Askar

FMA180

User's Manual

WARNING!!

NEVER VIEW THE SUN THROUGH THE TELESCOPE. THIS WILL CAUSE INSTANT BLINDNESS TO THE EYE. PLEASE PURCHASE A SPECIAL SOLAR OBSERVATION FILTER FOR THE SAFEST OBSERVATION GUIDANCE. THROUGH THE FINDERSCOPE WILL ALSO CAUSE SERIOUS DAMAGE TO THE EYE. PLEASE KEEP CHILDREN AWAY FROM THE SCOPE DURING THE DAY.

www.askarlens.com

English

Instructions for use

ASKAR FMA180 objective lens features Triplet air-spaced APO design, includes two pieces of ED (extra-low dispersion) glass, providing excellent correction of chromatic aberration, which lays the foundation for high quality astrophotography and observation.

ASKAR FMA180 reducer features Triplet air-spaced design, combined use with objective lens, providing clear and sharp image, specifically optimized for astrophotography, which is its strong point, you don't have to worry about chromatic aberration that can appear in the image field. Using the f/4.5 reducer makes it capable of capturing clear astrophotos in considerably less time.

When using the special F4.5 full frame reducer, the 40mm aperture, 220mm (f/4.5) focal length ASKAR FMA180 becomes a professional APO refractor with 180mm focal length, both scenery observation and astrophotography, will present good performance.

For traditional astrophotography, it is difficult to achieve a focal length of less than 200MM with commercially available telescopes. The only choice in this range is the ordinary camera lens. However, the camera lens is not optimized for astrophotography, so the result is not satisfactory.

FMA180 makes it new, if you wanted to capture deep-sky objects, it will get superior optical performance in image like telephoto prime lens.

In addition to photography and observation, FMA180 is also suitable for a high-performance finder/guider of your choice. The overall tube length is 145mm, the small size of FMA180 tips the scales at a mere 395g.

Therefore, the standard package includes a pair of tube rings and a finderscope bracket, which can be easily attached to the finder base on the market. In addition, the finder bracket can be divided into two parts, among which the dovetail plate can be used alone, and it can be connected to the tripod with standard camera thread and other head. This SWISS standard dovetail can be connected to the corresponding plate slot more conveniently, and it can also attach to the VIXEN narrow equatorial adapter. Hence you can get rich connectivity for both photographic purposes and observation.

Its small size could be directly attached to camera like a normal lens, easy to carry away the view time.

FMA180 Features:

1) It features multifunctional APO optical tube, can free transform into sextuplet 180mm F4.5 APO astrophotography lens or triplet dual ED 220MM F5.5 high quality compound apochromatic (APO) observation telescope tube.

2) It includes rich accessories, can be transformed into a variety of play, with a high degree of freedom. Whether it is used for observation, photography, guide scope and finder scope, there are corresponding connection modes to fill different needs of enthusiasts.

3) Compact and light, the tube weighs less than 400 grams, easy to carry and flexible to use.

4) In photographic mode, the back focus is standard 55mm, or can be changed to 99mm after removing the extension tube, so photographer have more freedom to attach other camera accessories.

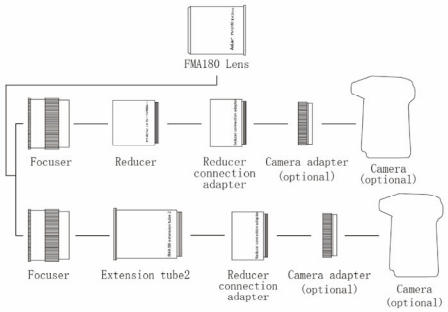
5) The triplet APO objective lens using dual ED glass, providing superior correction of chromatic aberration, which is the best of same models.

Below are FMA180 usage patterns for reference:

Photographic Mode:
1) Main tube + focuser + reducer + reducer connection adapter: 180mm F4.5 sextuplet APO flat field correction astrograph lens (recommended photographic mode, standard package)
2) Main tube + focuser + extension tube 2 + reducer connection adapter: 220mm F5.5 triplet APO lens

Observation Mode:
1) Main tube + focuser + extension tube 1 + 1.25" adapter: It can be equipped with 1.25" star diagonal and eyepiece for standard observation mode or finderscope mode.
2) Main tube + focuser + extension tube 1 + extension tube 2: It can be equipped with 1.25" eyepiece for visual observation mode or finderscope mode.

Photographic Mode



Observation Mode

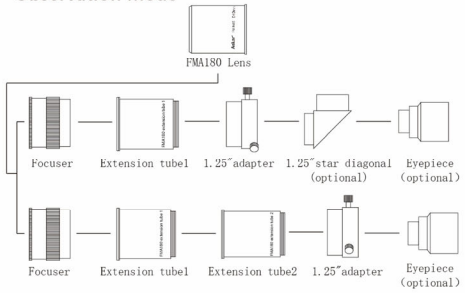
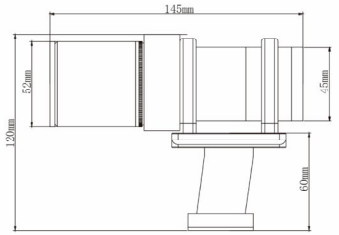
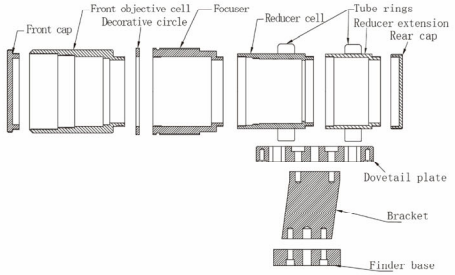


Diagram of lens size



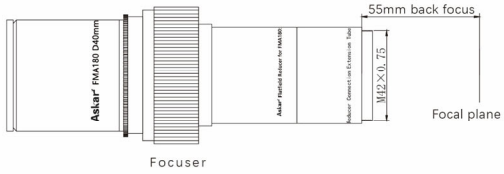
Configuration (includes focuser)

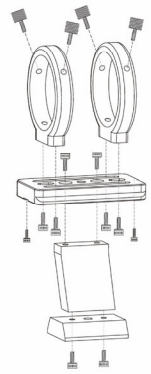


Specification:

Aperture: 40mm
Focal length: 220mm (objective lens)
180mm (plus the reducer)
Focal ratio: F5.5 (objective lens)
F4.5 (plus the reducer)
Objective type: Triplet dual ED air-spaced APO (objective lens)
Sextuplet refractor for full-frame astro photography (with reducer)
Overall length: 145mm (Photographic mode with focal reducer)
Body weight: 395g
Back-end adapter: M42x0.75 (photographic mode)
1.25" adapter (observation mode)
Included: FMA180 6-elements lens body, a pair of tube rings, a finder bracket, two extension tube, 1.25" adapter, an Allen wrench, a manual

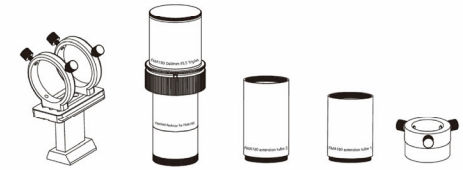
FMA180 Back Focus Diagram





Brass Thumb Screw
M4×10
M3×4

Package contents:



Multifunction finder bracket | Versatile astrograph | Extension tube 2 | Extension tube 1 | 1.25" adapter