



Andy Farrer Photography Workshops  
Training Resources

## LONG EXPOSURE CALCULATION CHART

Normal Exposure without Filters	3 Stop ND Filter (ND 0.9)	4 Stop ND Filter (ND 1.2)	6 Stop ND Filter (ND 1.8)	10 Stop ND Filter (ND 3.0)
1/500	1/60	1/30	1/8	2s
1/250	1/30	1/15	1/4	4s
1/125	1/15	1/8	1/2	8s
1/60	1/8	1/4	1s	15s
1/30	1/4	1/2	2s	30s
1/15	1/2	1s	4s	60s
1/8	1s	2s	8s	120s (2mins)
1/4	2s	4s	15s	240s (4mins)
1/2	4s	8s	30s	480s (8mins)
1	8s	15s	60s	960s (16mins)
2	15s	30s	120s (2mins)	1920s (32mins)
4	30s	60s	240s (4mins)	4000s (1h 6m)
8	60s	120s (2mins)	480s (8mins)	About 2h (Zzzzz)
15	120s (2mins)	240s (4mins)	960s (16mins)	A bit of a stretch
30	240s (4mins)	480s (8mins)	1920s (32mins)	A working day

**Take a base exposure with grads, but not ND's.**

Use the table to calculate the exposure times.

Some 10 stop filters are just over or under 10 stops, so test yours and adjust accordingly.

For exposures over a few seconds:

Find good footing for tripod, avoid centre column extension and stand clear to avoid jogging tripod.

Cover eyepiece to avoid stray light fogging image during exposure.

Remove camera strap to stop it flapping in the wind and causing camera-shake.