you can **Canon** 

## EF Lenses







# Perspective

A small, unkempt city garden. To the average observer, it is entirely unremarkable. But take a closer look and you'll see what others can't.

Captured by Jay Dykes through a Canon EF 100mm f/2.8 Macro USM lens, his garden suddenly transforms into a towering jungle of monstrous beasts and brilliantly hued beauties. Minute detail and indiscernible expression are magically brought to life. That's what makes SLR photography so special: the ability to explore a world beyond human perspective. To turn everyday into extraordinary. To go where the human eye cannot.

Canon's EF Lens system – the world's most comprehensive – is the product of more than six decades at the forefront of optical innovation. From the 14mm extreme wide angle to the 600mm super telephoto, each of the more than 60 lenses in the EF series brings a unique dimension to your photographic vision.

Every element of every EF lens is designed meticulously. Its materials are painstakingly inspected and its surface ground precisely, all to create an interchangeable lens of uncompromising quality that reaches beyond human limitations. Our pursuit of optical perfection continues, driving ever faster performance, wider angles, longer focal lengths and a level of accuracy that knows no equal.

Chosen by professionals the world over, the L series represents the crystallisation of Canon's long optical heritage. L series lenses incorporate the highest quality optical materials, each lens engineered to withstand demanding environments in the field. The EF-S series of lenses opens up wider angles of view to EOS photographers with digital SLR cameras, such as the EOS 30D or EOS 400D.

Pioneering developments have been incorporated throughout the entire range. The world's first lens-based Image Stabiliser system.

Smaller, lighter telephoto lenses using diffractive optical (DO) elements. Rapid, silent auto focus through ultrasonic motors (USM). All these innovations are now found in almost every EF lens.

As long as photographers like Jay Dykes continue to push creative boundaries, Canon will continue to push the technical limits.



# Lens Technology

For more than half a century, Canon's commitment to research has consistently raised the bar for SLR lens specifications. This promise of innovation is embodied in every one of the more than 60 EF lenses now available.



## ULTRASONIC MOTOR (USM)

The world's first lens-based motor that harnesses ultrasonic oscillation energy to drive virtually noiseless auto focus, which on some lenses is literally faster than the human eye. The USM can stop without overshooting the instant focus is achieved.

### IMAGE STABILISER

Some Canon EF lenses incorporate an Image Stabiliser (IS) to reduce camera shake. This is particularly useful with close-ups, slow shutter speeds and when a tripod can't be used. Optical shake is detected by gyro sensors which provide data to neutralise it. Some EF lenses have an additional IS mode for panning shots.

### ASPHERICAL ELEMENTS

Unless corrected, light rays entering conventional lens elements converge at slightly different focal points. Known as spherical aberration, this phenomenon produces soft, low contrast images that look as if covered with a thin veil. Canon was the first company in the world to correct this error in an SLR lens by incorporating an aspherical lens element. Now found in nearly every EF lens, these special elements help deliver corner-to-corner sharpness and clarity.

### SUPER SPECTRA COATING

Light reflecting off lens elements and a digital camera's sensor can result in significant light loss and cause ghosting (secondary images) and flare (washed out image). To eliminate harmful reflections, the latest EF lenses are treated with Canon's patented multi-layer Super Spectra coating, which absorbs light rather than reflecting it.

### **FLUORITE AND UD LENS ELEMENTS**

Canon has pioneered the development of Fluorite and UD lens elements for correcting chromatic aberrations. These aberrations are defects caused by different wavelengths or colors of light refracting by different amounts as they pass through conventional optical glass elements. With their special diffraction properties, Fluorite and UD lens elements correct such aberrations to deliver high contrast, sharpness and accurate colour reproduction.

## DIFFRACTIVE OPTICAL ELEMENT

Canon's EF 400mm f/4 DO IS USM and EF 70-300mm f/4.5-5.6 DO IS USM are the only two camera lenses in the world to incorporate multi-layer diffractive optical (DO) elements. Developed by a small team of young Canon engineers, DO lens elements have special optical properties that pave the way for extremely light and seriously compact telephoto lenses.

## Making sense of EF lens codes

Each EF lens is identified by a series of codes which provide important information about its unique characteristics.

## EF 100-400mm f/4.5-5.6L IS USM

**100-400mm** – refers to focal length, which relates to a lens' angle of view. The lower the number, the wider the lens' angle of view; the higher the number, the more powerful it is at bringing distant objects closer. If there is only one number, the lens has a fixed focal length. A number range indicates a zoom lens.

a - indicates a professional L-series lens - the ultimate in image performance and operability, with protection against weather and with protection against the elements. L-series lenses include special optical materials such as fluorite, ultra-low dispersion (UD) or super UD elements.

**6/4.5-5.6** – refers to the lens' minimum 'F number', a function of the lens' aperture diameter. The lower the number, the 'brighter' and generally more useful the lens. A number range indicates the minimum F number at each of the extremes of the lens' zoom range.

**IS** – refers to Image Stabiliser. Image Stabiliser lenses detect and compensate for unwanted movement, allowing for the use of shutter speeds up to three stops slower than would otherwise be possible.

**USM** – indicates an Ultra Sonic Motor. Technology pioneered by Canon to produce highly responsive, super fast focusing with excellent holding torque.

## Other lens codes you may come across:

**DO** – indicates the use of multi-layer Diffractive Optical elements.

This revolutionary technology, unique to Canon, enables the manufacture of smaller, lighter and outstanding performance photo lenses.

**EF-S** – EF lenses designed fit EOS models with the EF-S mount.

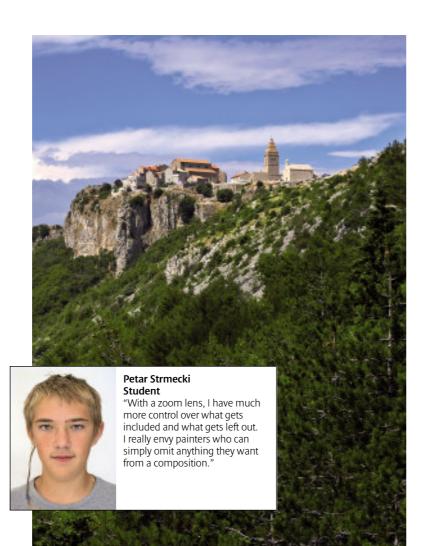
MP-E – lens specially designed for macro photography.

**Macro** – sometimes known as close-up lenses. Macro lenses have the ability to focus an image on the film or sensor that is at least as large as the subject. This is a magnification of 1:1.

**II or III, etc.** – indicate the version of the lens. Existing lenses are often redesigned to improve their performance or operability.

**TS-E** – specialist tilt/shift lenses that allow correction of perspective distortion and control over the angle of the focal plane. These lenses are often used for architectural interiors and exteriors.

**Extender** – lenses that fit between the camera body and master lens to deliver focal length magnification.



## Fixed Focal Length Lenses

Fixed focal length lenses generally offer a wider maximum aperture than zoom lenses.











EF 15mm f/2.8 Fisheye

180° angle of view captures a wide-area in a single frame.

EF 14mm f/2.8L USM EF 20mm f/2.8 USM

Extreme wide angle, ideal for shooting indoors in cramped spaces or for creative effects outdoors.

EF 24mm f/1.4L USM EF 24mm f/2.8

Wide angle lenses, particularly useful for landscape photography. Also useful for many other subjects, including portraits.







EF 28mm f/1.8 USM EF 28mm f/2.8

EF 35mm f/1.4L USM EF 35mm f/2

Wide angle lenses, particularly useful for landscape photography. Also useful for many other subjects, including interior photography.







EF 50mm f/1.2L USM EF 50mm f/1.4 USM EF 50mm f/1.8 II

Standard lenses to suit most subjects.









EF 85mm f/1.2L II USM

EF 85mm f/1.8 USM

EF 100mm f/2.0 USM

EF 135mm f/2.0L USM

Short telephoto lenses, ideal for portraits and many other subjects.



### EF 135mm f/2.8 with Soft Focus

This unusual lens can be used as a normal 135mm, but it is also suitable to set different strengths of soft focus. Designed for portrait work but also suitable for other subjects.





### EF 200mm f/2.8L II USM

EF 400mm f/5.6L USM

These longer telephoto lenses are used extensively by wildlife, sports and news photographers.

## **Zoom Lenses**

Zoom lenses offer the equivalent of two or more fixed focal length lenses in one unit. The maximum aperture of some zoom lenses can change as you alter the focal length, but Through-The-Lens (TTL) metering takes this into account to give correct exposure.







## EF 16-35mm f/2.8L II USM

EF 17-40mm f/4L USM

EF 20-35mm f/3.5-4.5 USM

 $\label{thm:commutation} \mbox{Wide angle zooms, ideal for interiors and landscapes.}$ 



## EF 16-35mm f/2.8L II USM

This fast, ultra wide-angle zoom lens delivers the ultimate in professional L-series performance.

Offering a constant f/2.8 aperture, the EF 16-35mm f/2.8L II USM maintains superior image quality throughout its focal range. Aspherical lens elements ensure high peripheral sharpness and contrast at large apertures, while two UD lens elements virtually eliminate chromatic aberration. A circular aperture diaphragm produces pleasing background blur for abstract and portrait photography. Providing fast, quiet auto focus with full-time manual override, this robust lens incorporates the superb build quality and weather resistance that are hallmarks Canon's professional L-series.

## **EF Lenses**















EF 24-70mm f/2.8L USM EF 24-85mm f/3.5-4.5 USM EF 28-90mm f/4-5.6 III EF 28-105mm f/3.5-4.5 II USM EF 28-105mm f/4-5.6

EF 28-105mm f/4-5.6 USM EF 28-200mm f/3.5-5.6 USM

Canon's biggest group of lenses, referred to as standard zooms (a standard zoom is any lens with 50mm in its zoom range). Most EOS owners will own at least one.

















EF 55-200mm f/4.5-5.6 II USM EF 70-200mm f/2.8L USM\* EF 70-200mm f/4L USM EF 75-300mm f/4-5.6 III EF 75-300mm f/4-5.6 III USM EF 90-300mm f/4.5-5.6

EF 90-300mm f/4.5-5.6 USM EF 100-300mm f/4.5-5.6 USM

Telephoto zooms are good general purpose lenses. Add a standard zoom such as the EF 24-85mm f/3.5-4.5 USM to your photographic arsenal and you'll have most of the focal lengths you're likely to need.

\* Product discontinued

## EF-S: Special lenses for compact sensors

The compact sensor found on EOS models with the EF-S lens mount has the effect of magnifying the focal length of attached lenses by 1.6x. To provide this category of camera owners more wide angle choice, Canon developed a new range of lightweight EF-S lenses.







EF-S 17-55mm f/2.8 IS USM



## Image Stabilised Lenses

Built-in gyro sensors control an Image Stabiliser within the lens. These shift in response to movement and reduce the effects of camera shake. When you're shooting hand-held it's possible to use a shutter speed two to three stops slower than normal without any increase in image blur.



EF 28-135mm f/3.5-5.6 IS USM



EF 24-105mm f/4L IS USM



EF 28-300mm f/3.5-5.6L IS USM



EF 70-200mm f/2.8L IS USM



Zoom IS lenses are mostly general purpose. Use them at your normal shutter speeds and you'll see an improvement in picture sharpness.



EF 300mm f/2.8L IS USM EF 300mm f/4L IS USM EF 400mm f/2.8L IS USM EF 500mm f/4L IS USM EF 600mm f/4L IS USM

These fixed focal length IS lenses are especially popular with sports and wildlife photographers.





## Diffractive Optical Lenses

Diffractive Optical (DO) lenses represent a new level in professional telephoto lenses. New technology delivers optical characteristics unavailable in traditional lenses, dramatically decreasing size and weight. Lens coatings are optimised to minimise the ghosting and flare that sometimes can occur when the lens is used with a digital camera.





EF 70-300mm f/4.5-5.6 DO IS USM

EF 400mm f/4 DO IS USM

Ideal for long range photographic applications such as sports and wildlife.

## Tilt-and-shift Lenses

These lenses can be tilted at an angle to the camera body, and the lens axis can be shifted away from the centre of the frame. This allows correction of perspective distortion and the manipulation of depth-of-field.







TS-E 24mm f/3.5L

TS-E 45mm f/2.8

TS-E 90mm f/2.8

Ideal for architectural work and close-up photography. No auto-focusing.



## Macro Lenses

Macro lenses are designed for close-up photography. Although most of them focus to infinity, their optimum performance is at close focusing distances.



## EF 50mm f/2.5 Compact Macro

Gives a maximum magnification of 0.5x (half life-size).



## MP-E 65mm f/2.8 1-5x Macro

This specialist lens only focuses between magnifications of 1x and 5x. Particularly useful for wildlife photography enthusiasts. No auto-focusing.



EF 100mm f/2.8 Macro USM
EF 180mm f/3.5L Macro USM

These lenses focus close enough to provide life-size images.

## **Extenders**

Extender is Canon's name for a teleconverter. These high performance accessories multiply the effective focal length of an attached lens by 1.4x or 2x. For example, a 200mm lens with a 1.4x Extender has an effective focal length of 280mm. With a 2x Extender, this increases to 400mm.

Extenders are only compatible with selected EF lenses, including the EF 70-200mm f/2.8L USM, EF 70-200mm f/2.8L IS USM, EF 70-200mm f/4L USM, EF 100-400mm f/4.5-5.6L IS USM, EF 400mm f/4 DO IS USM and fixed focal length L-series lenses of 135mm or higher.





## Extender EF 1.4x II

Extender EF 2x II

The extenders decrease the effective apertures of lenses to which they are attached by just one or two stops respectively.

## Accessories

## Filters



### **Protect Filter**

This neutral filter protects your lens while maintaining perfect colour balance. Super Spectra coating prevents harmful light reflections. For general photography.

Available sizes: 52mm, 58mm, 67mm, 72mm, 77mm, 82mm

This colourless filter absorbs ultraviolet light without cutting visible light. It's most effective on sunny days for cutting haze in distant landscape shots, especially when using black-and-white film. The filter has no effect on exposure and minimal effect on colour temperature. UV filters can also be used as protective filters for general photography.

Available sizes: 52mm, 58mm, 72mm

Neutral Density (ND) filters are used with colour and black-and-white film to reduce light entering the lens to a quarter (two f/stops) the original level at all wavelengths. The surface of this high-quality L-class filter features a vacuum-deposited light-absorbent material.

Available sizes: 52mm 58mm 72mm



Softmat filters soften focus, making them ideal for flattering portraits and dreamy landscapes. They utilise the diffraction that occurs between light passing through the filter's transparent and coated part. Softmat No. 1 filter gives gentle soft focus, Softmat No. 2 a stronger effect.

Available sizes: 52mm 58mm



## Skylight Filter

This light amber skylight filter can be used for both black-and-white and colour film for daylight exposures on sunny days. It reduces the blue cast that occurs with sky and water reflections and when photographing subjects in shadows. By blocking short wavelengths on sunny days, it warms colour temperature slightly without altering exposure. For general photography.

Available sizes: 52mm, 58mm, 72mm



This Polarising filter enhances image quality by blocking harmful reflected light. It reduces polarised light reflections from the surface of glass and water, and also improves colour saturation. Simple to use. Circular Polarising filters (such as Canon's PL-C) polarise light circularly rather than linearly. This means that auto-focus and TTL light metering is not affected.

Available sizes: 52mm, 58mm, 67mm, 72mm, 77mm



## ND8L Filters

This filter reduces light entering the lens to 1/8 (three f/stops) the original level. Invaluable for large-aperture and slow-shutter-speed photography.

Available sizes: 52mm, 58mm, 72mm



### Gelatin Filter Holder E

One holder, allowing up to three gelatin filters to be fitted.

Available sizes: 52mm, 58mm, 72mm, 77mm



## Drop-in Filters PL-C

Drop-in filters PL-C can be rotated from the outside without removing them from the lens, allowing precise control. The 52mm PL-C filter can be used with the EF 300mm f/2.8L IS USM, EF 400mm f/2.8L IS USM, FF 500mm f/4L IS USM and FF 600mm f/4L IS USM lenses

Available sizes: 48mm, 52mm



## **Drop-in Screw Filter Holders**

with Protect Filters

This device allows regular Protect filters (supplied) to be exchanged with other commercially available screw-type filters. Note that only filters with the correct filter frame thickness can be mounted

Available sizes: 48mm, 52mm



### **Drop-in Gelatin Filter Holders** These glass-backed holders accept up

to three commercially available cut-to-size gelatin filters for rear-insertion lenses. A 52mm holder is provided as standard with the EF 300mm f/2.8L IS USM, EF 400mm f/2.8L IS USM, FF 500mm f/4L IS USM and FF 600mm f/4L IS USM lenses

Available sizes: 48mm, 52mm



## Gelatin Filter Holders III & IV

Gelatin Filter Holder III uses 3 x 3 inch gelatin filters, Gelatin Filter Holder IV uses 4 x 4 inch gelatin filters. Both Holders provide extension hoods and Ø 52mm, 58mm, 67mm, 72mm and 77mm adapters. Refer to the EF Lens Accessory Table for information on lens combinations.

Available sizes: 52mm, 58mm, 72mm, 77mm

## Close-up Accessories

















Extender EF 1.4xII Extender EF 2xII

Close-up lenses screw to the filter mount at the front of the lens, providing a simple, inexpensive method of increasing subject magnification. There is no loss of light and all camera and lens functions are retained. However, auto-focusing is not always effective and manual focusing is recommended.

Three Canon close-up lenses are available. The close-up lenses 250D and 500D both use two lens elements to reduce colour aberrations. The close-up lens 500 is a one-element accessory for low-cost close-up photography. The 250D is recommended for lens focal lengths from 38mm to 135mm and is available with a 52mm or 58mm filter thread. The 500D and 500 lenses are recommended for focal lengths from 75mm to 300mm and are available with a filter thread of 52mm, 58mm, 72mm or 77mm.

Extension tubes fit between the lens and the camera body and allow the lens to focus much closer than normal, giving increased magnification. The larger the amount of extension and the shorter the focal length of the lens used, the greater the increase in magnification. However, especially when using wide angle lenses to obtain high magnifications. working distances can get very short.

### **EF Extenders**

Extenders increase the effective focal length of lenses while retaining the minimum focusing distance. The focal length is increased by the factor indicated. Extenders are only compatible with a selected range of EF telephoto and they can also be combined with extension tubes and close-up lenses for close-up and macro photography.

## Loupes

Loupe 4x and 8x



Canon Loupe 4x and 8x are high-performance magnifiers for viewing film in high resolution with colour-aberration. Super Spectra coating ensures a clear image which is fully effective for work such as final checking of film shot with an EF lens.

## **Hoods and Cases**





Shield your lenses from extraneous light and prevent flare spoiling your images.

Functional, rugged and well designed. Indispensable for protecting valuable lenses.



## Lenses Specifications Chart

EF Lens	Angle of View	Lens construction	No. of Diaphragm	Minimum	Closest Focusing	Maximum	Distance	AF Actuator
	(horizontal · vertical · diagonal)	(elements/group)	Blades	Aperture	Distance (m)	Magnification (x)	Information	
F 16-35mm f/2.8L II USM	98° - 54° • 74°10′ - 38° • 108°10′ - 63°	16/12	7	22	0.28	0.22 (at 35mm)	YES	Ring USM
F 17-40mm f/4L USM	93° - 49°20' • 70°30' - 34° • 104° - 57°30'	12/9	7	22	0.28	0.24 (at 40mm)	YES	Ring USN
F 20-35mm f/3.5-4.5 USM	84° - 54° • 62° - 38° • 94° - 63°	12/11	5	22 - 27	0.34	0.13 (at 35mm)	YES	Ring USN
F 24-70mm f/2.8L USM	74° - 29° • 53° - 19°30' • 84° - 34°	16/13	8	22	0.38	0.29 (at 70mm)	YES	Ring USN
F 24-85mm f/3.5-4.5 USM	74° - 24° • 53° - 16° • 84° - 28°30'	15/12	6	22 - 32	0.5	0.16 (at 85mm)	YES	Ring USN
F 24-105mm f/4L IS USM	74° - 19°20' • 53° - 13° • 84° - 23°20'	18/13	8	22	0.45	0.23 (at 105mm)	YES	Ring USN
F 28-90mm f/4-5.6 III	65° - 22°40' • 46° - 15°10' • 75° - 27°	10/8	5	22 - 32	0.38	0.30 (at 90mm)	YES	MM 3
F 28-90mm f/4-5.6 II USM	65° - 22°40' • 46° - 15°10' • 75° - 27°	10/8	5	22 - 32	0.38	0.30 (at 90mm)	-	Micro US
F 28-105mm f/4-5.6	65° - 19°20' • 46° - 13° • 75° - 23°20'	10/9	6	22 - 32	0.48	0.19 (at 105mm)	YES	MM <sup>3</sup>
F 28-105mm f/4-5.6 USM	65° - 19°20' • 46° - 13° • 75° - 23°20'	10/9	6	22 - 32	0.48	0.19 (at 105mm)	YES	Micro US
F 28-105mm f/3.5-4.5 II USM	65° - 19°20' • 46° - 13° • 75° - 23°20'	15/12	7	22 - 274	0.5	0.19 (at 105mm)	YES	Ring USI
F 28-135mm f/3.5-5.6 IS USM	65° - 15° • 46° - 10° • 75° - 18°	16/12	6	22 - 36	0.5	0.19 (at 135mm)	YES	Ring US
F 28-200mm f/3.5-5.6 USM	65° - 10° • 46° - 7° • 75° - 12°	16/12	6	22 - 36	0.45	0.28 (at 200mm)	YES	Micro U
F 28-300mm f/3.5-5.6L IS USM	65° - 6°50' • 46° - 4°35' • 75° - 8°15'	23/16	8	22 - 384	0.45	0.30 (at 300mm)	YES	Ring US
F 55-200mm f/4.5-5.6 II USM	36°-10° · 25° - 7° · 43° - 12°	13/13	6	22 - 274	1.2	0.21 (at 200mm)	-	Micro U
			8					
F 70-200mm f/2.8L USM	29° - 10° • 19°30′ - 7° • 34° - 12°	18/15		32	1.5	0.16 (at 200mm)	YES	Ring US
F 70-200mm f/2.8L IS USM	29° - 10° • 19°30′ - 7° • 34° - 12°	23/18	8	32	1.4	0.17 (at 200mm)	YES	Ring US
F 70-200mm f/4L IS USM	29° - 10° • 19°30′ - 7° • 34° - 12°	20/15	8	32	1.2	0.21 (at 200mm)	YES	Ring US
F 70-200mm f/4L USM	29° - 10° • 19°30' - 7° • 34° - 12°	16/13	8	32	1.2	0.21 (at 200mm)	YES	Ring US
F 70-300mm f/4-5.6 IS USM	29° - 6°50' • 19°30' - 4°35' • 34° - 8°15'	15/10	8	32 - 45	1.5	0.26 (at 300mm)	YES	Micro U
F 70-300mm f/4.5-5.6 DO IS USM	29° - 6°50' • 19°30' - 4°35' • 34° - 8°15'	18/12	6	32 - 38 4	1.4	0.19 (at 300mm)	YES	Ring US
F 75-300mm f/4-5.6 III USM	27° - 6°50' • 18°11' - 4°35' • 32°11' - 8°15'	13/9	7	32 - 45	1.5	0.25 (at 300mm)	-	Micro U
F 75-300mm f/4-5.6 III	27° - 6°50' • 18°11' - 4°35' • 32°11' - 8°15'	13/9	7	32 - 45	1.5	0.25 (at 300mm)	-	MM
F 90-300mm f/4.5-5.6	22°40′ - 6°50′ • 15°10′ - 4°35′ • 27° - 8°15′	13/9	7	38 - 45 4	1.5	0.25 (at 300mm)	YES	MM
F 90-300mm f/4.5-5.6 USM	22°40' - 6°50' • 15°10' - 4°35' • 27° - 8°15'	13/9	7	38 - 45 4	1.5	0.25 (at 300mm)	YES	Micro L
F 100-300mm f/4.5-5.6 USM	20° - 6°50' • 14° - 4°35' • 24° - 8°15'	13/10	8	32 - 38 4	1.5	0.20 (at 300mm)	YES	Ring U
F 100-400mm f/4.5-5.6L IS USM	20° - 5°10' • 14° - 3°30' • 24° - 6°10'	17/14	8	32 - 38 4	1.8	0.20 (at 400mm)	YES	Ring US
F 15mm f/2.8 Fisheye	180°	8/7	5	22	0.2	0.14	-	AFD
F 14mm f/2.8L USM	104° • 81° • 114°	14/10	5	22	0.25	0.1	YES	Ring US
F 20mm f/2.8 USM	84° · 62° · 94°	11/9	5	22	0.25	0.14	YES	Ring US
F 24mm f/1.4L USM	74° • 53° • 84°	11/9	7	22	0.25	0.14	YES	Ring US
F 24mm f/2.8			1					
	74° • 53° • 84°	10/10	6	22	0.25	0.16	-	AFD
F 28mm f/1.8 USM	65° • 46° • 75°	10/9	1	22	0.25	0.18	YES	Ring US
F 28mm f/2.8	65° • 46° • 75°	5/5	5	22	0.3	0.13	-	AFD
F 35mm f/1.4L USM	54° • 38° • 63°	11/9	8	22	0.3	0.18	YES	Ring US
F 35mm f/2	54° • 38° • 63°	7/5	5	22	0.25	0.23	-	AFD
F 50mm f/1.2L USM	40° • 27° • 46°	8/6	8	16	0.45	0.15	YES	Ring US
F 50mm f/1.4 USM	40° • 27° • 46°	7/6	8	22	0.45	0.15	-	Micro U
F 50mm f/1.8 II	40° • 27° • 46°	6/5	5	22	0.45	0.15	_	MM
F 85mm f/1.2L II USM	24° • 16° • 28°30'	8/7	8	16	0.95	0.11	YES	Ring U
F 85mm f/1.8 USM	24° • 16° • 28°30'	9/7	8	22	0.85	0.13	YES	Ring U
F 100mm f/2 USM	20° • 14° • 24°	8/6	8	22	0.9	0.14	YES	Ring U
F 135mm f/2L USM	15° • 10° • 18°	10/8	8	32	0.9	0.19	YES	Ring U
F 135mm f/2.8 (with Softfocus)	15° • 10° • 18°	7/6	6	32	1.3	0.12	_	AFD
F 200mm f/2.8L II USM	10° • 7° • 12°	9/7	8	32	1.5	0.16	YES	Ring U
F 300mm f/2.8L IS USM	6°50' • 4°35' • 8°15'	17/13	8	32	2.5	0.13	YES	Ring U
		15/11				0.13		
F 300mm f/4L IS USM	6°50' • 4°35' • 8°15' 5°10' • 3°30' • 6°10'		8	32	1.5		YES	Ring US
F 400mm f/2.8L IS USM		17/13	8	32	3	0.15	YES	Ring US
F 400mm f/5.6L USM	5°10' • 3°30' • 6°10'	7/6	8	32	3.5	0.12	YES	Ring U
F 400mm f/4 DO IS USM	5°10' • 3°30' • 6°10'	17/13	8	32	3.5	0.12	YES	Ring U
F 500mm f/4L IS USM	4° • 2°45′ • 5°	17/13	8	32	4.5	0.12	YES	Ring U
F 600mm f/4L IS USM	3°30' • 2°20' • 4°10'	17/13	8	32	5.5	0.12	YES	Ring U
rtender EF 1.4x II		5/4	=	-	-	-	YES	_
rtender EF 2x II		7/5	-	-	-	-	YES	_
F 50mm f/2.5 Compact Macro	40° • 27° • 46°	9/8	6	32	0.23	0.5	-	AFE
fe-Size Converter EF		4/3	-	-	0.24	1	-	-
P-E 65mm f/2.8 1-5x Macro Photo	15°40' • 10°35' • 18°40'	10/8	6	16	0.24	5	YES	-
100mm f/2.8 Macro USM	20° • 14° • 24°	12/8	8	32	0.31	1	YES	Ring U
180mm f/3.5L Macro USM	11°25′ • 7°40′ • 13°40′	14/12	8	32	0.48	1	YES	Ring U
rtension Tube EF 12 II	-	6	_	-	- 0.40	-	-	Lung U.
rtension Tube EF 25 II	_	7	-	_	_	_	_	_
S-E 24mm f/3.5L	74° • 53° • 84° (without tilt or shift) 8	11/9		22				
			8		0.3	0.14		_
5-E 45mm f/2.8	44° • 33° • 51° (without tilt or shift) 8	10/9	8	22	0.4	0.16	-	_
5-E 90mm f/2.8	22°37' • 15°11' • 27° (without tilt or shift)8	6/5	8	32	0.5	0.29	-	_
F-S Lens*								
F-S 60mm f/2.8 Macro USM	20°40' • 14°10' • 24°30'	12/8	7	32	0.20	1	YES	Ring U
F-S 10-22mm f/3.5-4.5 USM	97°10' - 54°30' • 74°10' - 37°50' • 107°30' - 63°30'	13/10	6	22 - 27	0.24	0.17 (at 22mm)	YES	Ring U
F-S 17-55mm f/2.8 IS USM	68°40′ - 23°20′ • 48° - 15°40′ • 78°30′ - 27°50′	19/12	7	22	0.35	0.17 (at 55mm)	YES	Ring US

<sup>\*</sup> Only for EOS 30D, EOS 20D, EOS 400D, EOS 350D and EOS 300D

													( <b>)</b> =	possible <b>≜</b> =	not possible
Extender EF 1.4x II															
Lens Attachment	EF 135mm	EF 180mm	EF 200mm	EF 300mm	EF 300mm	EF 400mm	EF 400mm	EF 400mm	EF 500mm	EF 600mm	EF 70-200mm	EF 70-200mm	EF 70-200mm	EF 70-200mm	EF100-400mm
	f/2L	f/3.5L	f/2.8L II	f/2.8L	f/4L	f/2.8L	f/4	f/5.6L	f/4L	f/4L	f/2.8L	f/2.8L	f/4L	f/4L	f/4.5-5.6L
	USM	Macro USM	USM	IS USM	IS USM	IS USM	DO IS USM	USM	IS USM	IS USM	USM	IS USM	USM	IS USM	IS USM
Focal Length (mm)	189	252	280	420	420	560	560	560	700	840	98 - 280	98 - 280	98 - 280	98 - 280	140 - 560
f-stop (f)	2.8 - 45	4.5 - 454	4 - 45	4 - 45	5.6 - 45	4 - 45	5.6 - 45	8 - 45	5.6 - 45	5.6 - 45	4 - 45	4 - 45	5.6 - 45	5.6 - 45	6.7 - 544
Max. Magnification (x)	0.27	1.4	0.22	0.19	0.33	0.22	0.17	0.18	0.17	0.17	0.22	0.24	0.31	0.29	0.28
AF	)	<b>)</b> 10		12	) <sup>12</sup>	12	D12	<b>≜</b> 11	12	) <sup>12</sup>	)9	12	)	12	<b>♠</b> 11,12

- Maximum number of Hood III/IV attachable. In the case of zoom lenses, the maximum number applies to the shortest focal length.
- Mechanical full-time manual focusing built-in.
- 3 Micro motor.
- 4 Data based on EOS models with exposures displayed in 1/2 stop increments. The aperture value is slightly different with cameras displaying 1/3 stops.
- 5 With EF 50mm f/2.5 Compact Macro.

- 6 Extension Tube EF 12 II cannot be used with the following lenses at wide angles: EF 16-35mm f/2.8L II USM, EF-5 10-22mm f/3.5-4.5 USM, EF-5 17-55mm f/2.8 IS USM, EF-5 17-85mm f/4-5.6 IS USM.

  7 Extension Tube EF 25 II cannot be used with the the following lenses at wide angles: EF 16-35mm f/2.8L II USM, EF 17-40mm f/4.L USM, EF 20-35mm f/3-5.4 USM, EF 24-70mm f/2.8L USM, EF 24-105mm f/4.L IS USM, EF 28-300mm f/3-5.5 G.I L USM, EF 5 10-22mm f/3-5.4 USM, EF-5 17-85mm f/4-5.6 IS USM, EF-5 18-55mm f/4-5.0 IS USM, EF-5 10-22mm f/3-5.4 USM, EF-5 17-85mm f/4-5.0 IS USM, EF-5 10-22mm f/3-5-4.5 USM, EF-5 18-55mm f/4-5.0 IS USM, EF-5 17-55mm f/2-8 IS USM.

## Lenses Specifications Chart

EF Lens	Filter Diameter (mm)	Max. Diameter x Length (mm)	Weight (g)	Magnification with Extension Tube EF 12 II <sup>6</sup>	Magnification with Extension Tube EF 25 II <sup>7</sup>	Lens Hood	Lens Case/Pouch	G.F.Holder III (hood III ¹)	G.F.Holder IV (hood IV 1)
EF 16-35mm f/2.8L II USM	(mm) 82	88.5 x 111.6	635	0.62 - 0.36 <sup>13</sup>	1.11 - 0.80 <sup>13</sup>	EW-88	-/LP1319	NC	NC
EF 17-40mm f/4L USM	77	83.5 x 96.8	475	0.83 - 0.32	1.02 - 0.70	EW-83E (Standard)	-/LP1319	NC	(0)
EF 20-35mm f/3.5-4.5 USM	77	83.5 x 68.9	340	0.70 - 0.36	1.00 - 0.80	EW-83II	-/LP1214	NC	(0)
EF 24-70mm f/2.8L USM	77	83.2 x 123.5	950	0.63 - 0.18	0.75 - 0.40	EW-83F	-/LP1219	(0)	(0)
EF 24-85mm f/3.5-4.5 USM	67	73 x 69.5	380	0.59 - 0.15	1.23 - 0.33	EW-73II	-/LP1014	NC	(0)
EF 24-105mm f/4L IS USM	77	83.5 x 107	670	0.60 - 0.12	0.61 - 0.27	EW-83H	-/LP1219	NC	(0)
EF 28-90mm f/4-5.6 III	58	67 x 71	190	0.56 - 0.14	1.13 - 0.31	EW-60C	-/LP814	(0)	(0)
EF 28-90mm f/4-5.6 II USM	58	67 x 71	190 210	0.56 - 0.14	1.13 - 0.31	EW-60C	-/LP814	(0)	(0)
EF 28-105mm f/4-5.6 EF 28-105mm f/4-5.6 USM	58 58	67 x 68 67 x 68	210	0.54 - 0.12 0.54 - 0.12	1.11 - 0.27 1.11 - 0.27	EW-63B EW-63B	-/LP814 -/LP814	(0)	(0)
EF 28-105mm f/3.5-4.5 II USM	58	72 x 75	375	0.53 - 0.12	0.75 - 0.27	EW-63II	-/LP814	(0)	(0)
EF 28-135mm f/3.5-5.6 IS USM	72	78.4 x 96.8	540	0.53 - 0.09	1.09 - 0.21	EW-78BII	-/LP1116	NC NC	(0)
EF 28-200mm f/3.5-5.6 USM	72	78.4 x 89.6	500	0.54 - 0.06	1.10 - 0.14	EW-78D	-/LP1116	NC NC	(0)
EF 28-300mm f/3.5-5.6L IS USM	77	92 x 184	1,670	0.50 - 0.04	0.50 - 0.09	EW-83G	-/LZ1324	NC	(6)
EF 55-200mm f/4.5-5.6 II USM	52	70.4 x 97.3	310	0.29 - 0.06	0.50 - 0.14	ET-54	-/LP1016	(3)	(3)
EF 70-200mm f/2.8L USM	77	84.6 x 193.6	1,310	0.22 - 0.06	0.41 - 0.14	ET-83II (Standard)	-/LZ1324	(2)	(2)
EF 70-200mm f/2.8L IS USM	77	86.2 x 197	1,470	0.24 - 0.06	0.41 - 0.14	ET-86 (Standard)	-/LZ1324	(0)	(1)
EF 70-200mm f/4L IS USM	67	76 x 172	760	0.23 - 0.06	0.42 - 0.14	ET-74	-/LP1224	(2)	(3)
EF 70-200mm f/4L USM	67	76 x 172	705	0.29 - 0.06	0.39 - 0.13	ET-74 (Standard)	-/LZ1224	(2)	(3)
EF 70-300mm f/4-5.6 IS USM	58	76.5 x 142.8	630	0.32 - 0.04	0.40 - 0.09	ET-65B	-/LP1222	(2)	(3)
EF 70-300mm f/4.5-5.6 DO IS USM	58	82.4 x 99.9	720	0.26 - 0.04	0.46 - 0.09	ET-65B	-/LP1116	(4)	(4)
EF 75-300mm f/4-5.6 III USM	58	71 x 122	480	0.31 - 0.04	0.39 - 0.09	ET-60 FT-60	-/LP1019	(5)	(4)
EF 75-300mm f/4-5.6 III EF 90-300mm f/4-5-5.6	58 58	71 x 122 71 x 114.7	480 420	0.31 - 0.04 0.31 - 0.13	0.39 - 0.09 0.39 - 0.09	E1-60 ET-60	-/LP1019 -/LP1019	(5)	(4)
EF 90-300mm f/4.5-5.6 USM	58	71 x 114.7	420	0.31 - 0.13	0.39 - 0.09	ET-60	-/LP1019 -/LP1019	(5)	(4)
EF 100-300mm f/4.5-5.6 USM	58	73 x 121.5	540	0.26 - 0.04	0.37 - 0.09	ET-65III	-/LP1019	(5)	(4)
EF 100-400mm f/4.5-5.6L IS USM	77	92 x 189	1,380	0.25 - 0.03	0.35 - 0.07	ET-83C (Standard)	-/LZ1324	(4)	(5)
EF 15mm f/2.8 Fisheye	Filter Holder	73 x 62.2	330	-	-		-/LP814	NC NC	NC
EF 14mm f/2.8L USM	Filter Holder	77 x 89	560	-	-	-	-/LP1016	NC	NC
EF 20mm f/2.8 USM	72	77.5 x 70.6	405	0.72 - 0.60	-	EW-75II	-/LP1214	NC	(0)
EF 24mm f/1.4L USM	77	83.5 x 77.4	550	0.66 - 0.50	-	EW-83DII (Standard)	-/LP1214	NC	(0)
EF 24mm f/2.8	58	67.5 x 48.5	270	0.64 - 0.50	1.22 - 1.11	EW-60II	-/LP811	(0)	(0)
EF 28mm f/1.8 USM	58	73.6 x 55.6	310	0.61 - 0.43	1.13 - 0.96	EW-63II	-/LP814	(0)	(0)
EF 28mm f/2.8	52	67.4 x 42.5	185	0.56 - 0.43	1.09 - 0.95	EW-65II	-/LP1011	(1)	(1)
EF 35mm f/1.4L USM	72	79 x 86	580	0.54 - 0.36	0.97 - 0.79	EW-78C (Standard)	-/LP1214	NC (2)	(0)
EF 35mm f/2 EF 50mm f/1.2L USM	52 72	67.4 x 42.5	210 590	0.58 - 0.35 0.39 - 0.24	1.00 - 0.77 0.67 - 0.53	EW-65II ES-78	-/LP1011 -/LP1214	(2)	(2)
EF 50mm f/1.4 USM	58	85.8 x 65.5 73.8 x 50.5	290	0.39 - 0.24	0.67 - 0.53	ES-71II	-/LP1214 -/LP1014	(0)	(1)
EF 50mm f/1.8 II	52	68.2 x 41	130	0.39 - 0.24	0.68 - 0.53	ES-62	-/LP1014	(2)	(1)
EF 85mm f/1.2L II USM	72	91.5 x 84.0	1,025	0.25 - 0.15	0.42 - 0.33	ES-79 II (Standard)	-/LP1219	(4)	(4)
EF 85mm f/1.8 USM	58	75 x 71.5	425	0.27 - 0.15	0.44 - 0.32	ET-65III	-/LP1014	(5)	(4)
EF 100mm f/2 USM	58	75 x 73.5	460	0.27 - 0.13	0.42 - 0.28	ET-65III	-/LP1014	(5)	(4)
EF 135mm f/2L USM	72	82.5 x 112	750	0.29 - 0.09	0.41 - 0.20	ET-78II (Standard)	-/LP1219	(5)	(5)
EF 135mm f/2.8 (with Softfocus)	52	69.2 x 98.4	390	0.22 - 0.09	0.33 - 0.20	ET-65III	-/LP1016	(5)	(4)
EF 200mm f/2.8L II USM	72	83.2 x 136.2	765	0.23 - 0.06	0.32 - 0.14	ET-83BII (Standard)	-/LP1222	(5)	(5)
EF 300mm f/2.8L IS USM	52 Drop-in	128 x 252	2,550	0.18 - 0.04	0.24 - 0.09	ET-120 (Standard)	Lens Case 300/—	NC	NC
EF 300mm f/4L IS USM	77	90 x 221	1,190	0.30 - 0.04	0.37 - 0.09	-	-/LZ1128	(5)	(5)
EF 400mm f/2.8L IS USM	52 Drop-in	163 x 349	5,370	0.19 - 0.03	0.23 - 0.06	ET-155 (Standard)	Lens Case 400/—	NC	NC
EF 400mm f/5.6L USM	77	90 x 256.5	1,250	0.16 - 0.03	0.21 - 0.07	ET 130 (Cr 11)	-/LZ1132	(5)	(5)
EF 400mm f/4 DO IS USM	52 Drop-in	128 x 232.7	1,940	0.16 - 0.03	0.20 - 0.07	ET-120 (Standard)	Lens Case 400B/—	NC NC	NC NC
EF 500mm f/4L IS USM EF 600mm f/4L IS USM	52 Drop-in 52 Drop-in	146 x 387 168 x 456	3,870 5,360	0.15 - 0.03 0.14 - 0.02	0.18 - 0.05 0.17 - 0.05	ET-138 (Standard) ET-160 (Standard)	Lens Case 500/— Lens Case 600/—	NC NC	NC NC
Extender EF 1.4x II	52 Drop-In	72.8 x 27.2	220	0.14-0.02	0.17 - 0.05	E1-100 (SIdHUdfU)	—/ LP811	NC —	NC _
Extender EF 2x II		71.8 x 57.9	265	_	_		-/ LP811	_	
EF 50mm f/2.5 Compact Macro	52	67.6 x 63	280	0.74 - 0.24	1.04 - 0.54		-/LP814	(2)	(2)
Life-Size Converter EF	-	67.6 x 34.9	160	- 0.74 0.24	-	-	-/LP811	(5)5	(5)5
MP-E 65mm f/2.8 1-5x Macro Photo	58	81 x 98	710	-	-	=	-/LP1216	(0)	(0)
EF 100mm f/2.8 Macro USM	58	78.6 x 118.6	580	1.19 - 0.12	1.39 - 0.26	ET-67	-/LP1219	(4)	(4)
EF 180mm f/3.5L Macro USM	72	82.5 x 186.6	1,090	1.09 - 0.07	1.21 - 0.15	ET-78II	-/LZ1324	(5)	(5)
Extension Tube EF 12 II	-	66.5 x 12.3	66	-	-	-	—/Exclusive	-	-
Extension Tube EF 25 II	-	67.6 x 27.3	125	-	-	=	-/LP811	-	-
TS-E 24mm f/3.5L	72	78 x 86.7	570	0.62 - 0.49	1.21 - 1.10	EW-75BII (Standard)	-/LP1216	(0)	(0)
TS-E 45mm f/2.8	72	81 x 90.1	645	0.44 - 0.27	-	EW-79BII (Standard)	-/LP1216	(0)	(0)
TS-E 90mm f/2.8	58	73.6 x 88	565	0.43 - 0.14	0.60 - 0.31	ES-65III (Standard)	-/LP1016	(1)	(1)
EE C Lonet									
EF-S Lens* EF-S 60mm f/2.8 Macro USM	FO	72 v 60 0	275	1 20 0 20	1.61 - 0.44	ET 670	_/  01016	(6)	(6)
EF-S 10-22mm f/3.5-4.5 USM	52 77	73 x 69.8 83.5 x 89.8	335 385	1.28 - 0.20 0.77 - 0.58	1.61 = 0.44 NR	ET-67B EW-83E	-/LP1016 -/LP1319	(6) NC	(6)
EF-S 17-55mm f/2.8 IS USM	77	83.5 x 110.6	645	0.45 - 0.23	NR NR	EW-83J	-/LP1319 -/LP1219	NC NC	(0)
EF-S 17-85mm f/4-5.6 IS USM	67	78.5 x 92	475	0.43 - 0.14	0.72 - 0.33	EW-73B	-/LP1219 -/LP1116	NC NC	(0)
EF-S 18-55mm f/3.5-5.6 II	58	68.5 x 66	190	0.81 - 0.23	0.92 - 0.51	EW-60C	-/LP814	(0)	(0)

	()= possible 🖢 not possible												not possible)		
Extender EF 2x II															
Lens Attachment	EF 135mm	EF 180mm	EF 200mm	EF 300mm	EF 300mm	EF 400mm	EF 400mm	EF 400mm	EF 500mm	EF 600mm	EF 70-200mm	EF 70-200mm	EF 70-200mm	EF 70-200mm	EF100-400mm
	f/2L	f/3.5L	f/2.8L II	f/2.8L	f/4L	f/2.8L	f/4	f/5.6L	f/4L	f/4L	f/2.8L	f/2.8L	f/4L	f/4L	f/4.5-5.6L
	USM	Macro USM	USM	IS USM	IS USM	IS USM	DO IS USM	USM	IS USM	IS USM	USM	IS USM	USM	IS USM	IS USM
Focal Length (mm)	270	360	400	600	600	800	800	800	1,000	1,200	140 - 400	140 - 400	140 - 400	140 - 400	200 - 800
f-stop (f)	4-64	6.7 - 64 4	5.6 - 64	5.6 - 64	8 - 64	5.6 - 64	8-64	11 - 64	8-64	8-64	5.6 - 64	5.6 - 64	8-64	8 - 64	9.5 - 764
Max. Magnification (x)	0.38	2	0.32	0.28	0.47	0.31	0.24	0.25	0.25	0.24	0.33	0.36	0.45	0.42	0.41
AF	)	•	)	D 12	<b>♠</b> 11,12	D12	<b>♠</b> 11,12	À	<b>♠</b> 11,12	♠ 11,12	9	)	<b>♠</b> 11	♠ 11,12	<b>♠</b> 12

- 8 Image circle dia. 58.6mm.
- If the EF 70-200mm ft/2.8 LUSM lens is attached to an EOS camera having multiple focusing points and an Extender is attached to the lens, only the center focusing point will be usable for AF.
   The auto-focusing range is from 0.8m to infinity.
- 11 With the EOS-1Ds Mark II, EOS-1Ds, EOS-1D Mark III, EOS-1D Mark II N, EOS-1D Mark II, EOS-1D, EOS 5D, EOS-1V/HS and EOS 3, AF is possible with the center focusing point. With other EOS cameras, only manual focus is available.
- 12 The Image Stabiliser does not operate with the following cameras: EOS 650, 620, 630/600, RT, 700, 750, 850, EOS-1, A2/A2E, 10s, Elan, Rebel/Rebel S, Rebel II/Rebel SII.
- 13 Only compatible at tele.
- NC: Not Compatible with Gelatin Filter Holder III/IV.
- NR: Not recommended.







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