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**Canon** EF Lenses



# EF Lens Technology

## Ultrasonic Motor

The world's first lens-based motor, this innovative feature spins by ultrasonic oscillation energy, ensuring fast and almost noiseless picture-taking. It also greatly increases auto-focusing speed – perfect for taking photos of nervous creatures or in quiet galleries and theatres.

## Diffraction 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 elements. This unique, revolutionary technology enables Canon to build smaller and lighter Supertelephoto lenses, using the principle of diffraction to correct chromatic aberrations.

## Image Stabiliser

Some Canon EF lenses incorporate an Image Stabiliser (IS) to prevent 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.

## Lens codes

L indicates one of Canon's L series lenses – the ultimate in cutting-edge lens design. The lenses often feature fluorite or ultra-dispersion (UD) elements for correction of lens aberrations.

USM is an abbreviation for Ultrasonic Motor. This technology has been pioneered by Canon to produce a fast, near-silent focusing action inside the lens.

II, III, etc. indicate the version of the lens. An existing lens is often re-designed to make it even smaller and lighter.



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

From wide angle to super telephoto in the blink of an eye: This is no ordinary lens. An 11x zoom brings a tiny object moving against a panoramic background suddenly up close to fill the frame. With the framing flexibility afforded by such a wide focal length range and Image Stabiliser increasing the lens speed by up to three stops, this EF masterpiece offers new levels of portability and versatility to the professional photographer. The hallowed red line engraved on the lens barrel indicates an L series: A title reserved for those superbly specified lenses considered by Canon's engineers to be worthy of the title 'professional'.



## Fixed Focal Length

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 50mm f/1.4 USM

### EF 50mm f/1.8 II

Standard lenses to suit most subjects.



### EF 24mm f/1.4L USM

### EF 24mm f/2.8

### 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 portraits.



**EF 85mm f/1.2L USM**  
**EF 85mm f/1.8 USM**

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

**EF 100mm f/2.0 USM**  
**EF 135mm f/2.0L USM**

**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**

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

**EF 400mm f/5.6L USM**



**EF 1200mm f/5.6L USM**

Canon's most powerful Supertelephoto lens, available by special order only.

## 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 USM**  
**EF 17-40mm f/4L USM**  
**EF 20-35mm f/3.5-4.5 USM**

Wide-angle zooms, ideal for interiors and landscapes.



**EF-S 18-55mm f/3.5-5.6**

Exclusively designed for the EOS 300D, the EF-S 18-55mm f/3.5-5.6 lens is a lightweight and compact wide-angle zoom lens. It has a shorter back focal distance, optimised for the size of the EOS 300D's sensor, providing pin-sharp images at focal lengths equivalent to 29-88mm in 135 format.



**EF 24-70mm f/2.8L USM**  
**EF 24-85mm f/3.5-4.5 USM**  
**EF 28-80mm f/3.5-5.6 II**  
**EF 28-80mm f/3.5-5.6 V USM**

**EF 28-90mm f/4-5.6 II**  
**EF 28-90mm f/4-5.6 II USM**  
**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**  
**EF 35-80mm f/4-5.6 III**

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 80-200mm f/4.5-5.6 II

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

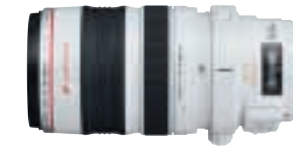


## Image Stabilisation Lenses

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



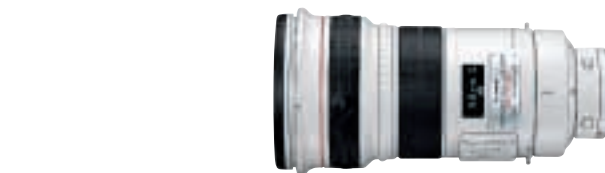
EF 28-300mm f/3.5-5.6L IS USM



EF 70-200mm f/2.8L IS USM  
 EF 75-300mm f/4-5.6 IS USM  
 EF 100-400mm f/4.5-5.6L 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

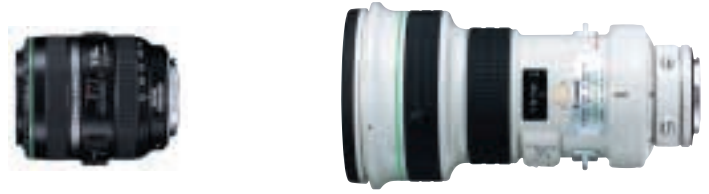


These fixed focal length IS lenses are especially popular with sports and wildlife photographers.



## Diffraction Optical Lenses

Diffraction 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 Macro**

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

**MP-E65 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, 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 effective aperture of the lens is increased by one or two stops respectively. Auto-focusing does not operate if the effective maximum aperture is greater than f/5.6 (f/8 on the EOS-1Ds, EOS-1D Mark II, EOS-1V and EOS 3).

# Lenses 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



### UV Filter

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



### ND4L Filter

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 No. 1 & No. 2

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



### 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 48mm PL-C filter can be used with the EF 200mm f/1.8L USM and EF 1200mm f/5.6L USM lenses. The 52mm PL-C filter can be used with the EF 300mm f/2.8L IS USM, EF 400mm f/2.8L IS USM, EF 500mm f/4L IS USM and EF 600mm f/4L IS USM lenses.

Available sizes: 48mm, 52mm



### Gelatin Filter Holder E

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

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



## Filters

### 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

### PL-C Filter

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

### 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 on the lens.

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 48mm holder is provided as standard with the EF 200mm f/1.8L USM and EF 1200mm f/5.6L USM lenses. A 52mm holder is provided as standard with the EF 300mm f/2.8L IS USM, EF 400mm f/2.8L IS USM, EF 500mm f/4L IS USM and EF 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 adaptors. Refer to the EF Lens Accessory Table for information on lens combinations.

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

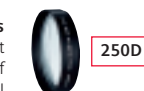
# Lenses Accessories

## Close-up Accessories

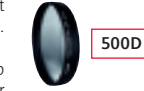
### Close-up Lenses

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.

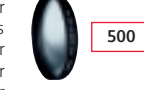
Three Canon close-up lenses are available. The close-up lenses 250D and 500D both use two lens elements to reduce colour aberrations. The close-up lens 500 is a one-element accessory for low-cost close-up photography. The 250D is recommended for lens focal lengths from 38mm to 135mm and is available 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.



250D



500D



500

### 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.



Extender EF 1.4xII



Extender EF 2xII

### Macro Ring Lite MR-14EX

Lighting for close-up photography can be a problem – the subject is often too close to the lens for conventional lighting to be effective. The Macro Ring Lite MR-14EX overcomes this by mounting twin flash tubes on the end of the lens (an adaptor may be required). The tubes can be fired together or separately to control the shadows given by the lighting. Exposure is handled automatically using E-TTL flash metering. An exposure confirmation signal is provided.



## 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.



## Close-up Accessories

### EF Extension Tubes

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.



EF12 II



EF25 II

### MP-E65 f/2.8 1-5x Macro Photo Lens

This is a specialist lens for macro photography only. At its smallest magnification the lens gives life-size (1:1) images, while its maximum magnification is five times life-size (5:1). The use of ultra-dispersion (UD) glass in one of the 10 elements of the lens virtually eliminates the chromatic aberrations that are a common problem with high-magnification images. The other Macro-lenses available are: the EF 50mm f/2.5 Macro, the EF 100mm f/2.8 Macro USM, and the EF 180mm f/3.5L Macro USM.



### Macro Twin Lite MT-24X

This versatile flash accessory brings creative control to Macro photography. The unit attaches to any of the EF macro lenses and provides two fully adjustable flash heads. The heads can be individually rotated vertically and horizontally. The ring on which they are mounted can also be rotated. Full E-TTL Autoflash control is available, with FP Flash, FE Lock, Flash Exposure Compensation, Flash Exposure Bracketing (FEB), and Flash Ratio (A:B) control. The Macro Twin Lite can function as the master unit in a wireless multiple flash set-up.



## Hoods and Cases

### Lens Hoods

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



### Lens Cases

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





## Service Support

### Introduction

Canon doesn't stop at developing great products, we deliver outstanding after-sales service too. With Canon cover, customers can have complete confidence in their Canon technology and enjoy the following benefits;

### Helpful, professional Customer Service Advisors

Our team are trained specifically to support Canon products over the phone in order to resolve customers enquiries quickly and efficiently. Customers can call our customer services Helpline on 08705 143723. Lines are open during normal working hours (9am - 5.30pm) and all calls are charged at standard National rates.

### Qualified technicians

All technicians receive ongoing product training and are equipped with the tools and resources to provide a first class service. There are absolutely no additional service costs for parts, travel and labour.

### Original Components

Canon only uses genuine spare parts and components in repairs. This ensures high product performance and protects the product warranty.

### Canon recover

Canon automatically logs all registered product owners onto a database. If a product is lost or stolen, the police can refer to this database to return recovered products. (Providing the customer has registered their details with us).

### Extended Warranty

You don't have to be limited to the free 12 months Canon warranty we provide. From just £16.00 (inc VAT), you can protect your investment in Canon technology for a total of 3 years. Canon's Extended warranty is the low cost, no-risk way to ensure that you are entitled to technical assistance and extended warranty repairs for a long time. Extended warranty can be purchased for both camera and business products.

## Additional Sources of Help

### Helpline Number

08705 143723

### Internet

FAQ's and on-line support is available on the web at [www.canon.co.uk](http://www.canon.co.uk)

### Canon UK Ltd

Woodhatch  
Reigate  
Surrey  
RH2 8BF  
T 01737 220000  
F 01737 220022

[www.canon.co.uk](http://www.canon.co.uk)

### Canon Consumer Imaging Service Centre

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T 0870 241 21 61  
F 0870 848 00 47

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