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LAOWA FF 100mm F2.8

CA-Dreamer **Macro 2X**

使用手册

Instruction Manual

LAOWA 老蛙

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Please note we reserve the right to change our product's
design and specifications at any time without notice and
to the final interpretation of the *Instruction Manual*.



Introduction

Thank you for purchasing LAOWA 老蛙 FF 100mm F2.8 CA-Dreamer Macro 2X. Featuring max. 2X magnification and APO technology, the lens is dedicated to Full Frame system cameras. It is designed to deliver stunning image quality ranging from macro to infinity, which greatly supports you to capture tiny subjects such as small insects and jewelries etc.



△ Prior to use, please read this instruction manual carefully to ensure proper use. Keep the Instruction Manual in hand and refer to it whenever needed. If you are still unable to solve the problem by reading the manual, please contact our after-sales service for further technical support.

FEATURES

- Unlike common macro lenses, LAOWA老蛙 FF 100mm F2.8 CA-Dreamer Macro 2X offers superior performance that can focus from infinity to 2X, with superb chromatic aberration correction resulted from its APO technology. High magnification helps generate more creative works.
- The Canon and Sony versions of the lens feature 13-blade circular aperture, which contributes to producing soft round-shaped bokeh by blurring the point light source.
*Nikon & Pentax versions featuring 7-blade aperture
- The lens is comprised of 12 elements in 10 groups with 2 pieces of ED glass included, which contribute to creating outstanding imaging. All-metal construction also ensures long-time durability.
- Since canon versions are equipped with auto aperture and internal electric motor, aperture can be set on the camera with lens data being recorded. It effectively enables photographers to get focus wide open when shooting macro.

PERCAUTIONS

⚠ Safety Precautions

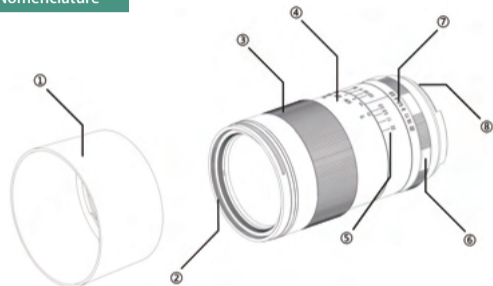
- Do not disassemble, modify the lens by yourself. Do not touch the internal parts that become exposed as the result of external force.
- Do not leave the lens where it will be exposed to high temperatures, such as in direct sunlight and an enclosed vehicle. Excessive heat may deform the glass elements and other parts of the lens.
- Whether it is attached to a 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 rays, which could cause a fire.
- Do not place the sun in the frame center when shooting with backlight. Sunlight focused into the camera when the sun is in or close to the frame could cause a fire or damage to your eyes.
- The lens itself may block the light and cause light fall-off when using the camera's built-in flash, so external flash will be recommended here.
- Designed for Full Frame cameras, the lens' angle of view will be narrowed when mounted on APS-C format ones.

PERCAUTIONS

■ Maintenance Precautions

- Avoid touching the lens surface. Remove the dust on the lens surface with a lens cloth or a blower. Keep the lens cap attached.
- Using a circular motion with a lens tissue or cleaning cloth, gently remove oil, fingerprints, and grime from the lens surface, working from the center outward.
- If the lens is taken from a cold environment into a warm one, condensation may develop on the lens surface and internal parts. To prevent condensation in this case, please take measures to protect against moisture before moving the lens.

Nomenclature



(尼康口版本)

- ① Lens hood ② Filter thread ③ Focus ring ④ Distance(Magnification) scale
⑤ Depth-of-field scale ⑥ Aperture ring(Canon version: N/A)
⑦ Aperture scale(Canon version: N/A) ⑧ Lens mounting index

INSTRUCTIONS

■ Mounting the Lens

- Remove the lens rear cap. Align the Lens mounting index (8) with the mark on the camera mount, then insert the lens into the camera mount and turn the lens in the direction for your lens version until it clicks into position.
- Gently rotate the lens to make sure it is properly attached to the camera.

■ Detaching the Lens

Turn the camera off. Press the lens release button. Turn the lens in the direction opposite to that for attaching and pull it out.

- *Aperture can be set on the camera with lens data being recorded in that canon versions of the lens feature electronic chips. As for other mounts, please set [Release shutter w/o lens] to [enable] on the camera because Non-CPU lenses cannot provide actual EXIF data.*

INSTRUCTIONS

■ Attaching and Removing the Lens Hood

- Line up the Lens hood mounting index with the mounting dot on the lens, and turn the lens hood clockwise until it clicks.
- Turn the lens hood in the direction opposite to that for attaching to remove it.
- The lens hood helps reduce lens flare and protects the lens front element from damage.
- Lens hood may be unavailable when using some certain filters.
- Place the lens hood backwards over the lens when not using it.
- When shooting with a flash, the lens hood may block light which may cause vignetting. So when shooting with camera's built-in flash or with the external flash unit that is not high enough, please remove the hood first before shooting. Selecting dedicated macro ring flash is also a great option.

■ Focusing

- As the lens is a manual focus lens, please slowly turn the Focus ring (3) to get focus.
- Gently turn the focus ring to prevent the focus mechanism from damage.
- The Distance scale(4) & Depth-of-field scale(5) are simply for instructional purpose. Actual focus and DOF may slightly differ from those scale indications.
- To get precise focus, make sure camera position is fixed, focus on the subjects wide open. Get focus first and then set the desired aperture by turning the aperture ring.
- Use [Focus Peaking] makes it easier to get focus. (Note that the function depends on camera models.)

INSTRUCTIONS

■ Setting the Aperture(unavailable to Canon version)

- Turn the Aperture ring(6) on the lens to choose the corresponding aperture according to the shooting situation and desired depth-of-field.
- The lens cannot provide actual aperture value of the lens to the camera since it is a manual focus lens.
- Aperture-priority is a better option than Shutter-priority for the lens because of its manual aperture. (Note that metering precision depends on the camera models.)

* Canon version lenses allow you to set the desired aperture on the cameras.

■ Macro Shooting

The lens features 2X magnification, 24.7cm min. focusing distance and 13cm min. working distance.

- *For the Nikon version lenses, select [Non-CPU Lens Data], set the widest aperture and focal length, and preset the aperture you desire on the lens to obtain precise auto exposure.*

INSTRUCTIONS

■ Focusing Tips

Method 1 Magnification Priority

- Set the magnification first, and then turn the focus ring to the desired magnification marked on the lens.
- Look through the viewfinder or enable [Live View], and roughly focus to obtain proper focus by moving the camera back and forth.
- Turn the focus ring to achieve precise focus.

Method 2 Framing Priority

Frame first. Turn the focus ring while you are looking through viewfinder or enable [Live View], and then follow the step 2, 3 as the method 1 above.

- *For high magnification close-ups, please be careful not to touch the subjects in that the lens' working distance is extremely short.*
- *Magnification is the relationship between of the size of subject's projection on the image sensor and that of the subject in reality.*

Depth of Field Table

Magnificaion	INF		0.5X		1.0X		1.5X		2.0X	
	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front
f/2.8	INF	98418.02	347.65	346.89	265.78	265.6	250.72	250.64	248.04	247.99
f/4	INF	71464.84	347.79	346.74	265.81	265.56	250.74	250.62	248.05	247.98
f/5.6	INF	50585.88	348.01	346.53	265.86	265.51	250.76	250.6	248.07	247.97
f/8	INF	35822.23	348.32	346.23	265.93	265.44	250.8	250.56	248.09	247.95
f/11	INF	25382.76	348.76	345.8	266.04	265.34	250.85	250.52	248.12	247.92
f/16	INF	18000.93	349.39	345.2	266.19	265.19	250.91	250.45	248.16	247.88
f/22	INF	12781.2	350.28	344.36	266.39	264.99	251.01	250.35	248.21	247.83

Distance between the subject and image sensor,unit: mm

Specifications

LAOWA老蛙 FF 100mm F2.8 CA-Dreamer Macro 2X	
Focal Length	100mm
Aperture	F2.8
Field of View	24.4°
Lens Construction	12 elements/ 10 groups (ED glass x2)
Aperture Blades	13 (Nikon versions featuring 7, Canon version featuring 9)
Min. Shooting Distance	24.7cm
Max. Magnification	2
Focusing	MF
Filter Thread	67mm
Dimensions	72X125mm (Filter and lens hood excluded)
Weight	638g
Mounts	Canon EF, Nikon F, PK, Sony E

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老蛙镜头

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