

Canon

EF-M28mm f/3.5 MACRO IS STM



IMAGE STABILIZER

ENG

Instructions

Thank you for purchasing a Canon product.

The Canon EF-M28mm f/3.5 MACRO IS STM is a macro lens for use on Canon EOS M Series cameras. It is equipped with an Image Stabilizer capable of shooting portraits, scenery and other normal shots, as well as close-up (macro) shots with a magnification ratio of 1.2x.

- “IS” stands for Image Stabilizer.
- “STM” stands for stepping motor.

Camera Firmware

- When using this lens, please check the Canon website for the latest camera firmware. If the camera's firmware is not the latest version, be sure to update to the latest firmware.
- For details on updating firmware, please check the Canon website.

Conventions used in this instruction




Warning to prevent lens or camera malfunction or damage.




Supplementary notes on using the lens and taking pictures.

Safety Precautions

Precautions to ensure that the camera is used safely. Read these precautions thoroughly. Make sure all details are observed in order to prevent risks and injury to the user and other people.

 **Warning** Details pertaining to risks that may result in death or serious injury.

- **Do not look at the sun or a bright light source through the lens.** Doing so could result in vision loss or blindness.
- **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.

 **Caution** Details pertaining to risks that may result in injury.

- **Do not hold the Macro Lites located on the front of the lens close to the eyes or stare at them when they are illuminated.** Doing so may result in eye damage.
- **Do not leave the camera in locations subject to high or low temperatures.** This may result in the camera becoming excessively hot or cold, which may cause burns or other injuries when touched.

Caution Details pertaining to risks that may result in damage to property.

- Do not leave the lens in excessive heat such as in a car in direct sunlight. High temperatures can cause the lens to malfunction.

General Precautions

Handling Precautions

- 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, first put the lens into an airtight plastic bag before taking it from a cold to warm environment. Then take out the lens after it has warmed gradually. Do the same when taking the lens from a warm environment into a cold one.
- Please also read any lens related handling precautions listed in your camera's instruction manual.

Shooting Precautions

- Note that there are cases in which the white ring on the front of the lens may be reflected into photographs if the lens is held close to reflective objects (glass surface on wristwatches, for example), even if the Macro Lites are not illuminated. This can be avoided by attaching the hood when taking photographs.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

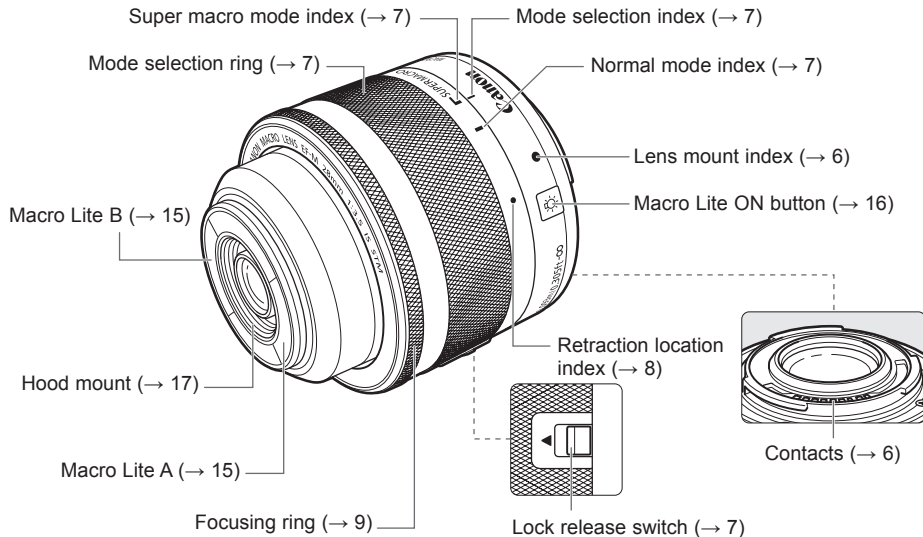
Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

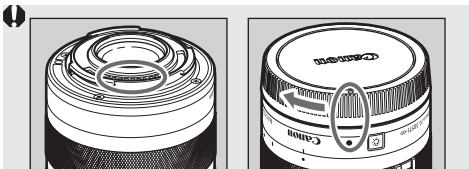
Nomenclature



● For detailed information, reference page numbers are provided in parentheses (→ **).

1 Mounting and Detaching the Lens

See your camera's instructions for details on mounting and detaching the lens.

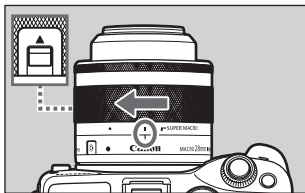


- After detaching the lens, place the lens with the rear end up to prevent the lens surface and contacts from getting scratched.
- If the contacts get soiled, scratched, or have fingerprints on them, corrosion or faulty connections can result. The camera and lens may not operate properly.
- If the contacts get soiled or have fingerprints on them, clean them with a soft cloth.
- Attach the lens cap and dust cap when disconnecting the lens. When attaching the dust cap, align the lens mount index with the ○ index of the dust cap and rotate in a clockwise direction as shown in the illustration. Follow the reverse procedure to detach it.

2 Shooting Preparations and Retracting Lens

<Shooting Preparations>

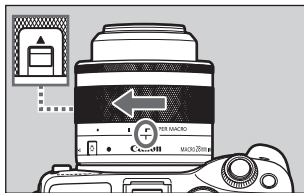
Set the mode selection ring to the normal mode or the super macro mode when taking photographs.



Normal Mode

The normal mode enables infinite distance photography through to close-up (macro) photography.

To prepare for this, press the lock release switch in the ▲ direction with the lens retracted, rotate the mode selection ring and align the normal mode index with the mode selection index.

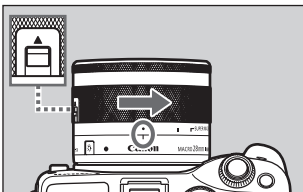


Super Macro Mode

The super macro mode is only used for close-up (macro) photography at a distance of between 11cm and 9.3cm and with a magnification ratio of between 0.7x and 1.2x.

To prepare for this, press the lock release switch in the ▲ direction, rotate the mode selection ring and align the super macro mode index with the mode selection index.

Shooting Preparations and Retracting Lens



<Retracting Lens>


The lens can be retracted.

To retract the lens, press the lock release switch in the ▲ direction, rotate the mode selection ring and align the retraction location index with the mode selection index.

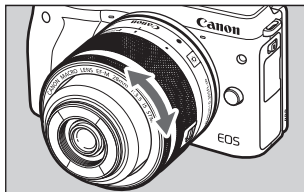
- It is only possible to start shooting videos or shoot still photographs if the mode selection ring is set at the normal mode or super macro mode.
- Video filming will be terminated once the mode selection ring is rotated from the normal mode towards the retracted position during filming.
- A warning will be displayed on the camera's LCD monitor if filming is not possible due to the position of the mode selection ring.
- Do not attempt to forcibly rotate the mode selection ring when it is locked. Doing so may result in damage to the lock release mechanism.

Shooting Preparations and Retracting Lens



- The magnification ratio represents the ratio between the actual size of the subject and the size of the image.
- The distance range represents the distance between the  mark (image mark) on the camera and the subject.
- The minimum distance range from the front of the lens to the subject (working distance) is 1.8cm in the normal mode and 1.3cm in the super macro mode.

3 Manual Focus



When the camera's focus mode is set to [MF], focus manually by turning the focusing ring.



Quickly rotating the focusing ring may result in delayed focus.



- Focus mode is set using the camera. Please refer to the camera's instructions.
- After autofocus in [AF+MF] mode, focus manually by pressing the shutter button halfway and turning the focusing ring (full-time manual focusing).

4 Image Stabilizer

This lens is equipped with an Image Stabilizer. This function corrects camera shake, allowing users to capture sharp images. Also, the Image Stabilizer automatically provides optimal image stabilization depending on shooting conditions (such as shooting still subjects and following shots). Please set the Image Stabilizer ON or OFF using the camera settings. See your camera's instructions for details.



Image Stabilizer [On]



Image Stabilizer [Off]

The image stabilizer in this lens is effective for hand-held shots under the following conditions.

- Hand-held close-ups (macro)
- In semi-darkened areas such as indoors or outdoors at night.
- In locations where flash photography is prohibited, such as art museums and theater stages.
- In situations where your footing is uncertain.
- In situations where fast shutter settings cannot be used.
- When panning subjects in motion.

Image Stabilizer

- The shorter the subject distance from the camera, the lesser the Image Stabilizer effect will be.
- The Image Stabilizer cannot compensate for a blurred shot caused by a subject that moved.
- Set the Image Stabilizer to OFF when you are taking pictures using the Bulb setting (long exposures). If the Image Stabilizer is set to ON, the image stabilizer function may introduce errors.
- The Image Stabilizer may not be fully effective if you shoot from a violently shaking vehicle or other transportation.
- The Image Stabilizer consumes more power than normal shooting, resulting in fewer shots and a shorter movie shooting time.



- When shooting a still subject, it compensates for camera shake in all directions.
- It compensates for vertical camera shake during following shots in a horizontal direction, and compensates for horizontal camera shake during following shots in a vertical direction.
- When you use a tripod, the Image Stabilizer should be turned off to save battery power.
- Even with a monopod, the Image Stabilizer will be as effective as during hand-held shooting. However, depending on the shooting conditions, there are cases in which the Image Stabilizer effect may be less effective.

5 Taking Hand-held Close-ups (Macro)

Hold the camera firmly

Hold the camera firmly as shown in the illustration on the right when taking hand-held close-ups (macro), and take the shots carefully to minimize camera shake and prevent focus blurring.

Taking Photographs with the Servo AF

It is recommended that the camera is set at Servo AF when taking close-up (macro) shots. See the camera's instruction manual for further details.

⚠ It is necessary to be careful of the following during close-up (macro) shooting.

- There is a tendency for camera shake to affect close-up (macro) shots more than normal shots, and the effects of the image stabilizing function are reduced.
- Depth of field becomes extremely shallow when taking close-up (macros) shots, and the focus may blur if the camera is moved forward and backward.



Place both elbows on a steady surface such as a table.



Use your knee to support an arm holding the camera.



Lean against a steady object like a wall.

6 Exposure When Taking Close-up (Macro) Shots

Setting the Exposure

When taking photographs using TTL metering, no exposure compensation is necessary to meter the light coming through the lens. With TTL metering, AE (autoexposure) is possible at all focusing distances. Just set the desired picture-taking mode, then check the shutter speed and aperture before taking the picture.

Magnification and Effective f-number

The aperture displayed by the camera assumes that the focus is set to infinity. The actual aperture (effective f-number) becomes darker (effective f-number increases) at closer focusing distances (magnification increases). This does not cause exposure problems for normal picture-taking. However, for closeup photography, you cannot ignore the change in the effective f-number.



- Conditions prevalent with the subject are very important when deciding on the correct level of exposure for close-up (macro) shots. It is therefore recommended that exposure levels are amended as much as possible during shooting, or that the image of the subject is checked on the camera's LCD monitor.
- Using either the aperture-priority AE (**Av**) mode or manual exposure (**M**) mode is recommended for close-up (macro) photography, as these make it easier to adjust the depth of field and exposure.

Exposure When Taking Close-up (Macro) Shots

When you use a handheld exposure meter to set the exposure, you must take into account the exposure factor shown in the following table.

Normal Mode

Magnification	0.5	0.7	1.0	1.2
Focusing Distance (cm/ft.)	12.4/ 0.41	10.9/ 0.36	9.7/ 0.32	–
Effective f/No.	3.9	4.0	4.1	–
Exposure Factor (stops)*	+1/3	+1/3	+1/3	–
	0	+1/2	+1/2	–

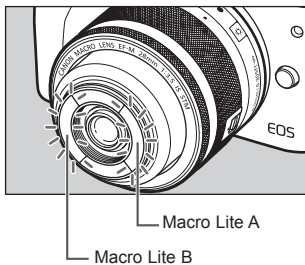
Super Macro Mode

Magnification	0.5	0.7	1.0	1.2
Focusing Distance (cm/ft.)	–	11.0/ 0.36	9.7/ 0.32	9.3/ 0.31
Effective f/No.	–	5.9	5.8	5.8
Exposure Factor (stops)*	–	1+1/3	1+1/3	1+1/3
	–	1+1/2	1+1/2	1+1/2

* Upper values: 1/3 stops. Lower values: 1/2 stops.

–: Photograph cannot be taken.

7 Macro Lites



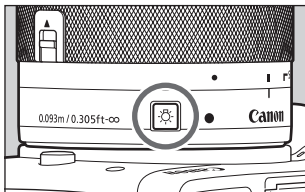
- The Macro Lites can only be illuminated when the power to the camera is switched on.
- Remove the hood when using the Macro Lites.

The use of a single Macro Lite will add shadow to the subject and add a sense of three-dimensionality to photographs.

The Macro Lites on the front of the lens shine light on the subject during close-up (macro) photography to facilitate shooting. There are two light-emitting Macro Lites located on both sides of the lens, and it is possible to illuminate both simultaneously or either of them independently.

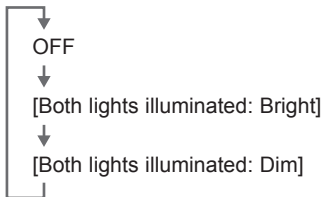
1. Set the mode selection ring to either the normal mode or the super macro mode.
2. Press the Macro Lite ON button to illuminate the Macro Lites.

Macro Lites



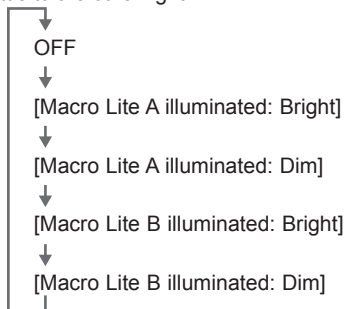
■ Both Macro Lites Illuminated

Briefly pressing the Macro Lite ON button will alternate between ON and OFF for both lights, and between Bright and Dim.



■ Macro Lites A and B Illuminated Independently

- Hold down the Macro Lite ON button with the light switch off to illuminate one of the lights.
- Briefly pressing the Macro Lite ON button when one light is illuminated will alternate the ON status to the other light.



■ Switching Between Both Macro Lites and a Single Macro Lite

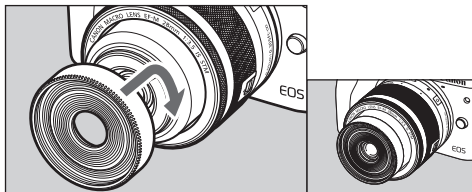
- Hold down the Macro Lite ON button with the light illuminated to alternate between both lights and a single light.

Macro Lites

- The Macro Lites cast shadows from the camera and lens onto the subject during close-up (macro) photography to facilitate shooting and improve the end result. They are not designed to shine sufficient light on subjects when shooting in dark locations.
- The Macro Lites are extinguished when the camera's power-saving function (Auto Power Off) turns off the power.
- The illumination status will not be saved once the Macro Lites have been extinguished when the power to the camera has been switched off and the lens retracted.
- More battery power is consumed when the Macro Lites are in use than when they are not in use, which will reduce the number of photographs that can be taken and the amount of time that videos can be filmed.
- The Macro Lites will be concealed when the hood is attached, so don't forget to switch them off.
- After pressing the shutter button halfway, don't change the Macro Lite status when shooting. Since pressing the shutter button halfway locks the exposure*, it may not be possible to shoot in standard exposure if the Macro Lite status has changed.

* Differs according to the camera's photometry and AF settings. For details, please check your camera's instruction manual.

8 Hood



The ES-22 lens hood plays the following roles:

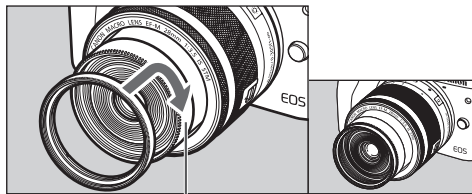
- In addition to blocking out damaging light, it also protects the lens from rain, snow, dust and other elements.
- It prevents the white ring on the front of the lens from being reflected back into images.
- It acts as an adapter when filters are being used.

Screw the hood firmly and correctly onto the front of the lens.

- Attaching the hood at an angle may damage the outside of the lens.
- If the hood is not attached properly, vignetting (darkening of the perimeter of the picture) may occur.
- Remove the hood when using the Macro Lites.

It is possible to attach the lens cap to the front of the hood when it is attached to the lens.

9 Filters (sold separately)



Hood

You can attach filters (which are 43 mm in diameter) to the filter mounting thread on the front of the hood.

1. Attach the hood.
2. Attach the filter to the front of the hood.

- Filters cannot be used unless the hood is attached.
- Only one filter may be attached.

Specifications

Focal Length/Aperture	28mm f/3.5
Lens Construction	10 groups, 11 elements
Minimum Aperture	f/22
Angle of View	Diagonal: 51°55', Vertical: 30°10', Horizontal: 44°10'
Min. Focusing Distance	0.097 m/0.318 ft. (When in the normal mode), 0.093 m/0.305 ft. (When in the super macro mode)
Max. Magnification	1x (When in the normal mode), 1.2x (When in the super macro mode)
Field of View	Approx. 15.0 x 22.4 mm/0.59 x 0.88 inch (When 0.097m/0.318 ft. in the normal mode), Approx. 12.5 x 18.7 mm/0.49 x 0.74 inch (When 0.093m/0.305 ft. in the super macro mode)
Filter Diameter	43 mm (when lens hood ES-22 is attached)
Max. Diameter and Length	60.9 x 45.5 mm/2.40 x 1.79 inch (When the lens is retracted)
Weight	Approx. 130 g/4.6 oz
Hood	ES-22
Lens Cap	EF-M28
Dust Cap	Lens Dust Cap EB
Case	LP811 (Sold Separately)

- Equivalent to 45 mm in the 35 mm film format.
- The lens length is measured from the mount surface to the front of the lens. When the lens cap and dust cap supplied are attached, add 25.8 mm if the hood is attached and 20.0 mm if the hood is not attached.
- The size and weight listed are for the lens only, except as indicated.
- Extenders and extension tubes cannot be used with this lens.
- Aperture settings are specified on the camera.
- All data listed is measured according to Canon standards.
- Product specifications and appearance are subject to change without notice.

Only for European Union and EEA (Norway, Iceland and Liechtenstein)



This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU) and national legislation. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your

cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service. For more information regarding return and recycling of WEEE products, please visit www.canon-europe.com/weee.

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