

SOLAR FILTER INSTRUCTIONS

TECHNICAL DETAILS:

Glass 2+: High quality hand selected glass with metallic coating on inside surface facing sun.

SolarLite Film: Metallic coating outside surface & absorptive material within substrate.

Silver-Black Polymer Film: Metallic coating outside surface absorptive material within substrate.

All filters block 99.999% of the energy from entering the instrument. For visual and photographic use.

IMPORTANT:

- Check the solar filter for damage before each use.
- The filter must be FIRST in-line between sun and instrument. Do not use filter behind any lens.
- Truss design telescopes must NOT be used without covering the open section of tube. Sunlight entering from the side will reflect off mirror and damage the solar filter.
- Secure filter properly. (See mounting instructions)
- Do not leave instrument unattended where a child or inexperienced adult could point it at the sun without the filter properly attached.
- Keep the finder-scope covered if not equipped with a proper solar filter.
- Point the instrument away from sun when attaching and removing solar filter.
- Do not place the filter up against a smaller instrument. The end of the tube will damage the filter.
- When looking through the focusing tube without an eyepiece, there may appear to be small defects in the coating that are not seen when observing through the eyepiece. This is normal and is not a coating defect or safety concern.
- "Ghosting" can occur due to internal reflections (glass filters only). If this is a problem, simply tilt the filter slightly.
- Filter may absorb solar energy and get hot during use. Use extra care when removing.

Pinholes and minor surface scratches are common in glass solar filters; however, our multi-coating technique keeps them to a minimum. A "bright" pinhole in the coating may cause "ghosting" due to scattered light. If this is seen during observation, the pinhole(s) should be blocked out. Block out any pinholes on inside surface facing telescope. Hold the filter 1-2 feet in front of a 50-100 soft white light bulb. Blocking can be done using a fine point felt marker. There is no danger if a few pinholes or minor scratches are present. The touch-up(s) will not lessen the optical performance. Small pinholes need not be blocked if not causing an image problem.

MOUNTING:

If your filter is too loose, it can be custom fitted using the extra felt included. If the paper backing is difficult to remove, dampen with water or alcohol using a wet sponge or fine spray mist. Peel backing off slowly. Let dry if necessary before installing on inside of cell. Extra felt can be added over any existing felt. Test fit before removing the backing and permanently installing the felt. We cannot exchange for another size if the felt is installed.

TIPS:

- Allow instrument and filter to equalize to the outside temperature for at least 15 minutes.
- If possible, do not view over pavement or buildings. Viewing over grass or water will help avoid heat currents that will degrade the image.
- Cover dark colored instruments with a light-colored cloth.

CLEANING:

Glass: Loose dust can be blown off with up to 15 PSI. Clean with Isopropyl (rubbing) alcohol and a soft tissue. Do not use a cloth. It's best to mist the filter with a spray versus soaking the tissue. Use a 3 inch or larger circular wad of tissue and lightly rub across surface using long strokes. Lightly wipe dry with a fresh dry tissue.

SolarLite & Silver-Black Polymer Film: Same as glass, however, polymer is more susceptible to small surface scratches, so extra care should be taken. Surface scratches will not compromise the safety.

WARRANTY:

Glass 2+ and SolarLite 15 years, Black Polymer 10 years. All filters are covered by a limited liability warranty from defects in material and workmanship. This warranty does not apply if in the judgment of Thousand Oaks Optical, the product fails to be safe due to shipping damage, damage from improper handling or storage, abuse or misuse, or has been used or maintained in a manner not conforming to product's instructions or has been modified in any way.