

Micro-Nikkor-P  
Auto  
55mm  
f/3.5

**Nikon** INSTRUCTION MANUAL

## NOMENCLATURE

### Micro-Nikkor-P

### M2 Ring

#### Distance scale

Calibrated in both feet and meters

#### Focusing ring

Easy-to-grip, crosshatched surface

#### Distance indicator

#### Reproduction ratio scale

Set to photograph at a predetermined reproduction ratio

#### Depth-of-field scale

Color-coded lines give depth of field at different apertures.

#### M2 Ring distance and reproduction ratio scales

For focusing when M2 Ring is used

#### Aperture scale

Ranging from f/3.5 to f/32, with an intermediate click-stop at f/4.

#### Meter coupling prong

Connects to the meter coupling pin

#### Aperture index

#### Lens spring catch release button

Press to detach ring from lens



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## FOREWORD

The Micro-Nikkor-P is a close-up lens which reaches maximum performance at a 1:10 reproduction ratio. It also produces an excellent image at greater reproduction ratios as well as at distance, since the definition and distortion-correction remain virtually unchanged over the entire focusing range.

The built-in dual-helical system provides continuous focusing from infinity to a reproduction ratio of 1:2, using the Micro-Nikkor-P's own focusing ring. This allows the photographer to switch from distance shots to close-ups, or vice versa, without interrupting his work. The insertion of the M2 Ring, supplied with the lens, extends the reproduction range to 1:1. Macro-photography is possible in conjunction with other close-up attachments.

Like other Nikkor Auto lenses, the Micro-Nikkor-P has a fully automatic diaphragm which couples with the Photomic and Nikkormat FTN thru-the-lens meters. The automatic diaphragm guarantees maximum image brightness on the focusing screen for ease of focusing.



## MOUNTING THE LENS

Position the lens in the camera's bayonet mount, lining up the black dot on the lens with the black dot on the camera. Grasp the lens by the white metal ring and twist it counterclockwise until it clicks into place. When mounting the lens on the Nikon F2 Photomic or Nikkormat FTN, make sure that the meter coupling pin fits into the slotted coupling prong on the lens.

To remove, depress the lens release button on the camera and twist the lens clockwise.



### Mounting the M2 Ring

The M2 Ring bayonets onto or off the Micro-Nikkor-P lens. Align the black dot on the lens with the white dot on the M2 Ring. Twist the lens counterclockwise until it clicks into place.

To mount the Micro-Nikkor-P/M2 Ring assembly onto the camera, match the pink dot on the M2 Ring with the black dot on the camera and turn the ring counterclockwise until it clicks into place. To detach, depress the lens release button on the camera and turn clockwise.

To remove the M2 Ring from the lens, press the spring catch on the ring and twist the lens clockwise.



## FOCUSING



Thanks to its fully automatic diaphragm, the Micro-Nikkor-P can be focused with maximum image brightness on the screen throughout the entire focusing range. The depth of field is also minimized at maximum aperture, so that the image snaps in and out of focus rapidly and distinctly.

To focus, turn the focusing ring until the image on the focusing screen appears sharp and crisp. Thanks to the internal dual-helical system, the Micro-Nikkor-P focuses continuously from infinity to 9-1/2 inches (24.1 cm) at a reproduction ratio of 1:2.

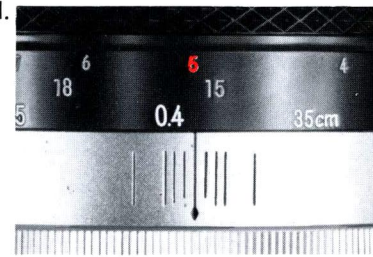
The distance scale on the focusing ring is marked in both feet and meters. These figures indicate the distance from the subject to the film plane (see note 1 on p. 11).

**Reproduction ratio** is the relation of the image size to be recorded on the film to the subject size. For example, if the image on the focusing screen is one-fifth the size of the subject, the reproduction ratio is 1:5, and this is indicated on the reproduction ratio scale on the focusing ring by the figure 5.

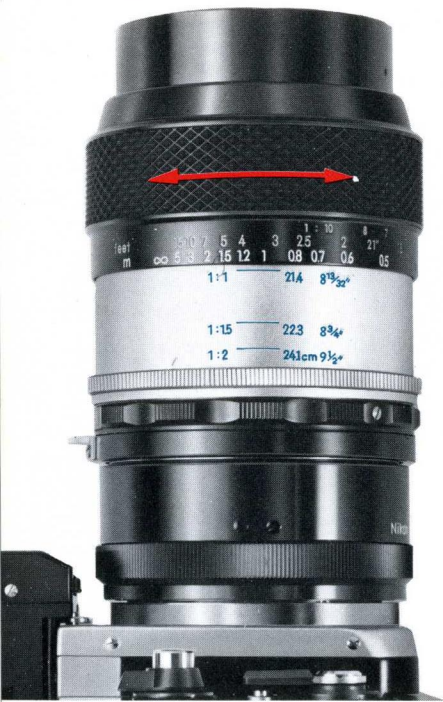
### Focusing at predetermined reproduction ratio

Immediately above the distance scale is the reproduction ratio scale. Reproduction ratios ranging from 1:10 to 1:2 are engraved in orange. Using this scale, you can photograph a subject at a predetermined reproduction ratio without any complex calculation. To photograph a subject at 1:5 reproduction ratio, for example, just turn the focusing ring so that the figure 5 on the reproduction ratio scale aligns with the black distance indicator line. Aim the camera at the subject and move it toward or away from the subject until the image on the focusing screen is sharp and crisp.

The depth-of-field tables on pages 20–22 also serve as a quick reference in helping to determine the focused distance at each reproduction ratio, and the subject field to be covered.







### Focusing with the M2 Ring

The M2 Ring which comes with the lens should be inserted between the camera and the Micro-Nikkor-P when reproduction ratios from 1:2 to 1:1 are desired. With the M2 Ring in place, the automatic diaphragm action of the Micro-Nikkor-P remains operative so that focusing can be carried out with the lens wide open, but the original distance and reproduction ratio scales on the focusing ring are no longer applicable, since the M2 Ring pushes the lens 28mm forward. As you rotate the focusing ring in order to focus at shorter distances, a new set of distance and reproduction ratio scales engraved in blue will appear to the right of the black indicator line. Distances from the subject to the film plane on this new scale are calibrated in centimeters and inches, and the reproduction ratios range from 1:2 to 1:1.

To focus, turn the focusing ring of the Micro-Nikkor-P. Use the edge of the focusing ring as the indicator in aligning with the blue line along each figure.

### Depth of field

The Micro-Nikkor-P permits depth-of-field preview. Press the depth-of-field preview button on the camera

body and the lens will stop down to the preselected aperture to allow you to see how much background or foreground is in focus.

Depth of field can also be observed by reading the color-coded scale engraved on the lens barrel. The pairs of colored lines on either side of the black indicator line correspond to f/numbers of the same color. At close distances so little is in focus that the depth-of-field tables on pages 20–22 are more useful.

At extremely close working distances, depth of field decreases to the actual focused distance. This can be partially compensated for by stopping down the lens. But at very close distances an extremely narrow depth of field is inevitable. Careful placement of the subject, if it has depth, will be necessary to ensure that the important surfaces will be in the same zone of sharpness.

Note: 1) The exact position of the film plane is indicated on the top of the camera body. On the Nikon cameras, the top edge of the serial number is the exact position of the film. On the Nikkormat, the film plane is indicated by the symbol (⊖). 2) When the Micro-Nikkor-P is used with Nikon cameras and a type A focusing screen, the central rangefinder area darkens at apertures smaller than f/4.5. Use of type B or E focusing screen is recommended. When using the Nikkormat, focus on the surrounding matte areas.

**To avoid camera shake** Close-up photography poses several problems not encountered in general photography. One of these is sensitivity to vibration: the magnification of the image on the film makes even slight image displacement prominent and results in a blurred image. Therefore, for best results, mount the camera on a tripod or on rigid supports, and use a cable release to trip the shutter.

The Micro-Nikkor-P gives excellent results whether with a nearby subject or a distant one, as the photos on these pages show.



Taken at 1 : 1 (life-size)



Taken at reproduction ratio of 1 : 5



Taken at 5 feet (1.5m)



Taken at infinity

(Photo: T. Tateishi)



With built-in TTL meter

The Micro-Nikkor-P has an automatic diaphragm and a set of click-stop aperture settings ranging from f/3.5 to f/32, with an intermediate click-stop at f/4 between f/3.5 and f/5.6. Like other Nikkor auto lenses, the Micro-Nikkor-P couples directly to the Photomic and the Nikkormat FTN TTL meters at full aperture over its entire aperture range. Follow the normal exposure determination procedures described in the Nikon F2 Photomic or the Nikkormat FTN instruction manual for correct exposure measurement.

When the M2 Ring or other extension units, such as bellows, are used, the direct coupling of the lens diaphragm with the meter is lost, but the TTL metering system can still be used by the stop-down method where the lens diaphragm is manually closed to the f/number setting of the lens. See the Nikon F2 Photomic or the Nikkormat FTN instruction manual for details.

**Caution:** When the stop-down method is used at small apertures, a finder eyecup should be attached to the finder eyepiece to ensure complete exclusion of stray light.

When non-TTL meter is used

At close ranges (reproduction ratios greater than 1:10), the amount of light reaching the film decreases as the lens-to-film distance increases. When non-TTL measurement is used for this range, the result is underexposed photographs unless compensation has been made for this decrease. (When the Micro-Nikkor-P Auto 55mm f/3.5 lens is used with the Photomic or Nikkormat FTN TTL meter it is not necessary to make compensations, since the meter is designed to give an accurate reading of the amount of light reaching the film.)

The table at right gives the exposure factors (compensation values) with exposure increase in f/stops for non-TTL exposure measurement at reproduction ratios greater than 1:10.

To calculate the necessary corrections in shutter speed rather than in aperture value, multiply a given exposure factor by the exposure time. For instance, if the normal exposure at a 1:1 reproduction ratio is 1/8 second, the correct shutter speed is  $1/8 \times 4 = 1/2$  second.

The following formula is used to calculate the exposure factor:  $\text{Exposure factor} = (1 + R)^2$

where R = Reproduction ratio

| Reproduction ratio | Exposure factor | Exposure increase in stops |
|--------------------|-----------------|----------------------------|
| 1/10               | 1.21            | 2/7                        |
| 1/8                | 1.27            | 1/3                        |
| 1/7                | 1.30            | 3/8                        |
| 1/6                | 1.36            | 4/9                        |
| 1/5                | 1.44            | 1/2                        |
| 1/4                | 1.56            | 2/3                        |
| 1/3                | 1.77            | 5/6                        |
| 1/2.5              | 1.96            | 1                          |
| 1/2                | 2.25            | 1-1/6                      |
| 1/1.5              | 2.75            | 1-4/9                      |
| 1/1                | 4.00            | 2                          |



## CLOSE-UP ATTACHMENTS



The range of reproduction ratios possible with the Micro-Nikkor-P can be extended by adding various close-up attachments, which are inserted between the camera and the lens. When the Bellows Focusing Attachment Model PB-4 is used, for example, the possible reproduction ratios (image size : subject size) range from 1:1.3 to 3.4:1 (3.4X). When the lens is used mounted reversely, the reproduction range is from 1:1.7 to 4.3:1 (4.3X). The table on page 19 indicates the ranges of reproduction ratios possible with various combinations of close-up attachments. Remember that when an extension unit is inserted between the camera and the lens, the automatic diaphragm coupling action is no longer operative. To obtain reproduction ratios above 1:1, it is desirable to mount the Micro-Nikkor-P reversely so that its



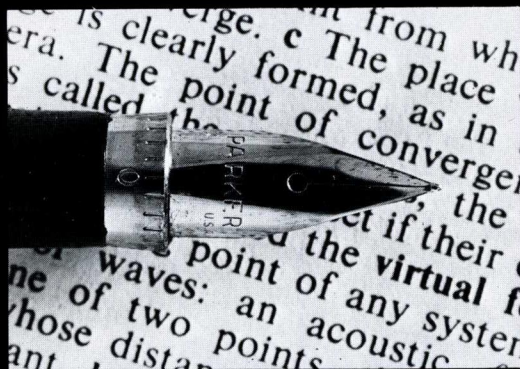
front faces the film and its back is to the subject. Use the Macro Adapter Ring BR-2. The Ring has a bayonet mount at one end that fits onto the bellows, and a 52mm screw thread mount at the other to accept the Micro-Nikkor-P. In this arrangement, focusing is done by extending or contracting the bellows attachment.

With the Micro-Nikkor-P in reverse position, the automatic diaphragm action is inoperative, and the lens diaphragm must be adjusted manually so that focusing can be carried out with maximum image brightness on the focusing screen. For details, see the instruction manual for the Bellows Focusing Attachment Model PB-3, 4 or 5.

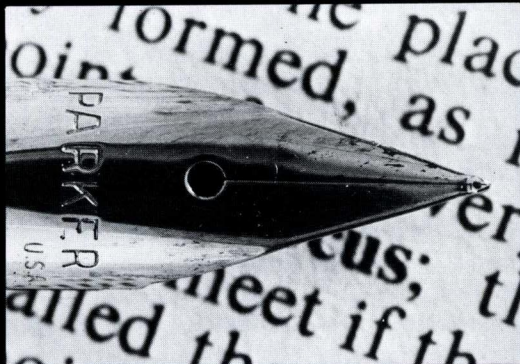
When the lens is reversed by means of the BR-2 Ring, the Extension Ring E2 can be attached on the rear of the lens mount to provide semiautomatic diaphragm control for ease of focusing. See the E2 instruction manual for details.

The Micro-Nikkor-P is excellent in combination with the Repro-Copy Outfit Model PF-2 for precise copying of documents, books or other small objects.





Taken at the reproduction ratio of 1 : 1 (life-size).



Taken at the reproduction ratio of 2 : 1 (twice life-size).

# CLOSE-UP TABLE

## Photographic Ranges with Other Close-Up Attachments

(in.)

| Close-up attachments             | Lens in normal position |                   |                  | Lens in reverse position |                     |                  |
|----------------------------------|-------------------------|-------------------|------------------|--------------------------|---------------------|------------------|
|                                  | Reproduction ratio      | Subject field     | Focused distance | Reproduction ratio       | Subject field       | Focused distance |
| Bellows PB-3                     | 1/1.7—2.6               | 1.6x2.4—0.36x0.55 | 9.0—10.6         | 1.5—3.5                  | 0.63x0.94—0.27x0.40 | 8.8—12.2         |
| Bellows PB-4, PB-5               | 1/1.3—3.4               | 1.2x1.8—0.28x0.42 | 8.5—12.0         | 1.7—4.3                  | 0.56x0.83—0.22x0.33 | 9.0—13.8         |
| Slide Copying Adapter PS-4, PS-5 | 1/1.3—1.8               | 1.2x1.8—0.52x0.79 | 8.5—9.2          | 1.7—4.3                  | 0.56x0.83—0.22x0.33 | 9.0—13.8         |
| *Repro-Copy Outfit PF-2          | 1/14—1.0                | 1.3x1.9—0.94x1.4  | 33.5—8.4         | —                        | —                   | —                |

(cm)

| Close-up attachments             | Lens in normal position |                 |                  | Lens in reverse position |                 |                  |
|----------------------------------|-------------------------|-----------------|------------------|--------------------------|-----------------|------------------|
|                                  | Reproduction ratio      | Subject field   | Focused distance | Reproduction ratio       | Subject field   | Focused distance |
| Bellows PB-3                     | 1/1.7—2.6               | 4.1x6.2—0.9x1.4 | 22.9—26.8        | 1.5—3.5                  | 1.5x2.4—0.7x1.0 | 22.3—31.1        |
| Bellows PB-4, PB-5               | 1/1.3—3.4               | 3.1x4.7—0.7x1.1 | 21.7—30.5        | 1.7—4.3                  | 1.4x2.1—0.6x0.8 | 22.9—35.1        |
| Slide Copying Adapter PS-4, PS-5 | 1/1.3—1.8               | 3.1x4.7—1.3x2.0 | 21.7—23.4        | 1.7—4.3                  | 1.4x2.1—0.6x0.8 | 22.9—35.1        |
| *Repro-Copy Outfit PF-2          | 1/14—1.0                | 3.2x4.8—2.4x3.6 | 85.0—21.4        | —                        | —               | —                |

\* These reproduction ratios are obtained with the Micro-Nikkor-P and M2 Ring combination with the subject placed on the baseplate of the Repro-copy outfit.



DEPTH-OF-FIELD TABLE

| Focused distance | Depth of Field |               |               |               |               |               |               |               | Reproduction ratio |
|------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------|
|                  | f/3.5          | f/4           | f/5.6         | f/8           | f/11          | f/16          | f/22          | f/32          |                    |
| 0.241            | 0.240 – 0.242  | 0.240 – 0.242 | 0.240 – 0.242 | 0.239 – 0.243 | 0.239 – 0.243 | 0.238 – 0.244 | 0.237 – 0.246 | 0.235 – 0.248 | 1/2                |
| 0.25             | 0.249 – 0.251  | 0.249 – 0.251 | 0.249 – 0.251 | 0.248 – 0.252 | 0.248 – 0.253 | 0.246 – 0.254 | 0.245 – 0.255 | 0.243 – 0.258 | 1/2.2              |
| 0.3              | 0.298 – 0.302  | 0.298 – 0.302 | 0.297 – 0.303 | 0.296 – 0.304 | 0.295 – 0.305 | 0.293 – 0.308 | 0.290 – 0.311 | 0.286 – 0.316 | 1/3.3              |
| 0.35             | 0.347 – 0.352  | 0.347 – 0.353 | 0.346 – 0.354 | 0.344 – 0.356 | 0.342 – 0.358 | 0.339 – 0.362 | 0.335 – 0.367 | 0.328 – 0.376 | 1/4.2              |
| 0.4              | 0.396 – 0.404  | 0.396 – 0.404 | 0.394 – 0.406 | 0.392 – 0.409 | 0.389 – 0.412 | 0.384 – 0.418 | 0.378 – 0.425 | 0.369 – 0.438 | 1/5.2              |
| 0.5              | 0.493 – 0.507  | 0.493 – 0.508 | 0.490 – 0.511 | 0.485 – 0.516 | 0.480 – 0.522 | 0.472 – 0.533 | 0.462 – 0.546 | 0.447 – 0.570 | 1/7.1              |
| 0.6              | 0.590 – 0.611  | 0.588 – 0.612 | 0.584 – 0.617 | 0.577 – 0.625 | 0.569 – 0.634 | 0.557 – 0.652 | 0.542 – 0.673 | 0.520 – 0.714 | 1/8.9              |
| 0.7              | 0.686 – 0.715  | 0.684 – 0.717 | 0.677 – 0.724 | 0.668 – 0.736 | 0.657 – 0.750 | 0.639 – 0.775 | 0.619 – 0.808 | 0.589 – 0.870 | 1/11               |
| 0.8              | 0.781 – 0.820  | 0.778 – 0.823 | 0.769 – 0.833 | 0.757 – 0.848 | 0.742 – 0.868 | 0.719 – 0.904 | 0.693 – 0.950 | 0.654 – 1.041 | 1/13               |
| 1.0              | 0.968 – 1.03   | 0.964 – 1.04  | 0.951 – 1.06  | 0.931 – 1.08  | 0.907 – 1.11  | 0.871 – 1.18  | 0.831 – 1.26  | 0.773 – 1.44  | 1/16               |
| 1.2              | 1.15 – 1.25    | 1.15 – 1.26   | 1.13 – 1.28   | 1.10 – 1.32   | 1.07 – 1.38   | 1.01 – 1.47   | 0.959 – 1.61  | 0.880 – 1.92  | 1/20               |
| 1.5              | 1.43 – 1.58    | 1.42 – 1.59   | 1.39 – 1.64   | 1.34 – 1.70   | 1.29 – 1.79   | 1.21 – 1.97   | 1.13 – 2.24   | 1.02 – 2.90   | 1/25               |
| 2.0              | 1.87 – 2.15    | 1.85 – 2.18   | 1.80 – 2.26   | 1.72 – 2.39   | 1.64 – 2.58   | 1.51 – 2.98   | 1.39 – 3.65   | 1.22 – 5.92   | 1/34               |
| 3                | 2.70 – 3.37    | 2.67 – 3.43   | 2.55 – 3.64   | 2.40 – 4.01   | 2.23 – 4.59   | 2.00 – 6.07   | 1.78 – 9.93   | 1.51 – ∞      | 1/53               |
| 5                | 4.21 – 6.15    | 4.12 – 6.36   | 3.85 – 7.14   | 3.51 – 8.75   | 3.16 – 12.21  | 2.71 – 36.07  | 2.31 – ∞      | 1.87 – ∞      | 1/89               |
| ∞                | 25.9 – ∞       | 22.7 – ∞      | 16.2 – ∞      | 11.4 – ∞      | 8.26 – ∞      | 5.68 – ∞      | 4.13 – ∞      | 2.84 – ∞      | 1/∞                |

(m)

| Focused distance | Depth of Field        |                       |                       |                       |                        |                        |                        |                       | Reproduction ratio |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|--------------------|
|                  | f/3.5                 | f/4                   | f/5.6                 | f/8                   | f/11                   | f/16                   | f/22                   | f/32                  |                    |
| 9 1/2"           | 9 15/32" – 9 17/32"   | 9 15/32" – 9 17/32"   | 9 15/32" – 9 17/32"   | 9 7/16" – 9 9/16"     | 9 13/32" – 9 19/32"    | 9 3/8" – 9 5/8"        | 9 11/32" – 9 11/16"    | 9 1/4" – 9 3/4"       | 1/2.0              |
| 10 1/2"          | 10 15/32" – 10 17/32" | 10 7/16" – 10 9/16"   | 10 7/16" – 10 9/16"   | 10 13/32" – 10 19/32" | 10 3/8" – 10 5/8"      | 10 5/16" – 10 11/16"   | 10 1/4" – 10 25/32"    | 10 1/8" – 10 29/32"   | 1/2.6              |
| 12"              | 11 15/16" – 1'        | 11 15/16" – 1'        | 11 7/8" – 1 1/8"      | 11 27/32" – 1 1/8"    | 11 3/4" – 1 1/4"       | 11 11/16" – 1 3/8"     | 11 5/8" – 1 1/2"       | 11 7/16" – 1 5/8"     | 1/3.4              |
| 15"              | 1' 2 7/8" – 1' 3 1/8" | 1' 2 7/8" – 1' 3 1/8" | 1' 2 3/4" – 1' 3 1/4" | 1' 2 3/4" – 1' 3 1/4" | 1' 2 5/8" – 1' 3 3/4"  | 1' 2 3/8" – 1' 3 5/8"  | 1' 2 1/4" – 1' 3 7/8"  | 1' 1 7/8" – 1' 4 1/4" | 1/4.8              |
| 18"              | 1' 5 3/4" – 1' 6 1/4" | 1' 5 3/4" – 1' 6 1/4" | 1' 5 5/8" – 1' 6 3/8" | 1' 5 1/2" – 1' 6 1/2" | 1' 5 3/8" – 1' 6 5/8"  | 1' 5 1/8" – 1' 7 1/8"  | 1' 4 3/4" – 1' 7 3/8"  | 1' 4 1/4" – 1' 8 1/8" | 1/6.3              |
| 21"              | 1' 8 3/4" – 1' 9 1/4" | 1' 8 5/8" – 1' 9 3/8" | 1' 8 1/2" – 1' 9 1/2" | 1' 8 3/8" – 1' 9 3/4" | 1' 8 1/8" – 1' 10"     | 1' 7 3/4" – 1' 10 1/2" | 1' 7 1/4" – 1' 11 1/8" | 1' 6 1/2" – 2' 1/4"   | 1/7.7              |
| 2'               | 1' 11 5/8" – 2' 3/8"  | 1' 11 1/2" – 2' 1/2"  | 1' 11 3/8" – 2' 3/4"  | 1' 11 1/8" – 2' 1"    | 1' 10 3/4" – 2' 1 3/8" | 1' 10 1/4" – 2' 2 1/8" | 1' 9 5/8" – 2' 3"      | 1' 8 3/4" – 2' 4 5/8" | 1/9.1              |
| 2.5'             | 2' 5 3/8" – 2' 6 3/4" | 2' 5 1/4" – 2' 6 7/8" | 2' 4 7/8" – 2' 7 1/8" | 2' 4 1/2" – 2' 7 3/4" | 2' 4" – 2' 8 3/8"      | 2' 3 1/8" – 2' 9 5/8"  | 2' 2 1/8" – 2' 11 1/4" | 2' 3/4" – 3' 2 3/8"   | 1/12               |

(ft)



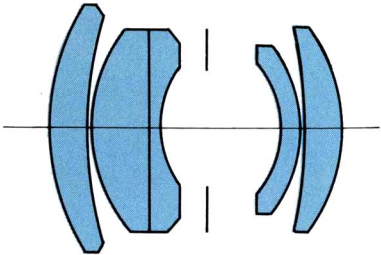
DEPTH-OF-FIELD TABLE—continued

| Focused distance | Depth of Field   |  |  |  |   |  |   |  | Reproduction ratio |
|------------------|--|--|--|--|---|--|---|--|--------------------|
|                  | f/3.5  | f/4  | f/5.6  | f/8  | f/11  | f/16   | f/22  | f/32   |                    |
| 3'               | 2'11" – 3'1 <sup>1</sup> / <sub>8</sub> "                              | 2'10 <sup>7</sup> / <sub>8</sub> " – 3'1 <sup>1</sup> / <sub>4</sub> " | 2'10 <sup>3</sup> / <sub>8</sub> " – 3'1 <sup>3</sup> / <sub>4</sub> " | 2'9 <sup>3</sup> / <sub>4</sub> " – 3'2 <sup>5</sup> / <sub>8</sub> "  | 2'9" – 3'3 <sup>5</sup> / <sub>8</sub> "                              | 2'7 <sup>3</sup> / <sub>4</sub> " – 3'5 <sup>5</sup> / <sub>8</sub> "  | 2'6 <sup>1</sup> / <sub>2</sub> " – 3'8 <sup>1</sup> / <sub>4</sub> " | 2'4 <sup>1</sup> / <sub>2</sub> " – 4'1 <sup>1</sup> / <sub>2</sub> "  | 1/15               |
| 4'               | 3'10 <sup>1</sup> / <sub>8</sub> " – 4'2 <sup>1</sup> / <sub>8</sub> " | 3'9 <sup>7</sup> / <sub>8</sub> " – 4'2 <sup>3</sup> / <sub>8</sub> "  | 3'9 <sup>1</sup> / <sub>8</sub> " – 4'3 <sup>3</sup> / <sub>8</sub> "  | 3'7 <sup>7</sup> / <sub>8</sub> " – 4'5"                               | 3'6 <sup>1</sup> / <sub>2</sub> " – 4'7 <sup>1</sup> / <sub>8</sub> " | 3'4 <sup>1</sup> / <sub>2</sub> " – 4'11 <sup>1</sup> / <sub>4</sub> " | 3'2 <sup>1</sup> / <sub>4</sub> " – 5'5"                              | 2'11 <sup>1</sup> / <sub>8</sub> " – 6'5 <sup>5</sup> / <sub>8</sub> " | 1/20               |
| 5'               | 4'9" – 5'3 <sup>3</sup> / <sub>8</sub> "                               | 4'8 <sup>5</sup> / <sub>8</sub> " – 5'3 <sup>7</sup> / <sub>8</sub> "  | 4'7 <sup>3</sup> / <sub>8</sub> " – 5'5 <sup>1</sup> / <sub>2</sub> "  | 4'5 <sup>1</sup> / <sub>2</sub> " – 5'8 <sup>1</sup> / <sub>4</sub> "  | 4'3 <sup>1</sup> / <sub>2</sub> " – 6'                                | 4'3 <sup>3</sup> / <sub>8</sub> " – 6'7 <sup>3</sup> / <sub>8</sub> "  | 3'9 <sup>1</sup> / <sub>8</sub> " – 7'6 <sup>3</sup> / <sub>8</sub> " | 3'4 <sup>5</sup> / <sub>8</sub> " – 9'10"                              | 1/26               |
| 7'               | 6'6" – 7'7"  | 6'5 <sup>1</sup> / <sub>4</sub> " – 7'8"                               | 6'2 <sup>7</sup> / <sub>8</sub> " – 7'11 <sup>3</sup> / <sub>4</sub> " | 5'11 <sup>5</sup> / <sub>8</sub> " – 8'5 <sup>7</sup> / <sub>8</sub> " | 5'7 <sup>7</sup> / <sub>8</sub> " – 9'2 <sup>3</sup> / <sub>4</sub> " | 5'2 <sup>3</sup> / <sub>8</sub> " – 10'9 <sup>5</sup> / <sub>8</sub> " | 4'9" – 13'7 <sup>1</sup> / <sub>4</sub> "                             | 4'1 <sup>3</sup> / <sub>4</sub> " – 24'1 <sup>5</sup> / <sub>8</sub> " | 1/37               |
| 10'              | 8'12" – 11'3"  | 8'10 <sup>1</sup> / <sub>2</sub> " – 11'6"                             | 8'5 <sup>7</sup> / <sub>8</sub> " – 12'2"                              | 7'11 <sup>3</sup> / <sub>4</sub> " – 13'5"                             | 7'5" – 15'5"  | 6'7 <sup>3</sup> / <sub>4</sub> " – 20'7"                              | 5'10 <sup>7</sup> / <sub>8</sub> " – 34'5"                            | 4'11 <sup>7</sup> / <sub>8</sub> " – ∞                                 | 1/54               |
| 15'              | 12'10" – 18'1"   | 12'7" – 18'8"  | 11'10" – 20'8"   | 10'10" – 24'8"   | 9'9 <sup>1</sup> / <sub>2</sub> " – 32'6"                             | 8'5 <sup>5</sup> / <sub>8</sub> " – 69'10"                             | 7'3 <sup>1</sup> / <sub>2</sub> " – ∞                                 | 5'11 <sup>1</sup> / <sub>8</sub> " – ∞                                 | 1/81               |
| ∞                | 85'2" – ∞  | 74'6" – ∞  | 53'2" – ∞  | 37'3" – ∞  | 27'1" – ∞   | 18'7" – ∞  | 13'7" – ∞   | 9'3 <sup>3</sup> / <sub>4</sub> " – ∞                                  | 1/∞                |

FEATURES/SPECIFICATIONS

Focal length/Aperture: 55mm f/3.5  
Picture angle: 43° at infinity  
Lens construction: 5 elements in 4 groups  
Diaphragm: Automatic type; stops down to f/32, with an intermediate click-stop at f/4. With M2 Ring in place, the automatic coupling action is retained.  
Meter coupling prong: Provided; with M2 Ring inserted, this linkage is lost.  
Focusing range: ∞ to 9-1/2 in. (24.1 cm); 9-1/2 in. (24.1 cm) to 8-13/32 in. (21.4 cm) with M2 Ring.  
Reproduction ratios: ∞ to 1:2; 1:2 to 1:1 with M2 Ring; optimum performance at 1:10.  
Distance scale: Graduated in both feet and meters measured from the film plane.  
Attachment size: 52mm screw-in. (P = 0.75)  
Dimensions: Lens: 65.5 x 64.6mm; M2 Ring: 61.5 x 35.5mm  
Weight: Lens: 235g; M2 Ring: 115g.  
Focusing screen: Type B especially recommended.

No lens hood is supplied for this lens since the deeply recessed lens front provides an efficient built-in hooding device. However, when a filter is used in close-up work, use of the lens hood for the Nikkor Auto 35mm f/2.8 is recommended in order to prevent reflection of light from the filter surface. The Micro-Nikkor-P can be used with a variety of 52mm screw-in filters.







NIPPON KOGAKU K.K.