LAOWA FF II 58mm F2.8 CA-Dreamer Macro 2X

使用手册
Instruction Manual

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安徽长庚光学科技有限公司

www.laowalens.com

服务热线：400-066-1316
Email: sales@laowalens.com
电话Tel：(+86) 551-69107990
地址：合肥市庐阳区天水路与太和路交口庐阳中科大校友创新园5号楼
Add：Building 5, USTC Alumni Innovation Park, Crossing of Tianshui and Taihe Road, Luyang District, Hefei City, Anhui Province, China

LAOWA 老蛙

前言

真诚地感谢您选购 LAOWA FFⅡ 58mm F2.8 CA-Dreamer Macro 2X全画幅微距镜头。支持无限远至2倍放大的拍摄范围，拥有“复消色差APO”技术，可最大限度消除色散。无论是微距还是无限远，在对焦范围内都能获得极佳的成像画质，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 FFⅡ 58mm F2.8 CA-Dreamer Macro 2X区别于传统的微距镜头，此款镜头在全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，多枚ED镜片的加持，让此镜头在两倍放大成像下，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、采用13片光阑叶片设计，让光圈更圆，可使点光源呈现出接近圆形的虚化效果，给予了焦外美丽且柔和的虚化。
- 3、内部有11组14枚镜片，包含三枚ED超低色散镜片和三枚超高折射率镜片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

注意事项

⚠ 安全注意事项

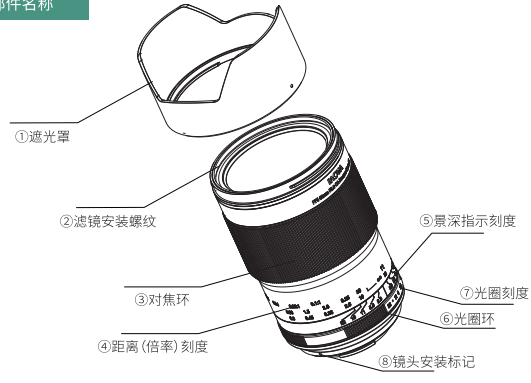
- 切勿自行拆解、修改或改装。当产品由于外力原因破损，切勿触碰外露部分或破损边缘处。
- 切勿放置于直射阳光下、封闭车辆中或其余高温处，否则过高的温度会使镜片和其他部件产生伸缩变形。
- 不使用镜头时，请将镜头前盖盖上或置于没有阳光照射处。凸透镜反射出的光线可能会聚集在附近物体上，导致发生火灾。
- 在逆光拍摄时，切勿将太阳置于画面中心，应该使太阳充分偏离画角，否则阳光会在相机内部聚集并导致火灾或灼伤眼睛。
- 在使用相机内置闪光灯拍摄时，由于镜头本身会遮挡光线而产生渐晕，因此建议您使用外设闪光灯拍摄。
- 本镜头为35mm全画幅系统镜头，装在APS-C格式照相机上时，镜头画面视角将有所裁切。

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⑧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。
佳能口含电子芯片，可通过机身调节光圈参数并记录镜头信息。其余卡口为非CPU镜头，无法提供数据信息，所以请在相机内开启“无镜头释放快门”功能。

镜头拆卸

将遮光罩上的安装标记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，或安装微距专用环形闪光灯。

对焦

此款镜头是全手动对焦镜头，合焦时，缓慢旋转对焦环③，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④与景深刻度⑤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

- 光圈在镜头上调节，根据拍摄环境和与所需要的景深，转动光圈环⑥来选择对应的光圈。
由于此镜头无CPU数据，所以暂时无法记录光圈参数。
由于光圈为手动调节，无法较好的使用快门优先模式，但可以使用光圈优先模式(测光准确度视相机型号而定)。

  尼康卡口若要实现较为准确的自动测光功能，必须要在机身的非CPU菜单下设定最大光圈和焦距。然后将需要的光圈，在镜头上预先设定，就可以实现较为准确的自动测光。

微距摄影模式

- 最大放大倍率为2: 1倍，最近对焦距离为18.3cm，从被拍物体镜头第一片玻璃的最近距离约7cm。

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。
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。

景深表

	OBJD = INF		0.25x		0.5x		0.75x	
FNo.	back	front	back	front	back	front	back	front
2.8	INF	35389.36	354	350.19	242.02	240.85	205.72	205.13
4.0	INF	25856.5	354.74	349.48	242.24	240.63	205.83	205.02
5.6	INF	18322.75	355.82	348.46	242.58	240.31	206	204.85
8.0	INF	12995.58	357.47	346.94	243.08	239.83	206.25	204.61
11.0	INF	9228.7	359.57	345.08	243.71	239.25	206.57	204.31
16.0	INF	6565.12	363.17	342.03	244.79	238.28	207.12	203.82
22.0	INF	4681.68	367.63	338.5	246.11	237.15	207.78	203.24

	OBJD = INF		1x		1.25x		1.5x	
FNo.	back	front	back	front	back	front	back	front
2.8	INF	35389.36	190.38	190.01	184.04	183.77	181.91	181.71
4.0	INF	25856.5	190.45	189.94	184.09	183.72	181.95	181.67
5.6	INF	18322.75	190.56	189.83	184.17	183.64	182	181.61
8.0	INF	12995.58	190.72	189.68	184.28	183.53	182.09	181.53
11.0	INF	9228.7	190.92	189.49	184.42	183.4	182.2	181.43
16.0	INF	6565.12	191.26	189.18	184.67	183.17	182.38	181.26
22.0	INF	4681.68	191.67	188.81	184.97	182.91	182.6	181.06

	OBJD = INF		1.75x		2x	
FNo.	back	front	back	front	back	front
2.8	INF	35389.36	182.45	182.28	183.86	183.72
4.0	INF	25856.5	182.48	182.25	183.89	183.69
5.6	INF	18322.75	182.53	182.21	183.93	183.65
8.0	INF	12995.58	182.6	182.14	183.99	183.6
11.0	INF	9228.7	182.68	182.06	184.07	183.52
16.0	INF	6565.12	182.83	181.92	184.2	183.4
22.0	INF	4681.68	183.02	181.75	184.36	183.26

规格表

LAOWA FFⅡ 58mm F2.8 CA-Dreamer Macro 2X	
画幅	全画幅
焦点距离	58mm
光圈范围	F2.8-22
视场角	40.9°
镜头结构	11组14枚（3枚ED镜片，3枚超高折射率镜片）
光阑叶片	13片
最近摄影距离（物像距离）	183mm
最大放大倍率	2倍
合焦驱动方式	手动（MF）
滤镜尺寸	Φ67mm
镜头尺寸	Φ74mm*117mm
重量	约595g(含前后盖)
卡口	E/R/Z/L

Preface

Sincerely thank you for purchasing the LAOWA FFII 58 mm F2.8 CA-Dreamer Macro 2× of full-frame macro lens. It supports a shooting range from infinity to 2 times magnification. It is with the "apochromatic APO" technology, so that dispersion can be minimized. Whether macro or infinity, excellent imaging quality can be obtained within the range of focus, providing users with 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 FFII 58 mm F2.8 CA-Dreamer Macro 2× is different from traditional macro lenses. Based on the high-performance imaging of the full-frame system, with this lens, high-resolution pictures can be taken from infinity to macro; and under the macro mode, an amazing 2× object magnification is achieved. With the support of multiple ED lens pieces, there is no obvious dispersion in imaging with this lens even under 2× magnification. Higher magnification provides users with more creative space.

- 2、The design with 13 diaphragm blades makes the aperture more round, which can make the point light source present a nearly circular blur effect, giving a beautiful and soft blur out of the focus.

- 3、There are 11 groups and 14 pieces of lens pieces inside, including three ED ultra-low dispersion lens pieces and three lens pieces with ultra-high refractive indices, which bring about high-quality imaging. 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

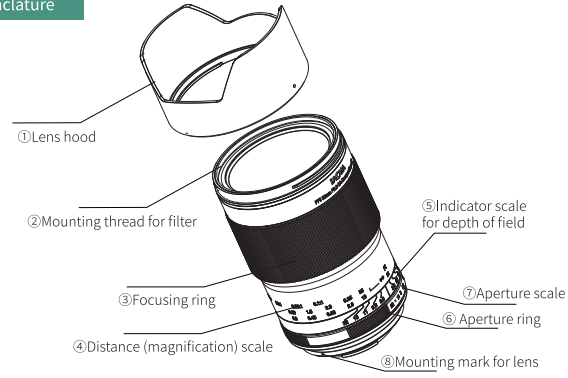
⚠ Safety Precautions

- 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.
- This lens is of a 35 mm full-frame system. When mounted on an APS-C format camera, the angle of view of the lens will be cropped somewhat.

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



Lens installation

Remove the back cover of the lens. Align the Mounting Mark ⑧ 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 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.
The Canon mount contains an electronic chip, and the aperture parameters can be adjusted through the camera body and lens information can be recorded thusly. The other mounts are on non-CPU lenses and cannot provide data information, so please turn on the "release shutter without lens" function in the camera.

Mounting and removing of lens hood

Align the mounting mark on the lens hood with the hood mounting point on the lens, and then turn the hood clockwise till the end is locked tight.
To remove the hood, just back it out in the opposite direction.
The installation of the lens hood can reduce hard light and protect the front components of the lens.
You may no longer be able to use the lens hood after installing certain filters.
If the lens hood is not used, it can be installed on the lens in the reverse direction.
When shooting with the flash lamp, the lens hood may block the light and cause vignetting in the image. Therefore, when using a camera flash lamp or an external flash lamp with light of insufficient brightness, please remove the hood before shooting, or install a special ring flash lamp for macrophotograph.

Focusing

This lens is a fully-manual-focus lens. When focus is achieved, slowly turn the Focusing Ring ③ till focus is achieved.

Do not turn the focusing ring too hard or too fast to avoid damaging the focus ring components with excessive force.
The Distance Scale ④ and Scale for Depth of Field ⑤ 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 is adjusted on the lens. Turn the Aperture Ring ⑥ 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.
Since the aperture is adjusted manually, it is impossible for shutter priority mode to be put in relatively good use, but the aperture priority mode can be used (the metering accuracy depends on the camera model)

If relatively accurate automatic metering function is to be achieved with the Nikon mount, the maximum aperture and focal length must be set under the non-CPU menu on the camera body. Then set the aperture on the lens as required in advance to achieve more accurate automatic metering.

Macrophotography mode

The maximum magnification is 2:1 times. The minimum focusing distance is 18.3 cm. And the minimum distance from the object shot to the first glass piece of the lens is about 7 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 ringing 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

	OBJD = INF		0.25x		0.5x		0.75x	
FNo.	back	front	back	front	back	front	back	front
2.8	INF	35389.36	354	350.19	242.02	240.85	205.72	205.13
4.0	INF	25856.5	354.74	349.48	242.24	240.63	205.83	205.02
5.6	INF	18322.75	355.82	348.46	242.58	240.31	206	204.85
8.0	INF	12995.58	357.47	346.94	243.08	239.83	206.25	204.61
11.0	INF	9228.7	359.57	345.08	243.71	239.25	206.57	204.31
16.0	INF	6565.12	363.17	342.03	244.79	238.28	207.12	203.82
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	OBJD = INF		1x		1.25x		1.5x	
FNo.	back	front	back	front	back	front	back	front
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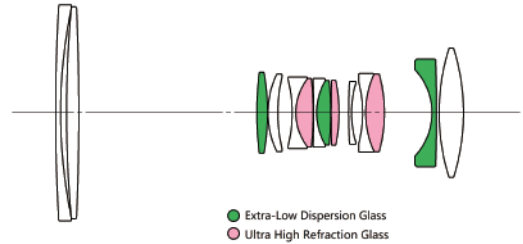
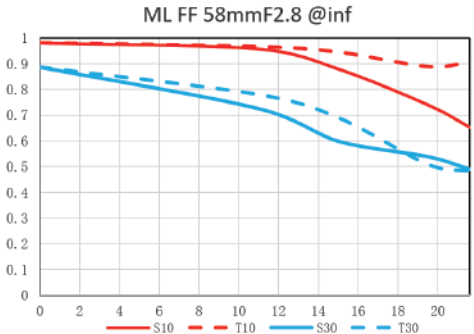
8.0	INF	12995.58	190.72	189.68	184.28	183.53	182.09	181.53
11.0	INF	9228.7	190.92	189.49	184.42	183.4	182.2	181.43
16.0	INF	6565.12	191.26	189.18	184.67	183.17	182.38	181.26
22.0	INF	4681.68	191.67	188.81	184.97	182.91	182.6	181.06

	OBJD = INF		1.75x		2x	
FNo.	back	front	back	front	back	front
2.8	INF	35389.36	182.45	182.28	183.86	183.72
4.0	INF	25856.5	182.48	182.25	183.89	183.69
5.6	INF	18322.75	182.53	182.21	183.93	183.65
8.0	INF	12995.58	182.6	182.14	183.99	183.6
11.0	INF	9228.7	182.68	182.06	184.07	183.52
16.0	INF	6565.12	182.83	181.92	184.2	183.4
22.0	INF	4681.68	183.02	181.75	184.36	183.26

Specifications

LAOWA FFⅡ 58 mm F2.8 CA-Dreamer Macro 2×	
Format	full frame
Focal distance	58 mm
Aperture range	F2.8-22
Angle of field of view	40.9°
Lens structure	11 groups and 14 pieces (3 ED lens pieces, 3 lens pieces with ultra-high refractive indices)
Aperture Blades	13 pieces
Min. Shooting Distance	183mm
Max. Magnification	2 times
Focus Mode	Manual (MF)
Filter Thread	Φ67mm
Dimensions	Φ74 mm × 117 mm
Weight	About 595 g (including front and rear covers)
Mounts	E/R/Z/L

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