Askar

FRA500

■使用说明书

User's Manual

WARNING!!

请不要通过本望远镜直接观察太阳,这样做可能导致瞬间失明。 请购买专用太阳观测滤镜或滤膜、来获得最安全的观测指导。通过 寻星镜,也可以造成眼睛的严重损害。请让孩子白天远离望远镜。

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

> 欢迎使用ASKAR FRA500 www.askarlens.com

饰圈让整个摄星镜的色彩搭配活泼而不失沉稳

Askar FRA500全长407mm,重约4.1kg,无论是设备携带还是安装都极 其方便,非常适合经常需要远距离旅行和实地天文拍摄的天文爱好者。 Askar FRA500摄星镜以其巨大的光圈孔径、超快的焦比、缜密的调焦系 统、独特的光学设计以及精良的成像效果得到了广大天文爱好者的称赞 与支持。Askar FRA500将成为您天文观测和拍摄之旅上的最佳伙伴。

规格

口径: 90mm 焦距: 500mm 焦比: f/5.6

物镜类型: 五片式全分离APO (包括两片ED玻璃)

后截距: 85mm (从锥形连接口M48×0.75螺纹端面开始算起) 158mm (从旋转器M86×1螺纹端面开始算起)

全长: 460mm (遮光罩收缩后为407mm)

本体重量: 4.1kg

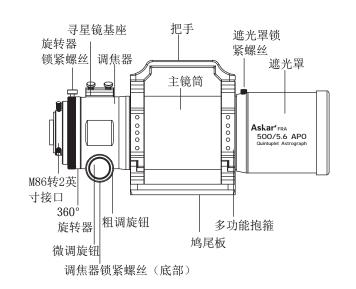
标准装重量: 5.2kg 末端接口: M86×1 锥形接口: M48×0.75

标配: FRA500本体一个, 抱箍一对, 提手一个, 宽型鸠尾板一个, 锥形

延长管一个,说明书一份,铝箱一个

鸠尾板。白色的主镜筒和遮光罩,亮黑色的调焦器以及红色的抱箍和装

四段式锥形接口示意图



锁紧螺丝示意图

②底部锁紧螺孔

④底部承载调节螺孔(内有M4小螺丝)

135可用于电动调焦支架安装

锁紧螺丝

Instructions for use

English

Sharpstar Optics introduces Askar FRA500 astrograph, which is the youngest among the well-known FRA- family, to our customers. Compared with its siblings, the 500mm-focal-length refractor has an aperture size of 90mm (f/5.6), so Askar FRA500 can better fit into the scenarios of deep-sky imaging than Askar FRA400. Besides, its more lightweight and compact than Askar FRA600, which makes it a great choice for out-door observation or astrophotography.

Askar FRA500 has inherited the legacies of superior FRAseries designing. It boasts a quintuplet air-spaced APO optical structure, a "three plus two" Petzval lens combination The front lens group consists of three lenses (including two pieces of ED glass) for excellent correction of aberrations. The posterior group is composed of two lenses separated by small space which is able to provide fine sharpness across the whole image. You may barely detect any blurry star at the edge of the image. FRA500 supports an image circle of amazing 55mm, much larger than the standard 44mm full-frame image circle. Its special back-focus design frees users from calculating confusing back-focus distance or rummaging around for a proper spacer. What you need to

it's quite convenient for users to carry around or mount on an EQ mount. It's particularly suitable for astronomy enthusiasts who frequently engage in long-distance trips or out-door astrophotography. Askar FRA500 together with the FRA- family is well received for large aperture, fast speed, delicate focusing system, unique optical design and the subsequently high-quality imaging results. Wish the Askar FRA500 be a loyal companion alongside your journey of astrophotography.

Specification

Aperture size:90mm

Focal length:500mm

Focal ratio:f/5.6

Objective lens:Quintuplet air-spaced APO(including two ED glass) Image circle:55mm

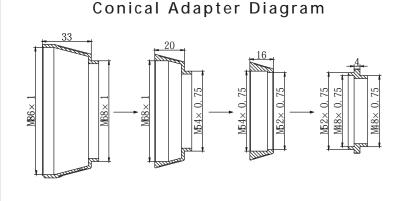
85mm(from base of M48×0.75 thread on the conical extender to focal plane) 158mm(from base of M86×1 thread on the rotator to focal plane) Total length:460mm(407mm when the dew shield is contracted) Net weight:4.1kg

Gross weight:5.2kg

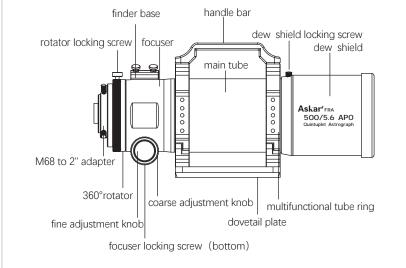
Rear-end thread type:M86×1

Conical adapter:M48×0.75

Package items:a FRA500 OTA, a pair of tube rings, a handle, an Askar Losmandy dovetail plate, a conical adapter, a manual, an aluminum case



Product Parts Diagram



中文版 (简体)

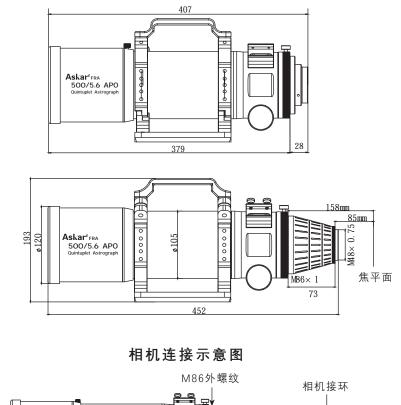
使用产品前请仔细阅读本使用说明书。

锐星光学推出全新Askar FRA500天文摄星镜。Askar FRA500是FRA系列 中的第三款产品,相较于Askar FRA400而言,它的口径达到90mm,焦 距500mm, 焦比f/5.6, 能够更好地适应深空天体拍摄需求; 和Askar FRA600相比,它更为灵巧轻便,非常适合户外观测和实地天文拍摄。

在光学设计上, Askar FRA500秉承FRA系列的高质量设计理念, 采用前 三后二的五片式全分离APO匹兹伐镜片设计。前端三片式全分离镜片组 中含有两块ED玻璃,能够有效纠正色差,提高成像锐度。后侧的两片式 全分离镜片组, 能够增加像场平坦度。因此, 即便在像场最边缘, 星点 也能达到非常优秀的水平。Askar FRA500的成像圈为55mm,高于44mm 成像圈。使得爱好者不必再为周边星点品质而烦恼。后截距也是"合焦即 最佳"的设计,天文爱好者不必再反复计算后截距距离或者为寻找合适的 接环而苦恼。

Askar FRA500在机械设计上依然追求实用性与艺术性的结合,设备整体 线条流畅,布局合理。摄星镜前端为带有经典红色装饰圈的遮光罩。遮光 罩完全伸展时,摄星镜的整体长度为460mm; 收缩遮光罩后,摄星镜的 整体长度为407mm。后端是一个高质量的3.5"有齿调焦器。调焦器带有 粗调手轮和1:10微调手轮,轻松实现双速焦距调节,在实际天文拍摄和 观测中具有很高的实用价值。调焦器表面抛光精良,漆层均匀,内部刻 度精准清晰。调焦器坚实稳固,左侧自带一个标准寻星镜基座和两颗手 拧螺丝。因此, Askar FRA500调焦器能有效承载寻星镜、导星镜等天文 配件,满足天文拍摄或观测时的配件组合需求。Askar FRA500依然包含 广受好评的多功能抱箍一对。抱箍上端连接把手,底部连接Askar宽型

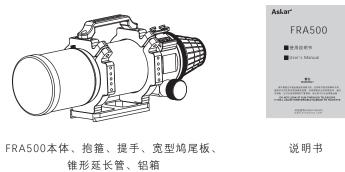
产品尺寸图



调焦器

360°旋转器

摄影锥形接口

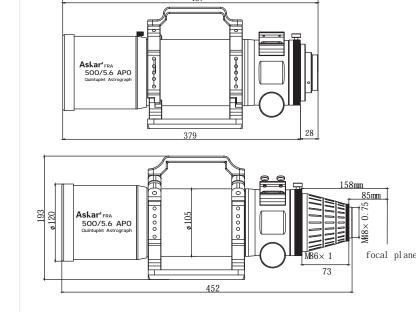


focus on is just to make your target stay in focus.

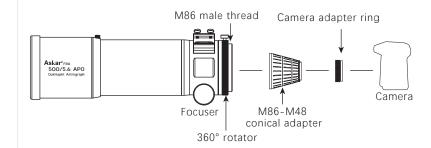
Askar FRA500 is typically a wonderful mix of pragmatism and aesthetics. The astrograph shows smooth lines and a sound layout of components. From the front, the Askar FRA500 has an impressive dew shield decorated with a classic bright-red bezel ring. The total length of FRA500 is 460mm when the dew shield is stretched out and 407mm when contracted back At the tail end of the astrograph locates a 3.5" massively-built focuser with dual-speed hand knobs (twin knobs for coarse adjustment and one 1:10 fine adjustment knob), which is of great use in real observation or astrophotography. The astrograph wears smooth coating and is evenly finished. The graduation inside of the focuser is quite clear and easily readable. The focuser is tough and solid, and on the left side of it, there is a standard finder base with two silver thumb screws. So the FRA500 can piggyback carry finders, guiders or other potential astronomy accessories. Askar FRA500 comes also with a pair of sought-after tube rings. On the top of the tube rings attached a handle and at the bottom, there is an Askar Losmandy-style dovetail plate. The combination of milk-white main tube and dew shield together with a high-gloss piano-black focuser makes the optical tube assembly calm and deep which is offset by the bright red decorative ring and tube rings.

The Askar FRA500 is 407mm long and weighs about 4.1kg, so

Product Size Diagram



Connection Diagram of Camera



Items in FRA500 Packaging

The Locking Screw Position Diagram

②Bottom locking screw

bracket installation

4 Bottom load adjustment screw hole

135can be used for electric focusing

(contains M4 small screws)

Bottom locking screw

a FRA500 OTA, a pair of tube rings, a handle, an Askar Losmandy dovetail plate, a conical adapter, an aluminum case

FRA500

Instruction manua