



FF107 APO

■ 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。

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

欢迎使用ZWO FF107 APO
www.zwoastro.com

中文版(简体)

使用产品前请仔细阅读本使用说明书。

FF107 APO是长焦比、自平场摄星镜，无需额外购买平场镜，避免计算平场镜的后截距或是进行繁琐的连接以达到匹配的距离，可直接接上任意成像配件，合焦后即是最佳拍摄状态，方便快捷，让天文爱好者有更多时间投入到拍摄工作中。用F107 APO进行目视观测也是非常理想的选择，连接天顶镜配合各种目镜，都能轻松合焦，甚至超高倍观测行星也不在话下。

ZWO FF107 APO 是一个真正的全能型选手。一台几乎适用于所有用途的望远镜，而这也正是FF107 APO制造的目的

FF107 APO采用f/7焦比，四片式光学镜片组合，其中两片为ED玻璃。因此，FF107 APO有着非常好的色差控制能力，即使目视放大到300倍也能有效纠正色差问题。

由于采用自平场设计，FF107 APO在天文拍摄中具有很强的优势。它不仅支持全画幅44mm影像圈，而且周边星点变形极小。视场中央星点RMS半径只有3微米左右，星点细腻，可以满足严苛的资深玩家对星点的要求。像场整体非常平坦，周边减光也非常优秀。

凭借749毫米的焦距和强大的像场修正，搭配高分辨率相机进行天文拍摄时，天体的精细细节也可以被轻松捕捉到。

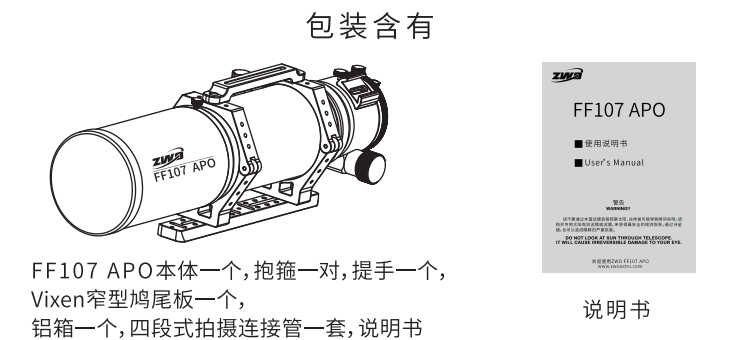
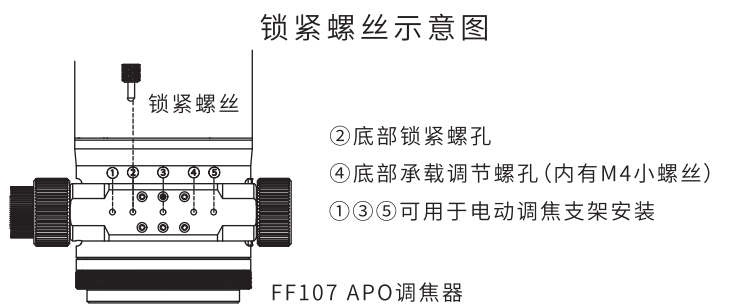
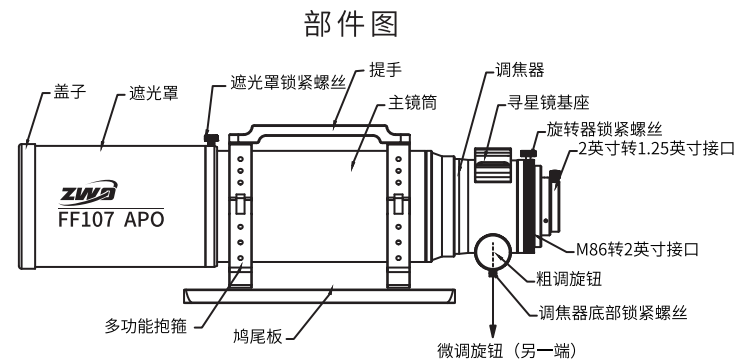
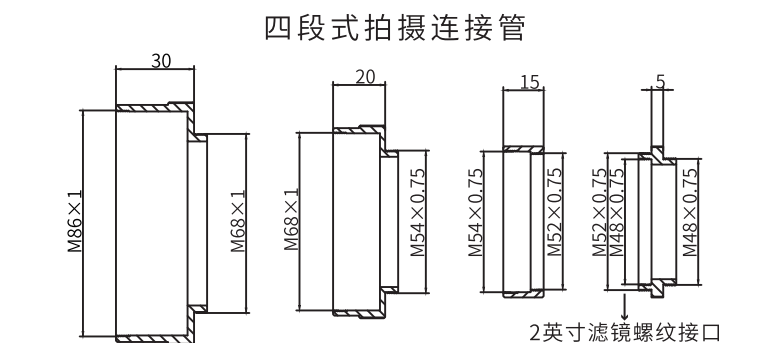
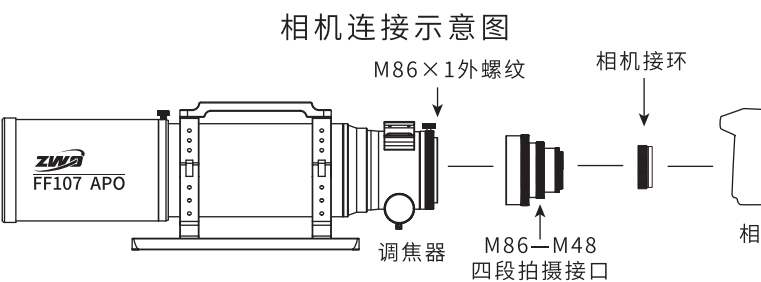
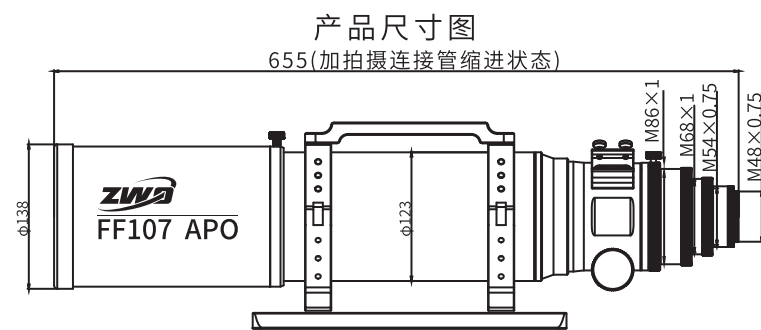
用FF107 APO进行目视观测也是非常理想的选择，无论是连接1.25英寸，2英寸天顶镜还是各种目镜，都能轻松合焦，甚至超高倍观测行星也不在话下。

FF107 APO镜筒全部使用高质量CNC加工工艺以及喷涂涂装，红色装饰零件醒目美观，刚性极高的3.4英寸大型调焦器完全满足观测和拍摄的使用需求。调焦器特别针对摄影进行了优化，可以承载高达8公斤的负荷。调焦行程范围非常大，最高为95毫米。

有效口径:107mm
焦距:749mm
焦比:f/7
物镜类型:四片式全分离APO(包括两片ED玻璃)
成像圈:44mm
调焦筒缩进状态下后端最长连接长度:(调焦器完全缩进状态)

1. 拍摄模式:
 - 79mm(从M48×0.75外螺纹算起)
 - 99mm(从M54×0.75外螺纹算起)
 - 119mm(从M68×1外螺纹算起)
 - 149mm(从M86×1外螺纹算起)
 2. 观测模式:
 - 120mm(从2英寸目镜基座算起)
- 全长:603mm(含2英寸接口缩进状态) 655mm(加拍摄连接管缩进状态)
754mm(含2英寸接口伸长状态) 806mm(加拍摄连接管伸长状态)

本体重量:5.7kg
标准装重量:6.9kg
四段式拍摄连接管接口:M86×1-M68×1
M68×1-M54×0.75
M54×0.75-M52×0.75
M52×0.75-M48×0.75(内置M48×0.75滤镜接口)
标配:FF107 APO本体一个,抱箍一对,提手一个,Vixen窄型鸠尾板一个,四段式拍摄连接管一套,铝箱一个,说明书一份



English

Instructions for use

The FF107 APO is a long-focal-ratio refractive astrograph with a powerful flatfield optical design which saves you from the expensive cost of a field flattener. It eliminates the trouble of calculating the back focus distance of the flattener and connecting various accessories to achieve that distance. You can just connect any possible accessories you need as long as the target is focused. This makes the whole setting up process much more convenient, and saves your time, allowing you to pay more attention to the image shooting itself. It will also be an ideal telescope if you want to do visual astronomy. Directly connect the star diagonal to the eyepieces, you'll see focusing is such an easy thing then. Planetary observation in high magnification is also piece of cake!

ZWO FF107 APO, a versatile all-rounder. FF107 APO can literally be applied in any conceivable situations, and that's the top reason why FF107 APO is produced: to slash as much trouble for users as possible.

FF107 APO, an f/7 astrograph, contains four pieces of lenses including two pieces of ED glass, which can better reduce chromatic aberration. It can achieve excellent color correction even with the magnification mounting to 300× in visual observation.

The built-in Flatfield lens is a great contribution to FF107 APO's imaging ability. It supports 44mm full-frame imaging. The stars around the corner of the images seldom suffer from distortion or deformation. At the center of its field of view, the RMS radius is merely 3um. Even a fastidious user can also be satiated when it comes to the shape of stars. FF107 APO can effectively handle with problems of field curvature and vignette.

FF107 APO can capture tiny star objects due to its 749mm focal length and astonishing field flattening capacity. When used FF107 APO and a high-resolution camera, it can still bring out lots of detailed information of your target.

FF107 APO is also a nice choice for your visual observation. It fits 1.25", 2" diagonal as well as various eyepieces and can achieve a perfect focus. It can even be used to observe planets with a super-high magnification eyepiece.

The sleek FF107 APO is assembled with high-quality CNC-machined components and wrapped with smooth coating. The calm and seriousness is offset by the bright red decorative rings or knobs. The 3.4" rigid focuser is capable of handling a load of 8kg. It's designed with a long travel distance of 95mm, which is suitable for visual observation. And it's been optimized especially for astrophotography.

Aperture size:107mm
Focal length:749mm
Focal ratio:f/7
Objective lens:Quadruplet air-spaced APO (including two ED glasses)
Image circle:44mm
Maximum accessory connection (with the focuser fully retreated):

1. Imaging mode:
 - 79mm (from the base of M48×0.75 male thread)
 - 99mm (from the base of M54×0.75 male thread)
 - 119mm (from the base of M68×1male thread)
 - 149mm (from the base of M86×1 male thread)
2. Observing mode:
 - 120mm (from the end of 2" visual back)

Total length:603mm(when the dew shield is contracted)
754mm(when the dew shield is stretched)
655mm (plus 4-piece adapter and with dew shield contracted)
806mm (plus 4-piece adapter and with dew shield stretched)

Net weight:5.7kg
Gross weight:6.9kg
Four-piece photographic adapter:M86×1 to M68×1
M68×1 to M54×0.75
M54×0.75 to M52×0.75
M52×0.75 to M48×0.75(with M48×0.75 filter thread)

Standard package items:an FF107 APO OTA, a pair of tube rings, a handle, a Vixen dovetail plate, a set of four-piece photographic adapters, a high-quality aluminum suitcase, a manual

