

FMA230

User's Manual

WARNING!!

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

www.askarlens.com

English

Instructions for use

Since the FMA135 and FMA180 have hit the market, we receive numerous positive feedback. It's really an encouragement for us to further introduce our FMA230 astrograph, hoping to offer more choices for our customers.

The FMA230 has a compound lens system. The front objective lens comprises three lenses and the posterior reducer is composed of four lenses and thus it's sometimes dubbed as a "three at the front and four at the rear" system. The aperture size of the objective lens is 50mm and the original focal length is 275mm thus we've got a relatively fast focal ratio of f/5.5. The objective lens contains two ED glasses which are adapted to cure chromatic aberrations. One can barely find an equal counterpart in the market as designing a three-element apochromatic objective lens in astrograph with such size demands more on craftsmanship and processing technique. We made it because we consistently cling to the belief that we have to deliver a better imaging result to our customers. The FMA230 can solely function as a lens to observe the ground scenery or stars in the sky, or as a telescope for direct-focus photography. You should just fine-tune the helical focuser to perfectly focus without adding extra optical devices.

The four-element reducer is a 0.84×optical device which can change the the FMA230 into a 50mm-aperture astrograph with

a focal length of 230mm and a focal ratio of f/4.6. The reducer is designed specially for sophisticated astrophotography, which plays an essential role in improving the image quality generally across the whole field of view. And it pays special attention to the stars at the edge of the image. The pictures will be greatly enhanced and detailed under the help of this dedicated reducer even the imaging equipment you use is a rather professional full-frame ordinary or astronomy camera.

FMA230 is equipped with useful standard accessories

The pair of tube rings are artistically pierced. Its stalks are lengthened which means that the tube rings provide more room for the devices, like a camera, that are attached to the FMA230, so they won't collide with the dovetail plate under the astrograph.

The FMA230 comes with a Vixen-style dovetail plate. Screw the tube-ring-wrapped astrograph onto the dovetail plate and then directly slide the assembly into the slot on top of an equatorial mount. The slot at the center of the dovetail plate is carved for the attachment to a tripod. It's quite convenient and helpful especially when you carry out some ground imaging or observation.

In order to solve the awkwardness of carrying around your astrograph when you engage in field astrophotography, the FMA230 is designed with a pretty-looking and utility handle. The detachable handle is installed on the top side of the tube ring. The handle is not just literally a handle, the dovetail slot carved out of the handle can also be a base for the attachment

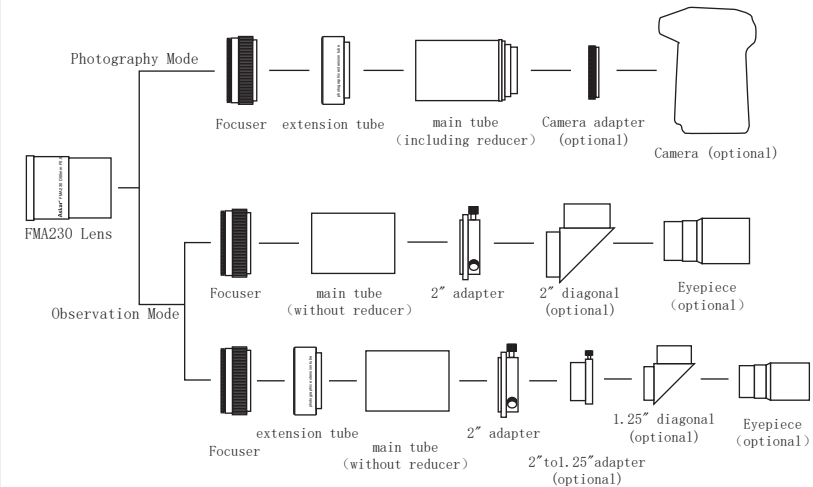
of finders, guiders or ASI AIRs that have a corresponding dovetail foot. So you have more room to integrate as many accessories as possible. Besides, the handle is carved with 45°Arca-swiss style slots at the sides, so an upside-down handle can be directly slid into a corresponding Arca-swiss clamp on a camera tripod.

The lightweight and compact FMA230 is a new sibling from the Askar FMA- family, it will definitely bring your observing and imaging experience to a whole new level!

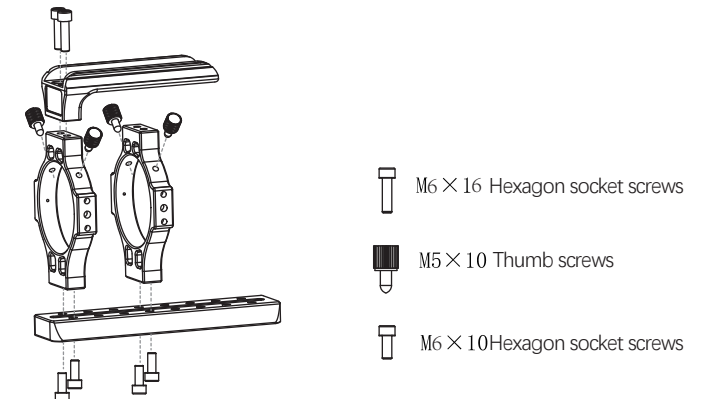
Specification:

- Aperture: 50mm
- Focal length: 275mm
230mm (with the reducer)
- Focal ratio: f/5.5
f/4.6 (with the reducer)
- Objective lens: Triplet air-spaced APO with two ED glasses
Septuplet full-frame astrograph (including the reducer)
- Length: 248mm (imaging with the reducer)
221mm (observing without a diagonal)
- Weight: 1045g
- Rear-end adapter type: M48×0.75 (for imaging)
2" socket (for observation)
- Package items: an FMA230 astrograph, a pair of tube rings, a Vixen-style dovetail plate, a manual

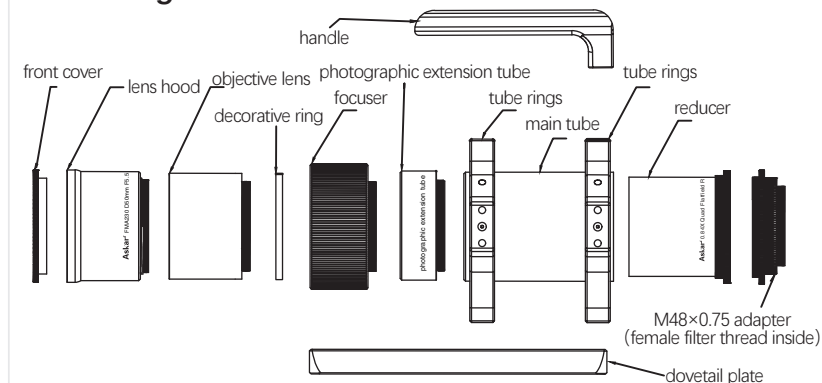
FMA230 assembly:



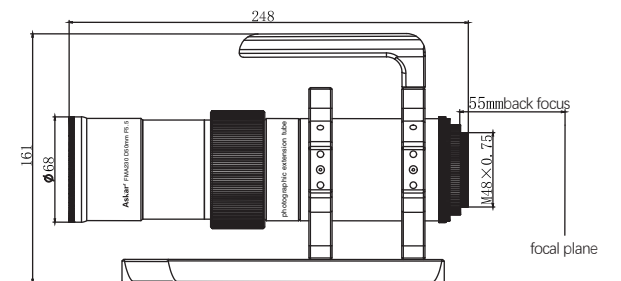
Tube rings installation schematic:



Configuration:



Dimension and back focus:



Official standard:

