

# MHX-series Mirror Mounts

**NEW**



MHX-25.4F-R

OptoSigma is pleased to introduce the all new MHX-series high-stability mirror mount. This all-stainless steel holder is made for standard 25.4-mm (1-in.) mirrors. It features a hollow-frame design which not only provides higher moment of inertia to maximize stiffness but also thinner, reduced-mass sections allowing it to reach thermal equilibrium faster than traditionally designed mounts. Thermal repeatability tests validate the effectiveness of the new frame design, showing lower deflection and equivalent repeatability against rival mounts. The MHX mount is loaded with additional features like center-post mounting, adhesive wells, and keying pin slots, all in the industry's most compact and affordable stainless steel mount.

## Data Table

Specifications	
Mirror Diameter	25.0-25.4 mm (Rear Loading)
Minimum Mirror Thickness	3 mm
Number of Adjusters	Three Adjusters, 2-mm (5/64-in.) Hex Key
Angular Range	+/-3 Degrees ( Pitch or Yaw)
Linear Travel Range	7 mm
Adjuster Screw Thread	M6x250µm (~102 TPI)
Envelope Volume	70 cm <sup>3</sup> (91 cm <sup>3</sup> with optional knobs)
Mass	165 g (200 g with optional knobs and locks)
Specific Frame Stiffness	3.20 x10 <sup>-1</sup> N·m/µrad·Kg
Features	
Kinematic Pad Material	Polished Sapphire
Mount Material	Stainless Steel
Screw Bushing Material	Stainless Steel
Mirror Clamping Mechanism	Set Screw with Torsion Barrier, 2-mm (5/64-in.) Hex Key
Standard Mounting	Counterbored clearance hole for M4 / 8-32 screws
Center-Post Mounting	M4 and 8-32 threaded holes
Adhesive Wells (for bonding mirror)	3 wells, φ1 mm
Dowel Pin Keys	Slot and Hole, φ2 mm
Surface-Plate Mounting Capability	Yes: Knobs turn freely when mount is fixed on to surface plate
Screw-on Knobs	φ14mm, M6x0.25 Thread - (sold separately)
Locks	2-mm (5/64-in.) Hex-Key - (sold separately)
Performance (typical)	
Standardized Adjustment Sensitivity (based on 1° knob rotation)	20 µrad
Typical Adjustment Sensitivity	6±2 µrad
Thermal Repeatability with a Δ10°C Thermal Cycle	≤1.5 µrad
Thermal Deflection Proportionality Constant	1.6±0.2 µrad/C° (2.9±0.4 µrad/F°)
Peak Pitch-Axis Drift Deflection with Δ10°C Thermal Cycle	16±2 µrad



MHX-25.4F-R mount, rear view

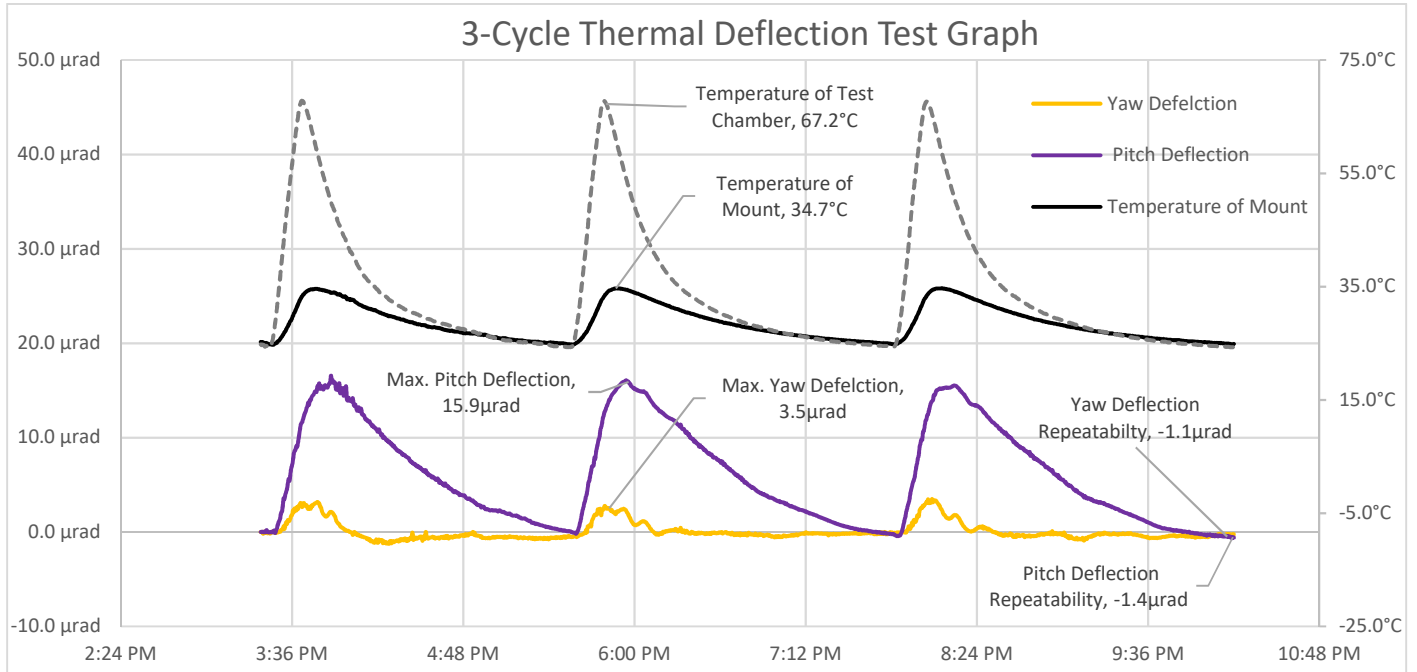


MHX-25.4F-R with optional knobs (sold separately)

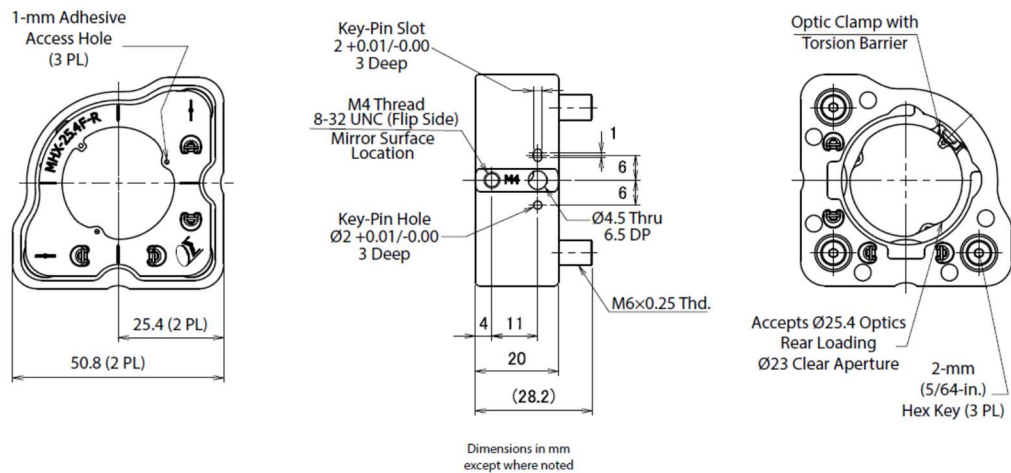


MHX-25.4F-R with optional locks (sold separately)

## Test Graph



## Drawing



## Ordering

Description	Model Number	List Price
1-in. mirror mount, stainless steel, high-stability, rear-loading, 3 hex adjusters	MHX-25.4F-R	\$119
Screw-on knobs, stainless steel, 14-mm diameter, M6x0.25 thread, pack of 3 ea.	MHX-K-M6	\$15
Adjuster locks, stainless steel, M6x0.25 thread, pack of 3 ea.	MHX-L-M6	\$25

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



Mount, MHX-25.4F-R



Knobs, MHX-K-M6



Locks, MHX-L-M6