

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

Eclipse Feature	Q	Shutter Speed									
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	11	---	---	---	1/4000	1/2000	1/1000	1/500	1/250	1/125	
Chromosphere	10	---	---	1/4000	1/2000	1/1000	1/500	1/250	1/125	1/60	
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 sec	2 sec	
Corona - 1.0 R _s	1	1/30	1/15	1/8	1/4	1/2	1 sec	2 sec	4 sec	8 sec	
Corona - 2.0 R _s	0	1/15	1/8	1/4	1/2	1 sec	2 sec	4 sec	8 sec	15 sec	
Corona - 4.0 R _s	-1	1/8	1/4	1/2	1 sec	2 sec	4 sec	8 sec	15 sec	30 sec	
Corona - 8.0 R _s	-3	1/2	1 sec	2 sec	4 sec	8 sec	15 sec	30 sec	1 min	2 min	

Instructions

Choose the ISO speed in the upper left column. Next, select the f/number of the lens or telescope (on same line as ISO). Finally, drop straight down to the bottom table to get the correct exposure for each feature of the solar eclipse.

Note that the brightness of the corona varies dramatically with distance from the Sun's edge. All exposure values in this guide are estimates. For best results, use them only as a guide and bracket your exposures.

Exposure Formula: $t = f^2 / (I \times 2^Q)$ where: t = exposure time (sec)
 f = f/number or focal ratio
 I = ISO film speed
 Q = brightness exponent

Abbreviations: ND = Neutral Density Filter.
 R_s = Solar Radii.

Notes: ¹ Exposures for partial phases are also good for annular eclipses.
² Baily's Beads are extremely bright and change rapidly.
³ This exposure also recommended for the *Diamond Ring* effect.

Photographer's Mode - Camera Chore Worksheet - By Solar Eclipse Timer

Announcement	Camera Chores and Notes
1st Contact in 60 Seconds	
40 seconds	
30 seconds	
20 seconds	
15	
10	
5, 4, 3, 2 1	
1st Contact Time (Tone)	_____ : _____ : _____ (Write Your C1 Time Here)
50 minutes to second contact	
40 minutes to second contact	
30 minutes to second contact	
20 minutes to second contact	
15 minutes to second contact	
10 minutes to second contact	
6 minutes to second contact (Begin App Remains Open)	
4 minutes to second contact	
3 minutes to second contact	
2 minutes to second contact	
90 seconds	
60 seconds, prepare to remove solar filters	
40 seconds	
30 seconds	
20 seconds	
15	
10	
5, 4, 3, 2, 1	
2nd Contact Time (Tone)	_____ : _____ : _____ (Write Your C2 Time Here)

Your Max Eclipse Time?	_____ : _____ : _____ (Write Your MAX Time Here)
4 minutes to C3	
3 minutes to C3	
2 minutes to C3	
{Max Eclipse (Tone)}	
1 minute to C3	
30 seconds	
20 seconds	
15	
10	
5, 4, 3, 2, 1	
3rd Contact Time (Tone)	_____ : _____ : _____ (Write Your C3 Time Here)
Plus 10 seconds	
Plus 15 seconds	
Plus 25 seconds, solar filters and glasses on	
Plus 45 seconds	
Plus 60 seconds	
4th contact in 60 seconds	
40 seconds	
30 seconds	
20 seconds	
10 seconds	
5, 4, 3, 2, 1	
4th Contact Time (Tone)	_____ : _____ : _____ (Write Your C4 Time Here)