

METRIC TIME

There are three different ways of stating lengths of time less than one second. There is fractional, which includes camera time; decimal, or sports time; and metric, or scientific, time. This table relates all of them.

FRACTIONAL Camera	DECIMAL Sports	METRIC Scientific
1	1.000	1000 ms
1/2	.500	500 ms
1/3	.333	333 ms
1/4	.250	250 ms
1/5	.200	200 ms
1/6	.167	167 ms
1/7	.143	143 ms
1/8	.125	125 ms
1/9	.111	111 ms
1/10	.100	100 ms
1/15	.067	67 ms
1/30	.033	33 ms
1/60	.017	17 ms
1/100	.010	10 ms
1/125	.008	8 ms
1/250	.004	4 ms
1/500	.002	2 ms
1/1000	.001	1 ms

One millisecond (ms) is to one full second as one second is to 1000 seconds or 16 minutes and 40 seconds. Light travels about 300 km or 186 miles in 1 ms.

1/2000	.0005	500 μ s
1/4000	.00025	250 μ s
1/5000	.0002	200 μ s
1/10,000	.0001	100 μ s
1/100,000	.00001	10 μ s
1/1,000,000	.000001	1 μ s

One microsecond (μ s) is to one full second as one second is to 1,000,000 seconds or 11 days, 13 hours, 46 minutes, and 40 seconds. Light travels about 300 m or the length of a football field in 1 μ s.

1/10,000,000	.0000001	100 ns
1/100,000,000	.00000001	10 ns
1/1,000,000,000	.000000001	1 ns

One nanosecond (ns) is to one full second as one second is to 1,000,000,000 seconds or 31 years, 259 days, 4 hours, 26 seconds. Light travels about 30 cm or one foot in 1 ns.

1/1,000,000,000,000,	000000000001	1 ps
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One picosecond is to one full second as one second is to 1,000,000,000,000 seconds or 31 millennia, 7 centuries, 9 years, 289 days, 1 hour, 55 minutes, 12 seconds. Light travels about 300 microns or about 1/100 of an inch in one picosecond.

1/1,000,000,000,000,000	.000000000000001	1 fs
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One femtosecond (fs) is to one full second as one second is to 1,000,000,000,000,000 seconds which is 31,709,792 years. Light would travel 300 nm in 1 fs but that is shorter than anything in the visible! One oscillation of light of Helium-Cadmium laser wavelength of 441.6 nm takes 1.472 fs to complete.