



PPD Recommended Cleaning Method: Laser Mirrors

If it's not dirty, don't clean it! Handling optics increases their chances of getting dirty or damaged, so optics should only be cleaned when there is a clear need to do so.

Handling should always take place in a clean-room environment where there are minimal particulates and airborne dust. To protect the surfaces of the optics from contamination, it is essential to wear gloves or finger cots that are powder-free and resistant to solvents such as acetone. Bare skin should never come into contact with any coated surface, as natural oils or debris from hands can stain coatings and/or contribute to long-term degradation. Similarly, lens tissue should only be used once and then



discarded; reusing it can transfer contaminants back onto the optic and cause scratches. Given the cost of precision optical components, using a fresh lens tissue each time is a minor expense that helps prevent costly damage.

To determine whether an optic requires cleaning, it should be inspected carefully under a strong visible-light source. By holding the optic at different angles, one can more easily detect scattering caused by the presence of dust, streaks or stains.

1. Required Materials

- Tweezers (2 pcs, for small optics)
- Examination grade latex gloves
- Methanol (analytical grade) or Chromatography grade acetone
- Berkshire Pro JX wipes or lint free Q-tips for small optics

2. Procedure

- Hold the mirror gently by the outer diameter, using tweezers for small optics.
- Moisten a Berkshire Pro JX wipe with methanol.
- Carefully wipe only 1/3 to 1/2 of the mirror surface:
 - Avoid contact with the bevel.
 - Apply minimal pressure to prevent linting or scratching.
- Rotate the part using tweezers and repeat the wipe process until the full surface is clean.
- Use a fresh wipe for each stroke to prevent contamination.
- Inspect the part under proper (bright fiber) lighting for remaining particulates during and after cleaning.

