

Solar Eclipse Exposure Guide

ISO	f/Number								
25	1.4	2	2.8	4	5.6	8	11	16	22
50	2	2.8	4	5.6	8	11	16	22	32
100	2.8	4	5.6	8	11	16	22	32	44
200	4	5.6	8	11	16	22	32	44	64
400	5.6	8	11	16	22	32	44	64	88
800	8	11	16	22	32	44	64	88	128
1600	11	16	22	32	44	64	88	128	176

Subject	Q	Shutter Speed (s)								
Partial[1] - 4.0 ND	11	-	-	-	1/4000	1/2000	1/1000	1/500	1/250	1/125
Partial[1] - 5.0 ND	8	1/4000	1/2000	1/1000	1/500	1/250	1/125	1/60	1/30	1/15
Baily's Beads[2]	12	-	-	-	-	1/4000	1/2000	1/1000	1/500	1/250
Chromosphere	11	-	-	-	1/4000	1/2000	1/1000	1/500	1/250	1/125
Prominences	9	-	1/4000	1/2000	1/1000	1/500	1/250	1/125	1/60	1/30
Corona - 0.1 R _s	7	1/2000	1/1000	1/500	1/250	1/125	1/60	1/30	1/15	1/8
Corona - 0.2 R _s [3]	5	1/500	1/250	1/125	1/60	1/30	1/15	1/8	1/4	1/2
Corona - 0.5 R _s	3	1/125	1/60	1/30	1/15	1/8	1/4	1/2	1	2
Corona - 1.0 R _s	1	1/30	1/15	1/8	1/4	1/2	1	2	4	8
Corona - 2.0 R _s	0	1/15	1/8	1/4	1/2	1	2	4	8	15
Corona - 4.0 R _s	-1	1/8	1/4	1/2	1	2	4	8	15	30
Corona - 8.0 R _s	-3	1/2	1	2	4	8	15	30	60	120

Abbreviations : ND Neutral Density Filter

R = Solar Radii.

Exposure Formula: $t = f^2 / (P \times 2^Q)$

where: t = exposure time (seconds)

f = f/number or focal ratio

P = ISO film speed

Q = brightness exponent

Notes: [1] Exposures for partial phases are also good for annular eclipses.

[2] Bailey's Beads are extremely bright and change rapidly.

[3] This exposure is also recommended for the 'Diamond Ring' effect.

How to use the above TABLE

The above table gives the relation between film used (ISO NO.), aperture and exposure time to be used to photograph the Solar eclipse.

Select the row of the film speed (ISO number) you are using. Also select the row of what you want to photograph. The figures in any single column for these two rows give the required aperture and exposure time. For example: to photograph the Corona with solar radius of 2 R_s with film of ISO 100, you may use f/5.6 with 1/4 sec. exposure (column no. 3) or f/8 with 1/2 sec. exposure (column no. 4)

