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SVBONY SV135

SVBONY SV135 Zoom Eyepiece (7-21mm) User Manual

Model: SV135 | Brand: SVBONY

Introduction

The SVBONY SV135 Zoom Eyepiece is a versatile accessory designed for astronomical telescopes, offering an adjustable focal length from 7mm to 21mm. This eyepiece is engineered to provide a comfortable viewing experience with high-contrast imaging, suitable for observing lunar surfaces, planets, nebulae, and star clusters. Its 1.25-inch barrel ensures compatibility with a wide range of telescopes.

Product Features

- **Adjustable Focal Length:** Offers a continuous zoom from 7mm to 21mm, eliminating the need to frequently change eyepieces for different magnifications.
- **Comfortable Eye Relief:** Features an eye relief of 18mm to 16.3mm, beneficial for eyeglass wearers and extended observation sessions.
- **Superior Optics:** Equipped with a 6-element, 4-group optical design and fully multi-coated lenses for enhanced light transmission, contrast, and edge-to-edge sharpness.
- **Standard Compatibility:** Designed with a precision-made 1.25-inch barrel, compatible with any telescope accepting 1.25-inch eyepieces.
- **Filter Thread:** Includes an M28.5*0.6 filter thread for attaching standard 1.25-inch astronomical filters.
- **Wide Field of View:** Provides a field of view ranging from 40 to 57 degrees, adapting to various observation needs.
- **Durable Construction:** Features a full metal body for durability and a rubber eye guard for comfortable viewing and stray light reduction.

What's in the Box

- 1x SVBONY SV135 7 to 21mm Zoom Eyepiece
- Lens covers
- Lens cleaning cloth



Image: The SVBONY SV135 Zoom Eyepiece package contents.

Setup

1. Unboxing and Initial Inspection

Carefully remove the SV135 Zoom Eyepiece from its packaging. Inspect the eyepiece for any visible damage. Ensure all included accessories (lens covers, cleaning cloth) are present.

Video: Demonstrates unboxing and initial handling of the SVBONY SV135 Zoom Eyepiece.

2. Attaching to Your Telescope

The SV135 Zoom Eyepiece features a standard 1.25-inch barrel. To attach it to your telescope:

1. Loosen the thumbscrew on your telescope's focuser or diagonal.
2. Gently insert the chrome barrel of the SV135 eyepiece into the focuser or diagonal.
3. Tighten the thumbscrew to secure the eyepiece in place. Do not overtighten.

Video: Shows how to attach the SV135 Zoom Eyepiece to a telescope.

3. Attaching Filters (Optional)

The SV135 eyepiece has an M28.5*0.6 thread at the bottom of its barrel, allowing you to attach standard 1.25-inch astronomical filters.

1. Carefully screw the desired filter onto the threaded end of the eyepiece barrel.
2. Ensure the filter is securely attached but do not overtighten.

Video: Demonstrates attaching a filter to the eyepiece and then inserting it into a diagonal.



Image: The M28.5*0.6 filter thread on the SV135 eyepiece.

Operating Instructions

1. Adjusting Focal Length (Zoom)

The SV135 allows you to smoothly change magnification by rotating the zoom ring. This eliminates the need to swap eyepieces when you want to change magnification.

1. Look through the eyepiece.
2. Rotate the ribbed barrel section of the eyepiece to adjust the focal length between 7mm and 21mm.

3. Observe how the magnification changes as you rotate the ring. A lower focal length (e.g., 7mm) provides higher magnification, while a higher focal length (e.g., 21mm) provides lower magnification and a wider field of view.

Video: Demonstrates adjusting the zoom on the SV135 eyepiece while observing through a telescope.



Image: Visual representation of focal length adjustment and its effect on lunar observation.



Image: The 40-57 degree field of view of the SV135 eyepiece.

2. Focusing

After adjusting the focal length, use your telescope's focuser knobs to achieve a sharp image. The SV135 is designed to maintain focus relatively well across its zoom range, but fine-tuning with the telescope's focuser may be necessary.

3. Observing Celestial Objects

The SV135 is suitable for various astronomical observations:

- **Lunar Observation:** Use lower magnifications (higher focal lengths) for wide views of the moon, and zoom in (lower focal lengths) for detailed views of craters and features.
- **Planetary Observation:** Higher magnifications (lower focal lengths) are generally preferred for planets to discern surface details.
- **Deep-Sky Objects:** For nebulae and star clusters, experiment with different focal lengths to find the best balance between brightness and detail.



Image: The SV135 eyepiece used for observing the moon, planets, and nebulae.

4. Using with a Smartphone Adapter

The SV135 can be used with a smartphone adapter to capture images or videos through your telescope. This allows you to share your observations or document celestial events.

- Attach your smartphone to a compatible adapter.
- Mount the adapter with your phone onto the eyepiece.
- Adjust the phone's camera position to align with the eyepiece's exit pupil.
- Use your phone's camera app to capture images or videos. You may need to adjust zoom and focus on your phone for optimal results.

Video: Demonstrates using the SV135 Zoom Eyepiece at 7mm focal length with a smartphone adapter to view distant objects.

Video: Demonstrates using the SV135 Zoom Eyepiece at 12mm focal length with a smartphone adapter to view distant objects.

Video: Demonstrates using the SV135 Zoom Eyepiece at 21mm focal length with a smartphone adapter to view distant objects.

Maintenance

- **Cleaning Lenses:** Use the provided lens cleaning cloth or a soft, lint-free cloth specifically designed for optics. Breathe lightly on the lens to fog it, then gently wipe in a circular motion from the center outwards. Avoid using harsh chemicals or abrasive materials.
- **Dust Removal:** Use a soft brush or a can of compressed air (ensure it's safe for optics) to remove loose dust particles from the lens surfaces.
- **Storage:** When not in use, store the eyepiece in its protective case or with both lens caps securely attached to prevent dust accumulation and accidental damage. Store in a cool, dry place.
- **Avoid Touching Optical Surfaces:** Fingerprints and oils can degrade optical performance. Handle the eyepiece by its barrel.

Troubleshooting

- **Blurry Image:** Ensure your telescope is properly focused. Adjust the telescope's focuser knob until the image is sharp. Also, check if the eyepiece lenses are clean.
- **Dark or Dim Image:** This can occur at very high magnifications or in poor viewing conditions. Ensure your telescope's aperture is fully open and consider using a lower magnification (higher focal length) eyepiece.
- **Vignetting (Dark Edges):** Some vignetting can occur, especially with certain telescope designs or at extreme zoom settings. Ensure the eyepiece is fully inserted and secured in the focuser/diagonal.
- **Difficulty Adjusting Zoom:** If the zoom ring feels stiff, ensure no dirt or debris is obstructing its movement. Avoid forcing the mechanism.

Specifications

Feature	Specification
Model Number	FAUW9105A
Focal Length	7mm to 21mm (Adjustable)
Barrel Size	1.25 inches
Optical Design	6 Elements in 4 Groups
Coatings	Fully Multi-Coated (FMC)
Field of View	40 to 57 degrees
Eye Relief	18mm - 16.3mm
Filter Thread	M28.5*0.6
Material	Full Metal Body
Item Weight	8.1 ounces (approx. 230g)
Product Dimensions	4.25 x 3.03 x 2.72 inches

Warranty and Support

SVBONY products are typically covered by a manufacturer's warranty. For specific warranty details, claims, or technical support, please refer to the official SVBONY website or contact their customer service directly. Keep your purchase receipt as proof of purchase.
You can visit the SVBONY Store on Amazon for more information and contact options.

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