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# LAOWA MFT 10mm F2.0 C&D-Dreamer

使用手册  
Instruction Manual

LAOWA 老蛙

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## 前言

真诚地感谢您选购 LAOWA MFT 10mm F2.0 C&D-Dreamer 广角镜头。此镜头是 M43 画幅系统超广角镜头，采用迷你化设计，轻便小巧。搭配电子光圈，通过机身调整光圈参数更加便捷。



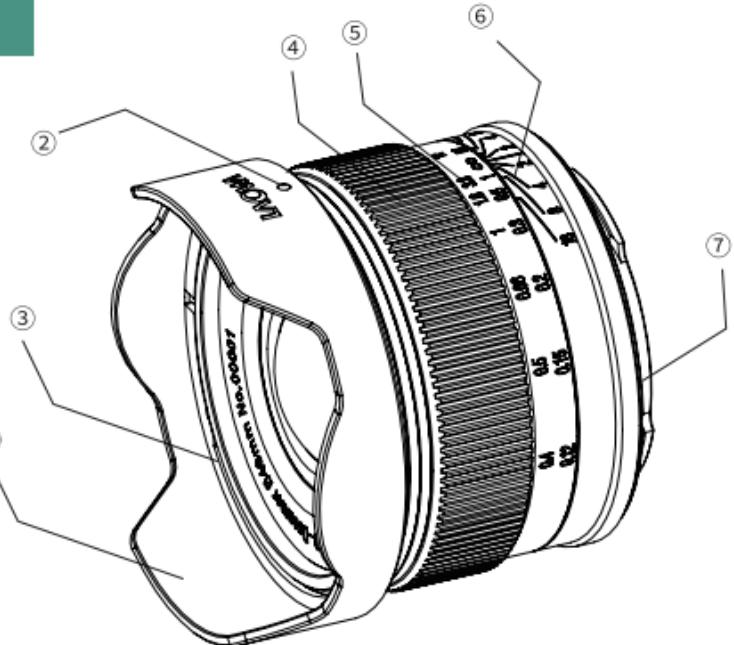
△ 为了操作上的安全，使用本产品前请务必详细阅读使用手册与注意事项，并将手册放在需要时容易取得的地方。如遇到不能解决的问题请通过售后电话获取技术支持。

- 镜头采取迷你化设计,大小仅有 $\phi 53\text{mm} \times 41\text{mm}$ ,重量125g,搭配在M43画幅机身上使用,体积小巧,轻便携带。
- 镜头采用电子光圈设计,可通过机身调节光圈参数并记录拍摄的光圈值和镜头型号数据信息,搭配大疆X5云台使用,可通过遥控直接调整光圈数值,提升了使用效率。
- 内部有7组11片镜片,包含3枚异常分散玻璃和2枚非球面镜片的结构带来的高素质成像。外有全金属材料制成的机械结构,保障了镜头长期使用的耐用性。

#### △ 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。

各部件名称



①分体式遮光罩

②遮光罩安装标记

③滤镜(镜头盖)安装螺纹

④对焦环

⑤距离(倍率)刻度

⑥景深指示刻度

⑦镜头安装标记

### ■ 镜头安装

- 取下镜头后盖。将镜头卡口上的安装标记⑦对准相机座圈上的对应标记，随后将镜头插入机身座圈，根据所购买卡口的安装方向旋转镜头，直至咔嚓声锁紧镜头。安装时请不要用力过猛，以免导致卡口损伤。

### ■ 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。
- 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。

### ■ 遮光罩装卸

- 将遮光罩上的安装标记②对准镜头上的遮光罩安装点，然后顺时针旋转遮光罩，直至锁紧末端为止。
- 如要拆卸遮光罩，按相反方向旋出即可。
- 安装遮光罩可减少强光并保护镜头前部元件。
- 安装某些滤光镜后，您可能无法再使用遮光罩。
- 若不使用遮光罩时，可将遮光罩反向安装于镜头上。
- 利用闪光灯拍摄时。遮光罩可能遮挡住光线而造成影像上的渐晕现象。所以在使用相机闪光灯或使用高度不够的外置闪光灯时，请拆卸遮光罩后再进行拍摄。

### ■ 对焦

- 此款镜头是全手动对焦镜头，合焦时，缓慢旋转对焦环④，直至合焦。
- 不要过猛过快地旋转对焦环，避免用力过度损坏对焦环部件。
- 镜头上的距离刻度⑤与景深刻度⑥是出于指导目的。实际焦点与最深可能同刻度标记稍有不同。
- 如需要非常精确的对焦，请在固定好相机位置的情况下使用最大光圈对焦，对焦完成后再旋至所需要的光圈值。

为了对焦的方便性，请开启相机内的峰值对焦功能(视所使用相机功能而定)。

## ■ 光圈使用

- 光圈在机身上调节,根据拍摄环境和与所需要的景深,转动机身光圈调节拨轮来选择对应的光圈。
- 由于此镜头有CPU数据,可以记录光圈参数。

## ■ 对焦方法

### 对焦方法一:

放大倍率预先确定后再进行对焦

- ① 预先确定放大倍率,随后转动对焦环至所需的放大倍率刻度。
- ② 通过取景器或开启Live View(实时取景)功能观察画面,并前后平移相机进行粗略对焦直至确定合适的焦距。
- ③ 转动对焦环对物体进行精确对焦。

### 对焦方法二:

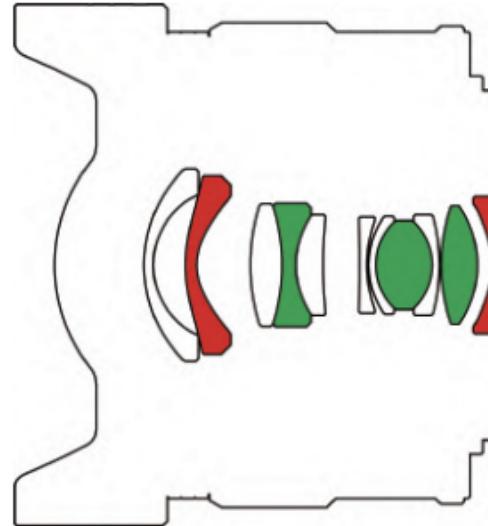
先构定拍摄画面 在通过取景器或开启Live View(实时取景)功能观察画面的同时,转动对焦环,构定拍摄画面后,进行方法一的②、③步骤。

- 在进行高放大倍率拍摄时,镜头的工作距离非常短,容易碰到拍摄物体,请小心拍摄。
- 放大倍率是指记录在传感器或胶片上的图像尺寸大小与拍摄物体的实际尺寸大小之间的比例关系。

## 规格表

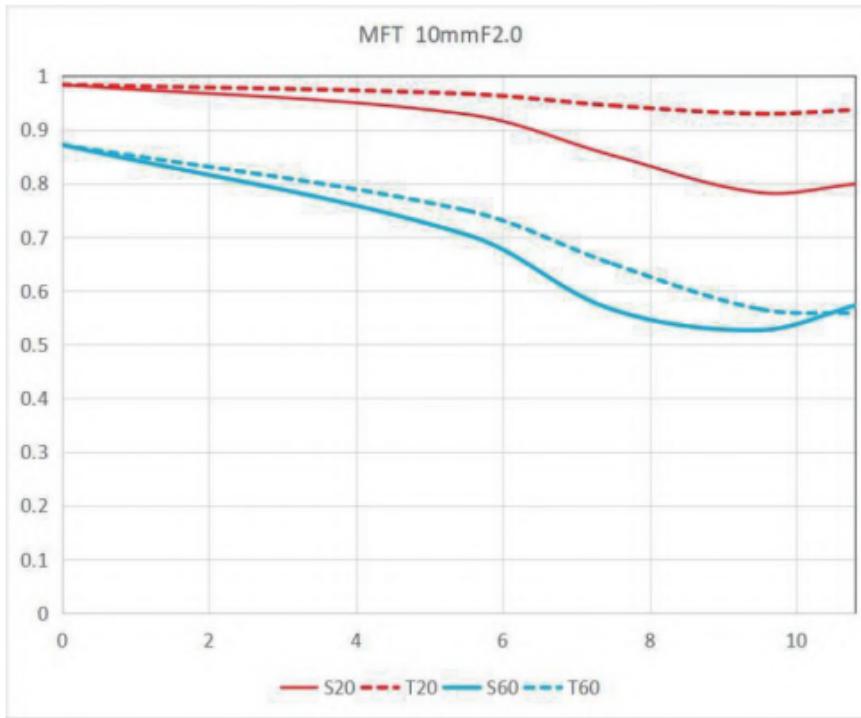
MFT 10mm F2.0 C&D-Dreamer	
镜头型号	MFT 10mm F2.0 C&D-Dreamer
画幅	M43
焦点距离	10mm
最大光圈	F2.0
视场角	96°
镜头结构	7组11片 (3枚异常分散玻璃, 2枚非球面)
光阑叶片	5片 (自动光圈)
最小光圈	F22
最近摄影距离(物像距离)	12cm
最大放大倍率	0.15倍
合焦驱动方式	手动(MF)
滤镜尺寸	ø46mm
镜头尺寸	ø53mm*41mm
重量	125g
卡口	M43

## 镜片结构



- 异常分散玻璃
- 非球面玻璃

## MTF图



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## PREFACE

Thank you very much for purchasing LAOWA MTF 10mm F2.0 C&D-Dreamer wide-angle lens. This ultra-wide-angle lens is designed for Micro Four Thirds Cameras. This lens is compact and light in weight. The lens is equipped with a CPU chip and the aperture can be controlled via the camera body.



⚠ *Read this operation manual carefully to familiarize yourself with its contents and ensure that you can operate the product properly. Keep the Instruction Manual in a safe place where it can easily be referenced whenever required. If you are still unable to solve the problem by reading the manual, please contact our after-sales service for further technical support.*

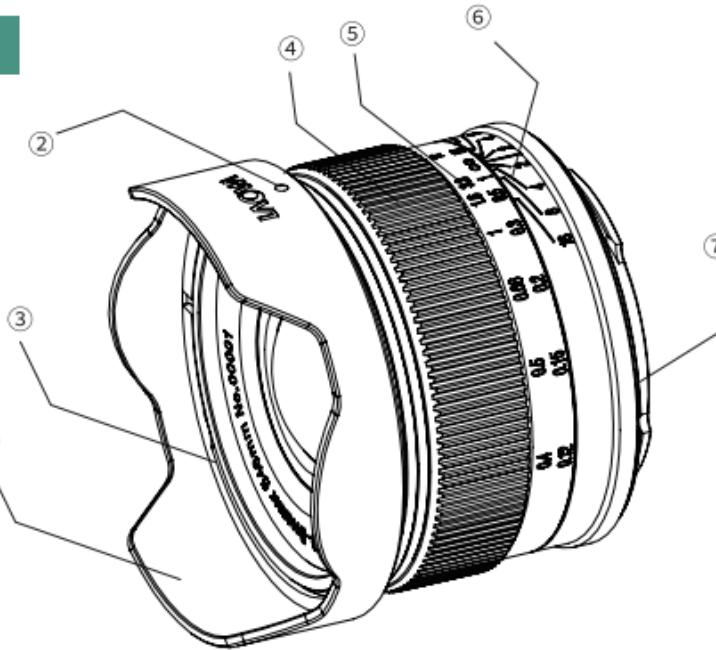
- The lens is extremely compact and lightweight. It measures φ 53mm\*41mm in size and weighs only around 125g. Using it with MFT cameras, the whole set is compact and easy to carry.
- The lens is equipped with a CPU chip and the aperture can be controlled via the camera body. All the lens data is directly recorded on EXIF. It is also compatible on the DJI X5 camera and the aperture value can be adjusted directly by remote control.
- The lens is constructed by 11 optical elements in 7 groups with 2 aspherical lenses and 3 ED lenses to deliver excellent sharpness. The all-metal structure ensures the lens' assembly accuracy and reliability.

#### ⚠ 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 only 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.



①Lens hood  
②Lens hood mounting index  
③Filter (lens cap) mounting  
thread

④Focus ring  
⑤Distance (magnification) scale  
⑥Depth of field scale  
⑦Lens mounting index

## INSTRUCTIONS

### ■ To attach the Lens

- Remove the rear lens cap. Align the mounting index⑦ on the lens bayonet with the mounting index on the camera, and place the lens on the camera mount, then rotate the lens according to the proper direction of the mount type until it locks. Do not use excessive force during installation to avoid damage to the bayonet.

### ■ 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.
- After attaching the lens, please try to rotate the lens to make sure it mounted onto the camera properly.

## INSTRUCTIONS

### ■ Attaching/detaching lens hood

- Align the mounting index② on the lens hood and the lens. Turn the hood clockwise until it locks.
- For detaching lens hood, rotate it counterclockwise.
- It is recommended that you use a lens hood to reduce strong light and protect the front element.
- Lens hood may be unavailable when using certain filters.
- When storing, turn over the lens hood and place it onto the lens backward.
- When shooting with a flash, the lens hood may block light and cause vignetting. So when shooting with the camera' s built-in flash or with the external flash unit that is not high enough, please remove the hood before shooting.

### ■ Focusing

- This is a fully manual lens. Rotate the focusing ring④ slowly to get focus.
- Turn the focus ring slowly and gently to prevent the focus mechanism from damage.
- The distance scale⑤ and depth of field scale⑥ are for instructional purposes. Actual focus and DOF may slightly differ from those scale indications.
- To get precise focus, it is recommended to focus wide open when the camera position is fixed. Get focus first, then set the desired aperture by turning the aperture ring.

Turn on the focus peaking on the camera to help focusing. (Note that the function depends on camera models.)

## ■ Setting the Aperture

- Aperture value is controlled via the camera body. According to the shooting situation and desired depth of field, rotate the control dial on the camera body to the corresponding aperture.
- Since the lens has CPU data, the aperture value can be recorded.

## ■ Focusing Tips

### Method 1 Magnification Priority

- ① Set the magnification first, and then turn the focus ring to the desired magnification mark on the lens.
- ② Check the frame by viewfinder or [Live View] on the camera and try to get focus by moving the camera back and forth until obtaining the proper focal length.
- ③ Rotate the focus ring to achieve precise focus.

### Method 2 Framing Priority

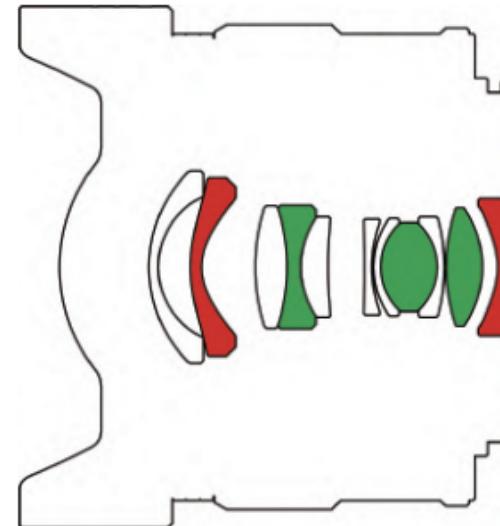
Set the frame first. Turn the focus ring while you are checking the image through viewfinder or [Live View] on the camera, and then follow steps 2, 3 as the method 1 above.

- *For high magnification close-ups, because of the extremely short working distance, please be careful not to touch the subject.*
- *Magnification refers to the proportional relationship between the size of an image recorded on a sensor or film and the actual size of the subject.*

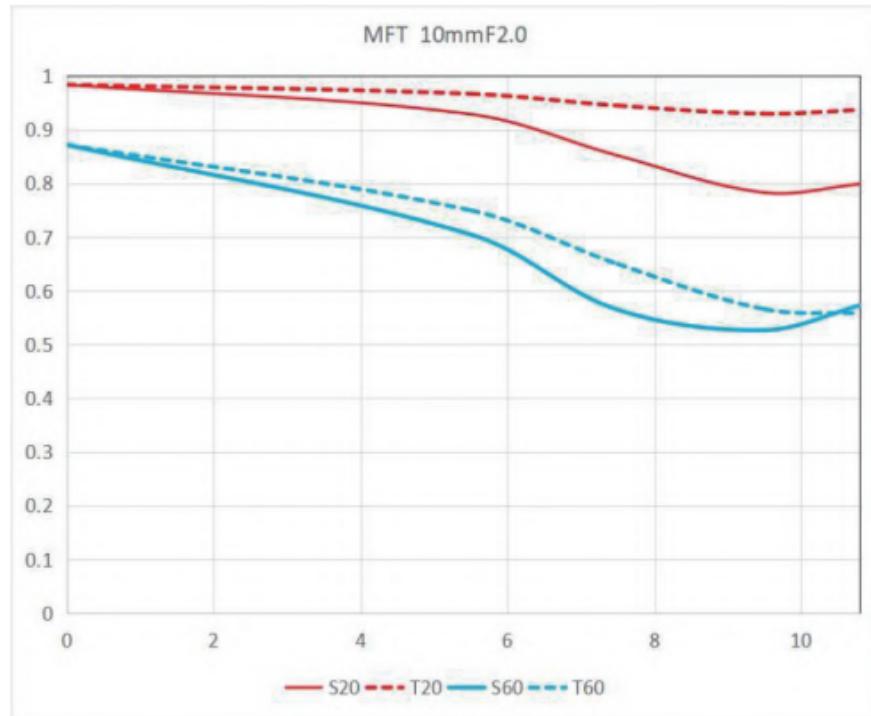
## SPECIFICATIONS

MFT 10mm F2.0 C&D-Dreamer	
Lens No.	MFT 10mm F2.0 C&D-Dreamer
Format	M43
Focal Distance	10mm
Max. Aperture	F2.0
Angle of View	96°
Lens Construction	11 elements/ 7 groups ( ED glass x3, aspherical glass x2)
Aperture Blades	5 (auto aperture)
Min. Aperture	F22
Min. Shooting Distance	12cm
Max. Magnification	0.15x
Focusing	MF
Filter Thread	Φ46mm
Dimensions	Φ53mm*41mm
Weight	125g
Mounts	M43

## LENS CONSTRUCTION



- Extra-low Dispersion Glass
- Aspherical Glass



LAOWA