

Cleaning Instructions For 1µm Protective Windows

General preconditions

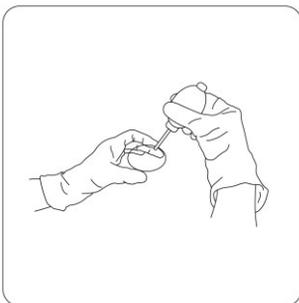
1. Important note: the following guidelines are for cleaning windows only, lenses are excluded. 1- micron lenses are packed and sealed in an automated system for maximum cleanliness. Opening, unpacking and cleaning of such lens should be carried out in a class 1,000 clean room. Cleaning under such conditions should be made using air blowing only.
2. Coated surfaces should never be touched. Always hold the optic element by its sides.
3. Always wear powder-free finger cots or latex gloves when handling the optics. Bare hands might leave oils and dirt, which will damage their performance.
4. Do not use any tools or sharp objects when handling the optic element or when removing it from its packaging.
5. Prepare a clean and smooth work surface that is free of oils, grease, dirt, etc.
6. Optic elements will scratch easily when placed on hard surfaces. Once the optic is unpacked, carefully place it on the lens tissue in which it was originally wrapped. Then place the tissue and the lens on a soft cloth, or on the foam from the package.

The optic elements are cleaned and packaged in a clean and controlled environment at Ophir, and should be ready to install in the laser machine. If an unpacked, new optic element does not appear to be clean, or seems to have a defect, please contact your local Ophir agent.

The following cleaning methods can be applied for all optic elements.

Method A

- A. Condition of lens: Dust or small loose particles on the surface
- B. Cleaning method:



1. Use a small air bulb to gently blow off dust and debris. Do not use compressed air from a compressor, as it is not a "clean" source of air and can contaminate the surface.

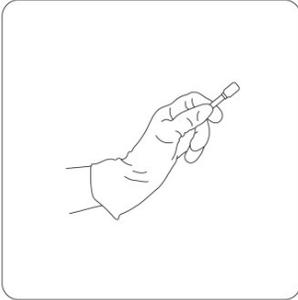


2. Gently place the provided optical-grade rice paper on the optic element. Slightly wet the paper with drops of Ethanol/ Diethyl ether, using a pipette, and gently pull the paper toward the dry side away from the element, until there is no contact between them.

If this method is not successful, proceed to Method B.

Method B

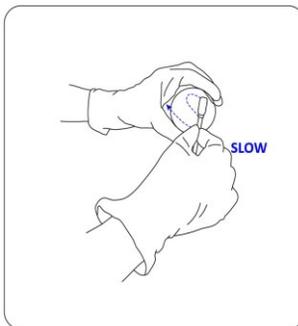
1. Condition of lens: Fingerprints, oil, other visual contaminants
2. Cleaning method:



1. Use a new clean class 1,000 foam swab.



2. Dampen the foam swab with Ethanol/ Diethyl ether. The foam swab must not be dry

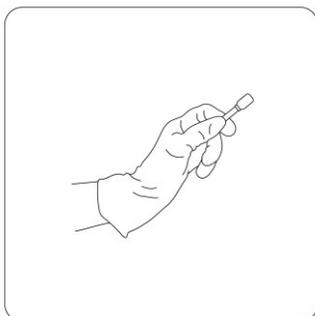


3. Slowly and gently wipe the element in a regular pattern. Do not scrub the surface (scrubbing might damage the coating or the element itself). Gently wipe element in "S" motion. If the surface is left with wipe marks, wipe it at a slower rate. When finished, no streaks should be visible.

If this method is not successful, proceed to Method C

Method C

1. Condition of lens: Moderate contamination (spittle, oils)
2. Cleaning method:



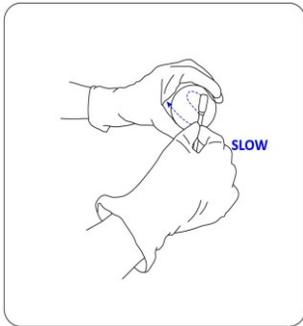
1. Use a new clean class 1,000 foam swab.



2. Dampen the foam swab with Ethanol (or Acetone). The foam swab must not be dry.



3. Slowly and gently wipe the element in a regular pattern. Do not scrub the surface (scrubbing might damage the coating or the element itself). Gently wipe element in "S" motion.



4. If the surface is left with wipe marks, wipe it at a slower rate. When finished, no streaks should be visible.



5. Slightly wet the provided optical-grade rice paper with drops of Ethanol/ Diethyl ether, using a pipette, and gently pull the paper toward the dry side away from the element, until there is no contact between them, and the residue of acetic acid has been removed.

For your convenience, an Ophir Cleaning Kit is available for purchase:



This Cleaning Kit Includes:

- Air bulb
- Polishing compound (Cerium Oxide Polish)
- Dispensers
- Finger cots
- Cotton balls
- Lens tissue (optical grade rice paper)



About Ophir Laser Optics

Established in 1976, Ophir Optics is a global leader in the High Power Laser Optics industry, and a reputable OEM supplier. We leverage our vast experience, expertise and technologies, to develop and manufacture superior optics for the industrial lasers industry.