

61EDPH

INSTRUCTION MANUAL

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Caution

Please do not observe the sun directly through this telescope, which may cause blinded instantly. Please purchase a special solar observation filter or filter membrane to obtain the safest observation guide. It will also cause serious damage to the eye through finderscope. Please keep the child away from the telescope in the daytime.



WARNING!!

**DO NOT LOOK AT SUN THROUGH TELESCOPE.
IT WILL CAUSE IRREVERSIBLE DAMAGE TO YOUR EYE.**

Specification

Aperture: 61mm

Limiting magnitude: 10.7

Focal ratio: F5.5

Resolution: 1.93 arc seconds

Objective type: Doublet air-spaced APO (one is made of ultra-low dispersion ED glass)

Total length of tube assy: 235mm (indented)

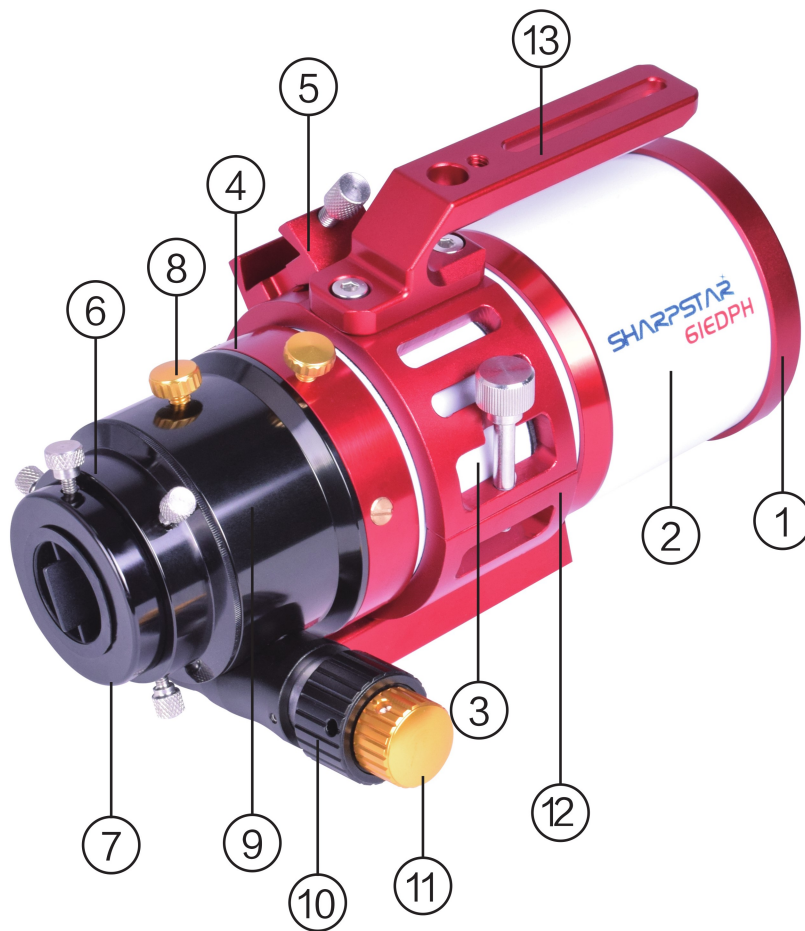
Accessories: A pair of tube rings, a dovetail plate, a handle and a finderscope base

Tube outer diameter: 80mm

Net weight: 1.42kg (excluding tube rings and dovetail plate)

Total weight: 1.8kg (including tube rings and dovetail plate)

Description of appearance of SHARPSTAR 6EDPH tube



- 1: Lens cap
- 2: Dew-shield
- 3: Main tube
- 4: 360° rotator
- 5: Finderscope base
- 6: 2" adapter
- 7: 1.25" adapter
- 8: Load adjusting screw
- 9: 2.5" Focuser
- 10: Rough focusing knob
- 11: Microdrive focusing knob
- 12: Hollow tube ring
- 13: Multifunctional handle

Contents include



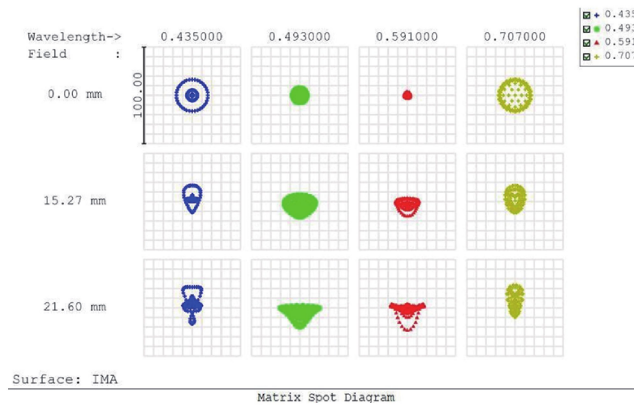
- 1: A set of main tube
- 2: A pair of tube rings
- 3: A specialized handle
- 4: A Finderscope base (Self-install to the tube ring)
- 5: A lock screw at the bottom of focuser
- 6: A double carton (two)
- 7: A set of EPE protection
- 8: An instruction manual, an inspection check list and a warranty certificate

61EDPH features

Technology is developing so fast, there is a big boost in people's demand for goods. In recent years, some new changes have taken place in the field of astronomy products. With the popularization of digital cameras and people's increasing love of astronomy photography, an all-round equipment that features photography and suitable for observation is needed to meet customers' demand. SharpStar 61EDPH occurs under this background. This telescope features a doublet air-spaced lens design with a focal length of 335mm and a focal ratio of F5.5. The use of one extra-low dispersion glass elements makes the overall tube shorter and more portable. The dedicated unitary tube rings with hollow design and streamlined handles is fashionable and beautiful and you can add some accessories to connect. The 61EDPH package also contains a 10cm dovetail plate, it have a screw-hole in the center that allows the camera to be mounted to a tripod for photography. The back-end is equipped with a middle 2.5" rack and pinion precision focuser to be used with a large dedicated reducer.

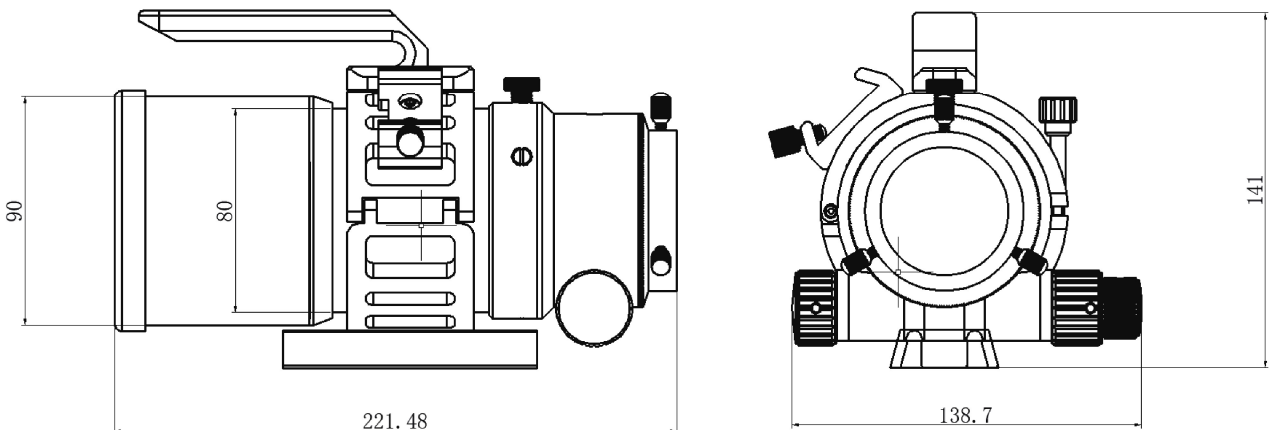
The following discussion will focus on the dedicated full-frame reducer of 61EDPH, because it meets the need of full-frame photography. The reducer is equipped with a 2.3" tube, one end of which adopts a M63×1 thread and connects to the pinion focuser of the primary mirror. The other end adopts a M48×0.75 thread, the focal plane is 55mm from the end interface. If you need to expand, it can measure up to 99mm by removing the end interface and adapting your own accessories, which fully meets the requirements of a wide range of photographic accessories. The reducer features a triplet air-spaced structure, which helps to support full-frame photography and achieve excellent perimeter dimmer control. The reducer is specifically designed for deep-space widefield astrophotography with a focal length of 275mm and a focal ratio of f/4.5.

In addition, the 360-degree rotator allows you to easily rotate the camera to achieve the best image framing.



Spot Diagram(61EDPH + F4.5 full frame reducer)

Mechanical structure diagram



Using steps

61EDPH is a high precision optical instrument, do not operate in high temperature, high humidity environment for a long time, so as not to affect the performance and service life of the product.

●Each connection

1. First, take out the 61EDPH main tube and the attached tube ring, dovetail plate, finderscope base and the bottom lock screw.
2. Install the finderscope base.
3. Open the tube ring, place the main tube of 61EDPH in it and lock in the tube ring.
4. Place the dovetail plate in the slot of equatorial mount or theodolite (optional). (note: the dovetails provided by Sharpstar are match with most of market narrow dovetail slot of equatorial mount.) Then lock the screws between the tube and the bracket. Refer to the connection in fig.1.



fig.1

●Use and operation of tube

Before operation and use, please check whether the connecting parts of main tube and bracket are safe and firmly.

61EDPH Observation

1. First, remove the front lens cap of the main tube: extend the Dew-shield to suppress any light scatter.
2. Loosen the 2-inch screw on the focuser, build in a 2-inch finder reflector or prism (optional), then put into a 2-inch or 1.25-inch eyepiece (optional), and the imaging system is ready.
3. Use the finderscope or directly collimate the observed object, and then turn the rough focusing knob to make the target gradually clear (fig.2), and then turn the golden microdrive knob to get the clearest image (fig.3).



fig.2

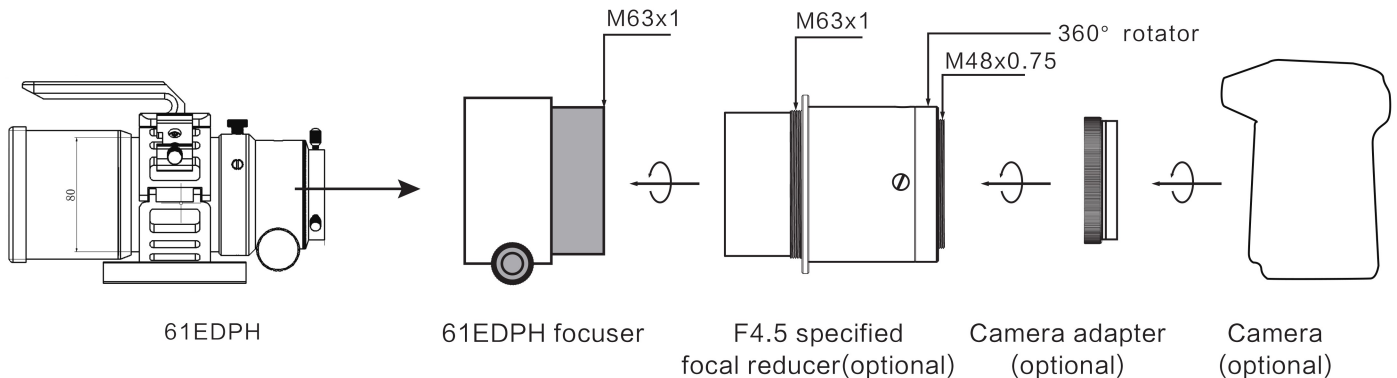


fig.3

Photography taken by 61EDPH

F4.5 full frame reducer

The specified order: ① 61EDPH focuser → ② F4.5 full frame reducer (optional) → ③ Camera adapter ring (optional) → ④ Camera (optional)



● Use of finderscope base

The native provides finderscope base, which is above the tube ring, for plug-in and fixing finderscope, there are a variety of specifications available for selection. Users can purchase separately.

Finderscope is low magnification and wide field, it can be more convenient and quick to find the object than primary mirror. The specific steps are as follows:

1: Build in the dovetail into finderscope base, and lock with screws.

2: Adjust the finderscope and primary mirror so that their optical axes are parallel. Adjust the microdrive target at the ground scene during the daytime so as to make it consistent with the central of the field in the primary mirror.

3: When observing, the finderscope can be used to locate the bright star in advance, because it is parallel to the optical axis of the primary mirror. When the observed object appears in the center of finderscope, the same object can be observed in the primary mirror.

● use 360° rotator

The 3-inch focuser connect up a good quality 360° rotator for easy observation and astrophotography.

The rotator is fixed consists of three adjusting screws and a locking screw. Loosen the lock screw and turn the focuser, rotating slowly and even speed. It is well-designed and excellent workmanship, even if the rear focuser has a certain load, the converter does not slip and misplace.

Users can also adjust the three adjusting screws by their own demands, so that the rotator has the appropriate tightness rotation. (note: the adjustment of screw is not much, please use the tool adjustment carefully. Do not loosen the screw too much to prevent the rotator from coming loose.)

It is not recommended to self-adjusting. Cause the rotator has been adjusted to a suitable state at the time of ex-factory.

Maintenance and service

1. Avoid direct sun exposure, high temperature, impact, collision, water immersion and baking.
2. When not in use, keep the native in a cool and dry place, away from acid, alkali and other corrosive chemicals.
3. The lens is the most important part of the whole telescope system. In order to avoid affecting the accuracy and performance, do not remove or wipe the lens at will; If must clean lens, should remove dirt with wool brush first, dip the clean cotton into the special cleaning liquid next, wipe gently along certain direction, then, blow off the remaining dust with a balloon carefully.
4. Instantaneous temperature changes: if possible, avoid moving the telescope directly from the cold outside to the warm room, as this would cloud the lens.

After sale

If you have any questions, maintenance and other services, please feel free to contact us (Monday to Friday 9:00–17:00):

E-mail: support@sharpstar-optics.com

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