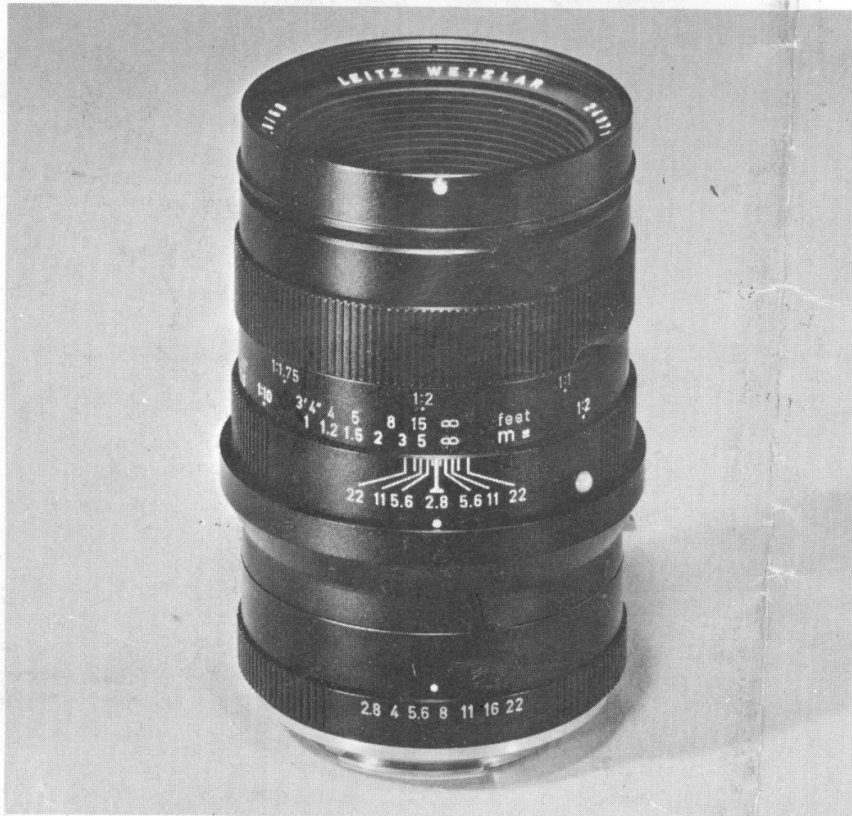


INSTRUCTIONS

60MM MACRO-ELMARIT-R f/2.8



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60MM MACRO-ELMARIT-R f/2.8

INSTRUCTIONS

The 60mm f/2.8 Macro-ELMARIT-R consists of two parts:

- a) The lens in focusing mount for direct mounting on the LEICAFLEX camera with continuous focus from infinity to a ratio of 1:2 (half life size), and
- b) An intermediate ring which is interposed between the lens and the LEICAFLEX camera for continuous focus from 1:2 to a ratio of 1:1 (life size).

Removing Intermediate Ring from Lens:

The lens is delivered with its intermediate ring attached. Depress the red lens-locking button, rotate the lens counterclockwise as far as it will go, and separate the two parts.

Using Lens Without Intermediate Ring (Infinity to 1:2):

Mounting:

The lens is mounted on the LEICAFLEX camera body in the same manner as other interchangeable lenses. Align the red lens-mounting index on the lens with the lens-release lock on the camera. Seat the lens in the camera flange and turn clockwise until it locks in position.

Focusing:

The Macro-ELMARIT is focused in the same manner as other LEICAFLEX lenses. Rotate the focusing mount until the image is sharp in the focusing circle of the camera viewing screen.

Scales:

The index (which is common to all scales) is the white line above, or the white dot below, the number "2.8" of the depth-of-field scale.

The **upper green scale** indicates ratios of reproduction from 1:2 to 1:1 and is used only in conjunction with the intermediate ring.

The **yellow scale** indicates the focusing distance in the English system and extends from infinity to 12 inches. The lens may be focused closer by rotating the focusing mount beyond the 12 inch mark.

Below the **yellow scale** are **two white scales**, one being slightly higher than the other. The lower scale indicates the focusing distance in the metric system and extends from infinity to 0.3 meters. The lens may be focused closer by rotating the focusing mount beyond the 0.3 meter mark.

The **second white scale** (slightly higher than the metric distance scale) indicates ratios of reproduction when using the lens without its intermediate ring. This scale begins at the left of the 1 meter mark and extends from 1:10 to 1:2. If a precise ratio of reproduction is desired, align the white dot under the desired ratio with the "2.8" index.

Exposure:

The LEICAFLEX-SL camera, with thru-the-lens metering, determines correct exposure in the same manner as with all other LEICAFLEX lenses. Center the meter needle within the circle of the follower arm by adjusting the diaphragm ring or shutter speed dial. Photography at close distance extends the lens further from the film and necessitates a longer exposure. Thru-the-lens metering of the LEICAFLEX-SL camera takes this into account. But when using the LEICAFLEX standard camera (which does not have thru-the-lens metering), you must increase the specified exposure by the amount shown in the table.

EXPOSURE INCREASE FOR LEICAFLEX CAMERA WITHOUT THRU-THE-LENS METER

Ratio of Reproduction	Increase Exposure	Area Covered (mm)
1:10	1.2 times	240 x 360
1:5	1.4 times	120 x 180
1:4	1.6 times	96 x 144
1:3	1.8 times	72 x 108
1:2.5	2.0 times	60 x 90
1:2	2.3 times	48 x 72
1:1.75	2.5 times	42 x 63
1:1.5	2.8 times	36 x 54
1:1.25	3.2 times	30 x 45
1:1	4.0 times	24 x 36

It is not necessary to increase the exposure when photographing at distances greater than 1:10.

Using Lens With Intermediate Ring (Ratios 1:2 to 1:1):**Mounting:**

Mount the intermediate ring on the LEICAFLEX camera in the same manner as when mounting the lens without ring.

Set the lens diaphragm ring of the lens (white scale at rear) to f/22. This aligns a green dot with the red lens-mounting index. The position of the green diaphragm numbers on the intermediate ring is unimportant.

Focusing:

When photographing at ratios between 1:2 and 1:1, focusing is best accomplished by setting the lens focusing mount to the desired ratio and then move the camera or subject back and forth until the image is sharp on the viewing screen.

Exposure:

Exposure determination with the LEICAFLEX-SL camera is the same as when using the lens without its intermediate ring. When using the LEICAFLEX standard camera which does not have thru-the-lens metering, increase your exposure by the amount stated in the above table.

REPRODUCTION RATIO DEFINED

Reproduction ratio is the size of the image on the film compared with the size of the object photographed. The ratio 1:5 signifies that the size of the image is 1/5th the size of the object, and that the object is five times larger than its image on the film.

The colon (:) in a ratio is simply a division symbol. A ratio of 1:1 states that the image and object are both the same, or life size. A ratio of 1:2 indicates the image is one-half the size of the object, and that the object is twice as large as its image.

GENERAL INFORMATION

As you bring your camera closer to the subject, and its image becomes larger on the film, the depth-of-field (area of sharp focus) decreases rapidly. In order to obtain sufficient depth, the lens should be closed to an aperture smaller than you would normally employ for photography at greater distances. For instance, at a ratio of 1:1 with the lens stopped down to f/11, your total depth of sharp focus is only 59 thousandths of an inch. Since longer exposures are required for close-up photography, the adjustment should be made by reducing your shutter speed rather than by opening the lens.

You should, wherever possible, use a sturdy tripod. It is next to impossible to hand hold a camera without motion. And motion is exaggerated in direct proportion to the size of the image. At a ratio of 1:1, image movement caused by camera motion would be ten times greater than when taking a picture at a ratio of 1:10.



Leitz Macro-Elmarit-R 60mm f/2.8 lens

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