

CANON LENSES

Canon lenses are held in the highest esteem by professional and discerning amateur photographers the world over for their unsurpassed, unique optical design and precision engineering.

Canon pioneered development of high-speed lenses—opening up new lanes of photographic versatility to the serious photographer. With the complete line of Canon Interchangeable Lenses R, the range of photography extends from wide-angle to extra-long telephoto pictures.

Before leaving the factory, all Canon lenses must meet the most exacting, rigid quality tests to insure the highest resolution, brilliance, and color fidelity for which the name of Canon is world famous. All lenses are Spectra-Coated (T.M.) externally and internally by a revolutionary process to insure maximum color and tone balance, greater light transmission, and complete elimination of flare.

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Canon

INTERCHANGEABLE
LENSES R

TYPES OF R LENSES

Wide-Angle Lenses

The Super Canonomatic Lens R 35mm F2.5 is a wide-angle lens which permits the coverage of expansive scenery, groups of people, as well as structures and interior shots when the distance between the object to be photographed and the camera is limited. As the depth-of-field resulting from its characteristic increases the realism of the average photograph, this lens is extensively used by professionals and serious amateurs.

Standard Lens

The field-of-vision in the Super Canonomatic Lens R 50mm F1.8 is almost the same as that of the human eye—looking ahead without concentrating on a given point. This lens is extremely versatile in black-and-white or color photography. It is ideally suited for scenery, snapshots, portraiture, close-ups, and copy work. The high-speed F1.8 is amply sufficient for night photography.

Long-Focus Lens

The Canon Long-Focus Lens R 85mm F1.8 has been designed to give the photographer a selected and natural field. It is ideal for portraiture and most effective for news and sporting events, night scenes, stage and commercial photography.

Telephoto Lenses

Canon telephoto lenses are popular among discerning amateurs and professional photographers because of the superb results obtained under various circumstances and situations. Canon Telephoto Lenses R 100mm F3.5 and F2, and 135mm F3.5 are unsurpassed when photographing sporting events, wild life, or even in portraiture and commercial photography.

Long- and Extra-Long-Telephoto Lenses

Compact, lightweight, easy-to-operate Canon Long- and Extra-Long-Telephoto Lenses R have a photographic range from 200mm to as far as 2000mm. These lenses are ideally suited for photographing in vivid detail close-ups of distant scenes and hard-to-reach subjects. Widely used by professionals and amateurs. Each lens comes with a complete set of attachments.

INTERCHANGEABLE LENSES

(Chart of Interchangeable Lenses for Canonflex Cameras)

Name of Lens	Type	Angle of View	Magnification	Number of Elements	Aperture (F stops) Click Stops down to	Focusing Range		Attachment Sizes		Coating	Weight (oz.) (gm.)
						in Feet	in Meters	Outer Diameter	Filter Size		
Super Canonomatic Lens R 35mm F2.5	Wide-Angle	64°	0.7×	7	16	1.5~10, ∞	0.4~5, ∞	60mm	58mm	Magenta	11.2 317
Super Canonomatic Lens R 50mm F1.8	Standard	46°	1.0×	6	16	2~50, ∞	0.6~15, ∞	60mm	58mm	Amber	10.4 295
Super Canonomatic Lens R 85mm F1.8	Long-Focus	29°	1.7×	5	22	3.5~60, ∞	1~20, ∞	60mm	58mm	Magenta	16.6 470
Super Canonomatic Lens R 100mm F2	Telephoto	24°	2.0×	6	16	3.5~60, ∞	1~20, ∞	60mm	58mm	Amber	18.2 515
Canon Lens (Pre-Set) R 100mm F3.5	Telephoto	24°	2.0×	5	16	3.5~50, ∞	1~20, ∞	42mm	40mm	Purple	— —
Super Canonomatic Lens R 135mm F2.5	Telephoto	18°	2.7×	6	16	5~100, ∞	1.5~30, ∞	60mm	58mm	Magenta	22.2 630
Canon Lens (Pre-Set) R 135mm F3.5	Telephoto	18°	2.7×	4	22	5~100, ∞	1.5~30, ∞	50mm	48mm	Magenta	— —
Canonomatic Lens R 200mm F3.5	Long Telephoto	12°	4.0×	7	22	8~150, ∞	2.5~50, ∞	60mm	58mm	Magenta	23.6 670

EFFECTIVENESS OF INTERCHANGEABLE LENSES

(Change of field-of-view)

Photographing from the same spot, the size of the object is changed accordingly using different focal-length lenses. In general, compared to the 50mm normal-focus lens, the longer the focal-length of the lens, the subject will be larger...but field-of-view smaller. Conversely, the shorter the focal-length of the lens, the subject will be smaller...but field-of-view larger.



35 mm

50 mm

135 mm

EFFECTIVENESS OF INTERCHANGEABLE LENSES

(Perspective)

When photographing the main subject in the same size with different focal-lengths by moving the position of the camera, the difference in the perspective can be distinctly noticed. The pictures illustrated here are taken in almost the same size with the front figure as the main subject. It is noticeable that the scenery in the background varies. The shorter the focal-length, the more exaggerated is the perspective. There are also out-of-focus variations of the background. A longer focal-length lens gives the effect of three-dimensional vision by weakening the background tones and relieving the main subject. Besides the changes in field-of-view and perspective, there are variations in the depth-of-field, due to the degree of opening of the lens aperture, and other characteristics for each focal-length lens.



35 mm

50 mm

135 mm

LENSES CLASSIFIED ACCORDING TO DIAPHRAGM MECHANISM

1. Super Canonomatic Lenses

Lenses with completely automatic pre-set diaphragm

R 35mm F2.5



R 50mm F1.8



R 85mm F1.8



R 100mm F2



R 135mm F2.5



2. Canonomatic Lens

Automatic diaphragm lens in which pre-set aperture is set with charge ring.

R 200mm F3.5



3. Canon Lenses

Lenses with manually-operated diaphragm
Manually-operated pre-set aperture type

R 100mm F3.5



R 135mm F3.5



Manually-operated aperture

All types of extra-long-telephoto lenses

OPERATION OF LENSES

Super Canonomatic Lens

The Super Canonomatic Lens is provided with an automatic springback aperture pre-set mechanism. As the shutter is released, the diaphragm closes to the pre-selected aperture stop automatically... and reopens to full aperture immediately after exposure. In the Super Canonomatic Lens the automatic diaphragm mechanism is charged simultaneously with the shutter and mirror of the camera. Therefore, after just setting the pre-set aperture stop the rest is left up to the camera.

Pre-Set Aperture

The aperture is pre-set to the desired aperture stop. When the shutter is released, the automatic diaphragm closes to the pre-selected aperture. The Super Canonomatic and Canonomatic Lenses are of the automatic pre-set type, and the Canon Lens R is of the manual pre-set type.

Manually-Operated Diaphragm

By turning the manually-operated diaphragm ring the aperture can be opened or closed without any connection to the pre-set aperture. Therefore, the brightness of the subject as seen through the lens under the pre-selected aperture condition can be checked. When using the pre-set diaphragm keep the manually-operated diaphragm at full opening.

- R 35mm F2.5
- R 50mm F1.8
- R 85mm F1.8
- R 100mm F2
- R 135mm F2.5



Aperture

As the aperture number gets larger the lens gets darker. With each aperture stop the brightness decreases by one-half. Therefore, when the aperture opening is made one stop smaller the exposure time must be doubled, and when the aperture opening is made two stops smaller the exposure time must be quadrupled.

CANONOMATIC LENS

By manipulating the charge ring the diaphragm of this lens can be kept open at full aperture. This lens is provided with a mechanism in which the diaphragm automatically closes to the pre-selected aperture stop as the shutter is released. When the charge ring is not used the pre-set aperture ring works as a manually-operated aperture ring and can be used for checking aperture effectiveness. The diaphragm which has been charged to full aperture can be closed to the pre-selected aperture stop, without affecting the shooting, by pressing the pre-set release button.

* The pre-set mechanism of this lens is not charged by the shutter charge on the camera body.

CANON LENS

1. Manually Pre-Set Type

With this type lens focusing is done with the lens open at full aperture. If the aperture set ring is manipulated just before shooting it will stop at the pre-set aperture stop. Therefore, though it is done manually, fast shooting is possible without checking the scale. After shooting return the aperture set ring to full aperture.

Opens when turned to the left.
Closes when turned to the right.

- R 100mm F3.5
- R 135mm F3.5

1. Turn the aperture set ring to full aperture.
2. Set the pre-set aperture ring at the desired stop.
3. Turn the aperture set ring just before shooting.



LENS HOOD

Always use the lens hood when taking pictures. It shuts out harmful and unnecessary rays from outside the shooting angle.

LEATHER CASE

The telephoto lens is put away into the leather case by covering it with the lens hood in a reverse position.

CHANGING LENSES

Detaching of lens: Turn the bayonet tightening ring in the direction of the arrow and then pull out the lens.

Mounting of lens: Insert the lens into the camera so that the red dot on the flange of the camera meets the red dot on the lens barrel. Then turn the bayonet tightening ring in a clockwise direction.

* The lens cannot be mounted unless the red dot on the lens barrel comes under the distance scale.

* Cover the detached lens with lens cap and base cap.

CARE OF YOUR CANON LENSES

When changing lenses avoid direct sunlight or strong artificial light. Do it in the shade, or use your shadow as a shield in broad daylight.

Care should be taken to keep the mount dust-free. Attach the base cap onto the lens immediately after it has been detached.

When dust has accumulated on the lens surface dust it off lightly with a clean and soft feather. If there is a stain on the lens lightly wipe it off with a clean and soft cotton cloth moistened with alcohol. Do not rub hard or wipe the lens when there is still dust on it because it will scratch the lens.

Do not keep your lens in a warm and humid place for any length of time. If this is impossible, always use a desiccating agent.

The use of a camera holder is recommended for photography using telephoto or long-focus lenses.

Aperture stop	1.2	1.4	1.8	2.0	2.8	(3.5)	4.0	5.6	8.0	11	16	22
Exposure ratio	1/3	1/2	1/1.25	1	2	(3)	4	8	16	32	64	128

Distance Scale

Gives the distance between the subject in focus and the film surface.

Infrared Index Mark

The letter "R" on the Depth-of-Field Scale of all Canon lenses is for infrared photography. When using infrared film, focusing is done in the normal way. Read off the distance reading as shown on the Lens Distance Scale opposite the Distance Index Mark. Then, turn the lens barrel until the distance reading is opposite the "R" mark. Your lens is now focused for infrared photography.

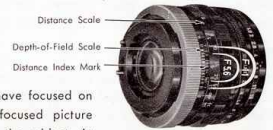


Depth-of-Field Scale

The Depth-of-Field Scale shows you the range of subjects which will be in sharp focus on the film. This range will vary with the F stop selected. For example:

The Depth-of-Field will be deeper
the smaller the lens aperture
the shorter the lens focal length
the farther the distance of the subject

The Depth-of-Field will be shallow
if opposite of the above



With an F stop of 5.6, and the subject you have focused on at 5m, your camera will give you a sharply focused picture from approximately 3.7m to 7.8m away from the subject. At F11, you will get a sharp picture from 2.9m to 17m.



R 200mm F3.5

1. Turn the pre-set aperture ring and set it at the desired aperture stop.
2. Turn the charge ring and open to full aperture.

2. Manually Operated Aperture Ring Type

These lenses do not have a pre-set ring.



(Used with Bellows R except R 2000mm lens.)

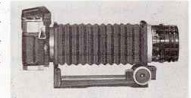
When mounting the lens, move the charge lever in the direction of the arrow. The charge lever must be charged before the lens is inserted into the camera. If a lens, with its aperture pre-set mechanism not charged, is inserted into a camera with its shutter cocked, the automatic aperture pre-set mechanism will not work for the first exposure. This will not, however, cause any maladjustment to any part of the camera or lens.



Note: Care must be taken not to touch the mirror after the lens has been detached from the camera.

BELLOWS R

Bellows R is a versatile accessory designed for use with the Canonflex. It has wide usage...for close-ups, focusing of long- and extra-long-telephoto lenses, copy work, microphotography and macro-photography. When the rangefinder type camera lenses of focal length longer than 85mm are used, close-ups from infinity to 1:1 life size are possible.



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