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## LAOWA MFT 4mm F2.8 210° CIRCULAR FISHEYE

使用手册

Instruction Manual

**LAOWA 老蛙**

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**老蛙镜头,为乐趣而生**



## PREFACE

Thank you very much for purchasing Laowa 4mm F2.8 fully manual circular Fisheye lens, which is designed for M4/3 system cameras. The lens produces a 210° circular angle of view, delivering more creative shots and happier shooting experience.



*△ For operational safety, please read this instruction manual thoroughly and place the manual where it is easy to obtain when needed. Please contact our after-sales service for technical support in case of any unsolvable problems.*

## FEATURES

- 4mm F2.8 Fisheye offers 210° circular and wide angle of view, for creative photography.
- Two photos are enough to take a 360° panoramic photograph, giving you a different shooting experience.
- For easier usage, the thumb lever is attached to the focus ring, making it easier for you to operate with one hand during shooting.
- The lens is small in size and only about 135g in weight, greatly saving space and reducing the users' burden.
- Multi-layer low-reflective coatings are applied to each glass element to eliminate ghosting and flare. The Frog Eye Water-repellent Coating "FEC", is applied to the front element of the lens, protecting it from water droplets and smudges.

## PERCAUTIONS

### ⚠ Handling Precautions

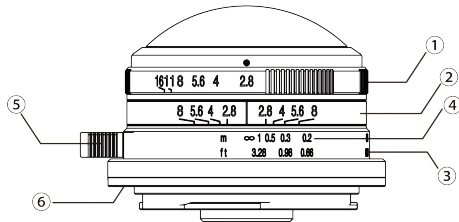
- Do not disassemble or modify the lens by yourself. If it is damaged by external force, do not touch any exposed part of the lens.
- Don't expose the lens to excessive heat such as direct sunshine or a parked car as this may deform the lens elements and other mechanism.
- Close the front cap of the lens or prevent the lens from exposing to direct sunlight when it is not in use. The light reflected by the convex lens can cause fire.
- Do not place the sun in the center of the frame when shooting with backlight, sunlight focused on the camera when the sun is in or close to the frame could cause a fire or damage to your eyes.
- When shooting with the camera's built-in flash, the lens itself may block the light and cause vignetting, an external flash is recommended in such case.

## PERCAUTIONS

### ■ Maintenance Precautions

- Avoid touching the lens surface and apply lens cloth or air blow to remove dust from it. Close the lens cap when it is not in use.
- Gently remove any dirt and fingerprints by rubbing the lens surface in spiral motions (from center to the periphery) with lens tissue or cleaning cloth.
- When the lens is taken from a cold environment into a warm one, condensation may develop on the surface and internal parts of the lens, so moisture protection should be taken when transferring.
- Because of the protruding front and rear elements, make sure the lens is placed horizontally with the lens cap on.

## Nomenclature



① Aperture ring

③ Focusing ring

⑤ Thumb lever

② Depth-of-field scale

④ Distance scale

⑥ Lens mounting mark

## Direction for use

### ■ Mounting the Lens

Remove the rear lens cap. Align the Mounting index⑥ on your lens with the matching mounting index mark on the camera. Insert the lens into the camera and turn the lens in the attachment direction until it locks with a "click". Please do not push too hard during installation in case of any damage to the Mount.

### ■ Detaching the Lens

Turn the camera off and press the lens release button on the camera, turn the lens in the direction opposite to that for attaching, and pull it out.

- *Gently turn the lens back and forth to ensure that the lens is fully attached to the camera.*
- *Since this is a non-CPU lens with no data information provided, the "lens-free shutter release" function in the camera has to be toggled on.*

## INSTRUCTIONS

### ■ Focusing Instructions

- Focus by moving the thumb lever⑤ as it is a manual focus only lens.
- Do not apply too much force when turning the focusing ring or moving it too quickly in case of any damage.
- The distance scale④ and the depth-of-field scale② on the lens are for instructional purpose. Actual focus and depth-of-field may be slightly different from the scale.
- For the need of extremely precise focus, please fix the camera position and focus with a wide-open aperture. Get focus first and then set the required aperture.
- To facilitate focusing, please turn on [Focus peaking] in the camera setting (Depending on the function of your camera).

## INSTRUCTIONS

### ■ Aperture Instructions

- Turn the aperture ring① to choose the corresponding aperture according to the shooting situation and desired depth-of-field.
- As a Non-CPU lens, the camera cannot record the actual aperture value.
- Since this is a manual lens, aperture priority mode is recommended to be used. (Metering accuracy will depend on the camera)

## SPECIFICATIONS

LAOWA (老蛙) MFT 4mm f2.8 210° Circular Fisheye	
Focal Length	4mm
Max. Aperture	2.8
Angle of view	210°
Elements/Groups	7 /6
Aperture Blades	7
Min. Aperture	22
Min. Shooting Distance	80mm
Min. Work Distance	25mm
Max. Magnification	0.11X
Focusing	Manual Focus (MF)
Size(length/diameter)	25.5mm×Φ45.2mm
Weight	About 135g