

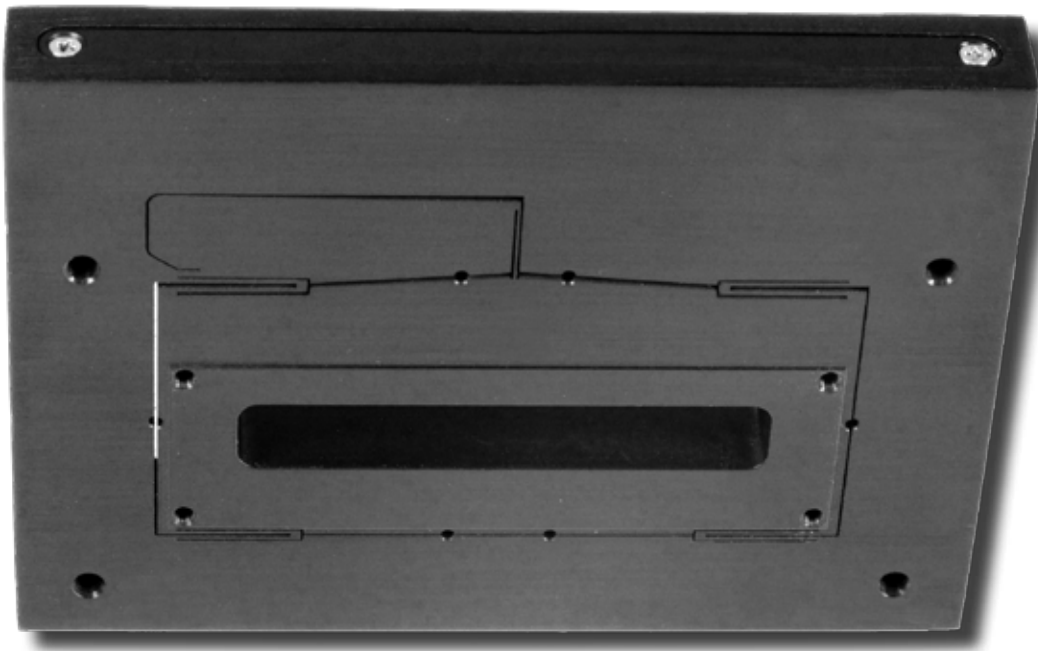
# Nano-YT500

## Features

- ▶ *Single axis motion*
- ▶ *Long range - 500 $\mu$ m*
- ▶ *Compact size*
- ▶ *Rectangular aperture*
- ▶ *Closed loop control*
- ▶ **pico** sensor technology

## Typical Applications

- ▶ *Long range scanning*
- ▶ *Inspection, quality control*



*Nano-YT500 constructed from aluminum.*

### LabVIEW Compatible USB Interfaces

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

## Product Description

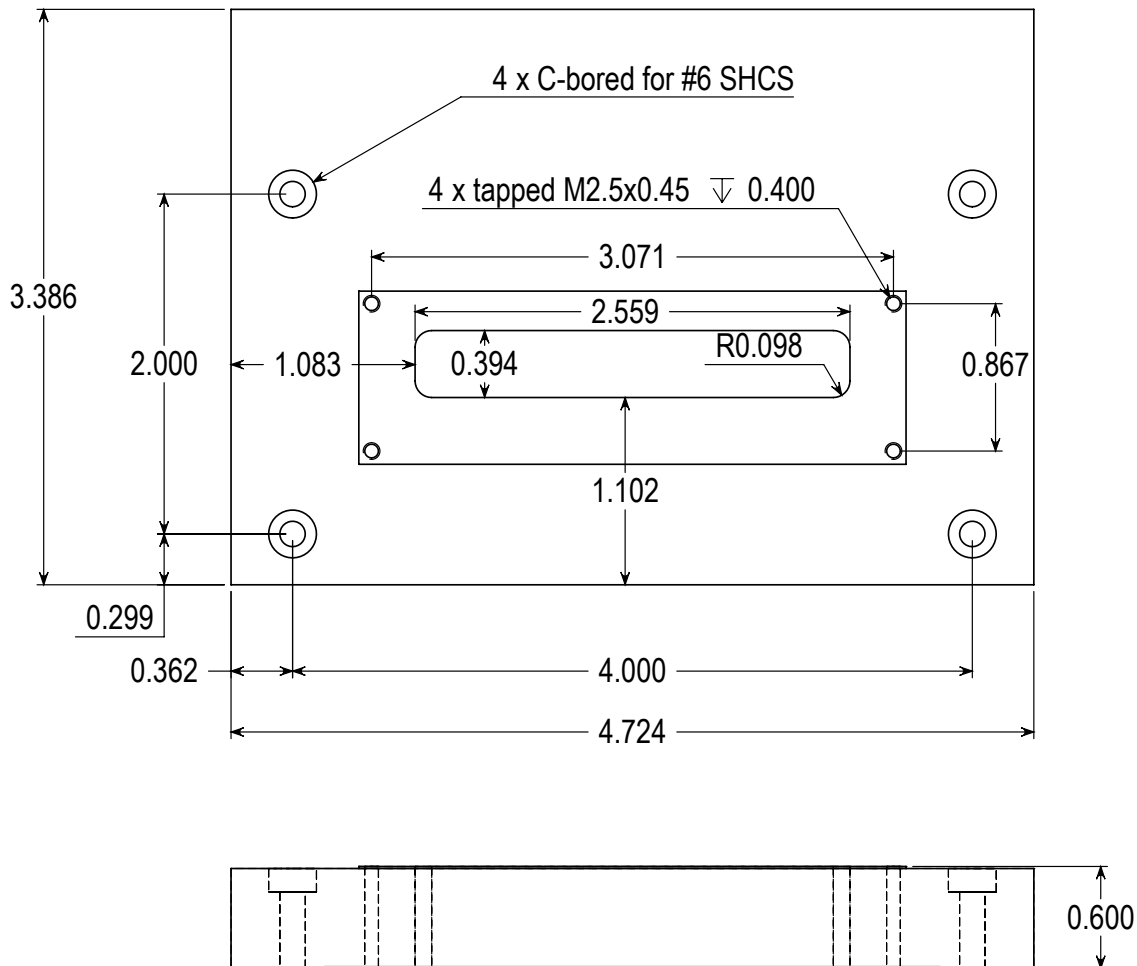
The Nano-YT500 is a long range, single axis, precision nanopositioning system with a central aperture well suited for optical scanning of samples. Internal position sensors utilizing proprietary **pico** technology provide absolute, repeatable position measurement with nanometer resolution under closed loop control. True flexure

guided motion of the Nano-YT500 minimizes the end-to-end differences in travel across the aperture to less than 1 $\mu$ m over the full 500 $\mu$ m range of motion (0.2%). The Nano-YT500 can be operated in any orientation and has been tested for reliability over 1,000,000 full cycles (1000 $\mu$ m total travel per cycle).

## Technical Specifications

Range of motion .....	500 $\mu\text{m}$
Resolution .....	1.0 nm
Resonant Frequency .....	150 Hz $\pm 20\%$
Stiffness .....	0.8 N/ $\mu\text{m}$
Recommended max. load (horizontal)* .....	0.5 kg
Recommended max. load (vertical)* .....	0.1 kg
Body Material .....	Aluminum
Controller .....	Nano-Drive <sup>®</sup>

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



**Note: All Dimensions in Inches**