



SOLAR FILTER

#94220 for PowerSeeker 60AZ and 60EQ

#94221 for PowerSeeker 70AZ, 70EQ, Travel Scope 70, and Inspire 90

#94222 for PowerSeeker 127EQ, NexStar 130SLT, Astro Fi 130, Omni XLT AZ 130, SkyProdigy 130

NOTE: The #94222 is **NOT** designed for use with AstroMaster 130 models.

The solar filter material used in this product:

- Conform to and meet the Transmission Requirements of ISO 12312-2, Filters for Direct Observation of the Sun.
- Meet the Transmission Requirements of EN 1836:2005 + A1:2007 (E) for an E15 Filter for the Direct Observation of the Sun.
- Meet the Transmission Requirements of AS/NZS 1338.1:2012, Filters for Eye Protectors. EC Type Examination by: SAI Global Assurance Services Ltd. (Notified Body No. NB2056), MK5 8HJ U.K.

SOLAR WARNING

Even though your EclipSmart solar filter is equipped with ISO certified material that allow safe direct observation of the Sun, there are still some important rules you should follow when solar observing:

- Never look directly at the Sun with the naked eye or with a telescope unless you have the proper solar filter. Permanent and irreversible eye damage may result.
- Never use a telescope to project an image of the Sun onto any surface. Internal heat build-up can damage the telescope and any accessories attached to it.
- Never use an eyepiece solar filter or a Herschel wedge. Internal heat build-up inside the telescope can cause these devices to crack or break, allowing unfiltered sunlight to pass through to the eye.
- Do not leave the telescope unsupervised, especially when children or adults unfamiliar with the correct operating procedures of your telescope are present.

HANDLING THE FILTER

When handling the filter, hold it by the other edges of the plastic filter cell. Avoid making contact with the filter material. Do not use any cleaning chemicals or brushes to clean this material. If you need to clean dust, use compressed air to blow it clean. Small smudges or fingerprints will have no effect on the performance of the filter. When not using the filter, make sure the safety cap is installed

INSTALLING THE FILTER

Before installing your filter, remove the protective cap and hold the filter up to a bright light source to inspect the surface (Figure 1). If you see holes or damage to the surface of the filter, do not use it. Each filter is based on the design of your telescope's lens cap and should fit snugly. Simply remove the lens cap from your telescope and replace it with the solar filter.



Figure 1

The 60 mm and 70 mm filters fit over the lens shade of the telescope and are secured in place using the three supplied nylon thumbscrews. Simply insert the three safety screws into the threaded holes on the side of the filter and tighten with just enough force to hold the filter securely in place. Do not overtighten.

The 127 mm filter slides inside of the front cell of your telescope. Spin the entire cap so that the filter is placed between your secondary mirror's spider vanes, free from obstruction. To attach the safety straps, peel the backing off two of the 1" x 1" self-adhesive Velcro tabs and stick them on opposite sides of the top surface of the filter (Figure 2).



Figure 2

With the filter installed, use the remaining two 1" x 1" tabs and stick them on the side of the telescope's front cell immediately adjacent to the tabs you placed on the top surface of the filter (Figure 3). Now use the two 4" long strips to connect each pair of tabs to secure the filter to the telescope (Figure 4).



Figure 3



Figure 4

For installation on the Inspire 90, you will need to remove the lens shade first by pulling the lens shade straight off the front of the telescope tube. Attach the filter directly to the front of the objective lens cell and use the screws to secure it in place.

REMOVE THE FINDERSCOPE

When observing the sun, you should always remove the finderscope from the telescope completely. Allowing the Sun to shine through the finderscope will result in a focused beam of sunlight that can cause burns or permanent damage to the finderscope. Never rely on the lens caps to stay secured to the finderscope. Locating the Sun without a finderscope is very simple.

LOCATING THE SUN IN THE TELESCOPE

Without directly looking at the Sun, turn the scope so the filter is pointed in the Sun's general direction. Now turn around look at the ground for the shadow of the telescope. Move the scope as necessary until the shadow of the telescope tube is perfectly round. If you are slightly off, the shadow will appear oval or elongated. The Sun should be within the field of view of your lowest power eyepiece. If it is not, look through the eyepiece and slowly move the scope in a circular pattern and you should find it in no time.

The Sun will appear as a white disk in the eyepiece. Use your telescope's focusing knobs as you normally would until the edge of the solar disk appears sharp.



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(Products or instructions may change without notice or obligation).

Designed and intended for those 14 years of age and older.



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