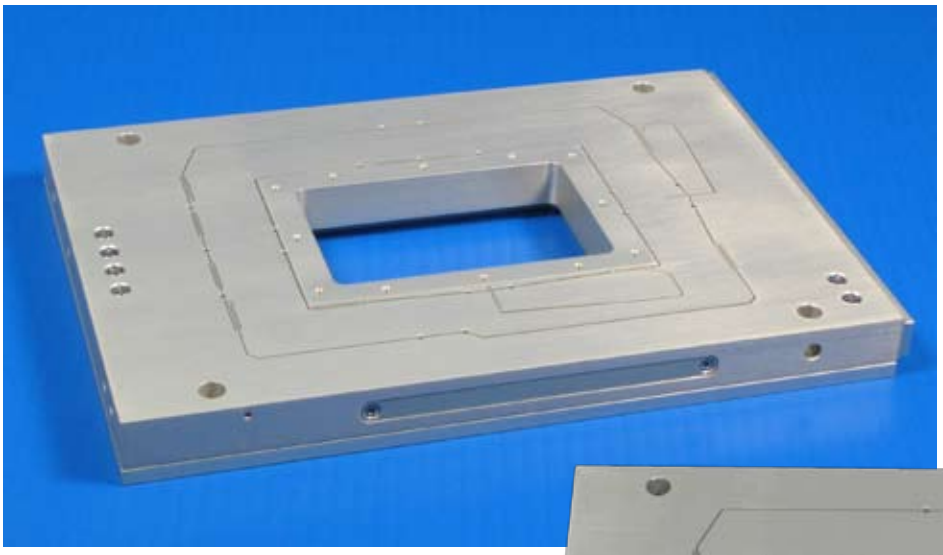
Nano-LPS Series

Features

- *Lowest profile 3-axis nanopositioner available*
- *Large aperture for standard 3" slides*
- *100 µm, 200 µm, and 300 µm ranges of motion (XYZ)*
- *pico® sensor technology*
- *Closed loop control*
- *High stability*

Typical Applications

- *Optical microscopy, easy to retrofit*
- *Optical trapping experiments*
- *Fluorescence imaging*
- *Alignment*
- *Single molecule spectroscopy*
- *Super resolution microscopy*



Nano-LPS100 (3-axis) constructed from aluminum.

Compatible Software Packages

LabVIEW

Examples, tutorial, and Nano-Route® 3D supplied with Nano-Drive® USB interfaces.

Image-Pro AMS

USB and analog motion control

MetaMorph®

USB and analog motion control

µManager
THE OPEN SOURCE MICROSCOPY SOFTWARE

USB motion control

Nano-LPS100 with re-entrant slide holder.

Re-entrant slide holder with coverslip adapter.

Product Description

The Nano-LPS Series are ultra-low profile, three axis nanopositioning systems with 100, 200, and 300 micron ranges of motion in all three axes. The low height of the Nano-LPS Series allows it to be easily integrated into existing inverted optical microscopes. Like the related Nano-LP Series, the Nano-LPS Series is ideal for demanding microscopy applications which require long range travel, fast scan rates, and three axes of motion. Uniquely suited for biological samples, the Nano-LPS has a large center aperture which is large enough to hold full size 3 inch (75mm) standard slides. Precise and repeatable motion is made possible through closed loop control combined with pico® position sensors.

Technical Specifications

Range of motion (Nano-LPS100) ...100 x 100 x 100 µm
Range of motion (Nano-LPS200) ...200 x 200 x 200 µm
Range of motion (Nano-LPS300) ...300 x 300 x 300 µm
Resolution (100/200/300 µm) ..... 0.2/0.4/0.6 nm
Resonant Frequencies
X axis (100/200/300 µm) .....400/350/300 Hz ±20%
Y axis (100/200/300 µm) .....400/350/300 Hz ±20%
Z axis (100/200/300 µm) .....400/300/200 Hz ±20%
Stiffness .....1.0 N/µm

θ_{roll} , θ_{pitch}(typical) ..... ≤1 µrad
θ_{yaw} (typical) ..... ≤3 µrad
Recommended max. load (horizontal)* .....0.5 kg
Recommended max. load (vertical)* .....0.2 kg
Body Material** .....Al, Invar or Titanium
Controller ..... Nano-Drive®

* Larger load requirements should be discussed with our engineering staff.
** Material is aluminum for Nano-LPS300.