

UHV Picomotor™ Clear Edge Large Aperture Optical Mounts



UHV Picomotor Mirror Mount Series

The New Focus™ 882X Clear edge series provides the precision and stability of Picomotor™ actuators with our reliable popular Ultima™ Precision Optical Mounts. These mounts can now be used in UHV environments (10^{-9} Torr) as well as for VUV/EUV applications.

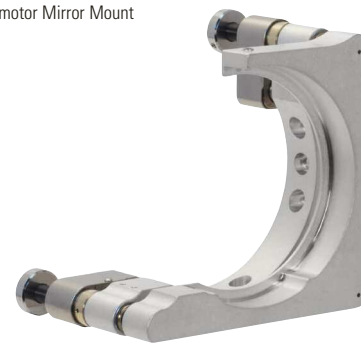
These new UHV Clear Edge mounts are available in aperture versions 1.0, 2.0, or 3.0 in (25.7, 50.8, 76.2 mm) diameter optics. With the thick front and rear plates, carbide seats, and optimized stiff springs, it provides for smooth, reliable motorized adjustment while maintaining a high level of thermal and mechanical stability. The picomotor offers the additional advantage of motorized positioning of $< 0.7 \mu\text{rad}$ resolution or just utilizing the integrated knobs for quick, manual adjustment.

The 8821-UHV, 8821-L-UHV, 8822-UHV, 8822-L-UHV and 8823 with its clear quadrant design, offer a versatile positioning system for mounting 1.0 in, 2.0 and 3.0 in mirrors while providing greater beam access.

- Vacuum Compatible 10^{-9} Torr
- Kapton Wires
- Kinematic Mechanism
- θ_x, θ_y Adjustments
- Angular Resolution $< 0.7 \mu\text{rad}$
- Set-and-Forget Long-Term Stability



Model 8822-L-UHV
2in Left-Handed UHV Picomotor Mirror Mount



Model 8823-UHV
3in UHV Picomotor Mirror Mount



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Specifications

	8821-UHV	8821-L-UHV	8822-UHV	8822-L-UHV	8823-UHV
Optic Diameter [in. (mm)]	1.0 (25.4)	1.0 (25.4)	2.0 (50.8)	2.0 (50.8)	3.0 (76.2)
Type	Clear Edge Center Mount	Clear Edge Center Mount	Clear Edge Center Mount	Clear Edge Center Mount	Clear Edge Center Mount
Angular Range (°)	±3	±3	±5	±5	±3.5
Cable Length [ft. (m)]	7 (2.1)	7 (2.1)	7 (2.1)	7 (2.1)	7 (2.1)
Resolution- Angular (μrad)	0.7	0.7	0.7	0.7	0.7
Mounting	Post	Post	Post	Post	Post
Thread Type	8-32 (M4) Thru	8-32 (M4) Thru	8-32 (M4) Thru	8-32 (M4) Thru	8-32 (M4) Thru
Motorized Axes	2 (θx, θy)	2 (θx, θy)	2 (θx, θy)	2 (θx, θy)	2 (θx, θy)
Vacuum Compatibility	10 ⁻⁹ Torr	10 ⁻⁹ Torr	10 ⁻⁹ Torr	10 ⁻⁹ Torr	10 ⁻⁹ Torr
Wire Type (vacuum rated)	Kapton	Kapton	Kapton	Kapton	Kapton

Ordering Information

Model	Description
8821-UHV	UHV Clear Edge Picomotor Mirror Mount, 1.0 in. Diameter
8821-L-UHV	UHV Clear Edge Picomotor Mirror Mount, 1.0 in. Diameter, Left-Handed
8822-UHV	UHV Clear Edge Picomotor Mirror Mount, 2.0 in. Diameter
8822-L-UHV	UHV Clear Edge Picomotor Mirror Mount, 2.0 in. Diameter, Left-Handed
8823-UHV	UHV Clear Edge Picomotor Mirror Mount, 3.0 in. Diameter
8742-4-KIT	Four-Axis 8742 Picomotor Controller/Driver Kit



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Newport Corporation, Irvine, California and Franklin, Massachusetts; Evry and Beaune-La-Rolande, France and Wuxi, China have all been certified compliant with ISO 9001 by the British Standards Institution. Santa Clara, California is DNV certified.

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