



# FF131 APO

## ■ 使用说明书

### 警告

请勿通过本望远镜直接观测太阳，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。

## 中文版（简体）

### 使用产品前请仔细阅读本使用说明书

FF131 APO 是一款口径为 131 毫米，焦距为 983 毫米，原生焦比为 F7.5 的天文摄影镜，用途多样，兼顾目视观测与天文摄影。

该望远镜采用前三后一的四片式光学结构，内含一片 ED 玻璃，并支持全画幅拍摄。采用自平场设计，连接相机等成像配件后，合焦即可直接拍摄（合焦范围自 M54-M48 拍摄接口端面算起，后端连接有效长度为 42mm-73mm 即可合焦）。

遮光罩采用可伸缩式设计，能进一步缩减整体长度，提升便携性。镜筒整体采用高质量 CNC 工艺加工，内部设有光阑，可有效抑制杂散光。

把手处预留寻星镜底座槽，调焦器两侧亦各配备一个寻星镜底座，不仅便于灵活调整寻星镜位置而无需拆卸，也为安装其他天文配件提供了更多可能。抱箍使用 CNC 定制手拧螺丝搭配蚌壳式开口设计，无需多余工具，拆卸方便。

FF131 APO 配备 3 英寸齿轮齿条式双速调焦器，支持 1:10 的精密调焦。后端集成 360 度像场旋转器，便于精确构图。鸠尾板为 300 毫米标准宽版规格，多孔位设计便于调整安装位置。

镜筒末端提供 2 英寸与 1.25 英寸接口，方便接驳各类附件。此外，FF131 APO 还标配四段式摄影延长管，内含 2 英寸滤镜螺纹，后端配备 M48×0.75 与 M54×0.75 规格的摄影接环，以满足多样化的拍摄需求。

## FF131 APO 规格

有效口径: 131mm  
焦距: 983mm  
焦比: F7.5  
物镜类型: 四片式全分离APO (包括一片ED玻璃)  
成像圈: 44mm

调焦筒缩进状态下后端最长连接长度:

拍摄模式:

73mm (从M48×0.75外螺纹算起)

91mm (从M54×0.75外螺纹算起)

观测模式:

131mm (从1.25英寸接口算起)

141mm (从2英寸接口算起)

全长:

878mm (含1.25英寸接口缩进状态) 963mm (含1.25英寸接口伸长状态)

941mm (加拍摄接口缩进状态) 1026mm (加拍摄接口伸长状态)

OTA重量: 7.9kg

总重 (包含提手、抱箍和鸠尾板): 9.4kg

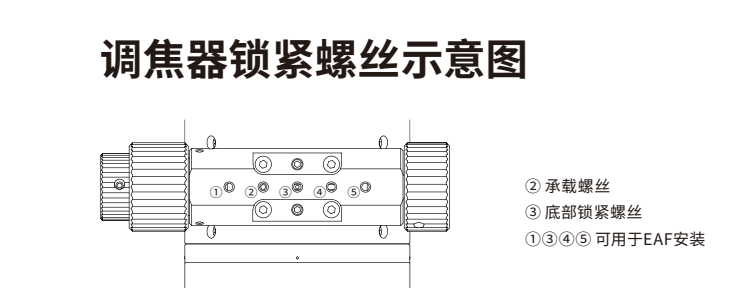
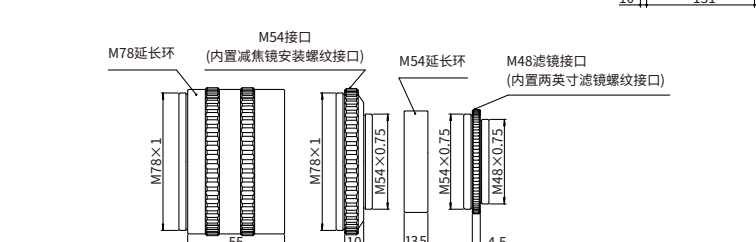
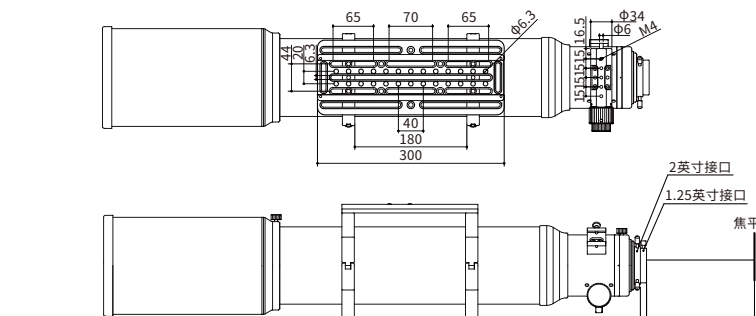
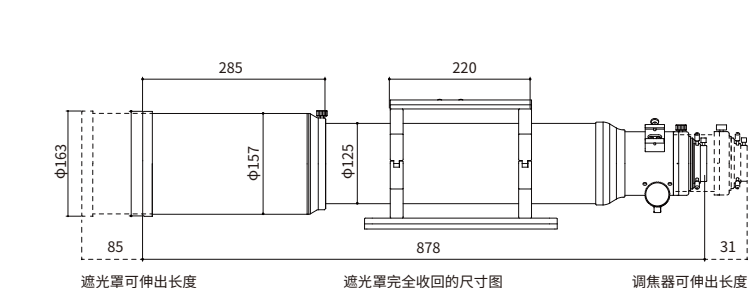
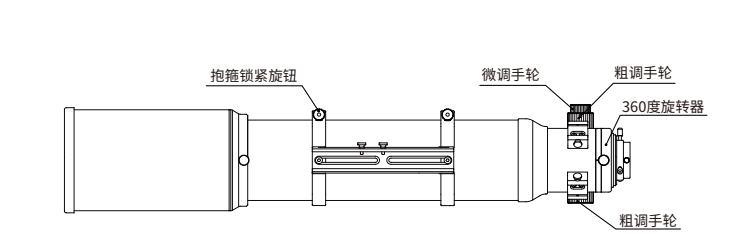
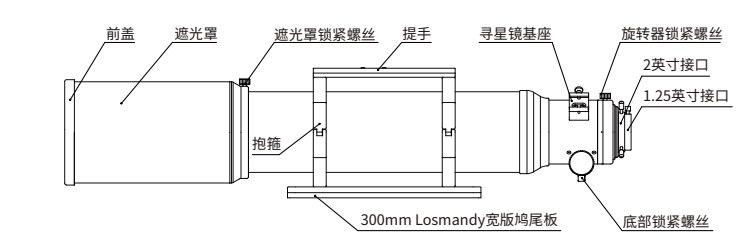
末端接口: (1) M78×1-55MM 延长环

(2) M78×1-M54×0.75

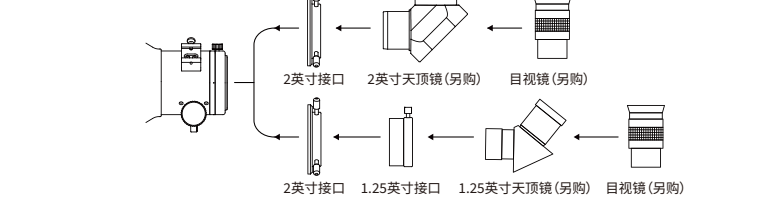
(3) M54×0.75-M54×0.75

(4) M54×0.75-M48×0.75 (内置 M48×0.75 滤镜螺纹)

## 产品尺寸及部件图

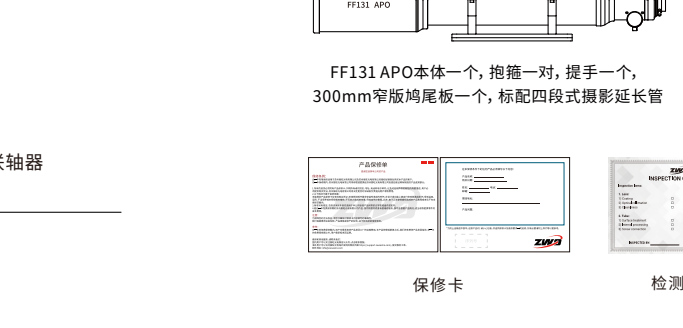
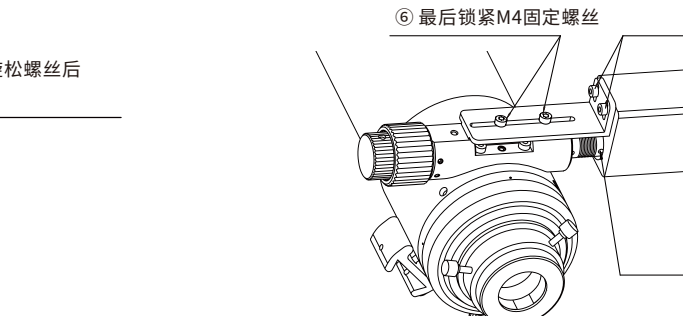
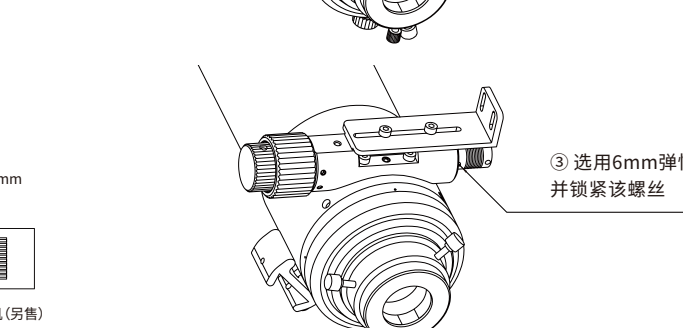
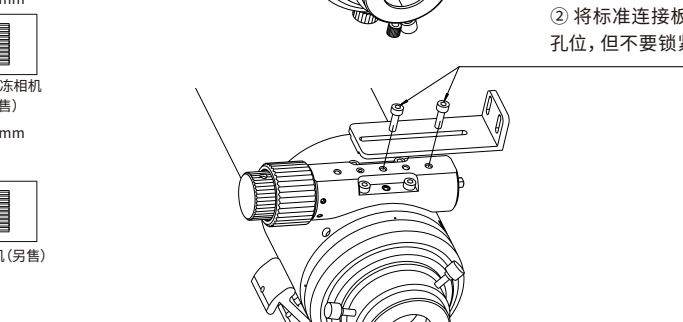
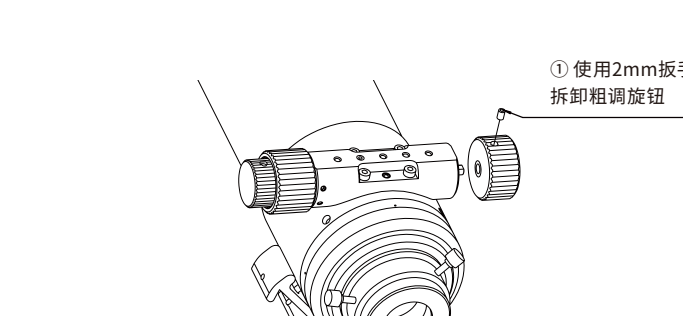
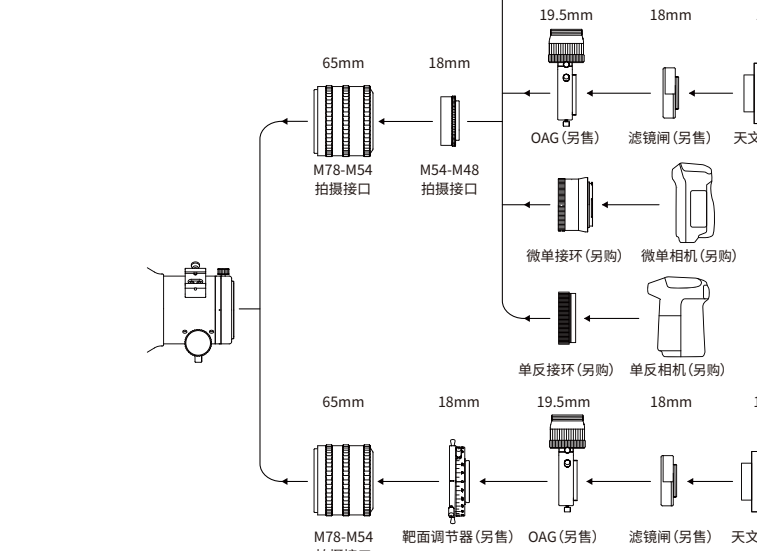


## 目视模式



## 拍摄模式

M54-M48拍摄接口端面算起，后端连接有效长度为42mm-73mm即可合焦





# FF131 APO

## User Manual

### WARNING

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

www.zwoastro.com

## English

Please read this user manual carefully before using the product.

The FF131 APO is an OTA with an aperture of 131mm, a focal length of 983mm, and a native focal ratio of F7.5. It is designed for both visual observation and astrophotography.

The telescope features a quadruplet optical lens design (three elements in the front and one in the rear), including one piece of ED glass, which can effectively reduce chromatic aberration, and supports 44mm full-frame imaging. With its self-flattened design, after attaching the imaging accessories, users can directly use it for shooting after the OTA is in focus. (The effective back focus is measured from the M54-M48 imaging interface flange. Focus can be achieved when the total rear connection length is between 42 mm and 73 mm).

The retractable dew shield helps reduce overall length and improves portability. The entire lens tube is manufactured using high-quality CNC machining and paint finish, and it also includes an internal baffle to effectively suppress stray light.

On the handle bar of FF131 APO, it has a finder base slot. Besides, there are two finder bases on both sides of the focuser. This allows flexible adjustment of the finder scope position without disassembly and provides additional options for attaching other astronomical accessories. The tube rings feature CNC-machined thumb screws and a clamshell opening design, enabling tool-free installation and removal.

The FF131 APO comes with a 3-inch rack-and-pinion dual-speed focuser offering 1:10 fine adjustment, along with a built-in 360° field rotator at the rear for precise framing. It includes a 300mm standard Losmandy-style dovetail plate with multiple holes, which makes it easy to adjust the position.

The rear interface of the FF131 APO includes both 2-inch and 1.25-inch adapters, enabling compatibility with a wide range of astronomical accessories.

The FF131 APO comes standard with Standard Four-Section Extension Tube, which includes M48\*0.75 and M54\*0.75 adapters. It also features a built-in 2-inch filter thread for easy attachment of filters.

## FF131 APO Specifications:

**Aperture size:** 131mm  
**Focal length:** 983mm  
**Focal ratio:** F7.5  
**Objective lens:** Quadruplet air-spaced APO (including one ED glass)  
**Image circle:** 44mm

**Maximum allowable optical path length (with the focuser fully retreated):**

**Imaging Mode:**  
73mm (from the base of M48×0.75 male thread)  
91mm (from the base of M54×0.75 male thread)

**Visual Mode:**  
131mm (from the end of 1.25" eyepiece holder)  
141mm (from the end of 2" eyepiece holder)

**Minimum allowable optical path length (with the focuser fully extended):**

**Imaging Mode:**  
42mm (from the base of M48×0.75 male thread)  
60mm (from the base of M54×0.75 male thread)

**Visual Mode:**  
100mm (from the end of 1.25" eyepiece holder)  
110mm (from the end of 2" eyepiece holder)

**Total length:**  
878mm (including 1.25" adapter as dew shield contracted)  
963mm (including 1.25" adapter, fully stretched)

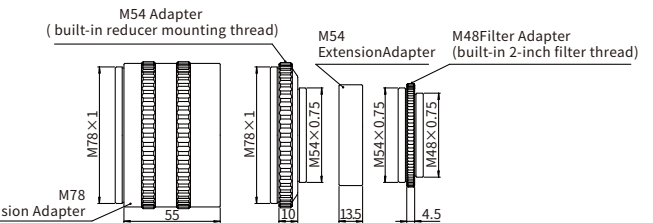
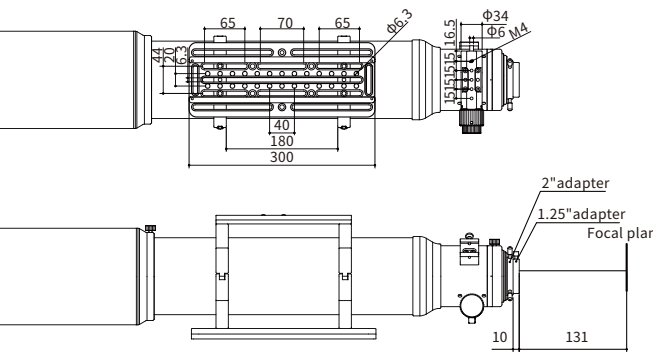
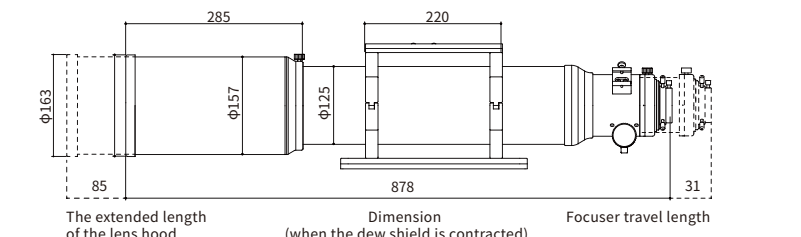
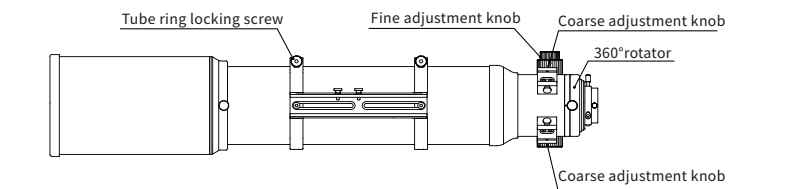
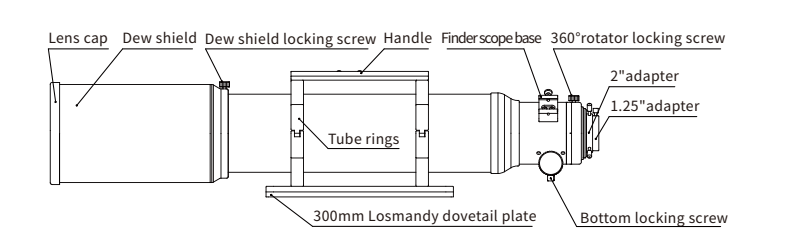
941mm (including the photographic extension tube as dew shield contracted)  
1026mm (including the photographic extension tube, fully stretched)

**Net weight:** 7.9kg

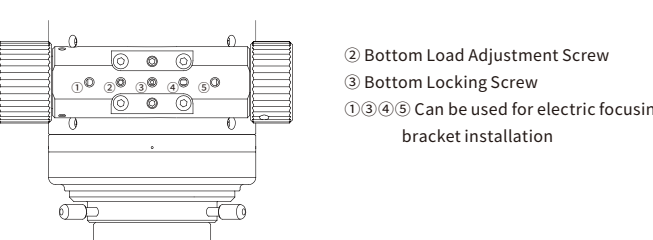
**Gross weight (including tube ring&dovetail plate):** 9.4kg

**Rear-end thread type:**  
(1) M78×1- 55MM adapter  
(2) M78×1 - M54×0.75  
(3) M54×0.75 - M54×0.75  
(4) M54×0.75 - M48×0.75 (with built-in M48×0.75 filter thread)

## Product Overview and Dimensional Diagram

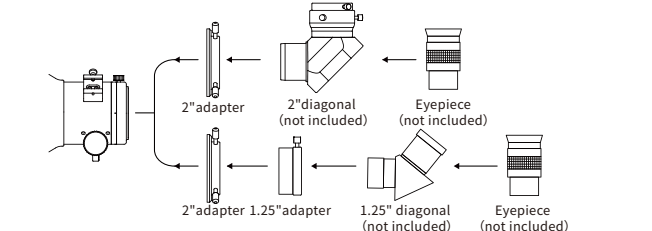


## The Locking Screw Position Diagram



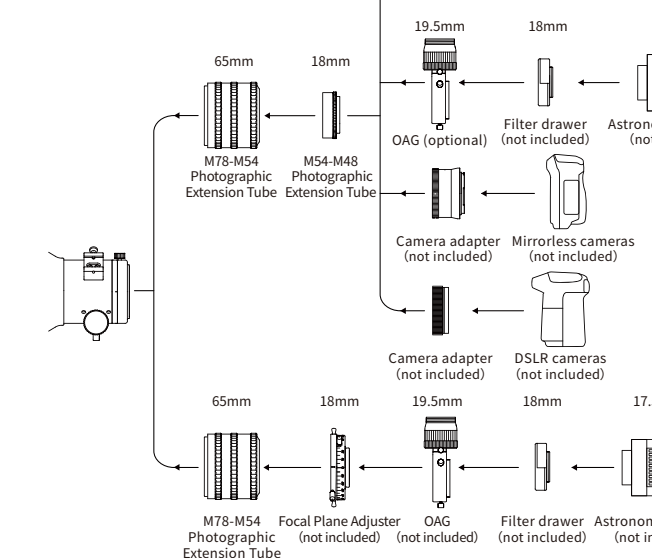
② Bottom Load Adjustment Screw  
③ Bottom Locking Screw  
①③④⑤ Can be used for electric focusing bracket installation

## Visual Mode

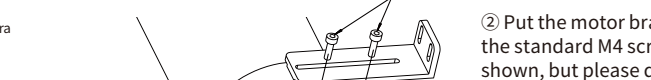
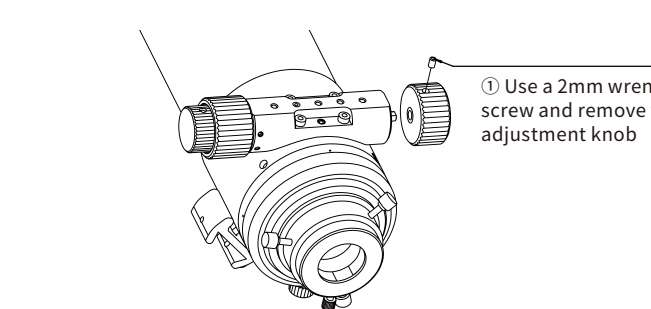


## Imaging mode

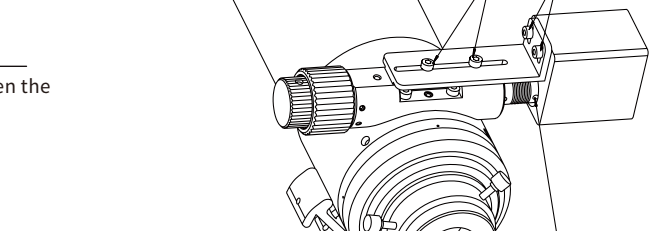
The effective focus range of the telescope rear-end connection is from 42 mm to 73mm (from the M54 to M48 photographic adapter).



## Steps of Installing EAF



## What's in the box



FF131 APO main unit ×1  
Carrying Handle ×1  
300 mm Narrow Dovetail Plate ×1

Tube Rings ×1 pair  
Standard Four-Section Extension Tube

User Manual

Warranty card  
Inspection Certificate



Official site Facebook YouTube



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