

# FRA400

## ■ 使用说明书

## ■ User's Manual

### 警告 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 FRA40  
www.askarlens.com

## 中文版（简体）

### 使用产品前请仔细阅读本使用说明书。

欢迎使用全新ASKAR FRA 系列，FRA为FLATFIELD REFRACTOR ASTROGRAPH的缩写，顾名思义，此系列均为内建像场修正功能的折射类型的天文摄星镜，但同时也可兼顾目视需求，成为市面上为数不多的多功能高质量望远镜光学镜筒。

秉承镜头参数的易换算性，我们的第一款FRA系列产品为焦距400mm，焦比5.6，口径72mm的五片式类匹兹伐结构天体摄星镜，其中包含两片特殊ED玻璃，影像圈支持全副达到44mm。

采用望远镜镜筒设计，伸缩式遮光罩，3英寸大型高精度有齿调焦器，包含360°旋转器，M68X1螺纹以及2英寸转接环和1.25英寸目视接口。调焦器也含有高精度微调，以利于目视和拍摄中的精细调焦。

色差控制优异，拍摄影像质量也是重点优化设计，均能满足不同用户的需求。

值得一提的是我们专为FRA 400/5.6设计了一对拥有专利的多功能连接抱箍，除拥有时尚外观外，还有非常实用的三面连接平台，可以加上各种附件方便拍摄时的需要。

FRA 400/5.6 APO 由于采用类匹兹伐整体摄星镜设计，后截距达到了140mm，也无需再为计算距离而操心，链接拍摄装备只要合焦后就是最佳状态。

由于设计紧凑，短小便携，链接方便，操作简单，ASKAR FRA400/5.6 无论是观测还是拍摄都可以是您最得力的伙伴。

F5.6 焦比对于天文望远镜或者天文摄影来说都是一个较快的焦比，但是我们为了满足更高阶玩家的需求，特别在此基础上设计了专用超短焦比减焦镜FRA72RD，配合FRA400/5.6使用此减焦镜，焦比可以达到更快的F3.9，进一步缩短曝光时间，并且支持全副，这在折射望远镜里面是非常难得的。

FRA400/5.6的设计宗旨就是更好的，更简单的使客户充分享受拍摄星空带来的乐趣，同时也可以得到高质量的观测体验，相信全新FRA400/5.6会带给您更好的体验！

### FRA400 规格：

口径：72mm

焦距：400mm

焦比：F5.6

物镜类型：五片式双ED全分离APO

全长：317mm

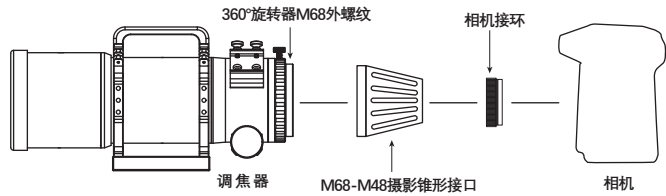
本体重量：2.56kg

标准装重量：2.88kg

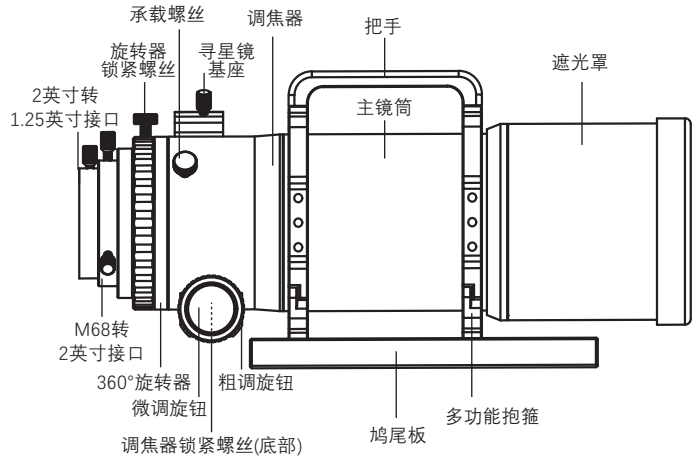
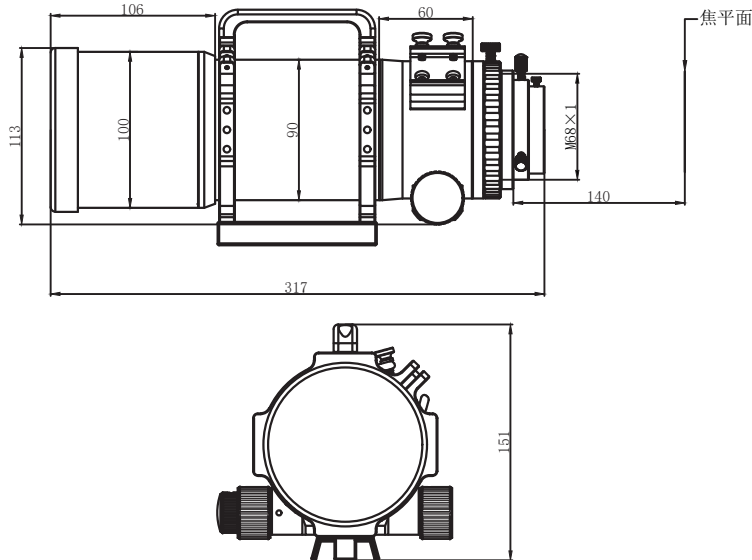
末端接口：M68×1外螺纹，2英寸插口/1.25英寸插口

标准附属品：抱箍一对，把手一个，鸠尾板一个，M68-M48摄影锥形接口一个，质保书一份，说明书一份

### 相机连接示意



### 产品尺寸图



## English

### Instructions for use

Welcome to use brand new ASKAR FRA series! The FRA, which stands for "FLATFIELD REFRACTOR ASTROGRAPH", is a refractor astrograph features built-in flat field correction. Meanwhile FRA can also meet the needs of observation, which is the few great telescope of versatile high-quality optical tube.

In accordance with the easy conversion of lens parameters, our first FRA series product is the f/5.6 quintuplet Petzval like astro-graph with 400mm focal length and 72mm aperture, it features two pieces of ED glass included, 44mm full frame image circle is supported.

It features telescope tube, push-fit dew shield, and the 3" large high-precision rack-and-pinion focuser is including 360° rotator and 2" adapter ring and 1.25" eyepiece adapter with M68x1 thread. The focuser also features precise adjustment for Micro-drive focusing during observation and photography.

It's excellent in controlling and possibly avoiding chromatic aberrations, the image quality is also optimized to satisfy the customers of requirement.

It's worth mentioning that FRA 400/5.6 has a pair of multifunctional attachment tube rings owns the patent, it's not all style and no substance though, the FRA shows well-conceived design and has a practical three-sided attach mounting points, which is convenient for photography with various accessories.

ASKAR FRA 400/5.6 Petzval like design refractor features 140mm of back focus to enable easier assimilation of accessories, and no need to worry about calculating the distance, attach to the photographic equipment is at its best as long as it is in sharp focus.

Being short and compact, ASKAR FRA400/5.6 can combine with various accessories, also simple to use, is an effective and very versatile photo-visual companion.

A focal ratio of F5.6 is relatively 'fast' for telescope or astrophotography, however, in order to meet the needs of expert astronomers, we specially designed a special ultra-short focal reducer FRA72RD, combine with FRA400/5.6, you can achieve a optically faster F3.9 focal ratio to reduce the exposure time, full frame is also supported, which is very rare type of refractor telescopes.

FRA400/5.6 is designed to "astrograph should meet satisfactory observation experience to enjoy capturing extended deep-sky objects, offering simpler configuration and better optical performance". It would provide a significantly better user experience.

### Specification:

**Aperture:** 72mm

**Focal length:** 400mm

**Focal ratio:** F5.6

**Objective type:** Quintuplet dual ED air-spaced APO

**Overall length:** 317mm

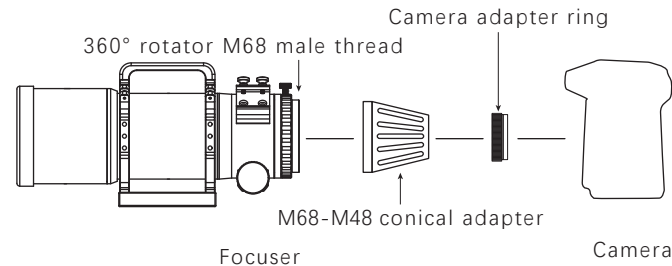
**Net weight:** 2.56kg

**Standard package weight:** 2.88kg

**Back-end adapter:** M68×1 male thread, 2" adapter/1.25" adapter

**Accessories:** a pair of tube rings, a handle, a dovetail plate, a M68-M48 conical adapter, an inspection list, a manual

### Connection Diagram of Camera



### Product Size Diagram

