FF 45mm F2.8 ULTRA MACRO 1-5X APO
FF 17.5mm F1.7 ULTRA MACRO 5-10X APO

使用手册
Instruction Manual

微信公众账号　FACEBOOK

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前言

真诚地感谢您选购 FF 45mm F2.8 ULTRA MACRO 1-5X APO以及FF 17.5mm F1.7 ULTRA MACRO 5-10X APO显微镜头。此镜头拥有高亮度，衍射小，光线充足;长工作距离，易补光;高性能，高解析力等镜头特点。

放大倍率1-5X　　放大倍率5-10X

⚠ *为了操作上的安全，使用本产品前请务必详细阅读使用手册与注意事项，并将手册放在需要时容易取得的地方。如遇到不能解决的问题请通过售后电话获取技术支持。*

主要特色

- 此系列显微镜最大光圈可达F1.7（5-10X）和F2.8（1-5X），带来的最大优势就是高亮度，衍射小，光线充足，能够保证拍摄时，ISO数值较低，画面更加纯净。
- 拥有较长的工作距离，易补光，操作方便，能够在工业和科研方面进行普及。
- 采用先进的光学设计，高性能，解析力出众。能够拍摄出惊艳且震撼的作品。
- 可实现1-10X的放大倍率切换。
- 具备齐焦功能，在改变放大倍率的过程中，焦点始终保持，适合视频素材拍摄。

注意事项

⚠ 安全注意事项

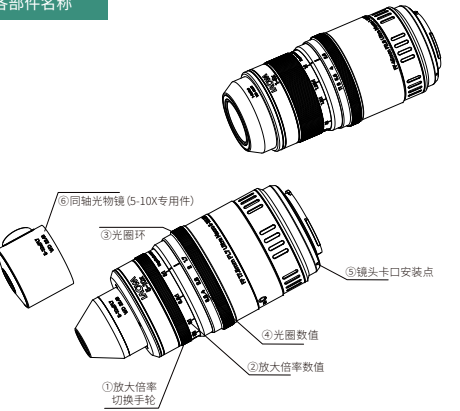
- 切勿自行拆解、修改或改装。当产品由于外力原因破损，切勿触碰外露部分或破损边缘处。
- 切勿放置于直射阳光下、封闭车辆中或其余高温处，否则过高的温度会使镜片和其他部件产生伸缩变形。
- 不使用镜头时，请将镜头前盖盖上或置于没有阳光照射处。凸透镜反射出的光线可能会聚集在附近物体上，导致发生火灾。
- 在逆光拍摄时，切勿将太阳置于画面中心，应该使太阳充分偏离画角，否则阳光会在相机内部聚集并导致火灾或灼伤眼睛。
- 在使用相机内置闪光灯拍摄时，由于镜头本身会遮挡光线而产生渐晕，因此建议您使用外设闪光灯拍摄。

注意事项

长期使用保养注意事项

- 避免触摸镜头表面，应用专用镜头布或气吹去除镜头表面的尘埃，不使用镜头时，应将镜头盖盖上。
- 使用镜头纸或镜头布清洁时，以螺旋的方式从中间向外擦拭镜头上的污垢以及指印。
- 镜头从寒冷的环境突然转移至温暖的环境时，镜头的外部以及内部镜片将会凝结水雾，所以在转移时应采取防潮保护措施。

各部件名称



使用说明

镜头安装

取下镜头后盖，将镜头卡口⑤安装点对准机身安装点，旋转进行安装，镜头安装完毕。装上镜头后，请尝试旋转镜头确认是否已将其固定在相机上。

镜头拆卸

关机后按住相机上的镜头释放按钮，依照所购买卡口的安装方向反向旋转镜头，随后将镜头从座圈中拔出。

光圈手轮使用

使用时，可以根据需要，通过调节光圈的大小，来适配需要的景深。（注：光圈的大小不同，衍射程度也会不同，通常光圈越小，衍射越大，如果光圈过小，会因为衍射而导致解析力下降。）

最近对焦距离（工作距离），被摄物体到镜头前端的距离。
1-5X：40.35mm　　5-10X：22.48mm

对焦

此款镜头在搭配不同倍率下，对焦距离会有所不同，对焦需要通过移动机身，来确定焦点。
为了达到拍摄的稳定性，建议用户选择专业的微距平台，使用电控或者手动方式进行前后或者上下移动机身，便于对焦。

对焦方法

峰值对焦(视所使用相机功能而定)
1、开启机身峰值对焦选项，峰值颜色选择为红色或常用颜色，峰值选项为低。
2、通过取景器或开启Live View（实时取景）功能观察画面，通过峰值来观察对焦点。
3、移动机身对物体进行精确对焦。
放大对焦
先构定拍摄画面，在通过取景器或开启Live　View（实时取景）功能观察画面的同时，通过按键或者双击屏幕将对焦点放大，移动机身直至合焦。

规格表

名称	FF 45mm F2.8 ULTRA MACRO 1-5X APO	FF 17.5mm F1.7 ULTRA MACRO 5-10X APO
画幅	全画幅	全画幅
焦距	45mm	17.5mm
光圈范围	F2.8-11	F1.7-5.6
镜头结构	9组13片	12组17片
光阑叶片数	11片	11片
变倍环行程	180°	180°
变倍倍率	1x-5x	5x-10x
光圈环行程	45.8°	49.3°
成像覆盖范围	36x24mm	36x24mm
最近工作距离(微距专用)	40.35mm	22.48mm
最大放大倍率	5x	10x
合焦驱动方式	MF	MF
镜头前端尺寸	Ø56mm	Ø42mm
最大直径	Ø70.2mm	Ø70.2mm
镜头尺寸	E:Ø70.2x149.5mm	Ø70.2x156mm
共轭距离	207.2mm	193.8mm
重量	F卡口约500g(不含前后盖)	F卡口约450g(不含前后盖)
卡口	Sony E/ Nikon Z/ L/Nikon F/Canon RF/Canon EF	Sony E/ Nikon Z/ L/Nikon F/Canon RF/Canon EF

Preface

Thank you very much for purchasing FF 45mm F2.8 ULTRA MACRO 1-5X APO and FF 17.5mm F1.7 ULTRA MACRO 5-10X APO microscopic lens. This series has high brightness, small diffraction, sufficient light; Long working distance, easy to fill light; High performance, high resolution and other lens features.

1-5X 5-10X

⚠ *For operational safety, please read the manual and precautions carefully before using this product, and keep the manual at a place that is easily accessible when needed. If you encounter a problem that cannot be solved, please ask for technical support through email.*

Features

- The series of microscopes boasts a maximum aperture of F1.7 (5-10X) and F2.8 (1-5X), offering significant advantages such as high brightness, low diffraction, and ample light, ensuring lower ISO values and cleaner images during shooting.
- The series has a long working distance, easy to fill light, easy to operate, can be popularized in industry and scientific research.
- The series adopts advanced optical design, having high performance and outstanding resolution. Therefore, it is able to shoot amazing and shocking works.
- It allows for magnification switching from 1X to 10X.
- The parfocal design maintains focus while changing the magnification, making it ideal for video recording.

Precautions

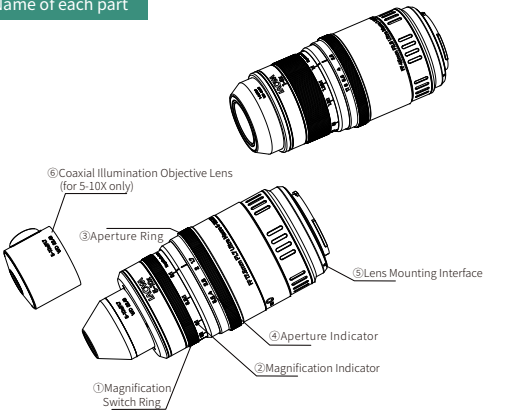
⚠ Safety Precautions

- Do not disassemble, modify the lens by yourself. Do not touch the internal parts that become exposed as the result of external force.
- Do not leave the lens where it will be exposed to high temperatures, such as in direct sunlight and an enclosed vehicle. Excessive heat may deform the glass elements and other parts of the lens.
- Whether it is attached to the camera or not, do not leave the lens under the sun without the lens cap attached. This is to prevent the lens from concentrating the sun' s rays, which could cause a fire.
- Do not place the sun in the frame center when shooting with backlight. Doing so might cause a fire or harm your eyes.
- The camera' s built-in flash will cause barrel shadow if used with this lens. For best results, please use an external flash unit.

Maintenance Precautions

- Do not touch the surface of the lens directly. Brush off any dust with a blower. Wipe the surface with a cleaning cloth or a lens tissue.
- Try a circular motion from the center outward to remove oil, fingerprints and grime on the lens surface.
- If your lens is brought directly from a cold place to a warm place, condensation may appear on the lens. To avoid this, be sure to take some action to protect the lens.

Name of each part



Instructions

To attach the Lens

Remove the lens cap, align Lens Mounting Interface ⑤ with the camera body mounting point, and rotate to install. The lens is now installed. After mounting the lens, try rotating it to confirm it is securely attached to the camera.

To remove the lens

Turn the camera off. While pressing and holding the lens release button on the camera, rotate the lens in the reverse direction for attaching the lens until it stops, then detach the lens.

Aperture Ring

When using it, you can adjust the aperture to suit the desired depth of field. (Note: Different aperture result in different degrees of diffraction. Generally, the smaller the aperture, the greater the diffraction. If the aperture is too small, diffraction will reduce the resolution.)

Minimum Focusing Distance (Working Distance)
The distance from the subject to the front of the lens.
1–5X: 40.35 mm 5–10X: 22.48 mm

Focusing

The focusing distance of this lens varies depending on the magnification, requiring camera movement to determine the focus point.
For stable shooting, it is recommended that users choose a professional macro platform and use electronic or manual controls to move the camera body forward/backward or up/down for easier focusing.

Focusing methods

Method 1 Focus Peaking (depending on the camera function)
1.Turn on the Focus Peaking on the camera. Chose the red color or other commonly used colors. Sets the Peaking Level to low.
2.Check the frame by the viewfinder or [Live View] on the camera and try to get focus by Focus Peaking.
3. Move the camera body to achieve precise focus.

Method 2 Focus Magnification
Set the frame first. While viewing the image through the viewfinder or [Live View], magnify the focus by pressing the button or double click the screen and move the camera until it is in focus.

Specifications

Name	FF 45mm F2.8 ULTRA MACRO 1-5X APO	FF 17.5mm F1.7 ULTRA MACRO 5-10X APO
Format	FF	FF
Focal Length	45mm	17.5mm
Aperture Range	F2.8-11	F1.7-5.6
Lens Structure	13 elements in 9 groups	17 elements in 12 groups
Aperture Blades	11	11
Magnification Throw	180°	180°
Magnification	1x-5x	5x-10x
Aperture Throw	45.8°	49.3°
Sensor Coverage	36x24mm	36x24mm
Min. Working Distance	40.35mm	22.48mm
Max. Magnification	5x	10x
Focus Type	MF	MF
Front Diameter	Ø56mm	Ø42mm
Largest Diameter	Ø70.2mm	Ø70.2mm
Dimensions	E:Ø70.2x149.5mm	Ø70.2x156mm
Conjugate Distance	207.2mm	193.8mm
Weight	F About:500g	F About:450g(without front and rear cap)
Mounts	Sony E/ Nikon Z/ L/Nikon F/Canon RF/Canon EF	Sony E/ Nikon Z/ L/Nikon F/Canon RF/Canon EF