

Mamiya-Sekor Macro C 140 mm f/4.5 for Mamiya RB

So that high resolution can be obtained in the outer edges of pictures in close-up photography, this lens incorporates the floating system (device for moving a part of the lens system back and forth to agree with the in focused distance).

The figure numbers throughout the text refer to pictures on the fold-out pages at the back.

■ Specifications

Focal length: 140 mm

Composition: 7 element, 4 group

Angle of view: 35°

Aperture range: f/4.5 – 32

Filter: 77 mm dia. screw-in type

Lens hood: Screw-in type

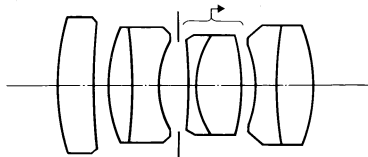
Length: 3-9/32" (83.3 mm)

Maximum diameter: 3-11/16" (94 mm)

Weight: 31 oz. (880 g)

■ Names of Parts (Fig. 1)

1. Depth-of-Field Scale
2. Distance Scale for Reading Depth-of-Field (with Magnification and Exposure Compensation Scale)
3. Shutter Speed Ring
4. Aperture Scale Ring
5. Synchroflash Terminal
6. M-X Selector
7. Mirror Release Operating Knob
8. Floating Ring



■ Instructions for Use

(1) General photography when an auto extension tube is not used

Photography Distance: ∞ – about 2.5 ft (75 cm) (from film plane to subject)

1. Align the ∞ mark (red) on the floating ring with the triangular pointer on the lens barrel. (Fig. 2)
 2. Focus the camera.
 3. Read the bellows extension amount (mm) from the distance scale on the side of the camera (Fig. 3) and align it with the scale on the floating ring. (In this case, the white scale beginning with ∞ is used. In this scale, one stop is equivalent to an extension of 5 mm.)
 4. Adjust the focus once more.
- ★ In photographing faraway subjects, adequately sharp images can be obtained if the floating ring is aligned to ∞ . When the floating ring has been operated, always readjust the focus.

(2) When using the auto extension tube No. 1

Photography Distance: About 2.5 ft – 1.9 ft (76 cm – 59 cm) (from film plane to subject)

1. Align the red spot on the green No. 1 scale on the floating ring with the triangular pointer on the lens barrel. (Fig. 4)
2. Focus the camera.
3. Read the bellows extension amount (mm) from the distance scale on the side of the camera (Fig. 3) and align it with the scale on the floating ring. (In this case, one stop is equivalent to an extension of 5 mm.)

4. Adjust the focus once more.

★ If the picture is taken after step 2, an adequately sharp image can be obtained. When you want maximum sharpness to the outer edges, carry out steps 3 and 4. In this case, always readjust the focus.

(3) When using the auto extension tube No. 2

Photography Distance: About 2 ft – 1.9 ft (61 cm – 57 cm) (from film plane to subject)

1. Align the red spot on the white No. 2 scale with the triangular pointer on the lens barrel. (Fig. 5)
 2. Focus the camera.
 3. Read the bellows extension amount (mm) from the distance scale on the side of the camera and align it with the scale on the floating ring. (In this case, one stop is equivalent to an extension of 10 mm.)
 4. Adjust the focus once more.
- ★ If the picture is taken after step 2, an adequately sharp image can be obtained. When you want maximum sharpness to the outer edges, carry out steps 3 and 4. In this case, always readjust the focus.

(4) When using the auto extension tubes No. 1 and No. 2 together

Photography Distance: About 1.9 ft – 1.8 ft (57 cm – 56 cm) (from film plane to subject)

1. Align the No. 1+2 red spot on the floating ring with the triangular pointer on the lens barrel. (Fig. 6)

2. Focus the camera and take the picture.
- ★ In life-size photography, align the bellows extension amount of the distance scale on the side of the camera to 13 mm. Next, move the camera itself back and forth to focus. It becomes 1:1. When photographing the actual size accurately, measure the image on the ground glass focusing screen and carry out fine adjustments.
 - ★ When using the auto extension tubes No. 1 and No. 2, the possibility of some vignetting in the four corners of the picture may occur when the bellows extension is 0 to 10 mm.

■ Depth-of-Field

If the distance scale ring (2) of the lens is turned and the photography distance is aligned to the triangular pointer, it is possible to read the depth-of-field, magnification and exposure compensation amount. (Fig. 7)

The depth-of-field can be seen on the finder screen if the depth-of-field preview lever on the lens is pressed down.

■ Magnification

Magnification is expressed by MAG. The MAG number is the inverse of magnification – 50 means that the subject is photographed at 1/50 its size, 20 at 1/20 and 5 at 1/5.

■ Exposure Compensation

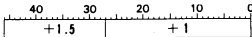
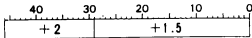
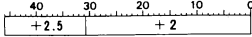
The exposure compensation amount is indicated by the STEP underneath the MAG.

When the STEP number is +0.5, open the aperture by 0.5. When it is +1, open the aperture by one stop or set the shutter speed to one step slower. (If the exposure is measured by the RB CdS finder, there is no need to carry out exposure compensation.)

■ How to Read the Close-Up Photography Table

1. The subject distance in this chart indicates the distance from the outermost edge of the lens to the subject.
2. The values on the left side of each column on the table are those when an auto extension tube is

attached and the bellows are not extended. The values on the right side of the column are those when the bellows are extended to the fullest (46 mm).

Lens	Extension Tube	Magnification	Distance	Subject Size	Bellows extension scale (mm) Exposure compensation value (STEP)
140 mm f/4.5	No. 1	0.32~0.65	$1' 8\frac{3}{32}" \sim 1' \frac{1}{16}"$ (52.3~30.7)cm	$6\frac{1}{16}" \times 8\frac{1}{32}" \sim 3\frac{1}{32}" \times 4\frac{5}{32}"$ (17.3×21.2)cm~(8.6×10.5)cm	
	No. 2	0.59~0.91	$1' 1" \sim 9\frac{5}{8}"$ (33.0~24.5)cm	$3\frac{3}{4}" \times 4\frac{13}{32}" \sim 2\frac{1}{32}" \times 2\frac{1}{16}"$ (9.6×11.7)cm~(6.1×7.5)cm	
	No. 1 + No. 2	0.91~1.23	$9\frac{1}{16}" \sim 8\frac{3}{32}"$ (24.6~20.5)cm	$2\frac{1}{16}" \times 2\frac{31}{32}" \sim 1\frac{23}{32}" \times 2\frac{3}{16}"$ (6.2×7.5)cm~(4.5×5.5)cm	

140mm

Depth-of-field Table

Aperture	Distance in Feet										
	∞	30'	15'	10'	8'	6'	5'	4.5'	3'	2.5'	2'
4.5	159'	25' 5"	13' 10"	9' 6"	7' 8"	5' 10"	4' 10 ³ / ₄ "	4' 5"	2' 11 ³ / ₄ "	2' 5 ³ / ₄ "	1' 11 ¹ / ₈ "
	∞	36' 7"	16' 5"	10' 7"	8' 4"	6' 2"	5' 1 ¹ / ₂ "	4' 7"	3' 1 ¹ / ₄ "	2' 6 ¹ / ₄ "	2' 1 ¹ / ₈ "
5.6	127'	24' 6"	13' 7"	9' 4 ¹ / ₂ "	7' 7"	5' 9 ¹ / ₂ "	4' 10 ¹ / ₄ "	4' 4 ³ / ₄ "	2' 11 ¹ / ₂ "	2' 5 ³ / ₄ "	1' 11 ¹ / ₈ "
	∞	38' 10"	16' 10"	10' 9"	8' 5 ¹ / ₂ "	6' 2 ¹ / ₂ "	5' 2"	4' 7 ¹ / ₄ "	3' 1 ¹ / ₂ "	2' 6 ¹ / ₄ "	2' 1 ¹ / ₈ "
8	89' 9"	22' 9"	13'	9' 1 ¹ / ₂ "	7' 5 ¹ / ₂ "	5' 8 ¹ / ₂ "	4' 9 ³ / ₄ "	4' 4 ¹ / ₄ "	2' 11 ¹ / ₄ "	2' 5 ⁵ / ₈ "	1' 11 ¹ / ₈ "
	∞	44' 3"	17' 9"	11' 1"	8' 7 ¹ / ₂ "	6' 4"	5' 2 ¹ / ₂ "	4' 8"	3' 3 ³ / ₄ "	2' 6 ¹ / ₄ "	2' 1 ¹ / ₈ "
11	63' 7"	20' 8"	12' 4"	8' 9 ¹ / ₂ "	7' 3"	5' 7"	4' 8 ³ / ₄ "	4' 3 ¹ / ₂ "	2' 11"	2' 5 ¹ / ₂ "	1' 11 ³ / ₄ "
	∞	55' 2"	19' 2"	11' 7"	8' 11 ¹ / ₂ "	6' 5 ¹ / ₂ "	5' 3 ¹ / ₂ "	4' 8 ³ / ₄ "	3' 1"	2' 6 ¹ / ₂ "	2' 1 ¹ / ₄ "
16	45' 1"	18' 4"	11' 6"	8' 4 ¹ / ₂ "	6' 11 ¹ / ₂ "	5' 5 ¹ / ₂ "	4' 7 ¹ / ₂ "	4' 2 ¹ / ₂ "	2' 10 ³ / ₄ "	2' 5 ¹ / ₄ "	1' 11 ³ / ₄ "
	∞	85' 1"	21' 8"	12' 5"	9' 5"	6' 8 ¹ / ₂ "	5' 5 ¹ / ₂ "	4' 10"	3' 1 ¹ / ₄ "	2' 6 ³ / ₄ "	2' 1 ¹ / ₄ "
22	32'	15' 10"	10' 6"	7' 10 ¹ / ₂ "	6' 7 ¹ / ₂ "	5' 3"	4' 6"	4' 1 ¹ / ₄ "	2' 10 ¹ / ₄ "	2' 5"	1' 11 ⁵ / ₈ "
	∞	∞	26' 8"	13' 10"	10' 2"	7' 1 ¹ / ₂ "	5' 8"	5'	3' 2"	2' 7"	2' 3 ⁵ / ₈ "
32	22' 9"	13' 4"	9' 4 ¹ / ₂ "	7' 3"	6' 2 ¹ / ₂ "	4' 11 ³ / ₄ "	4' 3 ³ / ₄ "	3' 11 ¹ / ₂ "	2' 9 ³ / ₄ "	2' 4 ⁵ / ₈ "	1' 11 ¹ / ₂ "
	∞	∞	39' 9"	16' 6"	11' 6"	7' 7"	6'	5' 3"	3' 2 ³ / ₄ "	2' 7 ¹ / ₂ "	2' 5 ⁵ / ₈ "