Nano-3D500

Features

▸ *Compact size*
▸ *500 µm three axis motion (XYZ)*
▸ *Closed loop control*
▸ *True flexure guided motion*

Typical Applications

▸ *Optical fiber alignment*
▸ *Hybrid positioning systems*
▸ *Micromachining*
▸ *Micromanipulation*

LabVIEW Compatible USB Interfaces

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

Nano-3D500 constructed from aluminum.
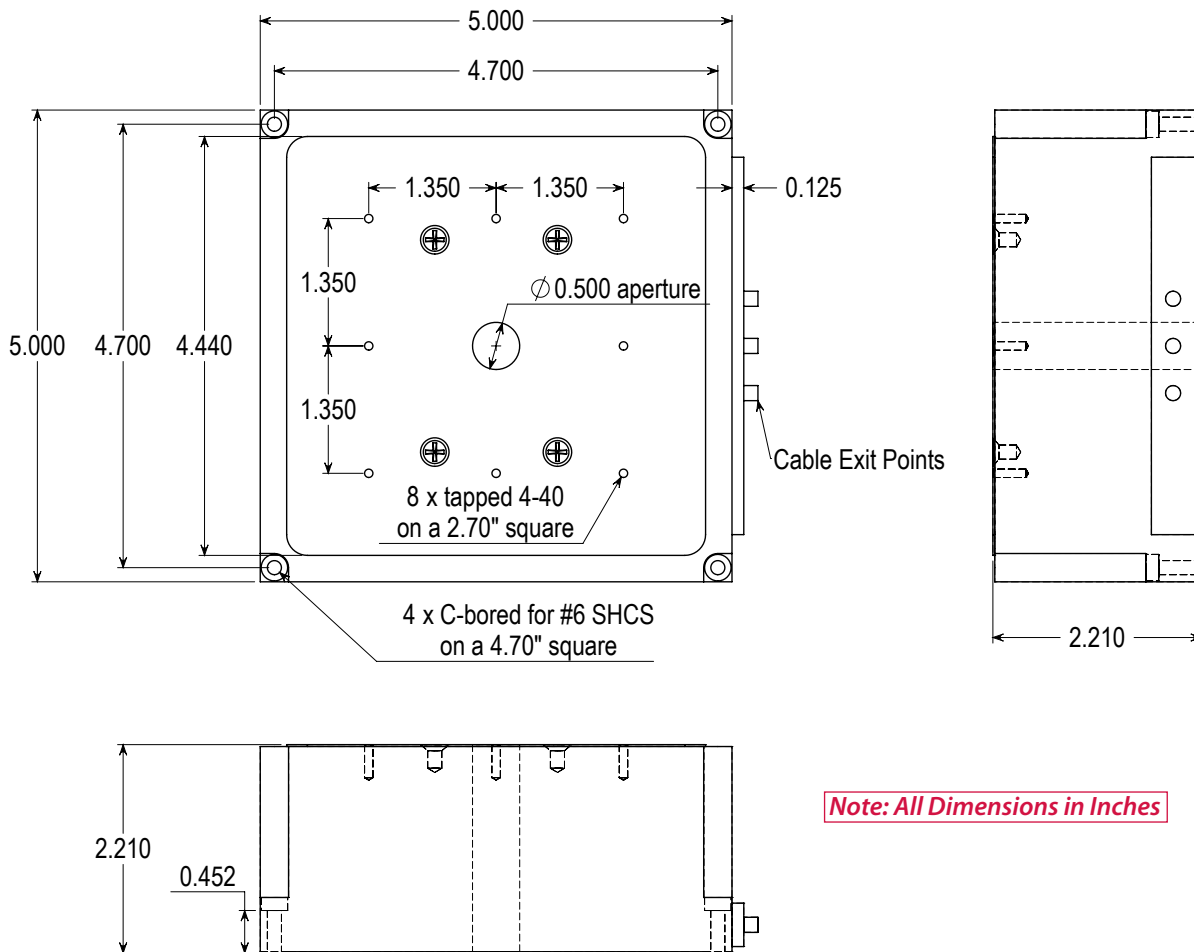
Product Description

The Nano-3D500 is a long range, three axis (XYZ) nanopositioning system constructed from aluminum. Ideally suited for optical alignment applications and high precision static positioning, the Nano-3D500 uses unique internal flexures to produce independent, isolated movement in all axes. High resolution position sensors combine with the closed loop controller to provide absolute, repeatable position measurement and long term stability. The 0.5 inch diameter center aperture provides a potentially useful optical path through the stage. A wireless 3-axis joystick controller is available as a convenience for fast, precise manual alignment without computer programming.

Technical Specifications

Ranges of motion (XYZ) .... 500 µm

Resolution.. 1 nm

Resonant Frequency (X) .... 150 Hz ±20%

Resonant Frequency (Y) .... 150 Hz ±20%

Resonant Frequency (Z) .... 200 Hz ±20%

Stiffness..1.0 N/µm

Recommended max. load (horizontal)* ....0.5 kg

Recommended max. load (vertical)*.....................0.2 kg

Body Material .... Aluminum

Controller .... Nano-Drive®

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

5.000

4.700

1.350   1.350   0.125

1.350

∅ 0.500 aperture

5.000   4.700   4.440

1.350

8 x tapped 4-40
on a 2.70" square

Cable Exit Points

4 x C-bored for #6 SHCS
on a 4.70" square

2.210

2.210

0.452

Note: All Dimensions in Inches