

Nano-MET2 & Nano-MET3

Features

- ▶ High speed, multi-axis
- ▶ 2 axis and 3 axis configurations
- ▶ Closed loop control
- ▶ Ultra-low noise performance
- ▶ Picometer positioning resolution
- ▶ High stability
- ▶ **pico** sensor technology

Typical Applications

- ▶ High speed, high resolution positioning
- ▶ Metrology
- ▶ AFM
- ▶ SPM



Nano-MET3 (XYZ motion)
constructed from aluminum.



Nano-MET2 (XY motion)
constructed from aluminum.

LabVIEW Compatible USB Interfaces



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

Product Description

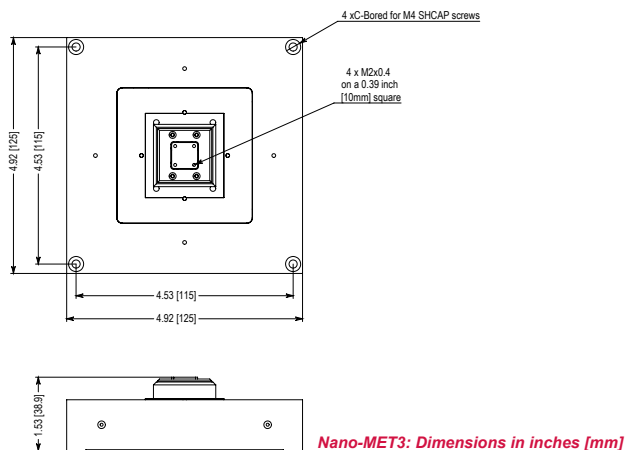
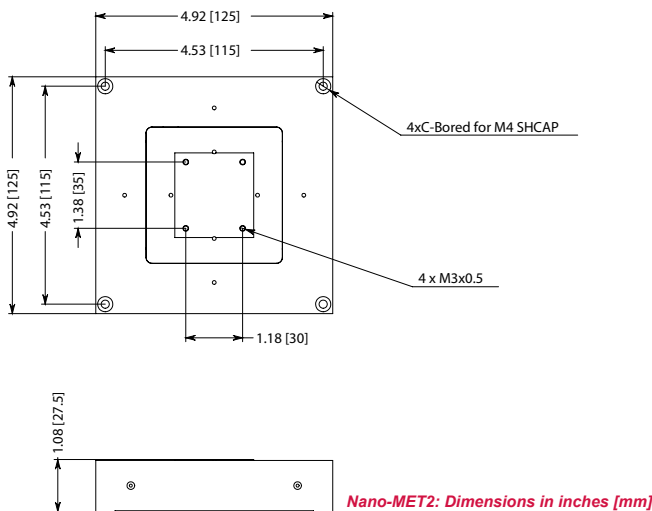
The Nano-MET2 and Nano-MET3 are ultra-low noise, high precision nanopositioning systems with picometer positioning resolution. Internal position sensors utilizing proprietary PicoQ[®] technology provide absolute, repeatable position measurement under closed loop control. The ultra-low position noise (4 picometers/Hz in XY and 400 femtometers/ $\sqrt{\text{Hz}}$ in Z)

of these nanopositioning systems make them ideal for demanding metrology applications. With a resonant frequency of 13.5kHz, the z-axis of the Nano-MET3 offers ultra-fast response needed for demanding AFM applications. Related products include the Nano-METZ, Nano-MET10 and Nano-MET20 nanopositioning systems.

Technical Specifications

Range of motion (XY)	75 μm
Range of motion (Z)	5 μm
Resolution (XY)	0.15 nm
Resolution (Z)	0.005 nm
Resonant Frequency XY (MET2)	1.4 kHz
Resonant Frequency XY (MET3)	1.0 kHz
Resonant Frequency Z (MET3)	13.5 kHz
Recommended max. load (horizontal)*	100 g
Recommended max. load (vertical)*	100 g
Body Material	Aluminum
Controller	Nano-Drive®

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



Low Position Noise

