35-85mm f2.8 Auto Variable Focusing Lens

Vivitar Series 1

Owner's Manual

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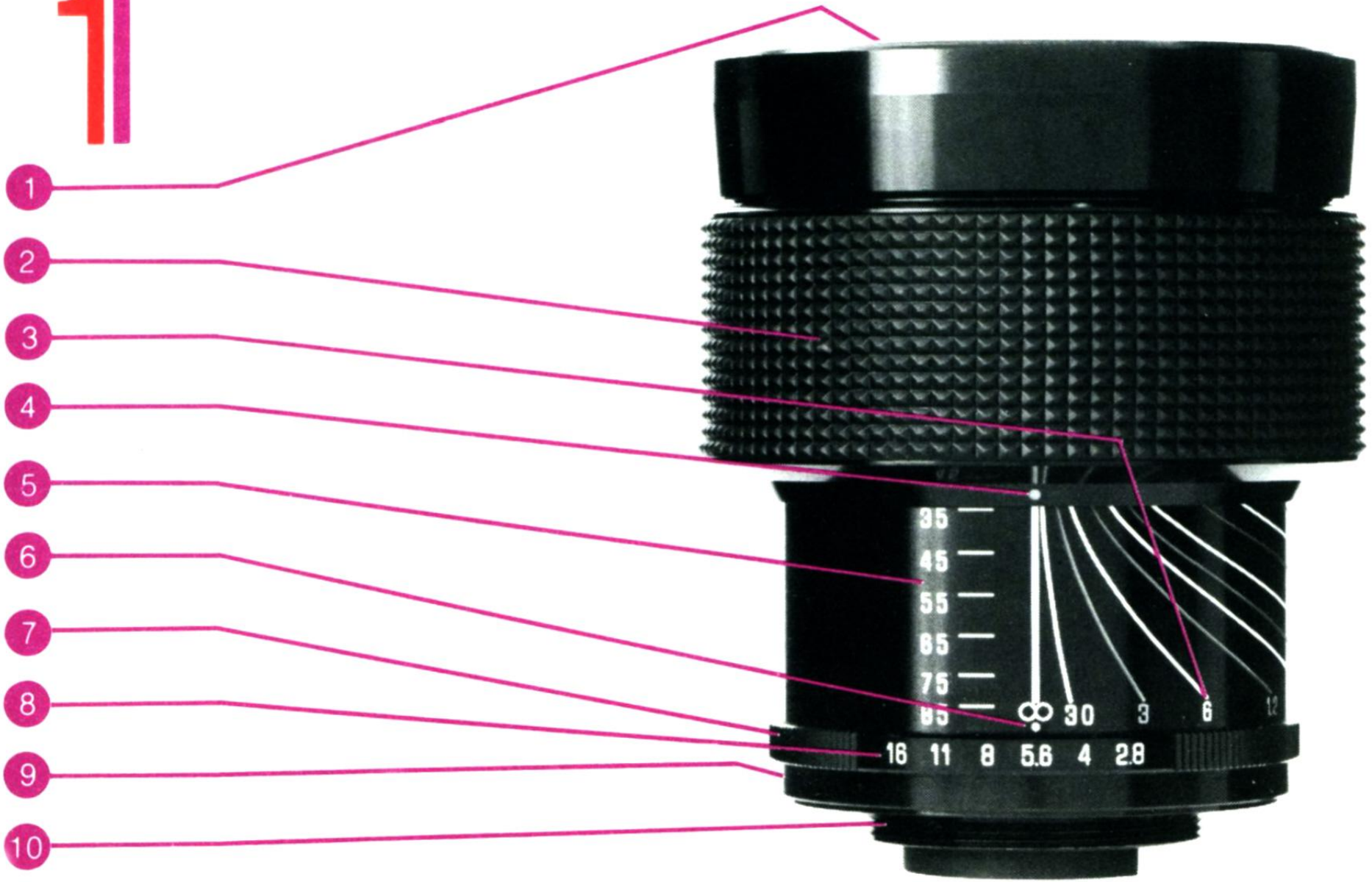


Your new VIVITAR Series 1 35-85mm Variable Focusing Lens with VIVITAR MULTI-COATING (VMC) is part of an entirely new system of lenses, unique in concept and design. One quick movement gives you an infinite number of focal lengths from 35 to 85mm, allowing you to compose the exact picture you want without changing your position. The unique range of the lens from wide angle to telephoto gives you unlimited versatility to explore the world around you. To you this means total creative control in nearly every photographic situation.

Becoming acquainted with your Lens

1. Accessory Thread
2. Variable Focusing Ring
3. Distance Scales
4. Distance Index Mark
5. Focal Length Scale
6. Aperture Index Mark
7. Aperture Ring
8. Aperture Scale
9. Auto/Manual Switch*
10. Lens Mount

*Universal Thread Mount lenses only.

Before you begin . . .

to use your new Vivitar Series 1 Lens, please take time to carefully study this Owner's Manual. Keep it with you as a handy guide and refer to it whenever questions arise on the use and care of your lens. The information should help you get the maximum enjoyment from your lens . . . enjoyment that comes from the satisfaction of taking pictures with that "professional touch."

Mounting your Lens

Your VIVITAR 35-85mm Auto Variable Focusing Lens has been designed to mount on your camera with the simplicity and ease of your normal lens. However, because it is longer than your normal lens, special care should be taken while attaching it to the camera.

For best results, slide the Variable Focusing Ring ② to the 35mm position on the Focal Length Scale ⑤ and grasp the lens barrel firmly as shown. This position will give you better balance and a more secure grip during the mounting procedure. (See photo "A")

Holding your Lens

While using your lens it is best to support the camera/lens combination by placing your left hand beneath the lens as shown. This leaves your right hand free to operate the camera controls and assures proper balance and stability. (See photo "B")

Aperture Control

The Aperture Ring (7) controls the amount of light allowed to reach the film by controlling the size of the lens diaphragm opening. The higher the f-stop number, the smaller the diaphragm opening and the smaller the amount of light allowed to reach the film. (See photo "C")

The automatic diaphragm operation of your lens allows you to focus and compose your picture with the diaphragm at maximum aperture, or "wide open," when the viewfinder image is brightest and easiest to see. The diaphragm will automatically "stop down" to the pre-selected aperture at the moment of exposure and immediately re-open after the exposure has been made.

NOTE: for Konica Autoreflex owners—

For your lens to operate automatically with your camera it must be coupled to the "EE" system by turning the Aperture Ring ⑦ to the "**EE**" setting. When moved into the "**EE**" setting the Aperture Ring locks into place with a positive click. The Locking Button on the lens prevents the Aperture Ring from being moved from the setting accidentally.

To set the aperture manually, press the "EE" Lock Button and rotate the Aperture Ring to the desired setting.

Focusing

After mounting the lens on your camera, focus on your subject as you would with your normal lens by turning the Variable Focusing Ring ② until the subject appears sharpest in the camera viewfinder.
(See photo "D")

While focusing, be careful not to accidentally change focal lengths by moving the Variable Focusing Ring forward or backward. If this occurs you must re-focus on your subject.

Variable Focal Length Operation

Your VIVITAR Auto Variable Focusing Lens provides an infinite number of focal lengths between 35 and 85mm. With one swift motion you can change the lens from a wide angle to a telephoto, or anything in between.

To change focal lengths, slide the Variable Focusing Ring ② back and forth along the lens barrel to the desired image size. The most commonly used focal lengths are engraved on the barrel for easy reference. (See photo "E")

Distance Scales

There are two wrap-around Distance Scales ③ engraved on the lens barrel to show the approximate distance between the subject in focus and the film plane. The white scale indicates the distance in feet and the green scale indicates the distance in meters. (See photo "F")

Distance Index Mark

The Distance Index Mark ④ is the reference point for the correct focus

position of your lens. Reading the distance indicated on the Distance Scales ③ opposite this mark lets you estimate the distance from the subject in focus to the film plane. You'll find the Distance Index Mark especially useful in flash photography, where it can be used to indicate whether your subject is within the effective operating range of your flash.

Example of how to use the Distance Scales—

To photograph a subject 6 feet from the film plane at a focal length of 35mm:

1. Slide the Variable Focusing Ring ② to the 35mm position engraved on the Focal Length Scale ⑤.
2. Align the Distance Index Mark ④ with the curved white line that leads to the '6' engraved on the lens. (See photo "G")
3. Determine the proper exposure and shoot.

Depth of Field

Depth of field is the area of acceptable sharpness in front of and behind the subject in focus. This area is determined by the aperture you choose, the distance from the subject to the film plane, and the focal length you are using. As you open your lens (i.e. from f16 to f2.8),

or as you move closer to your subject, this depth of field becomes shallower. (See photo "H") By stopping the lens down (i.e. from f2.8 to f16), or by moving farther away from your subject, the depth of field becomes greater. (See photo "I")

As a rule, the longer the focal length of a lens, the shallower the depth of field. Therefore, as you change the focal length of your lens from 35mm towards 85mm, depth of field decreases. You can compensate for this by stopping down your lens; however, shallow depth of field can add creative impact to your photographs with pleasing out-of-focus foregrounds or backgrounds. As shown in the illustration, a soft, out-of-focus background gives "separation" and makes your subject stand out.

As you move toward the 35mm position, your depth of field increases. This greater in-focus area is useful when important parts of your photograph are at varying distances from the camera. In fast moving action where quick camera handling is important, the greater depth of field makes "point and shoot" photography easier. This greater depth of field and the wider angle of view of shorter focal lengths also make them ideal for landscape and architectural photography.

Depth of Field Preview

You can visually check the depth of field in your pictures through your camera's viewfinder. If your camera has a built-in depth of field preview feature, refer to your camera owner's manual for instructions.

To preview depth of field using Universal Thread Mount Lenses, set the Auto/Manual Switch ⑨ to "**M**" (Manual). This stops the lens diaphragm down to the preselected aperture. To return the lens to automatic operation, set the Auto/Manual Switch back to the "**A**" (Automatic) position. (See photo "J")

Taking Care of Your Lens

A—When attaching threaded accessories (filters, etc.) to your lens, align the accessory very carefully with the Accessory Thread ① to prevent damage to the threads.

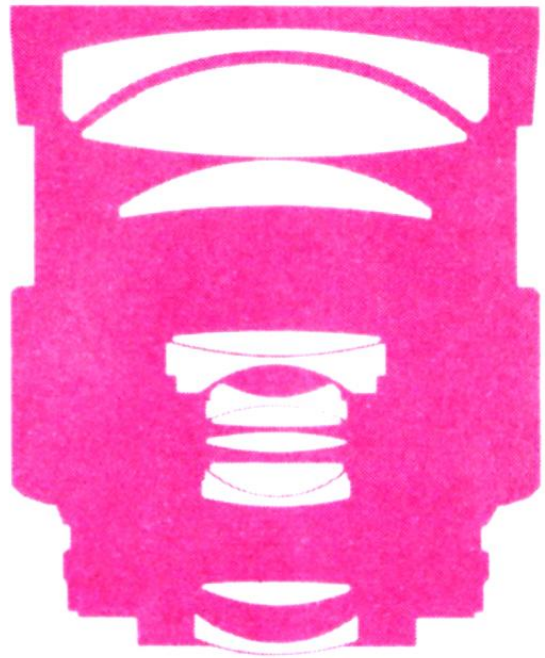
B—Keep your lens dust-free by using both front and rear lens caps when the lens is not in use.

C—Clean your lens with an air brush, anti-static brush, good quality camel hair brush, or use a lens tissue to gently brush away loose particles. To remove fingerprints and smudges, use a very small amount of lens cleaning fluid and gently swab the lens surface with a lens tissue. NEVER RUB THE LENS ELEMENTS WITH YOUR FINGERS, CLOTHING, OR OTHER ABRASIVE MATERIAL. Attempting to clean your lens this way can scratch the lens coating and damage the glass surface.

D—Always store your lens in a cool, dry place. It's a good idea to store it with the silica jel packet supplied, especially during wet or humid weather. A lens case with a silica jel packet provides a handy means of storage and gives excellent protection for your lens.

Specifications

Focal Length: 35mm to 85mm
Focal Length Ratio: 2.4:1
Angles of Acceptance: 28° at 85mm, 63° at 35mm
Optical Construction: 12 elements in 9 groups
Aperture Range: f2.8 to f16
Minimum Focusing Distance
Subject to Front Element: 4.3″ (10.9 cm)
Subject to Film Plane: 10.2″ (25.9 cm)
Length at ∞: 3.6″ (91 mm)
Maximum Barrel Diameter: 3.2″ (81 mm)
Weight: 27 oz. (765 g)
Accessory Size: 72mm
Accessories Included: Front Lens Cap, Rear Lens Cap, Slip-on Lens Hood



Specifications subject to change without notice. Lengths and weights may vary slightly depending on lens mount.

Depth of Field Tables

35mm

ft. \ f	2.8	4	5.6	8	11	16
1.2	1.19 ~ 1.21	1.18 ~ 1.22	1.17 ~ 1.23	1.16 ~ 1.24	1.15 ~ 1.26	1.13 ~ 1.28
2.0	1.95 ~ 2.06	1.93 ~ 2.08	1.90 ~ 2.11	1.86 ~ 2.17	1.81 ~ 2.25	1.75 ~ 2.37
3.0	2.87 ~ 3.15	2.82 ~ 3.21	2.75 ~ 3.31	2.66 ~ 3.46	2.54 ~ 3.70	2.40 ~ 4.11
6.0	5.43 ~ 6.71	5.22 ~ 7.06	4.96 ~ 7.64	4.64 ~ 8.63	4.25 ~ 10.62	3.81 ~ 15.85
30.0	18.73 ~ 69.52	16.32 ~ 160.91	13.80 ~ ∞	11.36 ~ ∞	9.10 ~ ∞	7.15 ~ ∞
∞	50.40 ~ ∞	35.80 ~ ∞	25.40 ~ ∞	18.00 ~ ∞	12.80 ~ ∞	9.20 ~ ∞

m \ f	2,8	4	5,6	8	11	16
0,3	0,29 ~ 0,30	0,29 ~ 0,30	0,29 ~ 0,30	0,29 ~ 0,30	0,29 ~ 0,30	0,28 ~ 0,31
0,45	0,44 ~ 0,46	0,44 ~ 0,46	0,44 ~ 0,47	0,43 ~ 0,47	0,42 ~ 0,48	0,41 ~ 0,50
0,75	0,72 ~ 0,78	0,71 ~ 0,79	0,70 ~ 0,81	0,68 ~ 0,83	0,66 ~ 0,88	0,63 ~ 0,95
1,2	1,12 ~ 1,28	1,10 ~ 1,32	1,06 ~ 1,38	1,01 ~ 1,47	0,95 ~ 1,63	0,88 ~ 1,93
3,0	2,54 ~ 3,67	2,38 ~ 4,04	2,20 ~ 4,75	1,99 ~ 6,30	1,75 ~ 11,90	1,50 ~ ∞
∞	15,40 ~ ∞	10,90 ~ ∞	7,70 ~ ∞	5,50 ~ ∞	3,90 ~ ∞	2,80 ~ ∞

45mm

ft. \ f	2.8	4	5.6	8	11	16
1.2	1.19 ~ 1.21	1.19 ~ 1.21	1.18 ~ 1.22	1.18 ~ 1.23	1.17 ~ 1.24	1.16 ~ 1.25
2.0	1.97 ~ 2.04	1.95 ~ 2.05	1.94 ~ 2.07	1.91 ~ 2.10	1.88 ~ 2.15	1.83 ~ 2.22
3.0	2.91 ~ 3.09	2.88 ~ 3.13	2.83 ~ 3.19	2.77 ~ 3.28	2.69 ~ 3.41	2.58 ~ 3.62
6.0	5.62 ~ 6.44	5.48 ~ 6.64	5.29 ~ 6.95	5.05 ~ 7.44	4.74 ~ 8.28	4.37 ~ 9.87
30.0	21.82 ~ 47.95	19.64 ~ 63.87	17.20 ~ 122.02	14.66 ~ ∞	12.13 ~ ∞	9.79 ~ ∞
∞	78.50 ~ ∞	55.70 ~ ∞	39.40 ~ ∞	28.00 ~ ∞	19.90 ~ ∞	14.20 ~ ∞

m \ f	2,8	4	5,6	8	11	16
0,3	–	–	–	–	–	–
0,45	0,44 ~ 0,45	0,44 ~ 0,45	0,44 ~ 0,46	0,43 ~ 0,46	0,43 ~ 0,47	0,42 ~ 0,47
0,75	0,73 ~ 0,77	0,72 ~ 0,77	0,71 ~ 0,78	0,70 ~ 0,80	0,68 ~ 0,82	0,66 ~ 0,86
1,2	1,15 ~ 1,25	1,13 ~ 1,27	1,11 ~ 1,31	1,07 ~ 1,36	1,03 ~ 1,44	0,97 ~ 1,56
3,0	2,68 ~ 3,40	2,57 ~ 3,60	2,43 ~ 3,92	2,26 ~ 4,50	2,05 ~ 5,72	1,82 ~ 9,28
∞	23,90 ~ ∞	17,00 ~ ∞	12,00 ~ ∞	8,50 ~ ∞	6,00 ~ ∞	4,30 ~ ∞

55mm

ft. \ f	2.8	4	5.6	8	11	16
1.2	–	–	–	–	–	–
2.0	1.98 ~ 2.02	1.97 ~ 2.03	1.96 ~ 2.05	1.94 ~ 2.07	1.92 ~ 2.09	1.88 ~ 2.14
3.0	2.94 ~ 3.06	2.92 ~ 3.09	2.89 ~ 3.12	2.84 ~ 3.18	2.78 ~ 3.26	2.71 ~ 3.38
6.0	5.74 ~ 6.29	5.64 ~ 6.41	5.51 ~ 6.60	5.33 ~ 6.89	5.09 ~ 7.34	4.80 ~ 8.10
30.0	23.95 ~ 39.92	22.14 ~ 46.33	19.99 ~ 60.18	17.60 ~ 103.82	15.05 ~ ∞	12.53 ~ ∞
∞	117.10 ~ ∞	83.00 ~ ∞	58.70 ~ ∞	41.70 ~ ∞	29.50 ~ ∞	21.00 ~ ∞

m \ f	2,8	4	5,6	8	11	16
0,3	–	–	–	–	–	–
0,45	0,45 ~ 0,45	0,45 ~ 0,45	0,44 ~ 0,46	0,44 ~ 0,46	0,44 ~ 0,46	0,43 ~ 0,47
0,75	0,74 ~ 0,76	0,74 ~ 0,77	0,73 ~ 0,77	0,72 ~ 0,78	0,71 ~ 0,80	0,69 ~ 0,82
1,2	1,17 ~ 1,23	1,16 ~ 1,25	1,14 ~ 1,27	1,11 ~ 1,30	1,08 ~ 1,35	1,04 ~ 1,43
3,0	2,78 ~ 3,25	2,70 ~ 3,37	2,60 ~ 3,56	2,46 ~ 3,85	2,29 ~ 4,38	2,09 ~ 5,43
∞	35,70 ~ ∞	25,30 ~ ∞	17,90 ~ ∞	12,70 ~ ∞	9,00 ~ ∞	6,40 ~ ∞

65mm

ft. \ f	2.8	4	5.6	8	11	16
1.2	–	–	–	–	–	–
2.0	1.99 ~ 2.02	1.98 ~ 2.02	1.97 ~ 2.03	1.96 ~ 2.04	1.94 ~ 2.06	1.92 ~ 2.09
3.0	2.96 ~ 3.04	2.94 ~ 3.06	2.92 ~ 3.08	2.89 ~ 3.12	2.85 ~ 3.18	2.79 ~ 3.25
6.0	5.81 ~ 6.20	5.74 ~ 6.28	5.64 ~ 6.41	5.51 ~ 6.60	5.33 ~ 6.89	5.09 ~ 7.34
30.0	25.43 ~ 36.50	23.95 ~ 40.15	22.10 ~ 46.80	19.96 ~ 61.00	17.54 ~ 108.06	15.01 ~ ∞
∞	163.50 ~ ∞	115.9 ~ ∞	81.9 ~ ∞	58.1 ~ ∞	41.10 ~ ∞	29.30 ~ ∞

m \ f	2,8	4	5,6	8	11	16
0,3	–	–	–	–	–	–
0,45	–	–	–	–	–	–
0,75	0,74 ~ 0,76	0,74 ~ 0,76	0,74 ~ 0,77	0,73 ~ 0,77	0,72 ~ 0,78	0,71 ~ 0,80
1,2	1,18 ~ 1,22	1,17 ~ 1,23	1,16 ~ 1,25	1,14 ~ 1,27	1,11 ~ 1,30	1,08 ~ 1,35
3,0	2,84 ~ 3,18	2,78 ~ 3,25	2,70 ~ 3,36	2,60 ~ 3,56	2,46 ~ 3,86	2,29 ~ 4,39
∞	49,80 ~ ∞	35,30 ~ ∞	25,00 ~ ∞	17,70 ~ ∞	12,50 ~ ∞	8,90 ~ ∞

75mm

ft. \ f	2.8	4	5.6	8	11	16
1.2	–	–	–	–	–	–
2.0	–	–	–	–	–	–
3.0	2.97 ~ 3.03	2.96 ~ 3.04	2.94 ~ 3.06	2.92 ~ 3.09	2.89 ~ 3.12	2.84 ~ 3.18
6.0	5.86 ~ 6.15	5.81 ~ 6.21	5.73 ~ 6.30	5.63 ~ 6.43	5.49 ~ 6.63	5.30 ~ 6.93
30.0	26.37 ~ 34.50	25.16 ~ 38.65	23.61 ~ 40.84	21.74 ~ 48.14	19.54 ~ 64.76	17.12 ~ 126.03
∞	217.50 ~ ∞	154.20 ~ ∞	109.00 ~ ∞	77.30 ~ ∞	54.70 ~ ∞	38.9 ~ ∞

m \ f	2,8	4	5,6	8	11	16
0,3	–	–	–	–	–	–
0,45	–	–	–	–	–	–
0,75	0,75 ~ 0,76	0,74 ~ 0,76	0,74 ~ 0,76	0,74 ~ 0,77	0,73 ~ 0,77	0,72 ~ 0,78
1,2	1,18 ~ 1,22	1,18 ~ 1,22	1,17 ~ 1,24	1,15 ~ 1,25	1,14 ~ 1,27	1,11 ~ 1,31
3,0	2,88 ~ 3,13	2,83 ~ 3,19	2,77 ~ 3,27	2,69 ~ 3,40	2,58 ~ 3,60	2,44 ~ 3,92
∞	66,30 ~ ∞	47,00 ~ ∞	33,20 ~ ∞	23,50 ~ ∞	16,70 ~ ∞	11,80 ~ ∞

85mm

ft. \ f	2.8	4	5.6	8	11	16
1.2	–	–	–	–	–	–
2.0	–	–	–	–	–	–
3.0	2.98 ~ 3.02	2.97 ~ 3.03	2.96 ~ 3.05	2.94 ~ 3.07	2.91 ~ 3.10	2.88 ~ 3.14
6.0	5.89 ~ 6.12	5.84 ~ 6.16	5.78 ~ 6.24	5.70 ~ 6.34	5.58 ~ 6.49	5.43 ~ 6.72
30.0	26.95 ~ 33.52	25.91 ~ 35.30	24.56 ~ 38.20	22.89 ~ 43.19	20.87 ~ 53.12	18.59 ~ 78.57
∞	266.40 ~ ∞	188.80 ~ ∞	133.40 ~ ∞	94.60 ~ ∞	66.90 ~ ∞	47.50 ~ ∞

m \ f	2,8	4	5,6	8	11	16
0,3	–	–	–	–	–	–
0,45	–	–	–	–	–	–
0,75	–	–	–	–	–	–
1,2	1,19 ~ 1,21	1,18 ~ 1,22	1,17 ~ 1,23	1,16 ~ 1,24	1,15 ~ 1,26	1,13 ~ 1,28
3,0	2,90 ~ 3,10	2,87 ~ 3,15	2,81 ~ 3,21	2,74 ~ 3,31	2,65 ~ 3,46	2,53 ~ 3,70
∞	81,20 ~ ∞	57,50 ~ ∞	40,60 ~ ∞	28,80 ~ ∞	20,40 ~ ∞	14,50 ~ ∞

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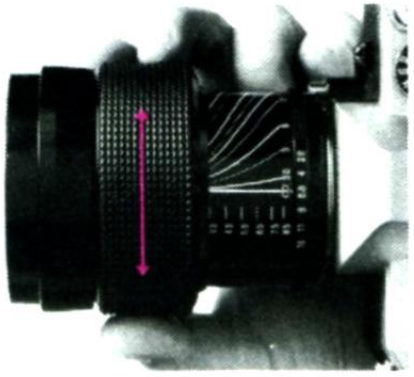

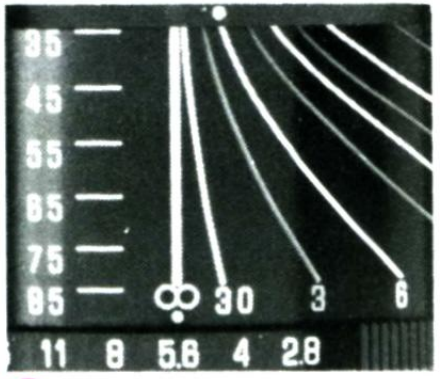

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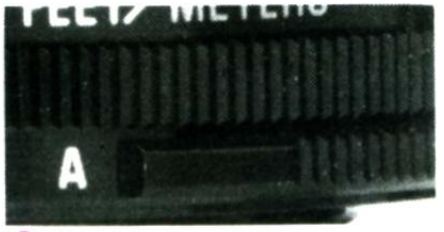

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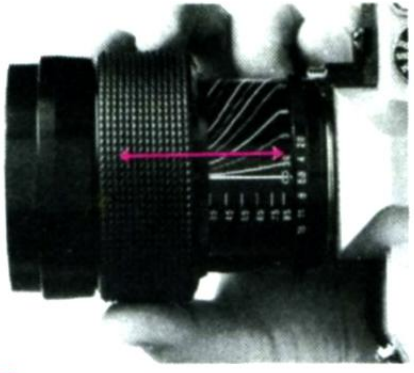

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f2.8

C

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f16

boggy

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email=himself@boggys.co.uk
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Vivitar.

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Vivitar Japan, Ltd. / Tokyo, Japan
Vivitar Photo-Elektronik GmbH / Frankfurt, W. Germany

3/75 Printed in Japan