

# Fixed Camera Exposure Table

[To record stars as point images using a 35mm camera, all times shown are in seconds]

Declination of Star (in degrees):

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>
<b>Focal length</b>																		
15mm	33	33	34	35	35	37	38	41	44	47	52	58	67	79	97	129	192	382
18mm	28	28	28	29	30	31	32	34	36	39	43	48	56	66	81	107	160	319
20mm	25	25	25	26	27	28	29	31	33	35	39	44	50	59	73	97	144	287
24mm	21	21	21	22	22	23	24	25	27	29	32	36	42	49	61	80	120	239
28mm	18	18	18	18	19	20	21	22	23	25	28	31	36	42	52	69	103	205
35mm	14	14	15	15	15	16	16	17	19	20	22	25	29	34	42	55	82	164
50mm	10	10	10	10	11	11	12	12	13	14	16	17	20	24	29	39	58	115
85mm	6	6	6	6	6	6	7	7	8	8	9	10	12	14	17	23	34	67
135mm	4	4	4	4	4	4	4	5	5	5	6	6	7	9	11	14	21	42
180mm	3	3	3	3	3	3	3	3	4	4	4	5	6	7	8	11	16	32
200mm	3	3	3	3	3	3	3	3	3	4	4	4	5	6	7	10	14	29
300mm	2	2	2	2	2	2	2	2	2	2	3	3	3	4	5	6	10	19
400mm	1	1	1	1	1	1	1	1	1	1	2	2	3	3	4	5	7	14
500mm	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	4	6	11
800mm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	7
1000mm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	6	

**FIXED CAMERA EXPOSURE FORMULA\***

$$\text{time (in seconds)} = \frac{1000 / (F \cos D)}{2}$$

(where F is the focal length of the lens in mm and D is the declination of the star).

\*(Please note this formula and table are only intended for use with 35mm film cameras)