Mechano Transformer Corporation

Electrical driven
Nano Alignment Mirror mounter Series

www.mechano-transformer.com contact : info@mechano-transformer.com

MTPAM- MHG-MP30-NL

The Nano Alignment Mirror mounter Series is designed to construct an optical experimental system more <u>quickly and easily</u>. The MTPAM-MHG-MP30-NL is a 2-axis electrical driven mirror mounter, which is ideal for constructing optical cavity and other optical experiment setup. The MTPAM-MHG-MP30-NL can easily correct the misalignment of even less than 1.0mRad. These misalignments often occur in the optical experimental systems like gravitational wave detectors based on Michelson interferometer.



With the MTPAM-MHG-MP30-NL, you can build <u>a self-alignment system</u> for your optical setup to <u>save you from a lot of effort spent on alignment</u>. The alignment procedures can be easily automated with a program. The automation algorithm can be based on the <u>artificial intelligence (like neural network)</u> or others. To detect the misalignment, <u>Wave Front Sensor (WFS) method</u> is one of the conventional methods. By detecting the interference between the 00 and 10 modes of the <u>Hermite Gaussian mode</u>, WFS method can controls the attitude of the mirror.

Save you from a lot of effort spent on alignment.

Primary material	Aluminum
Adjustment Range /Tilt	± 3°
Adjustment Range /Rotation	± 3°
Resolution /Tilt	<0.7µrad/rotation
Resolution /Rotation	<0.7µrad/rotation
Weight	0.17Kg
Number of Adjustment Axes	2 points
Compatible Optics Diameter	φ 30mm
Compatible Optics Thickness	3 - 5mm
Finish	Black Anodized/Blue Anodized

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The Nano Alignment Mirror mounter Series is driven by Piezo Assist Motor $^{\circledR}$. With Piezo Assist Motor $^{\circledR}$, the μ -Rad order alignment can be easily realized. The mirror mounter can be electrically controlled. The backlash is smaller than the widely used manual mirror mounter.

Automate your alignment with artificial intelligence like neural network or other algorithms.

