

Askar

80PHQ

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

Askar introduces the brand-new 80PHQ refractive astrograph. And it's the second long-focal-ratio astrograph from the PHQ- family.

The overall finish of 80PHQ is evenly painted. A pair of clam-shell-style tube rings tightly hold the OTA. There is a 3" rack-and-pinion rigorous focuser on the rear end of the telescope. It's a smooth focusing unit with dual-speed adjustment. 80PHQ's rotator is marked with precise graduation.

80PHQ inherits the optical design of the PHQ- family, adopting a 3+1 quadruplet lens structure which contains two pieces of ED glass that can effectively reduce chromatic aberration and enhance clarity and sharpness. It's worth mentioning that all astrographs from PHQ- family come with an integrated lens combination rather than simply placing three major lenses and acorrector together in a line. In another word, the whole optical system cannot solely perform without any piece of these lenses. This structure design leads to a more rational lens arrangement, better vignette control and superior image quality.

At the first glance, Askar 80PHQ is much more compact. 80PHQ is 450mm in length and gross weight 4.7kg. So if your equatorial mount is not capable of holding heavy telescopes, or if you are quite tired of carrying a bulky long focal-ratio telescope around, then 80PHQ may be a great option.

In terms of the optical design, 80PHQ is 80mm in its aperture diameter and 600mm in focal length. Thus its focal ratio is f/7.5. It's actually a medium focal ratio telescope compared with those

f/4 and f/5 short focal ratios or f/10 and f/11 long focal ratios. So 80PHQ is a compact halfway house.

The traditional long-focal-ratio astrographs are used only for observation due to the troublesome accessory connection. And those short-focal-ratio astrographs consistently suffer a lot from chromatic or spherical aberrations. As a great mixture, 80PHQ is equipped with a 4-piece adapter, convenient for users to connect different types of accessories. So it's a great helper in astrophotography. Besides, its special lens deign and power-ful flatfield capacity make a crucial contribution to the high-quality imaging results, greatly reducing the impact of spherical and chromatic aberrations.

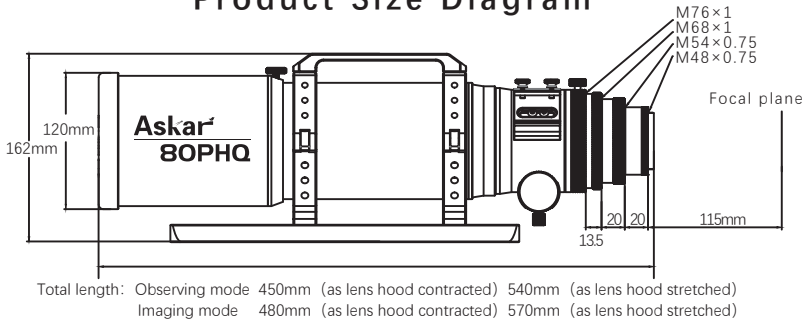
80PHQ is also a novice-friendly device. Keep in mind that the distance from the base of M68×1 to the focal plane is 155mm, and you can literally attach any accessories within this limit. You don't have to calculate your back focus distance which effectively simplifies the operation.

Askar 80PHQ is a cost-effective refractor. It boasts special and fantastic vantages in both mechanical and optical design. As an f/7.5 refractor, it can function well by virtue of its flatfield ability and rigorous optical performance.

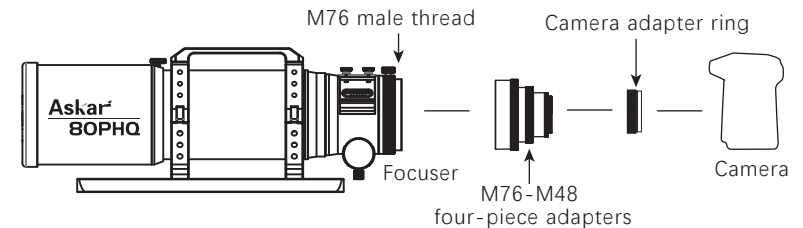
- Aperture size:** 80mm
Focal length: 600mm
Focal ratio: f/7.5
Objective lens: Quadruplet air-spaced APO (including two ED glass)
Image circle: 44mm
Maximum accessory connection (with the focuser fully retreated):
1. Imaging mode:
 - 115mm (from the base of M48×0.75 male thread)
 - 135mm (from the base of M54×0.75 male thread)
 - 155mm (from the base of M68×1male thread)
 - 168.5mm (from the base of M76×1 male thread)
 2. Observing mode:
 - 148mm (from the end of 2" eyepiece holder)
- Total length:**
450mm (including 1.25" eyepiece holder as dew shield contracted)
540mm (including 1.25" eyepiece holder as dew shield fully stretched)
480mm (including the 4-piece adapter as dew shield contracted)
570mm (including the 4-piece adapter as dew shield fully stretched)
Net weight: 3.9kg
Gross weight: 4.7kg
Rear-end thread type:
M76×1-M68×1
M68×1-M54×0.75
M54×0.75-M54×0.75
M54×0.75-M48×0.75 (M48×0.75 filter thread inside)

Standard package items: an 80PHQ OTA, a pair of tube rings, a handle, an Askar 300mm Vixen dovetail plate, a set of 4-piece photo-graphic adapters, a manual

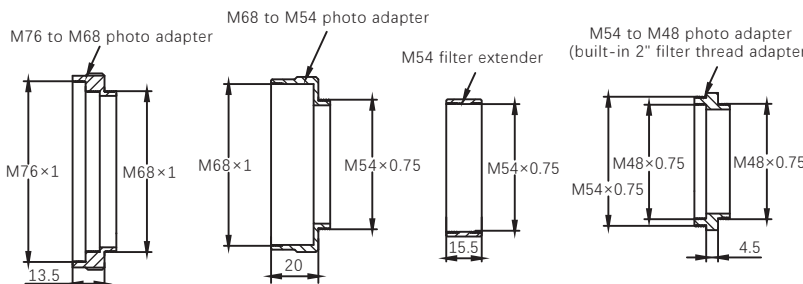
Product Size Diagram



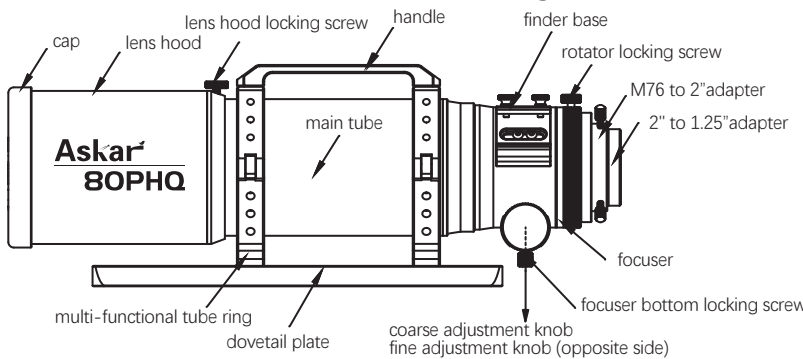
Connection Diagram of Camera



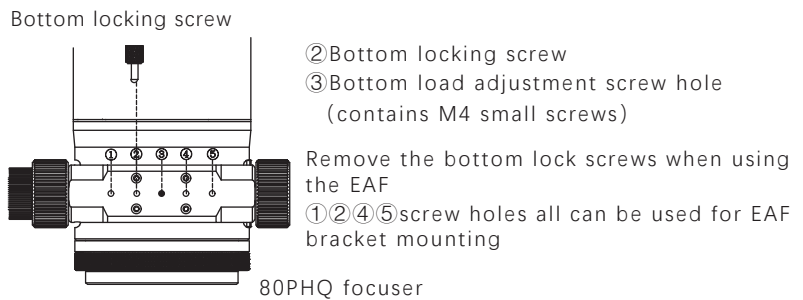
Four-piece Adapters Diagram



Product Parts Diagram



The Locking Screw Position Diagram



Items in 80PHQ Packaging

