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LAOWA MFT 50mm T2.9 Macro 2:1 Cine

使用手册

Instruction Manual

LAOWA 老蛙

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to the final interpretation of the *Instruction Manual*.



前言

真诚地感谢您选购 LAOWA MFT 50mm T2.9 Macro 2:1 Cine电影微距镜头。此镜头是MFT画幅系统镜头,支持微距模式下最大2倍放大,并且拥有近似于APO的色散控制能力。从无穷远到微距,都提供了极佳的成像画质,为用户提供了稳定可靠的支持。可拍摄到微小的物体,如小型昆虫、珠宝首饰等。



 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

- 1、LAOWA MFT 50mm T2.9 Macro 2:1 Cine区别于传统的微距镜头,此款镜头在M43画幅系统的高性能成像基础上,无穷远到微距都可以拍出高解析画质的照片,并且微距模式下达到了令人惊叹的2倍物体放大,近似于APO的色散控制,在2倍放大倍率下,也没有明显的色散。更高的放大倍率,使用户拥有更多的创作空间。
- 2、镜头采取迷你化设计,大小仅有 $\phi 58\text{mm} \times 83\text{mm}$,重量289g,搭配在M43画幅机身上使用,体积小,轻便携带。
- 3、采用电影镜头工业设计,光圈、对焦手轮均为0.8mm标准齿轮模数,兼容各类电影设备齿轮。
- 4、内部有10组14枚镜片,包含3枚异常分散玻璃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。

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



■ 镜头安装

取下镜头后盖。将镜头卡口上的安装标记⑥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。

■ 对焦

- 此款镜头是全手动对焦镜头，合焦时，缓慢旋转对焦齿轮②，直至合焦。不要过猛过快地旋转对焦齿轮，避免用力过度损坏对焦环部件。镜头上的距离刻度③与景深刻度④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

- 光圈齿轮⑤在镜身上调节,根据拍摄环境和与所需要的景深,转动光圈齿轮来选择对应的光圈。
由于此镜头无CPU数据,无法记录光圈参数。

■ 微距摄影模式

- 最大放大倍率为2:1倍,最近对焦距离为13.5cm,从被拍物体镜头第一片玻璃的最近距离约8cm。

■ 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。

景深表

FNo.	无限远		0.25倍		0.5倍	
	back	front	back	front	back	front
2.8	INF	54888.6	292.1	290.13	191.1	190.51
4	INF	39824.86	292.21	290.03	191.19	190.42
5.6	INF	28193.04	292.66	289.59	191.35	190.26
8	INF	19968.1	293.31	288.96	191.58	190.04
11	INF	14152.19	294.24	288.09	191.91	189.73
16	INF	10039.72	295.57	286.86	192.37	189.3

FNo.	0.75倍		1倍		1.25倍	
	back	front	back	front	back	front
2.8	159.9	159.6	146.12	145.92	139.27	139.13
4	159.92	159.58	146.15	145.88	139.29	139.11
5.6	159.99	159.51	146.21	145.83	139.32	139.08
8	160.09	159.41	146.29	145.75	139.38	139.03
11	160.24	159.27	146.41	145.64	139.45	138.96
16	160.44	159.08	146.57	145.48	139.55	138.86

FNo.	1.5倍		1.75倍		2倍	
	back	front	back	front	back	front
2.8	135.89	135.79	134.49	134.4	134.27	134.2
4	135.9	135.78	134.49	134.4	134.28	134.18
5.6	135.93	135.75	134.51	134.38	134.31	134.16
8	135.96	135.72	134.53	134.36	134.34	134.13
11	136.01	135.67	134.57	134.32	134.38	134.09
16	136.08	135.6	134.63	134.27	134.53	133.95

规格表

LAOWA MFT 50mm T2.9 Macro 2:1 Cine	
画幅	M4/3
焦点距离	50mm
光圈范围	2.9-22
视场角	24°
镜头结构	10组14片(3枚ED镜片)
光阑叶片	7片
最近摄影距离(物像距离)	13.5cm
最大放大倍率	2倍
合焦驱动方式	手动(MF)
滤镜尺寸	Φ49mm
镜头尺寸	约Φ58mm*83mm
重量	约289g(含前后盖)
卡口	M4/3



Preface

Sincerely thank you for purchasing LAOWA MFT 50 mm T2.9 Macro 2: 1 Cine cinema macro lens. This lens is for the MFT frame system. It supports up to 2× magnification under the macro mode. And it has a dispersion control capability that is similar to that of APO. Users are provided with excellent imaging quality is provided from infinity to macro, as well as stable and reliable support. With it, tiny objects can be captured, such as small insects, jewelry, etc.



⚠ *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.*

Main features

- 1、LAOWA MFT 50 mm T2.9 Macro 2.1 Cine is different from traditional macro lenses. Based on the high-performance imaging of the M43 frame system, with this lens, high-resolution images can be taken from infinity to macro, and amazing 2× object magnification is achieved under the macro mode. With the the dispersion control that is similar to that of APO, there is no obvious dispersion even under 2× magnification. Higher magnification provides users with more creative space.
- 2、The lens adopts a miniaturized design: the size is only $\phi 58 \text{ mm} \times 83 \text{ mm}$, and the weight is 289 g. It is used on a matching M43 frame body, and is compact in size and light for carrying.
- 3、The industrial design for cinema lenses is adopted, with the 0.8 mm standard modulus of gear for both the aperture and focusing handwheel, which are compatible with all kinds of cinema equipment gears.
- 4、There are 10 groups and 14 pieces of lens pieces inside, including 3 pieces of anomalous dispersion glass structures, which bring about high-quality images. There is a mechanical structure fully made of metal materials on the outside to ensure the durability of the lens for long-term use.

Matters needing attention

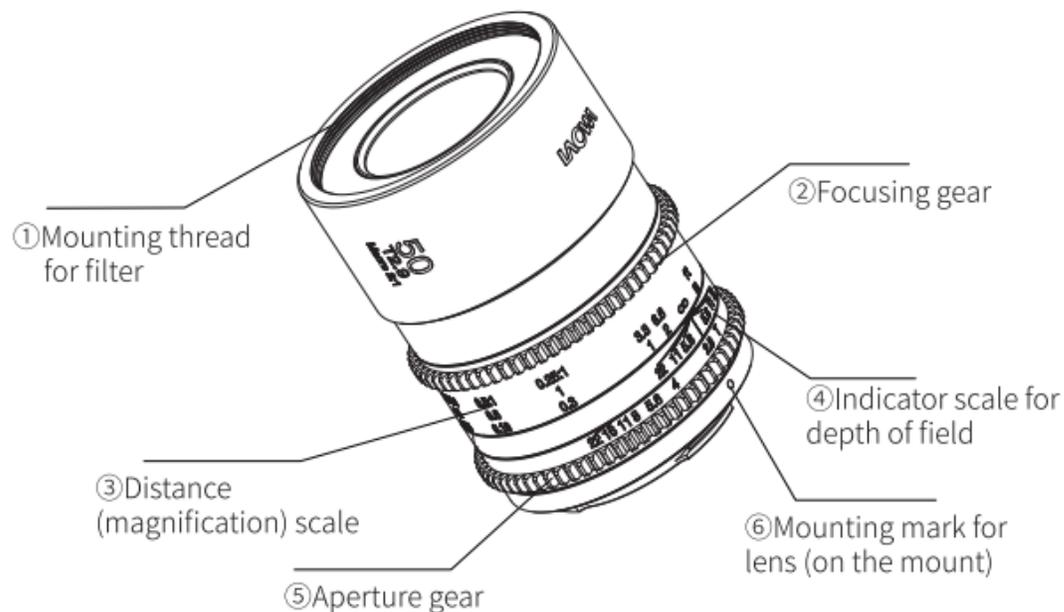
■ Safety Precautions

- Do not disassemble, alter or modify the lens by yourself. When the lens is damaged due to external forces, do not touch the exposed part or the edge of the place of damage.
- Do not place the lens under direct sunlight, in a locked vehicle, or at other high-temperature places, or otherwise excessively high temperature will cause the lens and other parts to stretch and deform.
- When not using the lens, put the front lens cover the lens or place the lens at a place where there is no direct sunlight. The light reflected by the convex lens may collect on nearby objects and cause a fire.
- When shooting against the light, do not place the sun at the center of the frame, and sufficiently avoid the avoid from the angle of picture, or otherwise the sunlight will collect inside the camera and cause fire or burns to the eye.
- When shooting with the camera's built-in flash lamp, since the lens itself will block the light and result in vignetting, it is recommended that you use an external flash lamp for shooting.

■ Precautions for long-term use and maintenance

- Avoid touching the surface of the lens. Use special lens cloth or air blowing to remove dust on the surface of the lens. When the lens is not in use, put the cover it.
- When cleaning the lens with lens paper or lens cloth, wipe the dirt and fingerprints on the lens from the middle to the outside in a spiral manner.
- When the lens is suddenly transferred from a cold environment to a warm environment, water mist will be condensed on external and internal pieces of the lens, so moisture protection measures should be taken when the lens is being transferred.

Nomenclature



Instructions for use

■ Lens installation

Remove the rear lens cap. Align the Mounting Mark ⑥ on the lens mount with the corresponding mark on the seat, then insert the lens into the seat on camera body, and turn the lens in the mounting direction of the purchased mount till the lens is locked with a click. Please do not use excessive force during installation to avoid damage to the mount.

■ Lens removal

After turning off the camera, press and hold the lens release button on the camera, turn the lens in the direction opposite to the mounting direction of the purchased mount, and then pull the lens out of the seat.

After mounting the lens, try turning the lens to confirm whether it has been fixed on the camera.

■ Focusing

This lens is a fully-manual-focus lens. When focus is achieved, slowly turn the Focusing Gear ② till focus is achieved.

Do not turn the focusing gear too fast or too hard to avoid damaging the focusing ring component with excessive force.

The Distance Scale ③ and Scale for Depth of Field ④ on the lens are for guidance purposes. The actual focus and the depth of field may be slightly different from the scale marking.

If very precise focus is needed, please achieve focus using the maximum aperture with the camera position fixed, and then turn to the required aperture value after the focus is achieved.

For the convenience of focusing, please turn on the peaking focus function in the camera (depending on the camera function used).

■ How to use the aperture

The Aperture Gear ⑤ is adjusted on the lens. Turn the aperture ring to select the corresponding aperture according to the shooting environment and the required depth of field.

As this lens is with no CPU data, it is temporarily impossible for the lens to record aperture parameters.

■ Macrophotography mode

The maximum magnification is 2:1 times. The minimum focusing distance is 13.5 cm. And the minimum distance from the object shot to the first glass piece of the lens is about 8 cm.

■ Focusing method I

Focusing after the magnification is determined in advance.

- ① Determine the magnification in advance, then turn the focusing ring to the desired magnification scale mark.
- ② Observe through the viewfinder or by turning on the Live View function, and pan the camera back and forth to roughly focus till a suitable focal length is determined.
- ③ Turn the focus ring to accurately focus on the object.

■ Focusing method II

Frame the scene to be shot first; while observing through the viewfinder or by turning on the Live View function, turn the focusing ring; after the scene to be shot is framed, proceed to Steps ② and ③ of Method I. When shooting with high magnification, the working distance from the lens is very short and it is easy for the lens to touch the object. Please be careful when shooting.

Magnification refers to the ratio between the size of the image recorded on the sensor or film and the actual size of the object shot.

■ Table of depth of field (missing)

FNo.	infinity		0.25		0.5	
	back	front	back	front	back	front
2.8	INF	54888.6	292.1	290.13	191.1	190.51
4	INF	39824.86	292.21	290.03	191.19	190.42
5.6	INF	28193.04	292.66	289.59	191.35	190.26
8	INF	19968.1	293.31	288.96	191.58	190.04
11	INF	14152.19	294.24	288.09	191.91	189.73
16	INF	10039.72	295.57	286.86	192.37	189.3

FNo.	0.75		1		1.25	
	back	front	back	front	back	front
2.8	159.9	159.6	146.12	145.92	139.27	139.13
4	159.92	159.58	146.15	145.88	139.29	139.11
5.6	159.99	159.51	146.21	145.83	139.32	139.08
8	160.09	159.41	146.29	145.75	139.38	139.03
11	160.24	159.27	146.41	145.64	139.45	138.96
16	160.44	159.08	146.57	145.48	139.55	138.86

FNo.	1.5		1.75		2	
	back	front	back	front	back	front
2.8	135.89	135.79	134.49	134.4	134.27	134.2
4	135.9	135.78	134.49	134.4	134.28	134.18
5.6	135.93	135.75	134.51	134.38	134.31	134.16
8	135.96	135.72	134.53	134.36	134.34	134.13
11	136.01	135.67	134.57	134.32	134.38	134.09
16	136.08	135.6	134.63	134.27	134.53	133.95

Specifications

LAOWA MFT 50 mm T2.9 Macro 2.1 Cine	
Format	M4/3
Focal distance	50mm
Aperture range	2.9-22
Angle of field of view	24°
Lens structure	10 groups and 14 pieces (3 ED lens pieces)
Aperture Blades	7 pieces
Min. Shooting Distance	13.5cm
Max. Magnification	2 times
Focusing	Manual (MF)
Filter Thread	Φ49mm
Dimensions	About φ58 mm × 83 mm
Weight	About 289 g (including front and rear covers)
Mounts	M4/3

