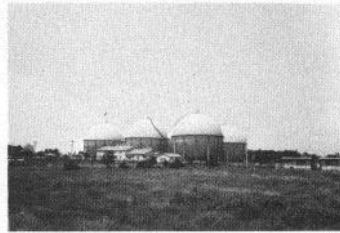


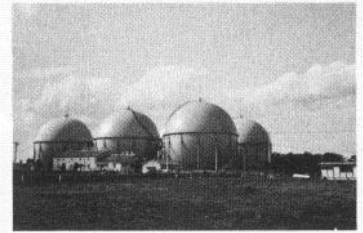
# Angle of View Changes by Interchanging Lenses

All these pictures were taken from the same position, at an identical distance from the subject.

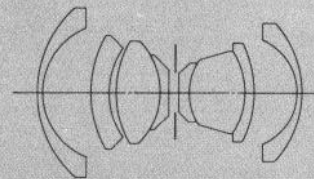
**50<sup>mm</sup>  
F6.3**



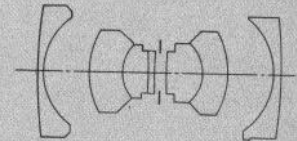
**75<sup>mm</sup>  
F5.6**



50 mm f/6.3



75 mm f/5.6

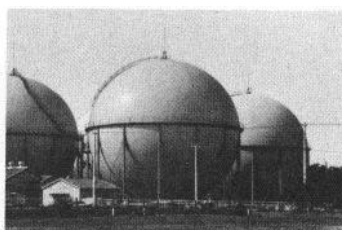
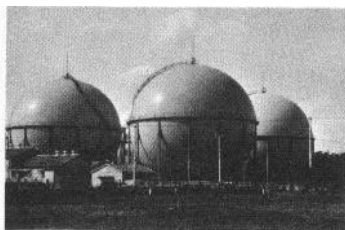
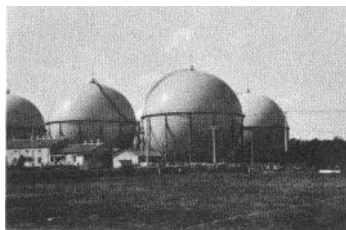


**100<sup>mm</sup>**  
**F3.5/F2.8**

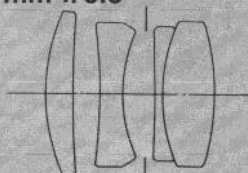
**127<sup>mm</sup>**  
**F4.7**

**150<sup>mm</sup>**  
**F5.6**

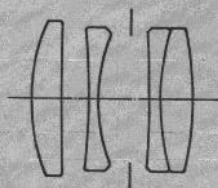
**250<sup>mm</sup>**  
**F5**



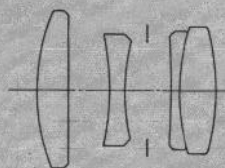
100 mm f/3.5



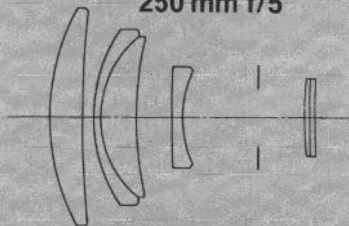
127 mm f/4.7



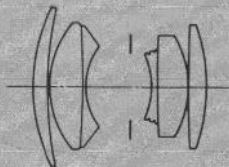
150 mm f/5.6



250 mm f/5

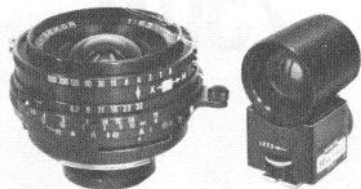


100 mm f/2.8



# Lens Comparison Chart

50 mm f/6.3



75 mm f/5.6



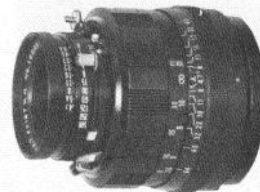
100 mm f/3.5



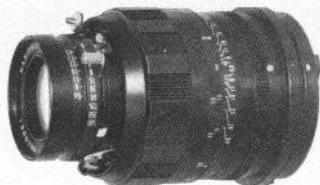
100 mm f/2.8



127 mm f/4.7



150 mm f/5.6



250 mm f/5



Lens	Lens construction	Angle of view		Minimum aperture	Shutter type	Filter size	lens hood	Shutter blade arresting
		6 x 9cm	6 x 7cm					
50mm f/6.3	5-group 8-element	89° 30'	81° 40'	32	Black	72mm	Clamp-on	Time lock
75mm f/5.6	4-group 7-element	61° *77°	68°	45	Black	72mm	Clamp-on	Press focus
100mm f/3.5	5-group 4-element	53° 30'	47° 30'	32	Black Chrome	55mm 40.5mm	Screw-in Clamp-on	Press focus
100mm f/2.8	4-group 6-element	53° 30'	47° 30'	32	Black Chrome	72mm 72mm	Clamp-on Clamp-on	Press focus Time lever
127mm f/4.7	3-group 4-element	43° 30' *50° 50'	38° 40'	64	Black	55mm	Screw-in	Press focus
150mm f/5.6	3-group 4-element	37° 10'	32° 40'	45	Black Chrome	55mm 40.5mm	Screw-in Clamp-on	Press focus Time lever
250mm f/5	4-group 6-element	22° 50'	20° 10'	45	Black	105mm	Clamp-on	Time lever

The picture angle marked with an asterisk ( \* ) is that when photographing through the Polaroid film pack format 100 or 660 series.

The black type lens has a black-finished lens barrel scale ring.

The chromium type lens has a chromium-plated shutter speed dial.

The lenses combine Mamiya Sekor lenses, boasting high resolving power and beautiful color balance, incorporating the famed Seiko #0 shutter.

All lenses have an M-X synchro terminal. By selecting this terminal, both M-class flash bulbs and electronic flash can be synchronized at all shutter speeds.

**The 250mm f/5 lens** interlocks with the rangefinder from 20ft (7m) to infinity. When photographing at a short distance, focus by directly observing the ground glass focusing screen or by setting the lens distance scale to the actually measured distance (by tape measure) or the distance measured visually.

Regarding the black type and the chromium type lens, the 100 mm f/3.5 and 150 mm f/5.6 lenses have different filter sizes and hood attachment sizes. **When purchasing filters, clearly indicate the filter diameter; when purchasing hoods, clearly designate the type of lens and its focal length.**

# Shutter Operation

(For 100mm f/3.5 and 127mm f/4.7 lenses, see Page 16.)



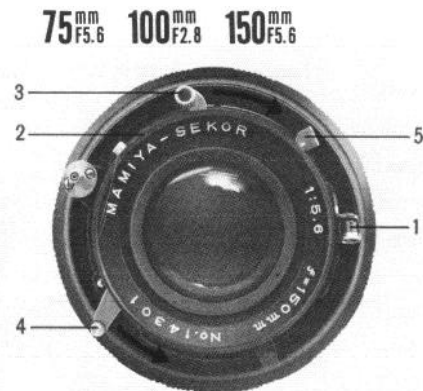
**Cable Release:** Screw the cable release into the cable release socket (1).

**Shutter speed:** Rotate the shutter speed ring (2) until the desired shutter speed scale is aligned with the index mark.

**Cocking:** Press the shutter cocking lever (3) in the direction shown in the photo until it stops. When removing the finger, the lever returns to its original position,

**Tripping:** Press the shutter release trigger of the hand grip or push in the shutter release button (4).

**T Setting:** To keep the shutter open for focusing on the focusing screen, by setting the shutter speed to "B", cocking the shutter, pushing the shutter release button (4) and rotating it clockwise, the shutter will remain open. To close the shutter, rotate the shutter release button counterclockwise, removing the finger from it.



**Cable Release:** Screw the cable release into the cable release socket (1).

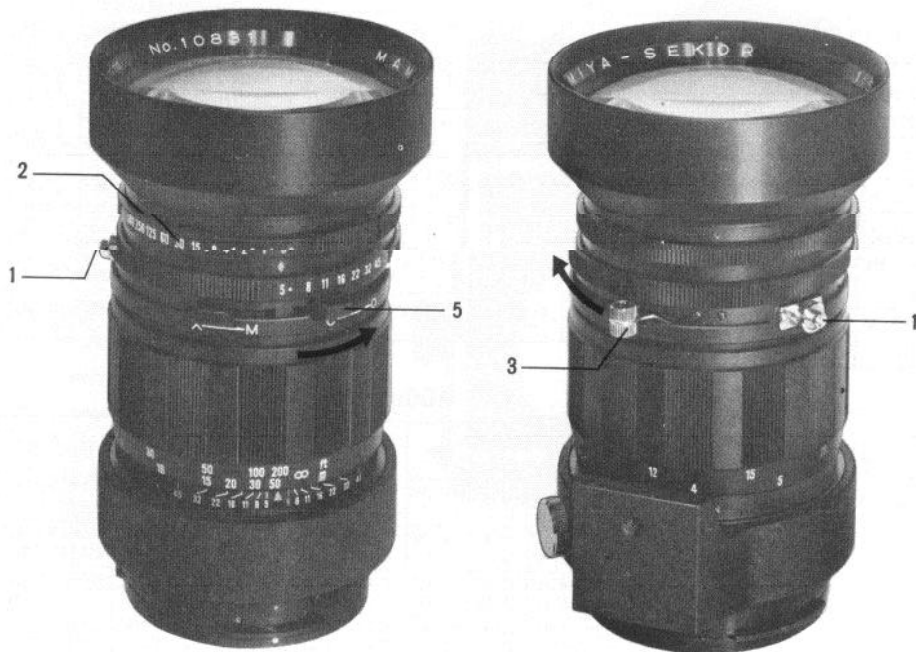
**Shutter Speed:** Rotate the shutter speed ring (2) until the desired shutter speed scale is aligned with the index mark.

**Cocking :** Press the shutter cocking lever (3) in the direction indicated in the photo until it stops.

**Tripping :** Press the shutter release trigger or move the shutter release lever (4) in the direction indicated in the photo,

**Press Focus:** When focusing by the focusing screen, by cocking the shutter (regardless of shutter speed) and pulling out the press focus lever (5), the shutter will remain open. To close the shutter, return the press focus lever (5) to its original position. It is not necessary to recock the shutter.

# 250mmF5



**Cable Release:** Screw the cable release into the release socket of the shutter button (1).

**Shutter Speed:** Rotate the shutter speed ring (2) until the desired shutter speed scale is aligned with the index mark.

**Cocking:** Press the shutter cocking lever (3) in the direction indicated in the photo until it stops. When removing the finger, the lever returns to its original position.

**Tripping:** Press the shutter release trigger of the cable release. When the cable release is not attached, press the shutter button (1).

**T Setting:** When focusing by the focusing screen, by setting the shutter speed to "B", cocking the shutter, and moving the time lever (5) in the direction indicated in the photo until it stops, the shutter will remain open. To close the shutter, return the time lever (5) to its original position. The time lever will not move when the shutter speed is not set on "B".

The shutter speed ring (2) will not turn when the shutter is kept open by using time "T" operation.

Do not move the shutter cocking lever (3) while the shutter is kept open.

# Depth of Field Table (Distance in feet)

## 50mm f/6.3

ft \ F	∞	30	15	10	8	7	6	5	4.5	4	3.5
6.3	113' 8" ∞	9' 6½" ∞	7' 3½" ∞	5' 11" 34' 4"	1' 5' 2½" 18' 1"	4' 9¼" 13' 6"	4' 3¼" 10' 1"	3' 9½" 7' 5½"	3' 6" 6' 4"	3' 7¼" 5' 4½"	2' 10¾" 4' 5½"
8	10' 10" ∞	8' 1" ∞	6' 5½" ∞	5' 4¾" 105"	4' 9¼" 27' 8"	4' 5" 18' 1"	4' 1¼" 12' 5"	3' 6¾" 8' 7½"	3' 3¾" 7' 2"	3' ½" 5' 11"	2' 9¼" 4' 10"
11	7' 8½" ∞	6' 3" ∞	5' 3" ∞	4' 6¾" ∞	4' 4" ∞	3' 10" 56' 9"	3' 6¾" 22' 11"	3' 2¾" 12' 6"	3' 9' 7"	2' 9¾" 7' 5"	2' 6½" 5' 9"
16	5' 6½" ∞	4' 9" ∞	4' 2" ∞	3' 8½" ∞	3' 5" ∞	3' 3" ∞	3' 1½" ∞	2' 9¾" 35' 9"	2' 7¾" 18' 10"	2' 5¾" 11' 10"	2' 3½" 8'
22	3' 11¾" ∞	3' 7" ∞	3' 3" ∞	2' 11¾" ∞	2' 9¾" ∞	2' 8¾" ∞	2' 6¾" ∞	2' 4¾" ∞	2' 10¼" ∞	2' 2" ∞	2' ¾" 18' 7"
32	2' 10¾" ∞	2' 8¾" ∞	2' 6" ∞	2' 4¾" ∞	2' 3" ∞	2' 2¾" ∞	2' 1½" ∞	2' ∞	1' 11¼" ∞	1' 10¾" ∞	1' 9¾" ∞

## 75mm f/5.6

ft \ F	∞	30	15	10	7	5	4	3.5
5.6	32' ∞ 7"	15' ∞ 10"	10' 27' 5"	7' 14' 9½"	5' 8' 10¼"	4' 5' 8"	3' 7¾"	3' 2¾"
8	23' ∞ 1"	13' ∞ 3"	9' 40' 3¾"	7' 16' 11"	5' 9' 6"	4' 6' 2"	3' 4' 8"	3' 1¼"
11	16' ∞ 5"	10' ∞ 9"	8' 144' ¾"	6' 23' 11"	5' 11' 1"	3' 11½"	3' 4' ½"	3' 0"
16	11' ∞ 8"	8' ∞ 6½"	6' ∞ 9"	5' 58' 2"	4' 15' 11"	3' 8' 1"	3' 1½"	2' 10"
22	8' ∞ 4"	6' 7½"	5' 6½"	4' 8¾"	4' 34' 0"	3' 10' 11"	2' 10½"	2' 7½"
32	5' 11¾"	5' ∞ 1"	4' ∞ 5"	3' ∞ 11"	3' ∞ 5"	2' 22' 11"	2' 9' 10½"	2' 4¾"
45	4' 3½"	3' ∞ 10"	3' 5½"	3' ∞ 2"	2' ∞ 10"	2' ∞ 6"	2' 3¾"	2' 1¼"

## 100mm f/3.5

ft \ F	∞	30	15	10	8	7	6	5	4.5	4	3.5
3.5	93' 2" ∞	22' 10' 43' 8"	13' 17' 7"	9' 1½" 11' 1"	7' 5½" 8' 8"	6' 7" 7' 4¾"	5' 8½" 6' 4"	4' 9½" 5' 2½"	4' 4" 4' 8"	3' 10¼" 4' 1½"	3' 5" 3' 7"
4	81' 7" ∞	22' 1" 46' 9"	12' 9" 18' 1"	9' ½" 11' 3"	7' 4¾" 8' 9"	6' 6½" 7' 6¾"	5' 8" 6' 4½"	4' 9¾" 5' 3"	4' 3¾" 4' 8½"	3' 10¼" 4' 1¾"	3' 4¾" 3' 7¼"
5.6	57' 9" ∞	19' 11" 60' 11"	12' 1" 19' 10"	8' 7½" 11' 10"	7' 1½" 9' 1½"	6' 4¾" 7' 9¾"	5' 6½" 6' 7"	4' 8" 5' 4¾"	4' 3" 4' 9¾"	3' 9½" 4' 2¾"	3' 4¾" 3' 7¾"
8	40' 11" ∞	17' 6" 107"	11' 2" 23"	8' 2½" 12' 10"	6' 10" 9' 8"	6' 1¾" 8' 2¾"	5' 4" 6' 10"	4' 6¾" 5' 6½"	4' 1¾" 4' 11"	3' 8¾" 4' 3¾"	3' 3¾" 3' 8¾"
11	29' 1" ∞	15' ∞	10' 1" 29' 7"	7' 7½" 14' 7"	6' 5½" 10' ∞	5' 9¾" 8' 10½"	5' 1½" 7' 3½"	4' 4¾" 5' 10"	4' 5' 1¼"	3' 7½" 4' 5½"	3' 2¾" 3' 10"
16	20' 7" ∞	12' 5" ∞	8' 11¾" 50' 1"	6' 11¾" 18' 2"	5' 11¾" 12' 3"	5' 5" 10'	4' 10" 8'	4' 2¾" 6' 3"	3' 10" 5' 5½"	3' 6" 4' 8½"	3' 1¾" 4'
22	14' 8" ∞	10' 1" ∞	7' 8" ∞	6' 2½" 27' 10"	5' 5" 15' 11"	4' 11¾" 12' 2"	4' 5¾" 9' 3¾"	3' 11" 7'	3' 7½" 5' 1"	3' 3¾" 4' 3"	3' 4' 3"
32	10' 6" ∞	7' 11½" ∞	6' 5" ∞	5' 4½" ∞	4' 9¾" 27' 9"	4' 5½" 17' 11"	4' ¾" 12' 2"	3' 7½" 8' 5"	3' 4¾" 6' 11¾"	3' 1¾" 5' 9"	2' 10" 4' 8¾"

### 100mm f/2.8

F	ft										
	∞	30	15	10	8	7	6	5	4.5	4	3.5
2.8	116' ∞	24' 0" 40' 0"	13' 5" 17' 1"	9' 3 1/2" 10' 10"	7' 7" 8' 6"	6' 8" 7' 4 1/2"	5' 9" 6' 3 3/8"	4' 10" 5' 2 3/8"	4' 4 3/8" 4' 7 3/4"	3' 11" 4' 1 3/4"	3' 5 1/4" 3' 7"
4	81' 7" ∞	22' 2" 46' 8"	12' 10" 18' 1"	9' 0" 11' 3"	7' 4 1/2" 8' 9"	6' 6 1/2" 7' 7"	5' 8" 6' 5"	4' 9 1/2" 5' 3 1/2"	4' 4" 4' 8 3/8"	3' 10 1/2" 4' 1 3/4"	3' 4 3/4" 3' 7 3/4"
5.6	57' 8" ∞	20' 0" 60' 10"	12' 1" 19' 10"	8' 8" 11' 10"	7' 2" 9' 1 1/2"	6' 4 1/2" 7' 10"	5' 6 1/2" 6' 7"	4' 8 1/4" 5' 4 1/4"	4' 3" 4' 9 1/2"	3' 9 3/4" 4' 2 3/4"	3' 4 1/4" 3' 8"
8	41' 0" ∞	17' 7" 106'	11' 2" 22' 11"	8' 2 3/8" 12' 10"	6' 10" 9' 8"	6' 1 1/2" 8' 2 1/2"	5' 4 3/8" 6' 10"	4' 6 3/8" 5' 6 1/2"	4' 2" 4' 11"	3' 8 3/4" 4' 3 3/4"	3' 3 3/4" 3' 8 3/4"
11	29' 1" ∞	15' 1" ∞	10' 2" 29' 6"	7' 8" 14' 7"	6' 5 1/2" 10' 7"	5' 10" 8' 10 1/4"	5' 1 3/8" 7' 3 3/8"	4' 5" 8' 10 1/4"	4' 3/4" 5' 10"	3' 7 3/4" 4' 5 1/2"	3' 2 3/4" 3' 10"
16	20' 8" ∞	12' 6" ∞	9' 0" 49' 9"	7' 0" 18' 1"	6' 0" 12' 3"	5' 5 1/2" 9' 11 1/4"	4' 10 1/4" 8' 0"	4' 2 3/8" 6' 3"	3' 10 3/4" 5' 5 1/2"	3' 6" 4' 8 3/4"	3' 1 3/4" 4' 0"
22	14' 9" ∞	10' 1" ∞	7' 9" 49' 9"	6' 3" 18' 1"	5' 5 1/2" 12' 3"	5' 0" 9' 11 1/4"	4' 6" 8' 0"	3' 11 1/2" 6' 1 1/2"	3' 7 3/4" 5' 11 1/2"	3' 4" 5' 1"	3' 0" 4' 2 3/4"
32	10' 6" ∞	8' 0" ∞	6' 5" ∞	5' 5" ∞	4' 10 3/4" 27' 4"	4' 6" 17' 9"	4' 1" 12' 1"	3' 7 3/4" 8' 4 3/8"	3' 4 3/4" 6' 11"	3' 1 1/2" 5' 8 3/8"	2' 10 1/2" 4' 8"

### 127mm f/4.7

F	ft							
	∞	30	15	10	8	7	6	5
4.7	112' ∞	23' 10" 40' 6"	13' 4" 17' 2"	9' 3 1/2" 10' 10"	7' 6 1/2" 8' 6"	6' 8" 7' 4 1/2"	5' 9" 6' 3"	4' 10" 5' 2"
5.6	92' 9" ∞	22' 11" 43' 8"	13' 1" 17' 8"	9' 1 1/2" 11' 1"	7' 5 1/2" 8' 7 1/2"	6' 7" 7' 5 1/2"	5' 8 1/2" 6' 4"	4' 9 3/4" 5' 2 3/8"
8	65' 8" ∞	20' 10" 53' 11"	12' 5" 19' 0"	8' 10" 11' 7"	7' 3" 8' 11"	6' 5" 7' 8"	5' 7" 6' 5 1/2"	4' 8 3/4" 5' 3 1/2"
11	46' 7" ∞	18' 7" 80' 9"	11' 7" 21' 5"	8' 5" 12' 4"	7' 0" 9' 4 1/2"	6' 3" 8' 0"	5' 5 1/2" 6' 8 1/2"	4' 7 1/2" 5' 5 1/2"
16	33' 1" ∞	16' 0" 279' 0"	10' 7" 26' 2"	7' 11" 13' 9"	6' 7 1/2" 10' 1"	5' 11 1/2" 8' 6"	5' 3" 6' 8 1/2"	4' 6" 5' 8"
22	23' 6" ∞	13' 6" ∞	9' 5 1/2" 38' 2"	7' 3 3/8" 16' 3"	6' 2 1/2" 11' 5"	5' 7 1/2" 9' 4 1/2"	5' 0" 7' 7"	4' 3 3/4" 6' 0"
32	16' 9" ∞	11' 0" ∞	8' 3" 111' 0"	6' 7" 22' 3"	5' 8 1/2" 13' 11"	5' 2 3/8" 10' 1"	4' 8" 8' 6 1/2"	4' 1" 6' 6 1/2"
45	11' 11" ∞	8' 9 1/2" ∞	6' 11 1/2" ∞	5' 9" 46' 8"	5' 1 1/2" 20' 4"	4' 8 3/4" 14' 6"	4' 3 1/2" 10' 5"	3' 9 3/4" 7' 6 1/2"
64	8' 7" ∞	6' 10 1/2" ∞	5' 9" ∞	4' 11 3/4" ∞	4' 5 3/4" 61' 3"	4' 2 1/4" 26' 11"	3' 10 1/4" 15' 5"	3' 5 3/4" 9' 8"

### 150mm f/5.6

F	ft						
	∞	30	15	10	8	7	
5.6	130' ∞	11 1/2" 38'	7 1/2" 38'	7" 16'	4 1/2" 10'	7 1/2" 8'	8 1/2" 7'
8	91' ∞	9 1/2" 43'	10 1/2" 9 3/4"	13' 17'	13 3/4" 11'	7 5 1/2" 8'	6 7 3/4" 7'
11	66' ∞	10 3/4" 52'	21' 11"	12' 18'	5 1/2" 10 3/4"	8' 8'	6 5 1/2" 7'
16	46' 1" ∞	18' 6" 81'	6' 5 1/4"	11' 7" 21'	5' 4 1/4"	7' 9'	6' 3" 7' 11 3/4"
22	33' 7 1/2" ∞	16' 2 1/2" 233'	10' 8" 25'	7' 11 1/2" 7 1/2"	6' 8 3/4" 13'	6' 10'	6' 8'
32	23' 3" ∞	13' 5 3/4" ∞	9' 5 1/2" 38'	7' 3 3/4" 1"	6' 2 3/4" 16'	5' 7 3/4" 11'	5' 7 3/4" 9'
45	16' 7 1/2" ∞	11' 3/4" ∞	8' 3" 105'	6' 7" 9 3/4"	5' 8 3/4" 21'	5' 2 3/4" 13'	5' 2 3/4" 10'

### 250mm f/5 and 250mm f/8

F	ft									
	∞	200	100	50	30	20	15	12	10	5
5	407' ∞	134' 390'	80' 6" 132'	44' 8" 56' 9"	28' 1" 32' 3"	19' 2" 20' 11"	14' 6" 15' 6"	11' 8" 12' 4"	9' 9 1/2" 10' 2"	7' 10 1/2" 8' 2 1/2"
5.6	360' ∞	129' 446'	78' 6" 138'	44' 1" 57' 9"	27' 10" 32' 7"	19' 21' 1"	14' 6" 15' 7"	11' 8" 12' 4"	9' 9 1/2" 10' 3"	7' 10 1/2" 8' 1 1/2"
8	255' ∞	112' 748'	72' 1" 163'	42' 2" 61' 9"	27' 33' 9"	18' 8" 21' 7"	14' 3" 15' 10"	11' 6" 12' 6"	9' 8 3/4" 10' 4"	7' 10" 8' 2 1/2"
11	180' ∞	95' 2" ∞	64' 8" 68' 4"	39' 10" 45' 11"	25' 11" 35' 7"	18' 2" 22' 3"	14' 2" 16' 2"	11' 4" 12' 9"	9' 7" 10' 6"	7' 9" 8' 8' 4"
16	128' ∞	78' 2" ∞	56' 5" 442'	36' 3" 80' 8"	24' 7" 38' 7"	17' 6" 23' 4"	13' 7" 16' 9"	11' 1" 13' 1"	9' 5" 10' 8"	7' 7 1/2" 8' 5"
22	90' 7" ∞	62' 5" ∞	47' 9" ∞	32' 8" 22' 3"	22' 10" 43' 9"	16' 8" 25' 1"	13' 1" 17' 7"	10' 9" 13' 6"	9' 2" 11'	7' 6" 8' 7"
32	64' 3" ∞	48' 7" ∞	39' 4" ∞	28' 5" 209'	20' 9" 54' 1"	15' 7" 24' 1"	12' 5" 18' 11"	10' 8" 14' 3"	8' 10 1/2" 11' 6"	7' 3 1/2" 8' 10"
45	45' 8" ∞	37' ∞	31' 5" ∞	24' 2" ∞	18' 5" 81' 1"	14' 3" 33' 8"	11' 7" 21' 3"	9' 9 1/2" 15' 6"	8' 5 1/2" 12' 3"	7' 1 1/2" 9' 3"



# Depth of Field Table (Distance in meter)

## 50mm f/6.3

m \ F	∞	10	5	3	2.5	2	1.7	1.5	1.3	1.2	1.1	1
6.3	4.17 ∞	2.98 ∞	2.32 ∞	1.79 9.90	1.61 5.85	1.40 3.62	1.25 2.71	1.14 2.22	1.03 1.79	0.97 1.60	0.90 1.42	0.84 1.25
8	3.30 ∞	2.52 ∞	2.04 ∞	1.62 27.10	1.47 9.27	1.29 4.67	1.17 3.25	1.08 2.55	0.97 2.00	0.92 1.76	0.86 1.54	0.80 1.34
11	2.35 ∞	1.94 ∞	1.64 ∞	1.37 ∞	1.26 ∞	1.13 10.87	1.04 5.31	0.97 3.65	0.89 2.59	0.84 2.20	0.79 1.89	0.75 1.57
16	1.69 ∞	1.47 ∞	1.30 ∞	1.13 ∞	1.06 ∞	0.97 ∞	0.90 ∞	0.85 9.66	0.79 4.56	0.75 3.43	0.72 2.65	0.68 2.08
22	1.21 ∞	1.10 ∞	1.01 ∞	0.91 ∞	0.86 ∞	0.80 ∞	0.76 ∞	0.72 ∞	0.68 ∞	0.66 ∞	0.63 6.99	0.60 3.98
32	0.88 ∞	0.82 ∞	0.77 ∞	0.72 ∞	0.69 ∞	0.66 ∞	0.63 ∞	0.60 ∞	0.58 ∞	0.56 ∞	0.54 ∞	0.52 ∞

## 75mm f/5.6

F \ m	∞	10	5	3	2	1.5	1.2	1
5.6	9.92 ∞	5.04 ∞	3.38 9.77	2.34 4.19	1.70 2.44	1.33 1.72	1.09 1.33	0.93 1.09
8	7.04 ∞	4.19 ∞	2.98 16.08	2.15 5.08	1.60 8.60	1.27 1.84	1.05 1.40	0.90 1.13
11	5.00 ∞	3.38 ∞	2.56 ∞	1.93 7.01	1.48 3.15	1.20 2.03	1.00 1.50	0.87 1.19
16	3.56 ∞	2.67 ∞	2.13 ∞	1.68 16.12	1.33 4.17	1.10 2.39	0.94 1.68	0.82 1.29
22	2.54 ∞	2.06 ∞	1.73 ∞	1.43 ∞	1.18 7.77	1.00 3.21	0.87 2.02	0.77 1.48
32	1.82 ∞	1.57 ∞	1.38 ∞	1.19 ∞	1.01 ∞	0.88 6.34	0.78 2.88	0.70 1.86
45	1.31 ∞	1.18 ∞	1.07 ∞	0.96 ∞	0.85 ∞	0.76 ∞	0.69 7.47	0.63 3.00

## 100mm f/3.5

F \ m	∞	10	5	3	2	1.5	1.2	1.0
3.5	28.41 ∞	7.46 15.24	4.29 6.00	2.74 3.32	1.89 2.13	1.44 1.57	1.16 1.24	0.94 1.03
4	24.87 ∞	7.19 16.48	4.21 6.18	2.71 3.37	1.87 2.15	1.43 1.58	1.16 1.25	0.97 1.03
5.6	17.61 ∞	6.45 22.57	3.95 6.85	2.60 3.55	1.82 2.22	1.40 1.61	1.14 1.26	0.96 1.04
8	12.49 ∞	5.63 47.48	3.63 8.09	2.47 3.84	1.76 2.32	1.37 1.66	1.12 1.29	0.95 1.06
11	8.86 ∞	4.77 ∞	3.27 10.93	2.30 4.36	1.68 2.49	1.32 1.74	1.09 1.34	0.93 1.09
16	6.29 ∞	3.94 ∞	2.86 21.81	2.10 5.38	1.58 2.77	1.26 1.67	1.05 1.41	0.90 1.13
22	4.48 ∞	3.16 ∞	2.44 ∞	1.87 8.10	1.45 3.31	1.18 2.08	1.00 1.52	0.87 1.19
32	3.20 ∞	2.48 ∞	2.03 ∞	1.63 29.76	1.31 4.60	1.09 2.49	0.94 1.71	0.82 1.30

### 100mm f/2.8

F \ m	∞	10	5	3	2.5	2	1.7	1.5	1.3	1.2	1.1	1.0
2.8	35.47	7.86	4.42	2.79	2.36	1.91	1.64	1.45	1.27	1.17	1.08	0.98
	∞	13.78	5.76	3.25	2.66	2.10	1.77	1.55	1.34	1.23	1.12	1.02
4	24.87	7.20	4.21	2.71	2.30	1.87	1.61	1.43	1.25	1.16	1.07	0.97
	∞	16.46	6.17	3.37	2.74	2.15	1.80	1.58	1.35	1.24	1.14	1.03
5.6	17.62	6.46	3.95	2.60	2.23	1.83	1.58	1.41	1.23	1.14	1.05	0.96
	∞	22.53	6.84	3.54	2.86	2.21	1.85	1.61	1.38	1.26	1.15	1.04
8	12.49	5.64	3.64	2.47	2.13	1.76	1.53	1.37	1.21	1.12	1.04	0.95
	∞	47.33	8.08	3.84	3.04	2.32	1.91	1.66	1.41	1.29	1.17	1.06
11	8.87	4.78	3.27	2.30	2.01	1.68	1.47	1.32	1.17	1.09	1.01	0.93
	∞	∞	10.89	4.34	3.34	2.48	2.02	1.74	1.47	1.34	1.21	1.08
16	6.30	3.94	2.87	2.11	1.86	1.58	1.40	1.26	1.13	1.05	0.98	0.90
	∞	∞	47.33	8.08	3.84	3.04	2.32	1.91	1.66	1.41	1.29	1.17
22	4.78	3.11	2.31	1.80	1.60	1.40	1.30	1.19	1.07	1.00	0.94	0.87
	∞	∞	∞	8.03	5.10	3.29	2.51	2.07	1.68	1.51	1.34	1.19
32	3.21	2.49	2.03	1.64	1.49	1.31	1.19	1.10	1.00	0.94	0.89	0.83
	∞	∞	∞	28.74	9.19	4.55	3.15	2.47	1.93	1.70	1.48	1.29

### 150mm f/5.6

F \ m	∞	10	5	3	2.5	2
5.6	39.92	8.06	4.49	2.81	2.38	1.92
	∞	13.18	5.65	3.21	2.64	2.08
8	27.98	7.45	4.30	2.75	2.33	1.89
	∞	15.27	5.99	3.31	2.70	2.12
11	20.38	6.80	4.08	2.66	2.27	1.86
	∞	19.07	6.47	3.44	2.79	2.17
16	14.05	5.95	3.77	2.53	2.18	1.80
	∞	32.64	7.48	3.69	2.94	2.26
22	10.25	5.17	3.46	2.40	2.08	1.73
	∞	231.32	9.21	4.04	3.15	2.37
∞	7.08	4.25	3.04	2.20	1.93	1.64
	∞	∞	15.09	4.81	3.59	2.60
45	5.07	3.46	2.63	1.99	1.77	1.53
	∞	∞	93.90	6.42	4.38	2.96

### 127mm f/4.7

F \ m	∞	10	5	3	2.5	2	1.7	1.5
4.7	33.99	7.79	4.40	2.79	2.35	1.91	1.64	1.45
	∞	13.99	5.79	3.25	2.67	2.10	1.77	1.55
5.6	28.26	7.46	4.30	2.75	2.33	1.89	1.62	1.44
	∞	15.23	5.99	3.31	2.70	2.12	1.78	1.56
8	20.02	6.75	4.06	2.65	2.26	1.85	1.59	1.42
	∞	19.48	6.52	3.46	2.80	2.18	1.82	1.59
11	14.19	5.96	3.77	2.53	2.18	1.80	1.56	1.39
	∞	32.26	7.48	3.69	2.95	2.26	1.88	1.63
16	10.07	5.11	3.43	2.38	2.07	1.72	1.50	1.35
	∞	∞	9.44	4.09	3.19	2.39	1.96	1.69
22	7.16	4.27	3.04	2.20	1.93	1.63	1.44	1.30
	∞	∞	15.09	4.83	3.61	2.61	2.10	1.79
32	5.10	3.46	2.62	1.98	1.77	1.52	1.35	1.23
	∞	∞	∞	6.52	4.44	3.00	2.33	1.95
45	3.64	2.75	2.20	1.74	1.58	1.38	1.25	1.15
	∞	∞	∞	13.13	6.65	3.82	2.78	2.23
64	2.61	2.14	1.81	1.50	1.38	1.23	1.13	1.05
	∞	∞	∞	∞	23.94	6.32	3.83	2.84

### 250mm

F \ m	∞	50	30	20	15	10	7	5	4	3	2.5
5	124.1	35.7	24.2	17.29	13.43	9.29	6.65	4.83	3.90	2.94	2.46
	∞	83.2	39.4	23.73	16.98	10.83	7.39	5.19	4.12	3.06	2.54
5.6	109.7	34.4	23.6	16.98	13.25	9.21	6.61	4.81	3.88	2.94	2.46
	∞	91.2	41.1	24.32	17.28	10.95	7.44	5.21	4.13	3.07	2.55
8	77.6	30.5	21.7	15.98	12.64	8.91	6.46	4.73	3.83	2.91	2.44
	∞	138.5	48.4	26.72	18.45	11.39	7.64	5.31	4.19	3.10	2.56
11	55.0	26.3	19.5	14.76	11.87	8.53	6.26	4.63	3.77	2.87	2.42
	∞	∞	65.0	31.04	20.39	12.09	7.94	5.44	4.27	3.14	2.59
16	38.9	22.0	17.0	13.31	10.92	8.04	6.00	4.49	3.68	2.82	2.38
	∞	∞	125.8	40.25	23.96	13.24	8.40	5.65	4.40	3.20	2.63
22	27.6	17.8	14.5	11.69	9.82	7.43	5.67	4.30	3.56	2.76	2.34
	∞	∞	∞	69.38	31.84	15.22	9.16	5.97	4.58	3.29	2.69
32	19.6	14.1	11.9	9.98	8.59	6.72	5.25	4.07	3.40	2.67	2.28
	∞	∞	∞	∞	59.58	19.58	10.51	6.50	4.87	3.43	2.78
45	13.9	10.9	9.5	8.27	7.30	5.92	4.76	3.78	3.20	2.55	2.19
	∞	∞	∞	∞	∞	32.53	13.27	7.42	5.36	3.65	2.91