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Find the *ThorLabs KM2CE* at our website: ***Click HERE***

Clear-Edge Kinematic Mirror Mounts

- **Design Provides 180° of Clear Edge**
- **Save Space in Laser Cavities and on Optical Tables**
- **Designed to Minimize Distortion in the Center of the Optic**



KM2CE
Two Adjuster Mount
For Ø2" Optics



KS1CE
Precision Three-Adjuster Mount
For Ø1" Optics



The clear edge design allows mirrors to be arranged in close proximity without clipping input and output beams.

Overview

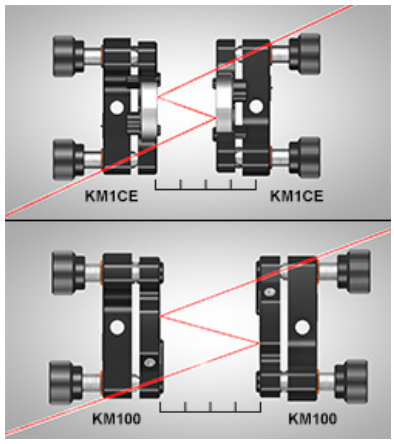
Features

- 180° Clear Edge Mounts for Ø1" or Ø2" Optics
- Two-Adjuster and Precision Three-Adjuster Designs Available
- Optic Clamping Mechanism Designed to Minimize Distortion (See *Performance* Tab)

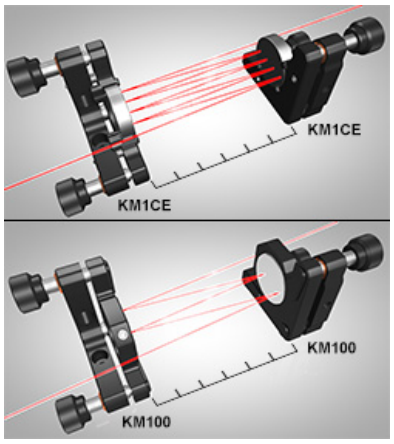
These Clear-Edge Mirror Mounts combine the functionality of our standard or precision mirror mounts with the added advantage of 180° of exposed optic edge. The clear-edge design allows close-proximity beam reflections to pass over the exposed outer radius of the optic without clipping on the mount's front face plate.

Some common applications are shown in the images to the right that compare our popular KM100 mount and the KM1CE. A pair of clear-edge mirror mounts can be placed much closer together than a pair of standard mounts. In addition, the beam can enter and exit the two-mirror system without clipping. Similarly, if two clear-edge mounts and two standard mounts are positioned with the same distance between each pair, the clear-edge design allows the beam to enter at a shallower angle. This provides a higher number of reflections before the beam exits the two-mirror system, an important feature for applications that use a pair of mirrors for dispersion compensation.

Each mount uses two nylon-tipped, 0.05" (1.3 mm) hex setscrews to secure an optic. The cavity that holds the optic is designed to reduce optic distortion in the center of the mirror. For more information on the clamping mechanism, see the *Performance* tab.



Click to Enlarge
For a two-mirror system designed to provide a single reflection off of each mirror surface, two KM1CE mounts (top) can be positioned in closer proximity than two KM100 mounts (bottom) while still allowing the beam to enter and exit without clipping.



Click to Enlarge
When two KM1CE (top) and two KM100 (bottom) mirror mounts are positioned at the same distance, the clear-edge design of the KM1CE allows more reflections to occur before the beam exits the two-mount system.

Clear-Edge Mounts Selection Guide				
Clear Quadrant Rear-Loaded Kinematic Mounts (Ø1/2" Optics)	180° Clear-Edge Kinematic Mounts (Ø1" and Ø2" Optics)	142° Clear-Edge Polaris® Kinematic Mount (Ø1" Optics)	D-Shaped Mirror Mounts (Ø1/2" and Ø1" Optics)	120° Clear-Edge, Pitch-Adjustable Flexure Mount (Ø1" Optics)

Standard 2-Adjuster Clear-Edge Mounts



Mount Ø1" or Ø2" Optics

- KM1CE: Ø1" Optics Between 0.10" and 0.25" Thick
- KM2CE: Ø2" Optics Between 0.33" and 0.49" Thick

Angular Adjustment: ±4° (KM1CE) or ±3° (KM2CE)

Resolution:

- KM1CE: 8.3 mrad/rev
- KM2CE: 5.1 mrad/rev

Two #8 (M4) Counterbores Allow Left- and Right-Handed Post Mounting

These Clear-Edge Mirror Mounts combine the functionality of our standard KM100 and KM200 mirror mounts with the added advantage of 180° of exposed optic edge. The clear-edge design allows close-proximity beam reflections to pass over the exposed outer radius of the optic without clipping on the mount's front face plate.



Click to Enlarge
Front Face Plate View



Click to Enlarge
KM1CE Shown with a PIAK10 Piezoelectric Inertia Actuator

Each mount uses two nylon-tipped, 0.05" (1.3 mm) hex setscrews to secure an optic. The KM1CE can accept optics between 0.10" and 0.25" (2.5 mm and 6.4 mm) thick, while the KM2CE can accept optics between 0.33" and 0.48" (8.4 mm and 12.2 mm) thick.

A #8 (M4) counterbore is located on each side of the KM1CE mount, allowing it to be mounted in right- and left-handed orientations. The KM2CE mount offers six #8 (M4) counterbores (three on each arm) for the same purpose. Both mounts feature two 1/4"-80 actuators with removable adjuster knobs. The KM1CE provides ±4° of angular adjustment at a resolution of 0.48°/rev (8.3 mrad/rev) while the KM2CE provides ±3° of angular adjustment at a resolution of 0.29°/rev (5.1 mrad/rev). An optional accessory, the LN2580 bronze locking nut, is available to lock the adjusters once the desired position is reached.

Precision 3-Adjuster Clear-Edge Mounts



Thicker Back Plate and Stiffer Springs Provide Increased Stability Compared to Standard Mounts

Mount Ø1" Optics Between 0.10" and 0.24" Thick

Angular Adjustment: ±4°

Resolution: 8.3 mrad/rev with Three Adjusters

Two #8 (M4) Counterbores Allow Left- and Right-Handed Post Mounting

The KS1CE Clear-Edge Precision Mirror Mount combines the increased stability of our KS1 mirror mount with the added advantage of 180° of exposed optic edge. The clear-edge design allows close-proximity beam reflections to pass over the exposed outer radius of the optic without clipping on the mount's front face plate. The KS1CE mount incorporates a thicker back plate and stiffer springs than our KM1CE mount, as well as three lockable adjusters that reduce drift for stable, long-term operation.

The mount uses two nylon-tipped, 0.05" (1.3 mm) hex setscrews to secure Ø1" optics, and features three lockable 1/4"-80 actuators with removable adjuster knobs that provide ±4° of angular adjustment at a resolution of 0.48°/rev (8.3 mrad/rev). A #8 (M4) counterbore is located on each side of the KS1CE mount, allowing it to be mounted in right- and left-handed orientations.

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