

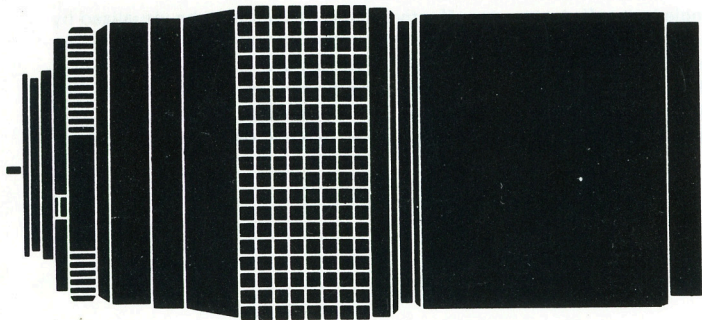
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MINOLTA ROKKOR
ROKKOR-X LENSES
DEPTH-OF-FIELD TABLES



DEPTH OF FIELD

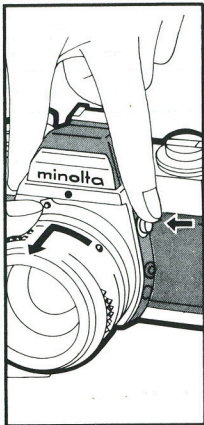
When a lens is focused at a given subject point, there is a certain distance range behind and in front of that point within which the photographic image will appear acceptably sharp. This distance is known as "depth of field" and may vary from paper thin to extremely deep in accordance with three factors: Depth of field decreases the longer the focal length of the lens, the larger the lens opening used, and the closer the lens is focused. It increases the shorter the lens focal length, the smaller the lens opening used, and the farther from the camera the lens is focused.

With Minolta single-lens reflex cameras, effective depth of field may be visualized by pushing the depth-of-field preview button and viewing the subject through the finder with the lens stopped down to the aperture at which the picture is to be taken. It may also be determined approximately from the depth-of-field scale on the lens barrel. The tables in this booklet provide precise data on near and far limits of acceptable focus at marked apertures at all or all scale-marked distances on Rokkor (Rokkor-X) Lenses of fixed focal length.

CHANGING ROKKOR (ROKKOR-X) LENSES

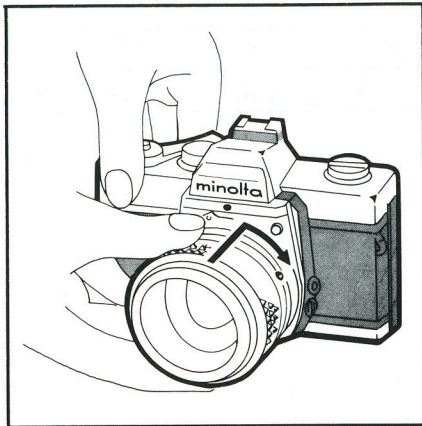
To Remove from Camera

While pushing lens-release button on camera, turn lens counterclockwise as far as it will go; then lift lens bayonet out of mount.



To Install Lens on Camera

Align red dot on lens barrel with red dot on camera lens-mount flange, insert lens bayonet into mount; and turn lens clockwise until it locks in place with a click.



7.5mm F4 FISHEYE ROKKOR (ROKKOR-X) LENS In METERS

F No. Dist. (m)	4	5.6	8	11	16	22
1.2	$\frac{\infty}{0.40}$	$\frac{\infty}{0.33}$	$\frac{\infty}{0.27}$	$\frac{\infty}{0.23}$	$\frac{\infty}{0.19}$	$\frac{\infty}{0.16}$

2

In FEET

F No. Dist. (ft)	4	5.6	8	11	16	22
4	$\frac{\infty}{1'3\frac{3}{4}''}$	$\frac{\infty}{1'1''}$	$\frac{\infty}{1' \frac{5}{8}''}$	$\frac{\infty}{9''}$	$\frac{\infty}{7\frac{1}{2}''}$	$\frac{\infty}{6\frac{1}{4}''}$

16mm F2.8 FISHEYE ROKKOR (ROKKOR-X) LENS In METERS

Dist. (m) F No.	2.8	4	5.6	8	11	16	22
∞	∞ 2.85	∞ 2.04	∞ 1.46	∞ 1.06	∞ 0.77	∞ 0.57	∞ 0.42
2	6.26 1.21	71.2 1.05	∞ 0.89	∞ 0.73	∞ 0.59	∞ 0.47	∞ 0.37
1	1.45 0.77	1.80 0.71	2.77 0.63	12.8 0.55	∞ 0.48	∞ 0.40	∞ 0.33
0.7	0.88 0.59	0.98 0.55	1.19 0.51	1.73 0.46	5.20 0.41	∞ 0.35	∞ 0.30
0.5	0.57 0.45	0.61 0.43	0.68 0.40	0.81 0.37	1.11 0.34	2.66 0.31	∞ 0.27
0.4	0.44 0.37	0.46 0.36	0.49 0.34	0.55 0.32	0.66 0.30	0.96 0.27	3.07 0.25
0.3	0.318 0.284	0.327 0.278	0.340 0.270	0.361 0.260	0.397 0.248	0.468 0.233	0.642 0.215

16mm F2.8 FISHEYE ROKKOR (ROKKOR-X) LENS

In FEET

Dist. (ft) \ F No.	2.8	4	5.6	8	11	16	22
∞	∞ 9' 4 $\frac{1}{8}$ "	∞ 6' 8 $\frac{1}{4}$ "	∞ 4' 9 $\frac{1}{2}$ "	∞ 3' 5 $\frac{1}{2}$ "	∞ 2' 6 $\frac{1}{4}$ "	∞ 1' 10"	∞ 1' 4 $\frac{5}{8}$ "
6	15' 8" 3' 9 $\frac{3}{8}$ "	50' 8" 3' 3 $\frac{1}{2}$ "	∞ 2' 9 $\frac{1}{2}$ "	∞ 2' 3 $\frac{7}{8}$ "	∞ 1' 11"	∞ 1' 6 $\frac{1}{8}$ "	∞ 1' 2 $\frac{3}{8}$ "
3	4' 1 $\frac{7}{8}$ " 2' 4 $\frac{3}{8}$ "	5' 2' 2' 2 $\frac{1}{4}$ "	7' $\frac{3}{8}$ " 2'	17' 6" 1' 8 $\frac{7}{8}$ "	∞ 1' 6"	∞ 1' 3 $\frac{1}{4}$ "	∞ 1' $\frac{3}{4}$ "
2	2' 4 $\frac{3}{4}$ " 1' 8 $\frac{5}{8}$ "	2' 7 $\frac{1}{2}$ " 1' 7 $\frac{5}{8}$ "	3' 5 $\frac{5}{8}$ " 1' 6 $\frac{1}{4}$ "	4' 4 $\frac{3}{4}$ "	7' 2 $\frac{1}{2}$ " 1' 3"	∞ 1' 1 $\frac{1}{8}$ "	∞ 11 $\frac{3}{8}$ "
1.5	1' 8 $\frac{1}{4}$ " 1' 4 $\frac{1}{4}$ "	1' 9 $\frac{3}{8}$ " 1' 3 $\frac{5}{8}$ "	1' 11 $\frac{3}{8}$ " 1' 2 $\frac{7}{8}$ "	2' 3" 1' 1 $\frac{7}{8}$ "	2' 11" 1' $\frac{3}{4}$ "	5' 2" 11 $\frac{1}{2}$ "	∞ 10 $\frac{1}{4}$ "
1.25	1' 4 $\frac{3}{8}$ " 1' 1 $\frac{7}{8}$ "	1' 5" 1' 1 $\frac{1}{2}$ "	1' 6 $\frac{1}{8}$ " 1' $\frac{7}{8}$ "	1' 8" 1' $\frac{1}{4}$ "	2' 11 $\frac{3}{8}$ "	2' 8 $\frac{1}{2}$ " 10 $\frac{1}{2}$ "	6' 4 $\frac{3}{4}$ " 9 $\frac{1}{2}$ "
1	1' $\frac{3}{4}$ " 11 $\frac{3}{8}$ "	1' 1" 11 $\frac{1}{8}$ "	1' 1" 10 $\frac{3}{4}$ "	1' 2 $\frac{1}{2}$ " 10 $\frac{3}{8}$ "	1' 4" 9 $\frac{7}{8}$ "	1' 7" 9 $\frac{1}{4}$ "	2' 2 $\frac{1}{2}$ " 8 $\frac{1}{2}$ "

17mm F4 W ROKKOR (ROKKOR-X) LENS

In METERS

F.No. Dist. (m)	4	5.6	8	11	16	22
∞	∞ 2.33	∞ 1.70	∞ 1.22	∞ 0.88	∞ 0.64	∞ 0.473
3	∞ 1.35	∞ 1.12	∞ 0.90	∞ 0.71	∞ 0.55	∞ 0.425
1	1.64 0.73	2.19 0.66	4.57 0.59	∞ 0.50	∞ 0.425	∞ 0.352
0.6	0.76 0.50	0.85 0.470	1.04 0.434	1.52 0.392	5.2 0.346	∞ 0.300
0.4	0.455 0.358	0.481 0.345	0.53 0.327	0.61 0.306	0.81 0.280	1.57 0.253
0.3	0.325 0.279	0.336 0.272	0.355 0.262	0.386 0.250	0.443 0.235	0.57 0.218
0.25	0.265 0.237	0.271 0.233	0.282 0.226	0.298 0.218	0.326 0.208	0.379 0.196

17mm F4 W ROKKOR (ROKKOR-X) LENS In FEET

F.No. Dist. (ft)	4	5.6	8	11	16	22
∞	∞ 7' 7 ¹¹ / ₁₆ "	∞ 5' 7 ¹¹ / ₁₆ "	∞ 4' 1 ¹ / ₈ "	∞ 2' 10 ¹³ / ₁₆ "	∞ 2' 1 ⁵ / ₁₆ "	∞ 1' 6 ⁵ / ₈ "
6	25' 7" 3' 5 ¹¹ / ₁₆ "	∞ 3' 1 ¹ / ₈ "	∞ 2' 6 ³ / ₁₆ "	∞ 2' 1 ¹¹ / ₁₆ "	∞ 1' 7 ³ / ₄ "	∞ 1' 3 ¹¹ / ₁₆ "
3	4' 7 ¹ / ₂ " 2' 2 ¹⁵ / ₁₆ "	5' 10 ⁵ / ₈ " 2' 1 ¹¹ / ₁₆ "	10' 1 ⁷ / ₁₆ " 1' 9 ¹⁵ / ₁₆ "	∞ 1' 7 ¹ / ₁₆ "	∞ 1' 4 ³ / ₁₆ "	∞ 1' 1 ¹ / ₂ "
2	2' 6 ¹ / ₂ " 1' 7 ⁷ / ₈ "	2' 10 ³ / ₁₆ " 1' 6 ³ / ₄ "	3' 6" 1' 5 ¹ / ₄ "	5' 2 ⁷ / ₈ " 1' 3 ⁹ / ₁₆ "	20' 5" 1' 1 ¹ / ₁₆ "	∞ 11 ⁷ / ₈ "
-1.25	1' 4 ⁷ / ₈ " 1' 1 ¹ / ₂ "	1' 5 ³ / ₄ " 1' 1 ¹ / ₁₆ "	1' 7 ⁵ / ₁₆ " 1' 3 ³ / ₈ "	1' 10 ³ / ₁₆ " 11 ⁵ / ₈ "	2' 4 ³ / ₈ " 10 ¹¹ / ₁₆ "	4' 7 ⁷ / ₈ " 9 ¹¹ / ₁₆ "
1	1' 1" 11 ¹ / ₈ "	1' 1 ⁷ / ₁₆ " 10 ¹³ / ₁₆ "	1' 2 ¹ / ₄ " 10 ⁷ / ₁₆ "	1' 3 ¹ / ₂ " 9 ¹⁵ / ₁₆ "	1' 5 ¹⁵ / ₁₆ " 9 ³ / ₁₆ "	1' 11 ⁵ / ₁₆ " 8 ⁵ / ₈ "
0.8	10 ³ / ₈ " 9 ¹ / ₈ "	10 ³ / ₈ " 8 ¹⁵ / ₁₆ "	10 ¹¹ / ₁₆ " 8 ¹ / ₁₆ "	11 ⁵ / ₁₆ " 8 ³ / ₈ "	1' 5 ⁵ / ₁₆ " 8"	1' 2 ³ / ₁₆ " 7 ⁹ / ₁₆ "

6

20mm F2.8 W ROKKOR (ROKKOR-X) LENS In METERS

F.No. Dist. (m)	2.8	4	5.6	8	11	16	22
∞	∞ 4.51	∞ 3.27	∞ 2.33	∞ 1.66	∞ 1.19	∞ 0.86	∞ 0.62
5	∞ 2.40	∞ 2.01	∞ 1.62	∞ 1.27	∞ 0.98	∞ 0.75	∞ 0.57
2	3.48 1.41	4.91 1.27	12.8 1.11	∞ 0.94	∞ 0.78	∞ 0.63	∞ 0.50
1	1.25 0.84	1.38 0.79	1.65 0.73	2.28 0.66	5.12 0.58	∞ 0.49	∞ 0.42
0.5	0.55 0.46	0.57 0.45	0.60 0.43	0.66 0.41	0.76 0.38	0.99 0.35	1.80 0.31
0.3	0.31 0.29	0.32 0.28	0.33 0.28	0.34 0.27	0.36 0.26	0.39 0.25	0.46 0.23
0.25	0.26 0.24	0.26 0.24	0.27 0.24	0.27 0.23	0.28 0.22	0.30 0.22	0.33 0.21

20mm F2.8 W ROKKOR (ROKKOR-X) LENS In FEET

F No. Dist. (ft)	2.8	4	5.6	8	11	16	22
∞	∞ 14' 9"	∞ 10' 9"	∞ 7' 7 $\frac{9}{16}$ "	∞ 5' 5 $\frac{3}{8}$ "	∞ 3' 10 $\frac{13}{16}$ "	∞ 2' 9 $\frac{3}{4}$ "	∞ 2' $\frac{1}{2}$ "
6	9' 9 $\frac{5}{16}$ " 4' 4 $\frac{1}{4}$ "	13' 3' 11 $\frac{5}{16}$ "	25' 8" 3' 5 $\frac{9}{16}$ "	∞ 2' 11 $\frac{1}{2}$ "	∞ 2' 5 $\frac{5}{8}$ "	∞ 2' $\frac{1}{16}$ "	∞ 1' 7 $\frac{1}{4}$ "
3	3' 7 $\frac{13}{16}$ " 2' 6 $\frac{5}{8}$ "	3' 11 $\frac{15}{16}$ " 2' 5"	4' 7 $\frac{3}{4}$ " 2' 2 $\frac{7}{8}$ "	6' $\frac{7}{8}$ " 2' $\frac{3}{8}$ "	10' 11" 1' 9 $\frac{5}{8}$ "	∞ 1' 6 $\frac{11}{16}$ "	∞ 1' 3 $\frac{13}{16}$ "
2	2' 2 $\frac{15}{16}$ " 1' 9 $\frac{5}{8}$ "	2' 4 $\frac{5}{16}$ " 1' 8 $\frac{7}{8}$ "	2' 6 $\frac{5}{8}$ " 1' 7 $\frac{13}{16}$ "	2' 10 $\frac{13}{16}$ " 1' 6 $\frac{9}{16}$ "	3' 7 $\frac{1}{4}$ " 1' 5"	5' 7 $\frac{1}{16}$ " 1' 3 $\frac{1}{4}$ "	29' 11" 1' 1 $\frac{7}{16}$ "
1.5	1' 7 $\frac{7}{16}$ " 1' 4 $\frac{3}{4}$ "	1' 8 $\frac{1}{16}$ " 1' 4 $\frac{5}{16}$ "	1' 9 $\frac{1}{8}$ " 1' 3 $\frac{11}{16}$ "	1' 10 $\frac{7}{8}$ " 1' 2 $\frac{15}{16}$ "	2' 1 $\frac{15}{16}$ " 1' 2"	2' 8 $\frac{3}{16}$ " 1' $\frac{7}{8}$ "	4' 2" 11 $\frac{5}{8}$ "
1.25	1' 3 $\frac{7}{8}$ " 1' 2 $\frac{1}{8}$ "	1' 4 $\frac{5}{16}$ " 1' 1 $\frac{7}{8}$ "	1' 4 $\frac{15}{16}$ " 1' 1 $\frac{1}{16}$ "	1' 5 $\frac{15}{16}$ " 1' $\frac{15}{16}$ "	1' 7 $\frac{5}{8}$ " 1' $\frac{1}{4}$ "	1' 10 $\frac{3}{4}$ " 11 $\frac{1}{16}$ "	2' 5 $\frac{11}{16}$ " 10 $\frac{1}{2}$ "
1.0	1' $\frac{1}{2}$ " 11 $\frac{1}{2}$ "	1' $\frac{11}{16}$ " 11 $\frac{5}{16}$ "	1' 1 $\frac{1}{16}$ " 11 $\frac{1}{16}$ "	1' 1 $\frac{9}{16}$ " 10 $\frac{3}{4}$ "	1' 2 $\frac{7}{16}$ " 10 $\frac{5}{16}$ "	1' 3 $\frac{3}{16}$ " 9 $\frac{13}{16}$ "	1' 6 $\frac{1}{2}$ " 9 $\frac{3}{16}$ "

24mm F2.8 W ROKKOR (ROKKOR-X) LENS In METERS

Dist. (m)	F.No.	2.8	4	5.6	8	11	16	22
∞	∞	∞	∞	∞	∞	∞	∞	∞
	∞	6.4	4.5	3.3	2.3	1.7	1.2	0.9
5.0	21.52 2.85	∞ 2.41	∞ 2.00	∞ 1.60	∞ 1.29	∞ 0.97	∞ 0.76	∞ 0.76
2.0	2.83 1.55	3.46 1.42	4.92 1.27	13.72 1.10	∞ 0.95	∞ 0.77	∞ 0.64	∞ 0.64
1.0	1.16 0.88	1.24 0.84	1.38 0.79	1.66 0.73	2.22 0.66	5.33 0.58	∞ 0.50	∞ 0.50
0.7	0.77 0.64	0.80 0.62	0.85 0.60	0.95 0.56	1.09 0.52	1.49 0.47	2.73 0.42	2.73 0.42
0.5	0.53 0.47	0.55 0.46	0.57 0.45	0.60 0.43	0.65 0.41	0.76 0.38	0.97 0.35	0.97 0.35
0.4	0.42 0.38	0.43 0.38	0.44 0.37	0.46 0.36	0.48 0.34	0.54 0.32	0.62 0.30	0.62 0.30
0.3	0.31 0.29	0.31 0.29	0.32 0.28	0.33 0.28	0.34 0.27	0.36 0.26	0.39 0.25	0.39 0.25

24mm F2.8 W ROKKOR (ROKKOR-X) LENS In FEET

Dist. (ft.) \ F.No.	2.8	4	5.6	8	11	16	22
∞	∞ 21' 2"	∞ 14' 10"	∞ 10' 8"	∞ 7' 6"	∞ 5' 6"	∞ 3' 10"	∞ 2' 10"
6	8' 2 ³ / ₁₆ " 4' 9"	9' 8 ¹¹ / ₁₆ " 4' 4 ³ / ₈ "	13' 1 ¹ / ₈ " 3' 11 ⁵ / ₁₆ "	26' 9" 3' 5 ³ / ₈ "	∞ 2' 11 ⁷ / ₈ "	∞ 2' 5 ⁷ / ₁₆ "	∞ 2' 3 ⁸ / ₈ "
3	3' 5" 2' 8 ¹ / ₁₆ "	3' 7 ¹¹ / ₁₆ " 2' 6 ¹¹ / ₁₆ "	3' 11 ⁷ / ₈ " 2' 5"	4' 8" 2' 2 ¹³ / ₁₆ "	5' 11 ⁵ / ₁₆ " 2' 9 ⁹ / ₁₆ "	11' 2 ¹ / ₄ " 1' 9 ⁹ / ₁₆ "	∞ 1' 6 ⁷ / ₈ "
2	2' 1 ¹⁵ / ₁₆ " 1' 10 ¹⁵ / ₁₆ "	2' 2 ⁷ / ₈ " 1' 9 ¹¹ / ₁₆ "	2' 4 ¹ / ₄ " 1' 8 ⁷ / ₈ "	2' 6 ¹¹ / ₁₆ " 1' 7 ¹³ / ₁₆ "	2' 10 ³ / ₈ " 1' 6 ⁵ / ₈ "	3' 7 ³ / ₈ " 1' 5"	5' 4" 1' 3 ⁷ / ₁₆ "
1.5	1' 6 ¹⁵ / ₁₆ " 1' 5 ¹ / ₈ "	1' 7 ³ / ₈ " 1' 4 ³ / ₄ "	1' 8 ¹ / ₁₆ " 1' 4 ⁵ / ₁₆ "	1' 9 ¹ / ₈ " 1' 3 ¹¹ / ₁₆ "	1' 10 ¹¹ / ₁₆ " 1' 3"	2' 1 ⁷ / ₈ " 1' 2"	2' 7 ³ / ₈ " 1' 1"
1.25	1' 3 ⁹ / ₁₆ " 1' 2 ³ / ₈ "	1' 3 ⁷ / ₈ " 1' 2 ³ / ₁₆ "	1' 4 ¹ / ₄ " 1' 1 ⁷ / ₈ "	1' 4 ¹⁵ / ₁₆ " 1' 1 ¹ / ₂ "	1' 5 ¹³ / ₁₆ " 1' 1"	1' 7 ⁹ / ₁₆ " 1' 5 ⁵ / ₁₆ "	1' 10 ⁵ / ₁₆ " 11 ⁹ / ₁₆ "
1.0	1' 5 ⁵ / ₁₆ " 11 ⁵ / ₈ "	1' 1 ¹ / ₂ " 11 ¹ / ₂ "	1' 1 ¹¹ / ₁₆ " 11 ³ / ₈ "	1' 1" 11 ¹ / ₈ "	1' 1 ¹ / ₂ " 10 ¹³ / ₁₆ "	1' 2 ³ / ₈ " 10 ³ / ₈ "	1' 3 ⁹ / ₁₆ " 9 ⁷ / ₈ "

10

28mm F2, F2.8 AND F3.5 W ROKKOR (ROKKOR-X) LENSES In METERS

Dist. (m) \ F.No.	2	2.8	3.5	4	5.6	8	11	16	22
∞	∞ 12.50	∞ 8.7	∞ 6.78	∞ 6.07	∞ 4.31	∞ 3.07	∞ 2.19	∞ 1.57	∞ 1.16
5	8.22 3.60	11.5 3.21	18.5 2.94	27.0 2.78	∞ 2.35	∞ 1.94	∞ 1.56	∞ 1.22	∞ 0.96
3	3.9 2.44	4.50 2.26	5.35 2.13	5.75 2.04	9.37 1.81	90.8 1.56	∞ 1.30	∞ 1.06	∞ 0.86
2	2.35 1.74	2.55 1.65	2.78 1.57	2.90 1.53	3.58 1.40	5.36 1.25	18.9 1.08	∞ 0.92	∞ 0.76
1.5	1.68 1.35	1.78 1.30	1.89 1.25	1.94 1.23	2.21 1.14	2.76 1.04	4.31 0.93	22.6 0.81	∞ 0.69
1.2	1.31 1.11	1.37 1.07	1.43 1.04	1.46 1.02	1.60 0.97	1.86 0.90	2.43 0.81	4.37 0.72	∞ 0.62
1.0	1.07 0.94	1.11 0.91	1.15 0.89	1.17 0.88	1.25 0.84	1.40 0.78	1.69 0.72	2.42 0.65	5.68 0.57
0.8	0.84 0.76	0.87 0.74	0.89 0.74	0.90 0.73	0.95 0.70	1.03 0.66	1.17 0.62	1.45 0.57	2.19 0.51
0.6	0.62 0.58	0.63 0.57	0.65 0.56	0.65 0.56	0.67 0.54	0.71 0.52	0.77 0.50	0.87 0.47	1.08 0.43
0.5	0.51 0.49	0.52 0.48	0.53 0.47	0.53 0.47	0.55 0.46	0.57 0.45	0.60 0.43	0.66 0.41	0.77 0.38
0.4	0.41 0.39	0.41 0.39	0.42 0.39	0.42 0.38	0.43 0.38	0.44 0.37	0.46 0.36	0.49 0.34	0.54 0.32
0.3	0.31 0.30	0.31 0.29	0.31 0.29	0.31 0.29	0.31 0.29	0.32 0.28	0.33 0.28	0.34 0.27	0.36 0.26

28mm F2, F2.8 AND F3.5 W ROKKOR (ROKKOR-X) LENSES In FEET

F.No. Dist. (ft)	2	2.8	3.5	4	5.6	8	11	16	22
∞	41' $\frac{\infty}{8}$ "	28' $7\frac{5}{16}$ "	22' 3 "	19' 11 "	14' 2 "	10' 1 "	7' 2 "	5' 2 "	3' 10 "
20	38' $5\frac{3}{8}$ " 13' $6\frac{3}{8}$ "	64' $11\frac{5}{16}$ " 11' $10\frac{1}{2}$ "	188' 10' 8 "	∞ 10' 1 "	∞ 8' $4\frac{3}{4}$ "	∞ 6' $9\frac{3}{4}$ "	∞ 5' $4\frac{5}{8}$ "	∞ 4' 2 "	∞ 3' 3 "
10	13' $5\frac{5}{8}$ " 8' $1\frac{3}{8}$ "	15' $1\frac{5}{16}$ " 7' $5\frac{15}{16}$ "	17' 9 " 6' $11\frac{7}{8}$ "	19' 6 " 6' $9\frac{1}{4}$ "	32' 5 " 6'	∞ 5' $1\frac{3}{4}$ "	∞ 4' $3\frac{5}{8}$ "	∞ 3' $6\frac{1}{8}$ "	∞ 2' 10 "
7	8' 4 " 6' $7\frac{1}{16}$ "	9' $1\frac{3}{8}$ " 5' $8\frac{5}{16}$ "	10' 5 " 5' $4\frac{7}{8}$ "	10' 6 " 5' $3\frac{1}{4}$ "	13' $3\frac{1}{4}$ " 4' $9\frac{1}{2}$ "	21' 4 " 4' 3 "	171' 3' 8 "	∞ 3' 1 "	∞ 2' $6\frac{1}{16}$ "
5	5' $7\frac{1}{16}$ " 4' 6 "	5' $11\frac{1}{2}$ " 4' $3\frac{11}{16}$ "	6' $3\frac{3}{4}$ " 4' $1\frac{3}{4}$ "	6' 6 " 4' $1\frac{3}{16}$ "	7' $5\frac{1}{8}$ " 3' $9\frac{1}{2}$ "	9' $4\frac{1}{4}$ " 3' $5\frac{5}{8}$ "	14' 10 " 3' $7\frac{1}{8}$ "	101' 2' 7 "	∞ 2' $3\frac{3}{16}$ "
4	4' $4\frac{1}{2}$ " 3' $8\frac{3}{16}$ "	4' $6\frac{7}{8}$ " 3' $6\frac{5}{8}$ "	4' $9\frac{3}{8}$ " 3' $5\frac{3}{8}$ "	4' $10\frac{1}{2}$ " 3' $4\frac{3}{4}$ "	5' $4\frac{3}{8}$ " 3' $2\frac{3}{8}$ "	6' $3\frac{1}{4}$ " 3'	8' $3\frac{1}{8}$ " 2' $8\frac{1}{4}$ "	15' 4 " 2' $4\frac{1}{2}$ "	∞ 2' $1\frac{1}{16}$ "
3	3' $2\frac{3}{8}$ " 2' $9\frac{1}{8}$ "	3' $3\frac{9}{16}$ " 2' 9 "	3' $4\frac{3}{4}$ " 2' $8\frac{1}{4}$ "	3' $5\frac{1}{4}$ " 2' $7\frac{7}{8}$ "	3' 8 " 2' $6\frac{1}{2}$ "	4' $1\frac{1}{2}$ " 2' $4\frac{3}{4}$ "	4' 9 " 2' $2\frac{5}{8}$ "	6' $4\frac{1}{4}$ " 2' $1\frac{1}{8}$ "	11' $7\frac{15}{16}$ " 1' $9\frac{3}{8}$ "
2.5	2' $7\frac{15}{16}$ " 2' $4\frac{9}{16}$ "	2' $8\frac{5}{16}$ " 2' $3\frac{15}{16}$ "	2' $9\frac{1}{4}$ " 2' $3\frac{1}{2}$ "	2' $9\frac{3}{8}$ " 2' $3\frac{1}{4}$ "	2' $11\frac{1}{8}$ " 2' $2\frac{1}{4}$ "	3' $1\frac{7}{8}$ " 2' 1 "	3' $6\frac{1}{2}$ " 1' 11 "	4' $3\frac{7}{8}$ " 1' $9\frac{1}{2}$ "	6' $2\frac{5}{8}$ " 1' $7\frac{3}{8}$ "
2	2' $7\frac{1}{8}$ " 1' $11\frac{1}{8}$ "	2' $1\frac{3}{8}$ " 1' $10\frac{11}{16}$ "	2' 1 " 1' $10\frac{3}{8}$ "	2' 2 " 1' $10\frac{1}{4}$ "	2' 3 " 1' $9\frac{5}{8}$ "	2' $4\frac{3}{8}$ " 1' $8\frac{3}{4}$ "	2' 6 " 1' $7\frac{3}{4}$ "	2' $11\frac{1}{8}$ " 1' $6\frac{1}{2}$ "	3' $7\frac{15}{16}$ " 1' $4\frac{15}{16}$ "
1.5	1' $6\frac{15}{16}$ " 1' $5\frac{1}{2}$ "	1' $6\frac{11}{16}$ " 1' $5\frac{5}{16}$ "	1' $6\frac{3}{4}$ " 1' $5\frac{1}{4}$ "	1' 7 " 1' $5\frac{1}{8}$ "	1' $7\frac{3}{8}$ " 1' $4\frac{3}{4}$ "	1' $8\frac{1}{8}$ " 1' $4\frac{1}{4}$ "	1' $9\frac{1}{8}$ " 1' $3\frac{3}{4}$ "	1' 11 " 1' 3 "	2' $2\frac{1}{16}$ " 1' $1\frac{15}{16}$ "
1.25	1' $3\frac{1}{4}$ " 1' $2\frac{11}{16}$ "	1' $3\frac{7}{16}$ " 1' $2\frac{9}{16}$ "	1' $3\frac{1}{2}$ " 1' $2\frac{1}{2}$ "	1' $3\frac{5}{8}$ " 1' $2\frac{3}{8}$ "	1' $3\frac{15}{16}$ " 1' $2\frac{1}{8}$ "	1' $4\frac{3}{8}$ " 1' $1\frac{13}{16}$ "	1' $4\frac{15}{16}$ " 1' $1\frac{7}{16}$ "	1' $6\frac{1}{8}$ " 1' $7\frac{1}{8}$ "	1' $7\frac{11}{16}$ " 1' $1\frac{1}{4}$ "
1	1' $1\frac{1}{16}$ " 11' $13\frac{1}{16}$ "	1' $1\frac{1}{4}$ " 11' $3\frac{1}{4}$ "	1' $5\frac{5}{16}$ " 11' $11\frac{1}{16}$ "	1' $5\frac{1}{8}$ " 11' $5\frac{1}{8}$ "	1' $1\frac{1}{2}$ " 11' $1\frac{1}{2}$ "	1' $3\frac{1}{4}$ " 11' $5\frac{1}{16}$ "	1' $1\frac{1}{16}$ " 11' $1\frac{1}{16}$ "	1' $1\frac{5}{8}$ " 10' $3\frac{1}{4}$ "	1' $2\frac{3}{8}$ " 10' $3\frac{3}{8}$ "

35mm F1.8 AND F2.8 W ROKKOR (ROKKOR-X) LENSES In METERS

F.No. Dist. (m)	1.8	2.8	4	5.6	8	11	16	22
∞	∞ 20	∞ 13.1	∞ 9.25	∞ 6.56	∞ 4.66	∞ 3.32	∞ 2.36	∞ 1.74
5	6.60 4.03	7.98 3.65	10.6 3.28	20.1 2.88	∞ 2.45	∞ 2.03	∞ 1.64	∞ 1.31
3	3.50 2.63	3.84 2.47	4.35 2.30	5.36 2.10	8.01 1.87	27.2 1.62	∞ 1.36	∞ 1.13
2	2.20 1.83	2.33 1.75	2.50 1.67	2.80 1.56	3.36 1.43	4.71 1.29	11.2 1.13	∞ 0.96
1.5	1.61 1.41	1.67 1.36	1.76 1.31	1.89 1.25	2.13 1.17	2.58 1.07	3.73 0.96	9.01 0.84
1.2	1.27 1.14	1.30 1.11	1.35 1.08	1.43 1.04	1.56 0.98	1.78 0.91	2.24 0.83	3.43 0.74
1	1.04 0.96	1.07 0.94	1.10 0.92	1.15 0.89	1.23 0.85	1.36 0.80	1.60 0.74	2.12 0.67
0.8	0.83 0.78	0.84 0.76	0.86 0.75	0.89 0.73	0.93 0.70	1.00 0.67	1.12 0.63	1.35 0.58
0.6	0.61 0.59	0.62 0.58	0.63 0.57	0.64 0.56	0.66 0.55	0.70 0.53	0.75 0.51	0.84 0.47
0.5	0.51 0.49	0.51 0.49	0.52 0.48	0.53 0.47	0.54 0.47	0.56 0.45	0.59 0.44	0.64 0.41
0.4	0.41 0.40	0.41 0.39	0.41 0.39	0.42 0.39	0.42 0.38	0.43 0.37	0.45 0.36	0.48 0.35
0.3	0.30 0.30	0.30 0.30	0.31 0.29	0.31 0.29	0.31 0.29	0.31 0.29	0.32 0.28	0.33 0.27

35mm F1.8 AND F2.8 W ROKKOR (ROKKOR-X) LENSES In FEET

F No. Dist. (ft)	1.8	2.8	4	5.6	8	11	16	22
∞	∞ 65' 9"	∞ 42' 10"	∞ 30' 4"	∞ 21' 6"	∞ 15' 3"	∞ 10' 11"	∞ 7' 9"	∞ 5' 8"
20	28' 6" 15' 5"	36' 11" 13' 9"	57' 2" 12' 2"	256' 10' 6"	∞ 8' 10"	∞ 7' 2"	∞ 5' 8 ³ / ₈ "	∞ 4' 6 ¹ / ₈ "
10	11' 8" 8' 8 ³ / ₄ "	12' 10" 8' 2 ¹ / ₄ "	14' 7" 7' 7 ¹ / ₂ "	18' 1" 6' 11"	27' 6" 6' 2 ¹ / ₈ "	105' 5' 4 ¹ / ₄ "	∞ 4' 6"	∞ 3' 8 ³ / ₄ "
7	7' 9 ¹ / ₄ " 7' 4 ³ / ₈ "	8' 3 ¹ / ₈ " 6' 1"	8' 11" 5' 9 ¹ / ₄ "	10' 1" 5' 4 ¹ / ₂ "	12' 4 ¹ / ₂ " 4' 11"	18' 4" 4' 4 ³ / ₄ "	58' 11" 3' 9 ³ / ₄ "	∞ 3' 3"
5	5' 4 ³ / ₈ " 4' 8 ¹ / ₈ "	5' 7" 4' 6 ¹ / ₄ "	5' 10" 4' 4 ¹ / ₄ "	6' 4 ¹ / ₈ " 4' 1 ³ / ₄ "	7' 1 ³ / ₄ " 3' 11"	8' 8 ³ / ₄ " 3' 6 ¹ / ₂ "	12' 9" 3' 2"	32' 11 ³ / ₈ " 2' 9 ¹ / ₄ "
4	4' 2" 3' 9 ¹ / ₂ "	4' 4 ¹ / ₄ " 3' 3 ³ / ₈ "	4' 6 ¹ / ₄ " 3' 7"	4' 9 ³ / ₈ " 3' 5 ¹ / ₄ "	5' 2 ¹ / ₂ " 3' 3 ¹ / ₈ "	6' 3' 3 ¹ / ₈ "	7' 7" 2' 9 ¹ / ₈ "	11' 10 ¹ / ₁₆ " 2' 5 ¹ / ₂ "
3	3' 1 ³ / ₈ " 2' 11"	3' 2 ¹ / ₄ " 2' 10"	3' 3 ¹ / ₄ " 2' 9 ¹ / ₄ "	3' 4 ³ / ₄ " 2' 8 ¹ / ₄ "	3' 7 ¹ / ₈ " 2' 7"	3' 11" 2' 5 ¹ / ₄ "	4' 6 ¹ / ₄ " 2' 3 ¹ / ₄ "	5' 8 ³ / ₄ " 2' 1 ¹ / ₁₆ "
2.5	2' 6" 2' 5 ¹ / ₈ "	2' 7 ¹ / ₂ " 2' 4"	2' 8 ¹ / ₈ " 2' 4 ¹ / ₈ "	2' 9 ¹ / ₈ " 2' 3 ³ / ₈ "	2' 11" 2' 2 ¹ / ₂ "	4' 2' 1 ³ / ₈ "	3' 5" 1' 11"	4' 5 ⁵ / ₈ " 1' 10"
2	2' 1 ¹ / ₂ " 1' 11"	2' 7 ¹ / ₈ " 1' 11"	2' 1 ¹ / ₄ " 1' 11"	2' 1 ³ / ₄ " 1' 10"	2' 2" 1' 9"	2' 3" 1' 9 ¹ / ₈ "	2' 6" 1' 8 ¹ / ₈ "	2' 9 ¹³ / ₁₆ " 1' 6 ³ / ₄ "
1.5	1' 6 ¹ / ₄ " 1' 5"	1' 6 ³ / ₈ " 1' 5 ¹ / ₂ "	1' 6 ¹ / ₂ " 1' 5 ³ / ₈ "	1' 6 ³ / ₄ " 1' 5 ¹ / ₈ "	1' 7 ¹ / ₄ " 1' 4 ³ / ₄ "	1' 7 ³ / ₈ " 1' 4 ¹ / ₂ "	1' 8 ³ / ₄ " 1' 4"	1' 10 ⁷ / ₁₆ " 1' 3 ¹ / ₈ "
1.25	1' 3 ¹ / ₈ " 1' 2 ⁷ / ₈ "	1' 3 ¹ / ₄ " 1' 2 ³ / ₄ "	1' 3 ³ / ₈ " 1' 2 ⁵ / ₈ "	1' 3 ¹ / ₂ " 1' 2 ¹ / ₂ "	1' 3 ³ / ₄ " 1' 2 ¹ / ₄ "	1' 4 ¹ / ₈ " 1' 2"	1' 4 ¹ / ₂ " 1' 1 ³ / ₄ "	1' 5 ¹ / ₁₆ " 1' 1 ¹ / ₁₆ "
1.0	1' 11 7 ¹ / ₈ "	1' 11 7 ¹ / ₈ "	1' 11 3 ¹ / ₄ "	1' 11 3 ¹ / ₄ "	1' 11 5 ¹ / ₈ "	1' 11 1 ¹ / ₂ "	1' 11 1 ¹ / ₄ "	1' 10 7 ¹ / ₈ "

45mm F2 ROKKOR (ROKKOR-X) LENS In METERS

F.No. Dist. (m)	2	2.8	4	5.6	8	11	16
∞	∞ 32.7	∞ 23.1	∞ 16.4	∞ 11.6	∞ 8.21	∞ 5.82	∞ 4.13
10	14.3 7.68	17.5 7.01	25.4 6.24	70.3 5.40	∞ 4.54	∞ 3.71	∞ 2.95
3	3.29 2.76	3.43 2.67	3.64 2.55	4.00 2.41	4.64 2.22	6.00 2.01	10.3 1.77
1.5	1.57 1.44	1.59 1.42	1.64 1.38	1.70 1.34	1.80 1.29	1.97 1.21	2.27 1.13
1	1.03 0.974	1.04 0.964	1.06 0.950	1.08 0.930	1.12 0.905	1.18 0.870	1.27 0.826
0.8	0.817 0.784	0.824 0.778	0.834 0.769	0.849 0.757	0.871 0.740	0.905 0.718	0.958 0.689
0.7	0.712 0.688	0.718 0.683	0.725 0.677	0.736 0.667	0.752 0.655	0.777 0.638	0.814 0.616
0.6	0.609 0.592	0.612 0.588	0.618 0.583	0.625 0.577	0.636 0.568	0.653 0.556	0.678 0.539

45mm F2 ROKKOR (ROKKOR-X) LENS

In FEET

Dist. (ft) \ F.No.	2	2.8	4	5.6	8	11	16
∞	$107' \infty$	$75' 11'' \infty$	$53' 9'' \infty$	$38' \infty$	$26' 11'' \infty$	$19' 1'' \infty$	$13' 6'' \infty$
15	$17' 4''$ $13' 2''$	$18' 7''$ $12' 7''$	$20' 7''$ $11' 10''$	$24' 5''$ $10' 10''$	$33' 1''$ $9' 8 \frac{13}{16}''$	$66' 5''$ $8' 6 \frac{1}{16}''$	$7' 2 \frac{11}{16}''$
7	$7' 5 \frac{7}{16}''$ $6' 7 \frac{1}{8}''$	$7' 7 \frac{15}{16}''$ $6' 5 \frac{5}{16}''$	$7' 11 \frac{3}{4}''$ $6' 2 \frac{13}{16}''$	$8' 5 \frac{5}{8}''$ $5' 11 \frac{5}{8}''$	$9' 3 \frac{3}{8}''$ $5' 7 \frac{1}{2}''$	$10' 8 \frac{13}{16}''$ $5' 2 \frac{1}{2}''$	$13' 10''$ $4' 8 \frac{9}{16}''$
4	$4' 1 \frac{5}{8}''$ $3' 10 \frac{7}{16}''$	$4' 2 \frac{5}{16}''$ $3' 9 \frac{13}{16}''$	$4' 3 \frac{3}{8}''$ $3' 9''$	$4' 4 \frac{15}{16}''$ $3' 7 \frac{7}{8}''$	$4' 7 \frac{3}{8}''$ $3' 6 \frac{3}{8}''$	$4' 11 \frac{3}{16}''$ $3' 4 \frac{7}{16}''$	$5' 5 \frac{5}{8}''$ $3' 2''$
3	$3' 7 \frac{7}{8}''$ $2' 11 \frac{1}{8}''$	$3' 1 \frac{1}{4}''$ $2' 10 \frac{13}{16}''$	$3' 1 \frac{3}{4}''$ $2' 10 \frac{5}{16}''$	$3' 2 \frac{9}{16}''$ $2' 9 \frac{11}{16}''$	$3' 3 \frac{13}{16}''$ $2' 8 \frac{13}{16}''$	$3' 5 \frac{5}{8}''$ $2' 7 \frac{11}{16}''$	$3' 8 \frac{9}{16}''$ $2' 6 \frac{1}{4}''$
2	$2' 5 \frac{5}{16}''$ $1' 11 \frac{5}{8}''$	$2' 1 \frac{1}{2}''$ $1' 11 \frac{1}{2}''$	$2' 1 \frac{11}{16}''$ $1' 11 \frac{5}{16}''$	$2' 1''$ $1' 11''$	$2' 1 \frac{7}{16}''$ $1' 10 \frac{5}{8}''$	$2' 2 \frac{1}{8}''$ $1' 10 \frac{3}{16}''$	$2' 3 \frac{3}{16}''$ $1' 9 \frac{1}{2}''$

16

50mm F1.2 ROKKOR (ROKKOR-X) LENSES In METERS

F.No. Dist. (m)	1.2	2	2.8	4	5.6	8	11	16
∞	∞ 65.7	∞ 40.7	∞ 28.8	∞ 20.4	∞ 14.4	∞ 10.2	∞ 7.23	∞ 5.12
10	11.8 8.69	13.2 8.05	15.2 7.45	19.5 6.74	32.1 5.94	394 5.08	∞ 4.23	∞ 3.42
5	5.40 4.65	5.68 4.47	6.02 4.28	6.58 4.03	7.57 3.74	9.63 3.38	15.7 2.99	145 2.56
3	3.14 2.87	3.23 2.80	3.33 2.73	3.49 2.63	3.75 2.50	4.19 2.34	5.01 2.15	6.96 1.92
2	2.06 1.94	2.10 1.91	2.14 1.88	2.20 1.83	2.30 1.77	2.45 1.69	2.71 1.59	3.18 1.46
1.5	1.53 1.47	1.55 1.45	1.58 1.43	1.61 1.41	1.66 1.37	1.73 1.32	1.86 1.26	2.06 1.18
1.2	1.22 1.18	1.23 1.17	1.25 1.16	1.27 1.14	1.30 1.12	1.34 1.09	1.41 1.05	1.52 0.992
1.0	1.01 0.987	1.02 0.979	1.03 0.971	1.04 0.959	1.06 0.943	1.09 0.921	1.14 0.892	1.21 0.855
0.9	0.911 0.890	0.917 0.883	0.925 0.877	0.936 0.867	0.951 0.854	0.974 0.837	1.01 0.813	1.06 0.782
0.8	0.808 0.792	0.813 0.787	0.819 0.782	0.827 0.775	0.839 0.764	0.857 0.751	0.883 0.732	0.923 0.707
0.7	0.706 0.694	0.710 0.690	0.714 0.686	0.720 0.681	0.729 0.673	0.742 0.663	0.761 0.649	0.789 0.630
0.6	0.604 0.596	0.607 0.593	0.610 0.590	0.614 0.586	0.620 0.581	0.629 0.574	0.642 0.563	0.662 0.550
0.5	0.503 0.497	0.505 0.496	0.507 0.494	0.509 0.491	0.513 0.488	0.519 0.483	0.527 0.476	0.539 0.466
0.45	0.452 0.448	0.453 0.447	0.455 0.445	0.457 0.443	0.460 0.440	0.465 0.436	0.471 0.431	0.480 0.424

50mm F1.2 ROKKOR (ROKKOR-X) LENSES In FEET

18

F.No. Dist. (ft)	1.2	2	2.8	4	5.6	8	11	16
∞	∞ 216'	∞ 134'	∞ 94' 6"	∞ 66' 10"	∞ 47' 4"	∞ 33' 6"	∞ 23' 9"	∞ 16' 10"
30	34' 9" 26' 5"	38' 7" 24' 7"	43' 9" 22' 10"	54' 20' 10"	80' 10" 18' 5"	273' 15' 11"	∞ 13' 4"	∞ 10' 10"
15	16' 1" 14' 1"	16' 10" 13' 6"	17' 9" 13' "	19' 2" 12' 4"	21' 9" 11' 6"	26' 9" 10' 5"	39' 7" 9' 3 7/16"	126' 8' 5/16"
10	10' 6" 9' 6 7/8"	10' 9" 9' 3 15/16"	11' 2" 9' 15/16"	11' 8" 8' 8 15/16"	12' 7" 8' 3 3/4"	14' 1" 7' 9 1/4"	16' 11" 7' 1 7/16"	23' 9" 6' 4 3/8"
7	7' 2 5/8" 6' 9 1/2"	7' 4 3/16" 6' 8"	7' 6 1/4" 6' 6 1/2"	7' 9 3/16" 6' 4 7/16"	8' 1 5/8" 6' 11 1/16"	8' 8 1/16" 5' 10 3/16"	9' 8 1/16" 5' 5 3/4"	11' 7 7/8" 5' 5/16"
5	5' 1 1/4" 4' 10 3/4"	5' 2 1/8" 4' 10"	5' 3 1/16" 4' 9 3/16"	5' 4 3/8" 4' 8 1/8"	5' 6 7/16" 4' 6 11/16"	5' 9 9/16" 4' 4 3/4"	6' 2 1/2" 4' 2 1/4"	6' 10 15/16" 3' 11 1/8"
4	4' 3/4" 3' 11 3/16"	4' 1 3/16" 3' 10 1/16"	4' 1 7/8" 3' 10 3/16"	4' 2 1/16" 3' 9 1/2"	4' 3 15/16" 3' 8 9/16"	4' 5 3/4" 3' 7 5/16"	4' 8 5/8" 3' 5 11/16"	5' 1 3/16" 3' 3 9/16"
3.5	3' 6 9/16" 3' 5 3/8"	3' 6 15/16" 3' 5"	3' 7 3/8" 3' 4 3/8"	3' 8" 3' 4 1/8"	3' 8 15/16" 3' 3 3/8"	3' 10 1/4" 3' 2 7/16"	4' 5/16" 3' 1 5/8"	4' 3 9/16" 2' 11 1/16"
3	3' 3/8" 2' 11 9/16"	3' 1 1/16" 2' 11 1/16"	3' 1" 2' 11"	3' 1 7/16" 2' 10 5/8"	3' 2 1/16" 2' 10 1/8"	3' 3" 2' 9 3/8"	3' 4 7/16" 2' 8 7/16"	3' 6 5/8" 2' 7 3/16"
2.5	2' 6 1/4" 2' 5 11/16"	2' 6 7/16" 2' 5 1/2"	2' 6 5/8" 2' 5 5/16"	2' 6 15/16" 2' 5 1/16"	2' 7 3/8" 2' 4 11/16"	2' 7 15/16" 2' 4 3/16"	2' 8 7/8" 2' 3 9/16"	2' 10 1/4" 2' 2 1/16"
2.25	2' 3 3/16" 2' 2 3/4"	2' 3 5/16" 2' 2 5/8"	2' 3 1/2" 2' 2 7/16"	2' 3 3/4" 2' 2 1/2"	2' 4 1/16" 2' 1 15/16"	2' 4 9/16" 2' 1 9/16"	2' 5 1/4" 2' 1 1/16"	2' 6 5/16" 2' 5/16"
2	2' 1 1/8" 1' 11 13/16"	2' 1 1/4" 1' 11 1/16"	2' 3/8" 1' 11 9/16"	2' 9/16" 1' 11 7/16"	2' 13/16" 1' 11 3/16"	2' 1 3/16" 1' 10 7/8"	2' 1 1/16" 1' 10 1/2"	2' 2 1/2" 1' 9 15/16"
1.75	1' 9 1/8" 1' 8 13/16"	1' 9 3/16" 1' 8 3/4"	1' 9 1/4" 1' 8 1/16"	1' 9 3/8" 1' 8 9/16"	1' 9 9/16" 1' 8 3/8"	1' 9 13/16" 1' 8 3/16"	1' 10 1/4" 1' 7 7/8"	1' 10 13/16" 1' 7 1/16"
1.5	1' 6 1/16" 1' 5 7/8"	1' 6 1/8" 1' 5 13/16"	1' 6 3/16" 1' 5 3/4"	1' 6 1/4" 1' 5 11/16"	1' 6 3/8" 1' 5 9/16"	1' 6 9/16" 1' 5 7/16"	1' 6 13/16" 1' 5 3/16"	1' 7 3/16" 1' 4 7/8"

50mm F1.4 AND F2 ROKKOR (ROKKOR-X) LENSES In METERS

F.No. Dist. (m)	1.4	2	2.8	4	5.6	8	11	16
∞	∞ 55.5	∞ 40.3	∞ 28.5	∞ 20.2	∞ 14.3	∞ 10.1	∞ 7.2	∞ 5.1
10	12.2 8.5	13.3 8.0	15.3 7.4	19.7 6.7	32.4 5.9	630.1 5.1	∞ 4.2	∞ 3.4
5	5.5 4.6	5.7 4.5	6.0 4.3	6.6 4.0	7.6 3.7	9.7 3.4	16.1 3.0	207.8 2.6
3	3.16 2.85	3.23 2.80	3.34 2.73	3.50 2.63	3.76 2.50	4.20 2.34	5.05 2.14	7.06 1.92
2	2.07 1.93	2.10 1.91	2.14 1.88	2.21 1.83	2.30 1.77	2.46 1.69	2.72 1.59	3.20 1.46
1.5	1.54 1.46	1.55 1.45	1.58 1.43	1.61 1.40	1.66 1.37	1.74 1.32	1.86 1.26	2.07 1.18
1.2	1.22 1.18	1.23 1.17	1.25 1.16	1.27 1.14	1.30 1.12	1.34 1.09	1.41 1.04	1.53 0.99
1.0	1.02 0.98	1.02 0.98	1.03 0.97	1.05 0.96	1.07 0.94	1.09 0.92	1.14 0.89	1.21 0.85
0.9	0.91 0.89	0.92 0.88	0.92 0.88	0.94 0.87	0.95 0.85	0.97 0.84	1.01 0.81	1.06 0.78
0.8	0.81 0.79	0.81 0.79	0.82 0.78	0.83 0.77	0.84 0.76	0.86 0.75	0.88 0.73	0.92 0.71
0.7	0.71 0.69	0.71 0.69	0.71 0.69	0.72 0.68	0.73 0.67	0.74 0.66	0.76 0.65	0.79 0.63
0.6	0.61 0.60	0.61 0.59	0.61 0.59	0.61 0.59	0.62 0.58	0.63 0.57	0.64 0.56	0.66 0.55
0.5	0.50 0.497	0.50 0.496	0.51 0.494	0.51 0.491	0.51 0.488	0.52 0.483	0.53 0.476	0.54 0.467
0.45	0.453 0.447	0.454 0.447	0.455 0.445	0.457 0.443	0.460 0.440	0.465 0.436	0.471 0.431	0.480 0.424

50mm F1.4 AND F2 ROKKOR (ROKKOR-X) LENSES In FEET

20

F.No. Dist. (ft)	1.4	2	2.8	4	5.6	8	11	16
∞	∞ 182' 1"	∞ 132' 1"	∞ 93' 5 ¹ / ₁₆ "	∞ 66' 1"	∞ 46' 9"	∞ 33' 1"	∞ 23' 6"	∞ 16' 8"
30	35' 10" 25' 10"	38' 8" 24' 6"	43' 11" 22' 9"	54' 5" 20' 9"	82' 4" 18' 5"	299' 6" 15' 10"	∞ 13' 3"	∞ 10' 10"
15	16' 4" 13' 11"	16' 10" 13' 6"	17' 9" 12' 12"	19' 3" 12' 4"	21' 10" 11' 5"	26' 11" 10' 5"	40' 4" 9' 3"	136' 6" 7' 12"
10	10' 6 ⁵ / ₈ " 9' 6"	10' 9 ³ / ₈ " 9' 3 ⁷ / ₈ "	11' 1 ¹¹ / ₁₆ " 9' ¹³ / ₁₆ "	11' 8 ³ / ₈ " 8' 8 ¹³ / ₁₆ "	12' 7" 8' 3 ⁵ / ₈ "	14' 1 ¹ / ₄ " 7' 9 ¹ / ₁₆ "	17' ³ / ₁₆ " 7' 1 ³ / ₁₆ "	24' ³ / ₄ " 6' 4 ¹ / ₈ "
7	7' 3 ¹ / ₈ " 6' 9 ¹ / ₁₆ "	7' 4 ³ / ₈ " 6' 8"	7' 6 ⁵ / ₁₆ " 6' 6 ³ / ₁₆ "	7' 9 ¹ / ₄ " 6' 4 ³ / ₈ "	8' 1 ³ / ₄ " 6' 1 ⁵ / ₈ "	8' 8 ¹⁵ / ₁₆ " 5' 10 ¹ / ₁₆ "	9' 9 ¹ / ₈ " 5' 5 ⁵ / ₈ "	11' 8 ¹ / ₄ " 5' ³ / ₁₆ "
5	5' 1 ¹ / ₂ " 4' 10 ¹ / ₂ "	5' 2 ¹ / ₈ " 4' 9 ¹⁵ / ₁₆ "	5' 3 ¹ / ₁₆ " 4' 9 ³ / ₁₆ "	5' 4 ⁷ / ₁₆ " 4' 8 ¹ / ₈ "	5' 6 ¹ / ₂ " 4' 6 ⁵ / ₈ "	5' 9 ⁵ / ₈ " 4' 4 ¹¹ / ₁₆ "	6' 2 ¹ / ₁₆ " 4' 2 ³ / ₁₆ "	6' 11 ³ / ₁₆ " 3' 11 ¹ / ₁₆ "
4	4' ¹⁵ / ₁₆ " 3' 11 ¹ / ₁₆ "	4' 1 ⁵ / ₁₆ " 3' 10 ¹¹ / ₁₆ "	4' 1 ⁷ / ₁₆ " 3' 10 ³ / ₁₆ "	4' 2 ¹¹ / ₁₆ " 3' 9 ¹ / ₂ "	4' 3 ¹⁵ / ₁₆ " 3' 8 ⁷ / ₁₆ "	4' 5 ³ / ₁₆ " 3' 7 ⁵ / ₁₆ "	4' 8 ¹ / ₁₆ " 3' 5 ⁵ / ₈ "	5' 1 ⁵ / ₁₆ " 3' 3 ¹ / ₂ "
3.5	3' 6 ¹¹ / ₁₆ " 3' 5 ¹ / ₄ "	3' 6 ¹⁵ / ₁₆ " 3' 5"	3' 7 ³ / ₈ " 3' 4 ⁵ / ₈ "	3' 8" 3' 4 ¹ / ₈ "	3' 8 ¹⁵ / ₁₆ " 3' 3 ³ / ₈ "	3' 10 ⁵ / ₁₆ " 3' 2 ⁷ / ₁₆ "	4' ³ / ₈ " 3' 1 ³ / ₈ "	4' 3 ⁵ / ₈ " 2' 11 ¹ / ₁₆ "
3	3' ¹ / ₂ " 2' 11 ¹ / ₂ "	3' ¹¹ / ₁₆ " 2' 11 ⁵ / ₁₆ "	3' 1" 2' 11"	3' 1 ⁷ / ₁₆ " 2' 10 ⁵ / ₈ "	3' 2 ¹ / ₁₆ " 2' 10 ¹ / ₈ "	3' 3" 2' 9 ³ / ₈ "	3' 4 ⁷ / ₁₆ " 2' 8 ⁷ / ₁₆ "	3' 6 ⁵ / ₈ " 2' 7 ³ / ₁₆ "
2.5	2' 6 ⁵ / ₁₆ " 2' 5 ⁵ / ₈ "	2' 6 ⁷ / ₁₆ " 2' 5 ¹ / ₂ "	2' 6 ⁵ / ₈ " 2' 5 ⁵ / ₁₆ "	2' 6 ¹⁵ / ₁₆ " 2' 5 ¹ / ₁₆ "	2' 7 ³ / ₈ " 2' 4 ¹¹ / ₁₆ "	2' 8" 2' 4 ³ / ₁₆ "	2' 8 ⁷ / ₈ " 2' 3 ⁹ / ₁₆ "	2' 10 ⁵ / ₁₆ " 2' 2 ¹ / ₁₆ "
2	2' ³ / ₁₆ " 1' 11 ³ / ₄ "	2' ¹ / ₄ " 1' 11 ¹¹ / ₁₆ "	2' ³ / ₈ " 1' 11 ⁹ / ₁₆ "	2' ⁹ / ₁₆ " 1' 11 ⁷ / ₁₆ "	2' ¹³ / ₁₆ " 1' 11 ³ / ₁₆ "	2' 1 ³ / ₁₆ " 1' 10 ⁷ / ₈ "	2' 1 ¹ / ₁₆ " 1' 10 ¹ / ₂ "	2' 2 ¹ / ₂ " 1' 9 ¹⁵ / ₁₆ "
1.75	1' 9 ¹ / ₈ " 1' 8 ¹³ / ₁₆ "	1' 9 ³ / ₁₆ " 1' 8 ³ / ₄ "	1' 9 ¹ / ₄ " 1' 8 ¹¹ / ₁₆ "	1' 9 ³ / ₈ " 1' 8 ⁹ / ₁₆ "	1' 9 ⁹ / ₁₆ " 1' 8 ³ / ₈ "	1' 9 ¹³ / ₁₆ " 1' 8 ³ / ₁₆ "	1' 10 ¹ / ₄ " 1' 7 ⁷ / ₈ "	1' 10 ¹³ / ₁₆ " 1' 7 ¹ / ₁₆ "
1.48	1' 5 ¹³ / ₁₆ " 1' 5 ⁹ / ₁₆ "	1' 5 ¹³ / ₁₆ " 1' 5 ⁹ / ₁₆ "	1' 5 ⁷ / ₈ " 1' 5 ¹ / ₂ "	1' 5 ¹⁵ / ₁₆ " 1' 5 ¹ / ₁₆ "	1' 6 ¹ / ₁₆ " 1' 5 ¹ / ₁₆ "	1' 6 ¹ / ₄ " 1' 5 ¹ / ₈ "	1' 6 ¹ / ₂ " 1' 4 ¹⁵ / ₁₆ "	1' 6 ³ / ₈ " 1' 4 ⁵ / ₈ "

50mm F1.7 ROKKOR (ROKKOR-X) LENS In METERS

F.No. Dist. (m)	1.7	2.8	4	5.6	8	11	16
∞	∞ 46.2	∞ 28.5	∞ 20.1	∞ 14.3	∞ 10.1	∞ 7.2	∞ 5.1
10	12.7 8.2	15.3 7.4	19.7 6.7	32.9 5.9	684.6 5.1	∞ 4.2	∞ 3.4
5	5.6 4.5	6.0 4.3	6.6 4.0	7.6 3.7	9.7 3.4	16.0 3.0	204.8 2.6
3	3.20 2.83	3.34 2.73	3.50 2.63	3.76 2.50	4.20 2.34	5.04 2.14	7.04 1.92
2	2.08 1.92	2.14 1.88	2.20 1.83	2.30 1.77	2.46 1.69	2.71 1.59	3.19 1.46
1.5	1.55 1.46	1.58 1.43	1.61 1.41	1.66 1.37	1.74 1.32	1.86 1.26	2.06 1.18
1.2	1.23 1.17	1.25 1.16	1.27 1.14	1.30 1.12	1.34 1.09	1.41 1.05	1.52 0.99
1	1.02 0.98	1.03 0.97	1.04 0.96	1.06 0.94	1.09 0.92	1.14 0.89	1.21 0.86
0.9	0.92 0.89	0.92 0.88	0.94 0.87	0.95 0.85	0.97 0.84	1.01 0.81	1.06 0.78
0.8	0.81 0.79	0.82 0.78	0.83 0.77	0.84 0.76	0.86 0.75	0.88 0.73	0.92 0.71
0.7	0.71 0.69	0.71 0.69	0.72 0.68	0.73 0.67	0.74 0.66	0.76 0.65	0.79 0.63
0.6	0.61 0.59	0.61 0.59	0.61 0.59	0.62 0.58	0.63 0.57	0.64 0.56	0.66 0.55
0.5	0.50 0.496	0.51 0.494	0.51 0.491	0.51 0.488	0.52 0.482	0.53 0.476	0.54 0.467
0.45	0.453 0.447	0.455 0.445	0.457 0.443	0.460 0.441	0.464 0.437	0.470 0.432	0.479 0.424

50mm F1.7 ROKKOR (ROKKOR-X) LENS In FEET

F.No. Dist. ft.	1.7	2.8	4	5.6	8	11	16
∞	∞ 151' 9"	∞ 93' 5"	∞ 66' 1"	∞ 46' 9"	∞ 33' 1"	∞ 23' 6"	∞ 16' 8"
30	37' 3" 25' 1"	43' 11" 22' 10"	54' 5" 20' 9"	82' 4" 18' 5"	299' 6" 15' 10"	∞ 13' 3"	∞ 10' 10"
15	16' 7" 13' 8"	17' 9" 12' 12"	19' 3" 12' 4"	21' 10" 11' 5"	26' 11" 10' 5"	40' 3" 9' 3"	135' 11" 8'
10	10' 8 ¹¹ / ₁₆ " 9' 4 ⁷ / ₈ "	11' 1 ¹¹ / ₁₆ " 9' 7 ⁷ / ₈ "	11' 8 ⁵ / ₁₆ " 8' 8 ¹³ / ₁₆ "	12' 6 ¹⁵ / ₁₆ " 8' 3 ⁵ / ₈ "	14' 1 ¹ / ₈ " 7' 9 ¹ / ₈ "	16' 11 ⁷ / ₈ " 7' 1 ⁵ / ₁₆ "	24' 1 ¹ / ₈ " 6' 4 ¹ / ₄ "
7	7' 3 ³ / ₄ " 6' 8 ¹ / ₂ "	7' 6 ³ / ₁₆ " 6' 6 ¹ / ₂ "	7' 9 ¹ / ₄ " 6' 4 ⁷ / ₁₆ "	8' 1 ¹¹ / ₁₆ " 6' 1 ¹¹ / ₁₆ "	8' 8 ⁷ / ₈ " 5' 10 ¹ / ₈ "	9' 8 ¹⁵ / ₁₆ " 5' 5 ¹¹ / ₁₆ "	11' 7 ¹⁵ / ₁₆ " 5' 1 ¹ / ₄ "
5	5' 1 ¹³ / ₁₆ " 4' 10 ¹ / ₄ "	5' 3 ¹ / ₁₆ " 4' 9 ³ / ₁₆ "	5' 4 ⁷ / ₁₆ " 4' 8 ¹ / ₈ "	5' 6 ⁷ / ₁₆ " 4' 6 ¹¹ / ₁₆ "	5' 9 ⁹ / ₁₆ " 4' 4 ³ / ₄ "	6' 2 ⁹ / ₁₆ " 4' 2 ¹ / ₄ "	6' 11" 3' 11 ¹ / ₈ "
4	4' 1 ¹ / ₈ " 3' 10 ⁷ / ₈ "	4' 1 ⁷ / ₈ " 3' 10 ¹ / ₄ "	4' 2 ¹¹ / ₁₆ " 3' 9 ⁹ / ₁₆ "	4' 3 ¹⁵ / ₁₆ " 3' 8 ⁵ / ₈ "	4' 5 ³ / ₄ " 3' 7 ⁵ / ₁₆ "	4' 8 ⁵ / ₈ " 3' 5 ¹ / ₁₆ "	5' 1 ³ / ₁₆ " 3' 3 ⁹ / ₁₆ "
3.5	3' 6 ¹³ / ₁₆ " 3' 5 ¹ / ₈ "	3' 7 ³ / ₈ " 3' 4 ⁵ / ₈ "	3' 8" 3' 4 ¹ / ₈ "	3' 8 ⁷ / ₈ " 3' 3 ⁷ / ₁₆ "	3' 10 ¹ / ₄ " 3' 2 ⁷ / ₁₆ "	4' 5 ⁵ / ₁₆ " 3' 1 ³ / ₁₆ "	4' 3 ⁹ / ₁₆ " 2' 11 ¹ / ₂ "
3	3' 9 ⁹ / ₁₆ " 2' 11 ³ / ₈ "	3' 1" 2' 11"	3' 1 ⁷ / ₁₆ " 2' 10 ⁵ / ₈ "	3' 2 ¹ / ₁₆ " 2' 10 ¹ / ₈ "	3' 3" 2' 9 ⁷ / ₁₆ "	3' 4 ³ / ₈ " 2' 8 ⁷ / ₁₆ "	3' 6 ⁹ / ₁₆ " 2' 7 ³ / ₁₆ "
2.5	2' 6 ³ / ₈ " 2' 5 ⁹ / ₁₆ "	2' 6 ⁵ / ₈ " 2' 5 ⁵ / ₁₆ "	2' 6 ¹⁵ / ₁₆ " 2' 5 ¹ / ₁₆ "	2' 7 ¹⁵ / ₁₆ " 2' 4 ³ / ₄ "	2' 7 ¹⁵ / ₁₆ " 2' 4 ¹ / ₄ "	2' 8 ⁷ / ₈ " 2' 3 ⁹ / ₁₆ "	2' 10 ¹ / ₄ " 2' 2 ¹ / ₁₆ "
2	2' 3 ³ / ₁₆ " 1' 11 ³ / ₄ "	2' 3 ⁸ / ₁₆ " 1' 11 ⁹ / ₁₆ "	2' 9 ⁹ / ₁₆ " 1' 11 ⁷ / ₁₆ "	2' 1 ¹³ / ₁₆ " 1' 11 ³ / ₁₆ "	2' 1 ¹ / ₈ " 1' 10 ¹⁵ / ₁₆ "	2' 1 ¹ / ₁₆ " 1' 10 ¹ / ₂ "	2' 2 ¹ / ₁₆ " 1' 9 ¹⁵ / ₁₆ "
1.75	1' 9 ⁹ / ₈ " 1' 8 ¹³ / ₁₆ "	1' 9 ¹ / ₄ " 1' 8 ¹¹ / ₁₆ "	1' 9 ³ / ₈ " 1' 8 ⁹ / ₁₆ "	1' 9 ⁹ / ₁₆ " 1' 8 ⁷ / ₁₆ "	1' 9 ¹³ / ₁₆ " 1' 8 ³ / ₁₆ "	1' 10 ³ / ₁₆ " 1' 7 ⁷ / ₈ "	1' 10 ³ / ₄ " 1' 7 ¹ / ₁₆ "
1.48	1' 5 ¹³ / ₁₆ " 1' 5 ⁹ / ₁₆ "	1' 5 ⁷ / ₈ " 1' 5 ¹ / ₂ "	1' 5 ¹⁵ / ₁₆ " 1' 5 ¹ / ₁₆ "	1' 6 ¹ / ₁₆ " 1' 5 ¹⁵ / ₁₆ "	1' 6 ¹ / ₄ " 1' 5 ³ / ₁₆ "	1' 6 ¹ / ₂ " 1' 4 ¹⁵ / ₁₆ "	1' 6 ¹³ / ₁₆ " 1' 4 ¹ / ₁₆ "

85mm F1.7 TELE ROKKOR (ROKKOR-X) LENS In METERS

F No. Dist. (m)	1.7	2.8	4	5.6	8	11	16	22
∞	∞ 125	∞ 75.0	∞ 53.0	∞ 37.5	∞ 26.6	∞ 18.8	∞ 13.3	∞ 9.43
20	23.8 17.3	27.2 15.8	31.9 14.6	42.5 13.1	79.6 11.5	∞ 9.74	∞ 8.04	∞ 6.46
10	10.9 9.27	11.5 8.85	12.3 8.44	13.5 7.93	15.9 7.31	21.0 6.58	38.8 5.76	∞ 4.91
5	5.20 4.82	5.34 4.70	5.50 4.59	5.73 4.43	6.10 4.24	6.72 3.99	7.85 3.68	10.3 3.32
3	3.07 2.93	3.12 2.89	3.17 2.85	3.24 2.79	3.35 2.72	3.53 2.61	3.80 2.48	4.28 2.32
2.5	2.55 2.46	2.58 2.43	2.61 2.40	2.66 2.36	2.74 2.30	2.85 2.23	3.02 2.13	3.31 2.01
2	2.03 1.97	2.05 1.95	2.07 1.94	2.10 1.91	2.14 1.87	2.21 1.83	2.31 1.76	2.47 1.68
1.7	1.72 1.68	1.73 1.67	1.75 1.65	1.77 1.64	1.80 1.61	1.85 1.58	1.91 1.53	2.02 1.47
1.5	1.52 1.48	1.53 1.47	1.54 1.46	1.55 1.45	1.58 1.43	1.61 1.40	1.66 1.37	1.74 1.32
1.3	1.31 1.29	1.32 1.28	1.33 1.27	1.34 1.26	1.36 1.25	1.38 1.23	1.42 1.20	1.47 1.17
1.2	1.21 1.19	1.22 1.18	1.22 1.18	1.23 1.17	1.25 1.16	1.27 1.14	1.30 1.12	1.34 1.09
1.1	1.11 1.09	1.11 1.09	1.12 1.08	1.13 1.07	1.14 1.06	1.15 1.05	1.18 1.03	1.21 1.01
1	1.01 0.99	1.01 0.99	1.01 0.99	1.02 0.98	1.03 0.97	1.04 0.96	1.06 0.95	1.09 0.92

85mm F1.7 TELE ROKKOR (ROKKOR-X) LENS In FEET

F No.	1.7	2.8	4	5.6	8	11	16	22
∞	∞	∞	∞	∞	∞	∞	∞	∞
30	409' 32' 4" 28'	246' 34' 1" 26' 10"	174' 36' 1" 25' 8"	123' 39' 5" 24' 3"	87' 1" 45' 4" 22' 5"	61' 8" 57' 6" 20' 4"	43' 8" 93' 18'	30' 11" 750' 15' 5"
20	21' 19' 1"	21' 8" 18' 7"	22' 6" 18'	23' 9" 17' 4"	25' 9" 16' 5"	29' 2" 15' 3"	36' 1" 13' 10"	54' 4" 12' 4"
15	15' 7" 14' 6"	15' 11" 14' 2"	16' 4" 13' 10"	17' 13' 5"	18' 12' 11"	19' 7" 12' 2"	22' 5" 11' 4"	28' 2" 10' 3"
12	12' 4" 11' 8"	12' 7" 11' 6"	12' 10" 11' 3"	13' 3" 11'	13' 10" 10' 7"	14' 9" 10' 2"	16' 3" 9' 6 ⁷ / ₁₆ "	19' 8' 9 ¹ / ₂ "
10	10' 3" 9' 9 ⁵ / ₁₆ "	10' 5" 9' 7 ⁵ / ₈ "	10' 7" 9' 5 ⁷ / ₈ "	10' 10" 9' 3 ⁹ / ₁₆ "	11' 2" 9' 7 ⁷ / ₁₆ "	11' 9" 8' 8 ¹ / ₄ "	12' 9" 8' 2 ¹⁵ / ₁₆ "	14' 4" 7' 8 ⁵ / ₁₆ "
8	8' 1 ¹¹ / ₁₆ " 7' 10 ⁵ / ₁₆ "	8' 2 ⁷ / ₈ " 7' 9 ⁷ / ₁₆ "	8' 4 ³ / ₁₆ " 7' 8 ¹ / ₈ "	8' 6" 7' 6 ⁵ / ₈ "	8' 8 ¹ / ₂ " 7' 4 ⁹ / ₁₆ "	9' 1 ¹⁵ / ₁₆ " 7' 1 ¹³ / ₁₆ "	9' 7 ³ / ₈ " 6' 10 ¹ / ₄ "	10' 6" 6' 5 ¹¹ / ₁₆ "
7	7' 1 ¹ / ₄ " 6' 10 ¹ / ₁₆ "	7' 2 ³ / ₈ " 6' 9 ⁷ / ₈ "	7' 3 ¹ / ₈ " 6' 9 ¹ / ₁₆ "	7' 4 ¹ / ₂ " 6' 7 ⁷ / ₈ "	7' 6 ¹ / ₂ " 6' 6 ⁵ / ₁₆ "	7' 9 ⁹ / ₁₆ " 6' 4 ³ / ₁₆ "	8' 2 ¹ / ₄ " 6' 1 ⁷ / ₁₆ "	8' 9 ³ / ₄ " 5' 9 ¹³ / ₁₆ "
6	6' 1 ¹⁵ / ₁₆ " 5' 11 ¹ / ₁₆ "	6' 1 ⁹ / ₁₆ " 5' 10 ⁷ / ₁₆ "	6' 2 ¹ / ₄ " 5' 9 ⁷ / ₈ "	6' 3 ¹ / ₁₆ " 5' 9"	6' 4 ⁵ / ₈ " 5' 7 ⁷ / ₈ "	6' 6 ³ / ₄ " 5' 6 ⁵ / ₁₆ "	6' 10" 5' 4 ³ / ₁₆ "	7' 3" 5' 1 ¹ / ₂ "
5	5' 5 ⁵ / ₈ " 4' 11 ³ / ₈ "	5' 1" 4' 10 ¹⁵ / ₁₆ "	5' 1 ¹ / ₂ " 4' 10 ¹ / ₂ "	5' 2 ¹ / ₈ " 4' 9 ¹⁵ / ₁₆ "	5' 3 ¹ / ₁₆ " 4' 9 ³ / ₁₆ "	5' 4 ¹ / ₂ " 4' 8 ¹ / ₁₆ "	5' 6 ⁹ / ₁₆ " 4' 6 ⁵ / ₈ "	5' 9 ³ / ₄ " 4' 4 ¹¹ / ₁₆ "
4.5	4' 6 ¹ / ₂ " 4' 5 ¹ / ₂ "	4' 6 ¹³ / ₁₆ " 4' 5 ¹ / ₈ "	4' 7 ³ / ₁₆ " 4' 4 ¹³ / ₁₆ "	4' 7 ¹¹ / ₁₆ " 4' 4 ³ / ₈ "	4' 8 ⁷ / ₁₆ " 4' 3 ³ / ₄ "	4' 9 ¹ / ₂ " 4' 2 ⁷ / ₈ "	4' 11 ¹ / ₈ " 4' 1 ¹¹ / ₁₆ "	5' 1 ⁹ / ₁₆ " 4' 1 ¹ / ₈ "
4	4' 3 ⁸ / ₁₆ " 3' 11 ⁹ / ₁₆ "	4' 5 ⁸ / ₁₆ " 3' 11 ⁵ / ₁₆ "	4' 7 ⁸ / ₁₆ " 3' 11 ¹ / ₁₆ "	4' 1 ⁵ / ₁₆ " 3' 10 ³ / ₄ "	4' 1 ⁷ / ₈ " 3' 10 ¹ / ₄ "	4' 2 ¹¹ / ₁₆ " 3' 9 ³ / ₁₆ "	4' 3 ⁷ / ₈ " 3' 8 ⁵ / ₈ "	4' 5 ³ / ₄ " 3' 7 ³ / ₈ "
3.5	3' 6 ¹ / ₄ " 3' 5 ¹¹ / ₁₆ "	3' 6 ⁷ / ₁₆ " 3' 5 ¹ / ₂ "	3' 6 ⁵ / ₈ " 3' 5 ⁷ / ₁₆ "	3' 6 ¹⁵ / ₁₆ " 3' 5 ¹ / ₁₆ "	3' 7 ³ / ₈ " 3' 4 ¹¹ / ₁₆ "	3' 7 ¹⁵ / ₁₆ " 3' 4 ³ / ₁₆ "	3' 8 ³ / ₁₆ " 3' 3 ¹¹ / ₁₆ "	3' 10 ³ / ₁₆ " 3' 2 ¹ / ₂ "

100mm F2.5 TELE ROKKOR (ROKKOR-X) LENS

In METERS

F No. Dist. (m)	2.5	2.8	4	5.6	8	11	16	22
∞	∞ 114	∞ 103	∞ 73	∞ 52	∞ 36	∞ 26	∞ 18	∞ 13
20	24 17	25 17	27 16	32 14	44 13	87 11	∞ 9.6	∞ 7.9
10	10.9 9.2	11.0 9.1	11.5 8.8	12.3 8.4	13.7 7.9	16.1 7.3	21.6 6.5	41.9 5.7
7	7.4 6.6	7.5 6.6	7.7 6.4	8.1 6.2	8.6 5.9	9.5 5.6	11.1 5.1	14.8 4.6
5	5.2 4.80	5.2 4.78	5.3 4.70	5.5 4.58	5.7 4.43	6.1 4.23	6.8 3.97	7.9 3.66
4	4.13 3.87	4.15 3.86	4.22 3.81	4.31 3.73	4.46 3.63	4.68 3.50	5.04 3.32	5.64 3.11
3	3.07 2.93	3.08 2.92	3.12 2.89	3.17 2.85	3.24 2.79	3.36 2.71	3.53 2.61	3.81 2.48
2.5	2.55 2.45	2.56 2.45	2.58 2.43	2.61 2.40	2.66 2.36	2.74 2.30	2.85 2.23	3.03 2.13
2	2.03 1.97	2.03 1.97	2.05 1.95	2.07 1.94	2.10 1.91	2.14 1.87	2.21 1.83	2.31 1.77
1.7	1.72 1.68	1.72 1.68	1.73 1.67	1.75 1.65	1.77 1.64	1.80 1.61	1.84 1.58	1.91 1.53
1.5	1.52 1.48	1.52 1.48	1.53 1.48	1.54 1.47	1.55 1.45	1.57 1.43	1.61 1.41	1.66 1.37
1.3	1.31 1.29	1.31 1.29	1.32 1.28	1.33 1.27	1.34 1.26	1.35 1.25	1.38 1.23	1.41 1.21
1.2	1.21 1.19	1.21 1.19	1.22 1.19	1.22 1.18	1.23 1.17	1.24 1.16	1.26 1.14	1.29 1.12
1.1	1.11 1.09	1.11 1.09	1.11 1.09	1.12 1.08	1.13 1.08	1.14 1.07	1.15 1.05	1.18 1.03
1	1.01 0.99	1.01 0.99	1.01 0.99	1.01 0.99	1.02 0.98	1.03 0.97	1.04 0.96	1.06 0.95

100mm F2.5 TELE ROKKOR (ROKKOR-X) LENS In FEET

26

F No. Dist. (ft.)	2.5	2.8	4	5.6	8	11	16	22
∞	∞ 375'	∞ 338'	∞ 239'	∞ 169'	∞ 120'	∞ 84' 8"	∞ 60'	∞ 42' 6"
50	57' 7" 44' 2"	58' 6" 43' 8"	63' 41' 6"	70' 7" 38' 9"	85' 1" 35' 5"	120' 31' 8"	289' 27' 6"	∞ 23' 2"
30	32' 6" 27' 10"	32' 10" 27' 7"	34' 2" 26' 9"	36' 3" 25' 7"	39' 8" 24' 2"	45' 10" 22' 4"	58' 10" 20' 2"	98' 1" 17' 10"
20	21' 1" 19'	21' 2" 18' 11"	21' 9" 18' 6"	22' 7" 18'	23' 10" 17' 3"	25' 10" 16' 4"	29' 6" 15' 2"	36' 9" 13' 10"
15	15' 7" 14' 5"	15' 8" 14' 5"	15' 11" 14' 2"	16' 4" 13' 10"	17' 13' 5"	18' 12' 10"	19' 8" 12' 2"	22' 7" 11' 3"
12	12' 4" 11' 8"	12' 5" 11' 7"	12' 7" 11' 6"	12' 10" 11' 3"	13' 3" 11'	13' 10" 10' 7"	14' 9" 10' 2"	16' 4" 9' 6"
10	10' 3" 9' 9 ¹ / ₈ "	10' 3" 9' 8 ¹³ / ₁₆ "	10' 5" 9' 7 ⁹ / ₁₆ "	10' 7" 9' 5 ⁷ / ₈ "	10' 10" 9' 3 ¹ / ₂ "	11' 3" 9' 5 ⁵ / ₁₆ "	11' 10" 8' 8 ³ / ₁₆ "	12' 9" 8' 2 ¹³ / ₁₆ "
8	8' 1 ¹³ / ₁₆ " 7' 10 ³ / ₁₆ "	8' 2" 7' 10"	8' 2 ¹⁵ / ₁₆ " 7' 9 ³ / ₁₆ "	8' 4 ³ / ₁₆ " 7' 8 ¹ / ₈ "	8' 6 ¹ / ₁₆ " 7' 6 ⁵ / ₈ "	8' 8 ¹³ / ₁₆ " 7' 4 ⁹ / ₁₆ "	9' 1" 7' 1 ¹ / ₁₆ "	9' 7 ¹ / ₂ " 6' 10 ¹ / ₄ "
7	7' 1 ³ / ₈ " 6' 10 ⁵ / ₈ "	7' 1 ¹ / ₂ " 6' 10 ¹ / ₂ "	7' 2 ³ / ₁₆ " 6' 9 ⁷ / ₈ "	7' 3 ¹ / ₈ " 6' 9 ¹ / ₁₆ "	7' 4 ¹ / ₂ " 6' 7 ⁷ / ₈ "	7' 6 ¹ / ₂ " 6' 6 ⁵ / ₁₆ "	7' 9 ⁹ / ₁₆ " 6' 4 ¹ / ₄ "	8' 2 ¹ / ₄ " 6' 1 ¹ / ₁₆ "
6	6' 1 ¹⁵ / ₁₆ " 5' 11"	6' 1 ¹ / ₁₆ " 5' 10 ⁷ / ₈ "	6' 1 ⁹ / ₁₆ " 5' 10 ¹ / ₂ "	6' 2 ³ / ₁₆ " 5' 9 ⁷ / ₈ "	6' 3 ³ / ₁₆ " 5' 9 ¹ / ₁₆ "	6' 4 ⁵ / ₈ " 5' 7 ⁷ / ₈ "	6' 6 ¹¹ / ₁₆ " 5' 6 ⁵ / ₁₆ "	6' 9 ¹⁵ / ₁₆ " 5' 4 ¹ / ₄ "
5	5' 5 ⁸ / ₈ " 4' 11 ⁵ / ₁₆ "	5' 1 ¹ / ₁₆ " 4' 11 ¹ / ₄ "	5' 1" 4' 10 ¹⁵ / ₁₆ "	5' 1 ⁷ / ₁₆ " 4' 10 ⁹ / ₁₆ "	5' 2 ¹ / ₈ " 4' 10"	5' 3" 4' 9 ³ / ₁₆ "	5' 4 ³ / ₈ " 4' 8 ¹ / ₈ "	5' 6 ⁷ / ₁₆ " 4' 6 ¹¹ / ₁₆ "
4.5	4' 6 ¹ / ₂ " 4' 5 ⁷ / ₁₆ "	4' 6 ⁹ / ₁₆ " 4' 5 ³ / ₈ "	4' 6 ¹³ / ₁₆ " 4' 5 ³ / ₁₆ "	4' 7 ¹ / ₈ " 4' 4 ⁷ / ₈ "	4' 7 ⁵ / ₈ " 4' 4 ³ / ₈ "	4' 8 ³ / ₈ " 4' 3 ³ / ₄ "	4' 9 ⁷ / ₁₆ " 4' 2 ¹⁵ / ₁₆ "	4' 11" 4' 1 ³ / ₄ "
4	4' 3 ³ / ₈ " 3' 11 ⁹ / ₁₆ "	4' 7 ⁷ / ₁₆ " 3' 11 ⁹ / ₁₆ "	4' 5 ⁵ / ₈ " 3' 11 ³ / ₈ "	4' 7 ⁷ / ₈ " 3' 11 ¹ / ₈ "	4' 1 ¹ / ₄ " 3' 10 ³ / ₄ "	4' 1 ¹³ / ₁₆ " 3' 10 ⁵ / ₁₆ "	4' 2 ⁵ / ₈ " 3' 9 ⁵ / ₈ "	4' 3 ³ / ₄ " 3' 8 ³ / ₄ "
3.5	3' 6 ¹ / ₄ " 3' 5 ¹ / ₁₆ "	3' 6 ⁵ / ₁₆ " 3' 5 ⁵ / ₈ "	3' 6 ⁷ / ₁₆ " 3' 5 ¹ / ₂ "	3' 6 ⁵ / ₈ " 3' 5 ⁵ / ₁₆ "	3' 6 ⁷ / ₈ " 3' 5 ¹ / ₁₆ "	3' 7 ⁵ / ₁₆ " 3' 4 ³ / ₄ "	3' 7 ⁷ / ₈ " 3' 4 ¹ / ₄ "	3' 8 ³ / ₄ " 3' 3 ⁹ / ₁₆ "

135mm F2.8 AND F3.5 TELE ROKKOR (ROKKOR-X) LENSES In METERS

F No. Dist. (m)	2.8	3.5	4	5.6	8	11	16	22
∞	∞ 196	∞ 158	∞ 137	∞ 97	∞ 69	∞ 49	∞ 34	∞ 24
20	22.2 18.2	22.8 17.8	23.4 17.5	25.1 16.6	28.1 15.5	33.7 14.2	47.1 12.7	∞ 11.1
10	10.5 9.5	10.6 9.4	10.8 9.3	11.1 9.1	11.6 8.8	12.5 8.3	13.9 7.8	16.7 7.2
7	7.3 6.8	7.3 6.7	7.4 6.7	7.5 6.6	7.8 6.4	8.1 6.2	8.7 5.9	9.7 5.5
5	5.1 4.9	5.1 4.9	5.2 4.8	5.3 4.8	5.4 4.7	5.5 4.6	5.8 4.4	6.2 4.2
4	4.08 3.93	4.09 3.91	4.11 3.90	4.16 3.86	4.22 3.80	4.32 3.72	4.48 3.62	4.71 3.48
3	3.04 2.96	3.05 2.95	3.06 2.94	3.08 2.92	3.12 2.89	3.17 2.85	3.26 2.79	3.37 2.71
2.5	2.53 2.47	2.53 2.47	2.54 2.46	2.56 2.45	2.58 2.43	2.61 2.40	2.67 2.35	2.74 2.30
2	2.02 1.98	2.02 1.98	2.02 1.98	2.03 1.97	2.05 1.95	2.07 1.94	2.10 1.91	2.14 1.88
1.7	1.71 1.69	1.71 1.69	1.72 1.68	1.72 1.68	1.73 1.67	1.75 1.66	1.77 1.64	1.80 1.61
1.5	1.51 1.49	1.51 1.49	1.51 1.49	1.52 1.48	1.52 1.48	1.54 1.47	1.55 1.45	1.57 1.43

135mm F2.8 AND F3.5 TELE ROKKOR (ROKKOR-X) LENSES In FEET

28

F No Dist. (ft)	2.8	3.5	4	5.6	8	11	16	22
∞	∞ 643'	∞ 518'	∞ 449'	∞ 318'	∞ 225'	∞ 159'	∞ 113'	∞ 80'
50	54' 1" 46' 6"	55' 2" 45' 9"	56' 1" 45' 1"	59' 1" 43' 4"	63' 11" 41' 1"	72' 3" 38' 3"	88' 8" 34' 11"	131' 31'
30	31' 5" 28' 9"	31' 9" 28' 5"	32' 1" 28' 2"	33' 27' 6"	34' 5" 26' 7"	36' 8" 25' 5"	40' 5" 23' 11"	47' 2" 22' 1"
20	20' 7" 19' 5"	20' 9" 19' 4"	20' 11" 19' 2"	21' 3" 18' 11"	21' 10" 18' 6"	22' 8" 17' 11"	24' 17' 2"	26' 3" 16' 2"
15	15' 4" 14' 8"	15' 5" 14' 7"	15' 6" 14' 7"	15' 8" 14' 5"	16' 14' 2"	16' 5" 13' 10"	17' 1" 13' 4"	18' 2" 12' 10"
12	12' 2" 11' 10"	12' 3" 11' 9"	12' 4" 11' 9"	12' 5" 11' 7"	12' 7" 11' 5"	12' 11" 11' 3"	13' 3" 10' 11"	13' 11" 10' 7"
10	10' 2" 9' 10"	10' 2" 9' 10"	10' 2" 9' 9"	10' 3" 9' 8"	10' 5" 9' 7"	10' 7" 9' 5"	10' 10" 9' 3"	11' 3" 9' 1/4"
8	8' 1" 7' 11"	8' 1 1/4" 7' 10 3/4"	8' 1 3/8" 7' 10 5/8"	8' 2" 7' 10"	8' 3" 7' 9 1/4"	8' 4 1/4" 7' 8 1/8"	8' 6 1/8" 7' 6 5/8"	8' 9" 7' 4 1/2"
7	7' 3/4" 6' 11 1/4"	7' 1" 6' 11"	7' 1" 6' 11"	7' 1 5/8" 6' 10 1/2"	7' 2 1/8" 6' 9 7/8"	7' 3 1/8" 6' 9 1/8"	7' 4 1/2" 6' 8"	7' 6 5/8" 6' 6 3/8"
6	6' 1/2" 5' 11 1/2"	6' 3/4" 5' 11 1/4"	6' 3/4" 5' 11 1/4"	6' 1 1/4" 5' 11"	6' 1 1/2" 5' 10 1/2"	6' 2 1/4" 5' 10"	6' 3 1/4" 5' 9 1/8"	6' 4 5/8" 5' 8"
5	5' 3/8" 4' 11 5/8"	5' 1/2" 4' 11 1/2"	5' 1/2" 4' 11 1/2"	5' 5/8" 4' 11 3/8"	5' 1" 4' 11"	5' 1 3/8" 4' 10 5/8"	5' 2 1/8" 4' 10 1/8"	5' 3" 4' 9 3/8"

200mm F3.5, F4 AND F4.5 TELE ROKKOR (ROKKOR-X) LENSES In METERS

F.No. Dist. (m)	3.5	4	4.5	5.6	8	11	16	22	32
∞	∞ 342	∞ 299	∞ 268	∞ 212	∞ 150	∞ 106	∞ 75	∞ 53	∞ 38
30	33 28	33 27	34 27	35 26	37 25	42 24	50 22	68 19	136 17
15	15.7 14.4	15.8 14.3	15.8 14.2	16.1 14.0	16.6 13.7	17.4 13.2	18.6 12.6	20.6 11.8	24.2 10.9
10	10.3 9.7	10.3 9.7	10.4 9.7	10.5 9.6	10.7 9.4	11.0 9.2	11.4 8.9	12.2 8.5	13.3 8.0
7	7.1 6.9	7.2 6.9	7.2 6.8	7.2 6.8	7.3 6.7	7.5 6.6	7.7 6.5	8.0 6.3	8.4 6.0
5	5.1 4.9	5.1 4.9	5.1 4.9	5.1 4.9	5.2 4.8	5.2 4.8	5.3 4.7	5.5 4.6	5.6 4.5
4	4.0 3.96	4.1 3.96	4.1 3.95	4.1 3.94	4.1 3.91	4.1 3.88	4.2 3.83	4.2 3.76	4.4 3.68
3	3.02 2.98	3.02 2.98	3.03 2.97	3.03 2.97	3.05 2.95	3.07 2.93	3.10 2.91	3.14 2.87	3.20 2.83
2.5	2.51 2.49	2.52 2.48	2.52 2.48	2.52 2.48	2.53 2.47	2.54 2.46	2.56 2.44	2.59 2.42	2.63 2.39

200mm F3.5, F4 AND F4.5 TELE ROKKOR (ROKKOR-X) LENSES In FEET

F.No. Dist. (ft)	3.5	4	4.5	5.6	8	11	16	22	32
∞	∞ 1122'	∞ 982'	∞ 884'	∞ 695'	∞ 491'	∞ 348'	∞ 246'	∞ 174'	∞ 125'
100	110' 92'	111' 91'	112' 90'	116' 88'	125' 83'	139' 78'	167' 72'	231' 64'	479' 56'
50	52' 3" 47' 11"	52' 7" 47' 8"	52' 10" 47' 5"	53' 8" 46' 9"	55' 5" 45' 7"	58' 43' 11"	62' 2" 41' 10"	69' 2" 39' 3"	81' 6" 36' 2"
30	30' 9" 29' 3"	30' 11" 29' 2"	30' 11" 29' 1"	31' 3" 28' 10"	31' 10" 28' 5"	32' 8" 27' 9"	33' 10" 26' 11"	35' 9" 25' 10"	38' 8" 24' 7"
20	20' 4" 19' 8"	20' 4" 19' 8"	20' 4" 19' 7"	20' 6" 19' 6"	20' 9" 19' 4"	21' 1" 19'	21' 7" 18' 8"	22' 4" 18' 2"	23' 4" 17' 6"
15	15' 2" 14' 10"	15' 2" 14' 10"	15' 2" 14' 9"	15' 3" 14' 9"	15' 5" 14' 7"	15' 7" 14' 6"	15' 10" 14' 3"	16' 3" 14'	16' 9" 13' 7"
10	10 1" 9' 11 1/4"	10' 1" 9' 11"	10' 1" 9' 10 7/8"	10' 1" 9' 10 5/8"	10' 2" 9' 10 1/4"	10' 3" 9' 9 3/8"	10' 4" 9' 8 1/4"	10' 6" 9' 6 3/4"	10' 8" 9' 5"
8	8' 1/2" 7' 11 1/2"	8' 1/2" 7' 11 3/8"	8' 5/8" 7' 11 3/8"	8' 3/4" 7' 11 1/4"	8' 1 1/8" 7' 10 7/8"	8' 1 1/2" 7' 10 3/8"	8' 2 3/8" 7' 9 3/4"	8' 3 1/4" 7' 8 7/8"	7' 3 5/16" 6' 8 7/8"

30

300mm F4.5 AND F5.6 TELE ROKKOR (ROKKOR-X) LENSES In METERS

F.No. Dist. (m)	4.5	5.6	8	11	16	22	32
∞	∞ 607	∞ 483	∞ 341	∞ 242	∞ 171	∞ 121	∞ 83
50	54.4 46.3	55.6 45.4	58.4 43.8	62.7 41.6	70.1 38.9	84.2 35.6	123.7 31.5
30	31.5 28.6	31.9 28.3	32.8 27.7	34.1 26.8	36.1 25.7	39.4 24.2	46.3 22.3
20	20.6 19.4	20.8 19.3	21.2 19.0	21.7 18.6	22.5 18.0	23.7 17.3	26.0 16.3
15	15.3 14.7	15.4 14.6	15.6 14.4	15.9 14.2	16.3 13.9	16.9 13.5	18.0 12.9
10	10.1 9.86	10.2 9.82	10.3 9.75	10.4 9.65	10.5 9.51	10.8 9.32	11.2 9.03
7	7.07 6.93	7.08 6.92	7.12 6.88	7.17 6.84	7.25 6.77	7.35 6.68	7.54 6.54
5	5.03 4.97	5.04 4.96	5.06 4.95	5.08 4.92	5.11 4.89	5.16 4.85	5.25 4.78
4.5	4.52 4.48	4.53 4.47	4.54 4.46	4.56 4.44	4.59 4.41	4.63 4.38	4.69 4.32

300mm F4.5 AND F5.6 TELE ROKKOR (ROKKOR-X) LENSES In FEET

F.No. Dist. (ft)	4.5	5.6	8	11	16	22	32
∞	∞ 1990'	∞ 1584'	∞ 1120'	∞ 793'	∞ 561'	∞ 397'	∞ 272'
200	222' 182'	228' 178'	243' 170'	266' 160'	308' 148'	398' 134'	739' 116'
100	105' 95' 4"	106' 94' 3"	109' 92' 1"	114' 89' 3"	121' 85' 5"	132' 80' 7"	156' 73'10"
50	51' 2" 48'10"	51' 6" 48' 7"	52' 2" 48'	53' 1" 47' 3"	54' 6" 46' 3"	56' 7" 44'10"	60' 4" 42' 9"
30	30' 5" 29' 7"	30' 6" 29' 6"	30' 9" 29' 4"	31' 29' 1"	31' 6" 28' 8"	32' 1" 28' 2"	33' 3" 27' 4"
20	20' 2" 19'10"	20' 2" 19'10"	20' 3" 19' 9"	20' 5" 19' 7"	20' 7" 19' 5"	20'10" 19' 3"	21' 3" 18'10"
15	15' 1" 14'11"	15' 1" 14'11"	15' 2" 14'10"	15' 3" 14'10"	15' 4" 14' 9"	15' 5" 14' 7"	15' 8" 14' 5"

32

Specifications subject to change without notice

LENS CARE

Never touch glass lens surface with the fingers.

Should a glass lens surface become dirty, gently whisk loose, dry matter off it with a bellows lens brush. If necessary, the glass surface may then be wiped gently with a circular motion from the center outward with a soft, clean cotton cloth or special photographic lens tissue.

Liquid lens cleaner should be used only when finger prints or other matter cannot be removed with a dry cloth or lens tissue. *Never drop lens cleaning fluid directly on lens surfaces.* Instead, apply only one drop of fluid to the cloth or tissue and wipe the glass surface gently from center to edge.

The lens barrel and other metal parts may be wiped with a silicon-treated cloth.

For all other service and repairs, contact your authorized Minolta repair facility.

STORAGE

When not in use, glass surfaces should be protected by attaching front and rear caps and the lenses stored in their cases. Do not store lenses where temperature or humidity is high or near corrosive chemicals or gases.

If a lens is to be stored for an extended period, it is best to place it in its case in an airtight container (such as a heavy or double plastic bag) along with a small bag of a drying agent (such as silica gel).

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