# Mechano Transformer Corporation Electrical driven Nano Alignment Mirror mounter Series

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#### MTPAM-LMHB-30M

The Nano Alignment Mirror mounter Series is designed to construct an optical experimental system more <u>quickly and easily</u>. The MTPAM-LMHB-30M is a 2-axis electrical driven mirror mounter, which is ideal for constructing optical cavity and other optical experiment setup. The MTPAM-LMHB-30M 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.



## Save you from a lot of effort spent on alignment.

Туре	Kinematic
Adjustment Range /Tilt	±2.8°
Adjustment Range /Rotation	±2.8°
Resolution /Tilt	<0.7µrad/rotation
Resolution /Rotation	<0.7µrad/rotation
Weight	0.4Kg
Primary material	Aluminum
Coarse Resolution /Tilt	-
Coarse Resolution /Rotation	-
Compatible Optics Diameter	<i>ф</i> 30mm
Compatible Optics Thickness	3 - 9mm
Fine Adjuster Indicator Conversion /Tilt	-
Fine Adjuster Indicator Conversion /Rotation	-
Fine Adjustment Range /Tilt	-
Fine Adjustment Range /Rotation	-
Finish	Black Anodized/ Blue Anodized

### MTPAM- LMHB-30M

With the MTPAM-LMHB-30M, 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</u> <u>intelligence (like neural network)</u> or others. To detect the misalignment, <u>Wave Front</u> <u>Sensor (WFS) method</u> is one of the conventional methods. By detecting the interference between the 00 and10 modes of the <u>Hermite Gaussian mode</u>, WFS method can controls the attitude of the mirror.

The Nano Alignment Mirror mounter Series is driven by Piezo Assist Motor<sup>®</sup>. With Piezo Assist Motor<sup>®</sup>, the  $\mu$ -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.

## <u>Automate your alignment with artificial</u> <u>intelligence like neural network or other</u> <u>algorithms.</u>



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