



ASTRO LPR FILTER INSTRUCTION MANUAL

Thank you for your purchase of the ASTRO LPR (Light Pollution Reduction) filter. This filter reduces the effect of light pollution. Light pollution is a hindrance of astronomical photography. This filter has also the effect of increasing the contrast of the heavenly bodies. In order to accomplish this effect, we have applied specialized multi-coatings to the surface of the filter. Please take extreme care in handling the filter.

For your safety

1. Before using the filter for the first time, read "SAFETY PRECAUTIONS" Please keep this instruction manual after reading them carefully.
2. This instruction manual indicates information on matters for safe use of the filter to prevent the user or others from injury or property damage.
3. The meaning of symbols and marks are as follows. Please read the instructions after understanding the meaning of these symbols.

1. Explanation of symbols

symbols	Explanation of symbols
WARNING	This symbol indicates information that, if in non-conforming to this instruction, may possibly result in death or serious personal injury. (*1)
CAUTION	This symbol indicates information that, if in non-conforming to this instruction, may possibly result in personal injury or property damage.

- ※1 Serious injury means long-term or permanent and would require ongoing medical care including blindness, burns, electric shock, fractures, etc.
 ※2 Injury means non-permanent injury, burns and electric shock etc..
 ※3 Property damage means damage to real property such as a house or in connections with household effects, livestock, pets, etc.

2. Explanation of marks

Marks	Explanation of marks
prohibition	Meaning of prohibition. NEVER do what is described or shown in a picture or a text with the symbol or near it.
instructions	Meaning of be sure to do, Be sure to do what is shown with a picture or described in text next to the symbol or near it.

WARNING	
prohibition	NEVER see the sun through lens with this filter.

CAUTION	
prohibition	Do not drop the filter or subject it to hard impact. If the glass breaks, do not touch the broken pieces of glass with your bare hands, or it may cause injury. Moreover, filter frame may become deformed, and this filter may not be attached to lens.
prohibition	Do not leave filter exposed to direct sunlight or in hot & humid locations, or it may discolor the filter, which may prevent it from yielding a desired effect.
instructions	Be sure to properly and securely attach filter to lens. Failure to do so may result in the filter falling off the lens, which may damage the filter threads and could break the filter on impact with the ground.
instructions	There are some specialized wide-angle lenses that have protruding front elements. Attaching a filter to such a lens may cause contact between filter and the glass of the front element, possibly scratching the lens. Be sure to carefully check the gap between the filter and front element while attaching the filter.

■ASTRO LPR (Light Pollution Resistance) FILTER Type1

It is possible to make only the form of a heavenly body such as a nebula, star cluster, and a comet of the observable by the main characteristic wavelengths select carefully and passing while cutting most wavelengths of common light pollution caused by city lights which consists of various light sources. Please mount the filter securely on the astronomical telescope or its eyepiece for use.

- * Compared with the instrument without the filter, the view will seem dark until eyes adjust to the lower amount of light being past through.
- * Even with the filter, all the detailed parts of a heavenly body, which is seen in a photograph, cannot be seen.
- * Although it may use it for photography, in the case of a digital camera, image-processing software is required for post-processing of the image in order to adjust a color-balance and contrast. Since the amount of light decreases compared to viewing without the filter, exposure time and/or aperture settings are need to be adjusted.

■ASTRO LPR (Light Pollution Resistance) FILTER Type2

When taking a photograph of a nebula, a cluster, a comet, etc., the filter can cut most wavelengths of city lights (mainly mercury lamps and sodium-vapor lamps) which consist of various light sources. Please mount this filter on the camera lens, the astronomical telescope or its eyepiece for use.

- * It can attach the filter to an eyepiece, lens etc. and to observe by the naked eye. But, compared with viewing without the filter, an effect may appear unclear.

■ADVICE FOR USING THE FILTER

- About the incident angle characteristics, incident angle shifts to the short wavelength side when using a wide angle lens.
- To use photography field angle under 24° (12° incidence angles) is recommended.
- Please focus with the filter, or the focus position will be different.
- For shooting with a digital camera, take a photograph in the camera's RAW mode is recommended. RAW mode provides the adjustments needed to process the image for the best results. If a photograph is taken in JPEG mode, you may not be able to adjust image to attain a satisfactory result.
- To use a lens hood on the camera lens is recommended.
- 31.7mm(1.25 inch) is only for mount the diameter of screw which is 1.25 inch(P=1/40inch) eyepiece. In general, the filter can be attached to American size eyepieces. But in rare cases it may not be able to be attached. Because the diameter of a screw is non-standard, please contact the manufacturer of your eyepiece about the standard screw diameter and pitch

■Clean and care

To clean off dirt from glass, apply a small amount of lens cleaner to a lens cloth or lens paper, and use gentle, circular motion from the center of the lens toward the outer edge of the lens. When glass is clean, wipe it dry with lens cloth, making sure that no lens cleaner remains on the glass. When filter is not in use, place it in the supplied case, and store away from direct sunlight, and very hot and humid locations.



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