# Canon EFS LENS

# EF-S60mm f/2.8 MACRO USM



使用説明書

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Mode d'emploi

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使用说明书

使用説明書



使用本镜头前,请详细阅读本说明书。 请将说明书妥善保存,以备将来参考。

# Thank you for purchasing a Canon USM lens.

The Canon EF-S60mm f/2.8 MACRO USM lens is a macro lens that can be used for normal photography and close-up pictures up to 1:1, or life-size magnification. It has been developed for use with digital SLR cameras\* compatible with EF-S lenses.

- \* As of April 2005, only the EOS 20D, EOS DIGITAL REBEL XT/350D DIGITAL, and EOS DIGITAL REBEL/300D DIGITAL are compatible with EF-S lenses.
- "USM" stands for Ultrasonic Motor.

### **Features**

- The three-group floating system results in sharp and clear delineation at all focusing distances from life-size to infinity.
- A Canon macro flash (sold separately) makes it easy to take close-up pictures with a flash. The inner focusing mechanism enables AF photography while the macro flash is attached.
- 3. USM for fast, quiet focusing.
- 4. Manual focusing available in autofocusing mode (ONE SHOT AF).

### 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

- Do not look at the sun or a bright light source through the lens or camera. Doing so could result in loss of vision. Looking at the sun directly through the lens is especially hazardous.
- 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.

### **⚠** Handling Cautions

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.

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.
- Consult the dealer or an experienced radio/TV technician for help.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus". ICES-003 of the Industry Canada.

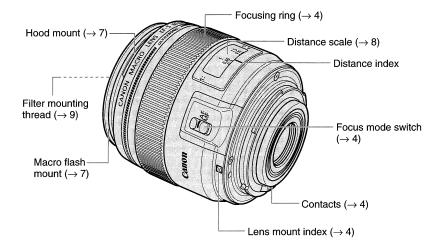


The CE Mark is a Directive conformity mark of the European Community (EC)



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For detailed information, reference page numbers are provided in parentheses ( $\rightarrow$  \*\*).



# **Mounting and Detaching the Lens**

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

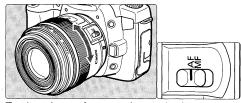






- After detaching the lens, place the lens with the rear end up to prevent the lens surface and electrical contacts from getting scratched.
- If the contacts get soiled, scratched, or have fingerprints on them, corrosion or faulty connections can result. The camera and lens may not operate properly.
- If the contacts get soiled or have fingerprints on them, clean them with a soft cloth.
- If you remove the lens, cover it with the dust cap. To attach it properly, align the lens mount index and the \( \subseteq \) index of the dust cap as shown in the diagram, and turn clockwise. To remove it, reverse the order.

# Setting the Focus Mode



To shoot in autofocus mode, set the focus mode switch to AF.

To use only manual focusing, set the focus mode switch to MF, and focus by turning the focusing ring. The focusing ring always works, regardless of the focus mode.



After autofocusing in ONE SHOT AF mode, focus manually by pressing the shutter button halfway and turning the focusing ring. (Full-time manual focus)

### Normal Photography

The lens can be used as a medium-telephoto lens equivalent to 96mm in 35mm format for normal photography such as snapshots and portraits.

### Closeup Photography

Close-up photos up to 1x (life-size) magnification are possible. The minimum focusing distance of 20cm is the distance from the subject to the film plane. The working distance from the front of the lens to the subject is about 9cm.

When focusing, you can give priority to framing or to magnification.

### [Framing Priority]

While looking through the viewfinder and framing the subject, focus with the AF or MF mode.

### [Magnification Priority]

- 1. Set the lens' focus mode switch to MF.
- 2. Set the magnification.

While referring to the magnification scale on the distance index, turn the focusing ring to the desired magnification.

### 3. Focus the subject.

While looking through the viewfinder, move the camera forward or back to find the point of focus.

### 4. Touch up the focus.

Turn the focusing ring for fine focusing.



- Since macro shots have a very shallow depth of field, focus carefully to obtain proper sharpness.
- Image quality deteriorates near the minimum aperture opening due to diffraction.



- The magnification refers to the ratio between the subject's size and the corresponding image size on the image sensor plane. On the distance index, it is indicated as 1:x.
- To prevent camera shake, using a Remote Switch (both sold separately) and tripod is recommended.
- To check the depth of field, press the camera's depth-of-field preview button.

E



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

Magnification		1:5	1:4	1:3	1:2	1:1.5	1:1
Effective f/No.		3.50	3.66	3.89	4.39	4.86	5.84
Exposure Factor	in ½ stops	+ 1/2	+ 1/2	+1	+1	$+1\frac{1}{2}$	+2
(stops)	in $\frac{1}{3}$ stops	+ 2/3	$+\frac{2}{3}$	+1	$+1\frac{1}{3}$	$+1\frac{2}{3}$	+2



- The correct exposure for a close-up shot largely depends on the subject. Therefore, it is recommended to take several shots of the same subject at different exposures.
- When taking close-up shots, it is recommended to use aperture-priority AE (Av) or Manual (M) picture-taking modes, because depth of field and exposure are easy to adjust in those modes.



# Macro Flash (Sold Separately)

The Canon Macro Ring Lite MR-14EX or the Macro Twin Lite MT-24EX enables fully automatic macro flash photography up to 1x magnification in E-TTL autoflash mode.



- For information on operating the Canon Macro Ring Lite MR-14EX or the Macro Twin Lite MT-24EX, refer to the individual instruction booklets.
- Using aperture-priority AE (Av) or Manual (M) is recommended.



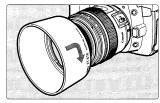
# Flash Range (ISO100) MR-14EX MT-24EX 32 22 16 11 8 8 4 2.8 1: 1 1.5 2 3 5 Maonification → : Flash range

### Flash Head Angle Settings for MT-24EX

Magnification	Inward Angle of Flash Head			
	45°	30°	15°	
1:1-1:1.5	•			
1:2		•		
1:3		•	•	
1:5			•	

# 6 Hood (Sold Separately)

The ET-67B hood can keep unwanted light out of the lens, and also protects the lens from rain, snow, and dust.





To attach the hood, align the hood with the lens hood mount, then turn the hood clockwise to secure it.

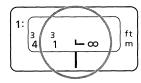
The hood can be reverse-mounted on the lens for storage.



- Part of the picture may be blocked if the hood is not attached properly.
- When attaching or detaching the hood, grasp the base of the hood to turn it. To prevent deformation, do not grasp the rim of the hood to turn it.



# **Infinity Distance Mark**



To compensate for shifting of the infinity focus point that results from changes in temperature. The infinity position at normal temperature is the point at which the vertical line of the L mark is aligned with the distance indicator on the distance scale.



For accurate manual focusing on subjects at infinity distance, look through the viewfinder while rotating the focusing ring.

# 8 C

# Close-up Lenses (Sold separately)

Attaching a 250D, 500, or 500D (52mm) Close-up Lens enables close-up photography. The magnification will be as follows:

	Near	Far
250D	1.33×	0.25×
500/500D	0.18×	0.12×

- Sales of the 500 Close-up Lens may already be terminated in some areas.
- When using a Close-up Lens, focus manually.

# Filters (Sold Separately)

You can attach filters to the filter mounting thread on the front of the lens.



- Up to two 52mm filters can be attached.
- This lens can accommodate both filters and the macro flash at the same time.
- If you need a polarizing filter, use Canon's PL-C 52mm polarizing filter.
- To adjust the polarizing filter, first remove the lens hood.
- When the Canon's PL-C 52mm polarizing filter is attached, the lens cap cannot be attached.

# Gelatin Filter Holder (Sold separately)

With the Gelatin Filter Holder, you can use filters to create various effects.

The Gelatin Filter Holder compatibility is shown below.

- Gelatin Filter Holder III: Up to six hoods can be used.
- Gelatin Filter Holder IV: Up to six hoods can be used.



# **Extension Tubes (Sold Separately)**

You can attach Extension Tube EF12 II or EF25 II for magnified shots. The shooting distance and magnification are shown below.

	Camera-to-Subject Distance (mm)		Magnification		
	Near	Far	Near	Far	
EF12 II	207	445	1.28×	0.20×	
EF25 II	215	289	1.61×	0.44×	





- Extension Tube EF12 or EF25 cannot be attached.
- When an Extension Tube is attached, focus manually.

# 12 Specifications

Image Size	15.1 × 22.7 mm				
Focal Length/Aperture	60 mm f/2.8				
Lens Construction	8 groups, 12 elements				
Minimum Aperture	f/32				
Angle of View	Diagonal: 24° 30' Vertical: 14° 10' Horizontal: 20° 40'				
Min. Focusing Distance	0.2 m/0.7 ft.				
Max. Magnification	1 x				
Field of View	15.1 × 22.7 mm/0.6 × 0.9 inch				
Filter Diameter	52 mm/2.0 inch				
Max. Diameter and Length	73 × 69.8 mm/2.9 × 2.7 inch				
Weight	335 g/11.8 oz				
Hood	ET-67B (Sold separately)				
Lens Cap	E-52U				
Case	LP1016 (Sold separately)				

- Equivalent to 96 mm in the 35mm film format.
- The lens length is measured from the mount surface to the front end of the lens. Add 17 mm when including the lens cap and dust cap.
- The size and weight listed are for the lens only, except as indicated.
- Aperture settings are specified on the camera.
- The EF1.4X II/EF2X II extenders cannot be used with this lens.
- All data listed is measured according to Canon standards.
- Product specifications and appearance are subject to change without notice.

# Canon

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### CANON U.S.A. INC.

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CANON U.S.A., INC.

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This Limited Warranty is only effective upon presentation of this warranty card and proof of purchase.

A Product, when delivered to you in new condition in its original container, is warranted against defects in materials or workmanship as follows: for a period of one (1) year from the date of original purchases, defective parts or a defective Product returned to Canno nr its authorized service providers, and proven to be defective upon integer be repaired with new or comparable rebuilt parts or exchanged for a refurbished Product, as determined by Canon or the authorized service provider, in their sole discretion. Replaced parts and exchanged Products will become the property of Canon.

When returning a Product for warranty service, the shipping charges must be prepaid and the Product should be shipped in its original container, or an equivalent, properly packed to withstand the hazards of shipment and be fully insured. A copy of this warranty card and proof of purchase should be enclosed, as well as a description of the problem (including film samples, where appropriate). Repairs will be made and the Product will be returned, shipped at NO CHARGE, within the country of repair.

This warranty only covers defective materials or workmanship encountered in normal use and service of a Product and does not apply in the following cases:

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- (b) If a Product is defective as a result of leaking batteries or damage due to water or other liquid.
- (c) Defective materials or workmanship where the defect is due to a Product having been serviced or modified by other than Canon or a Canon authorized service provider.
- (d) Malfunction resulting from the use of accessories, attachments, supplies, parts or devices (including, without limitation, batteries, film, flash attachments and other accessories) that do not conform to Canon specifications.
- (e) Damage resulting during shipment, (Claim must be presented and examined by the shipper).
- (f) Damage or service resulting from modifications or alterations to a Product in any way (including any alteration or removal of its serial number or identification marks).

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