

Filters

How are filters used?

- Protection
- Improve Exposure
- Add Impact

UV/ Protection

- Protection of lens front element – are you using?
 - Rain, dust, etc.. Drop?
- Historically block UV – because old film was sensitive

Skylight and Polarizing

- Skylights not used anymore- a relic from film age – sky would cause a blueish cast. Can cause increased lens flare
- Post-production software can manage many of these issues now
- Like sunglasses – polarizers saturate color. Reduce reflection and glare on surfaces and water
- Best for landscapes

Neutral Density (ND)

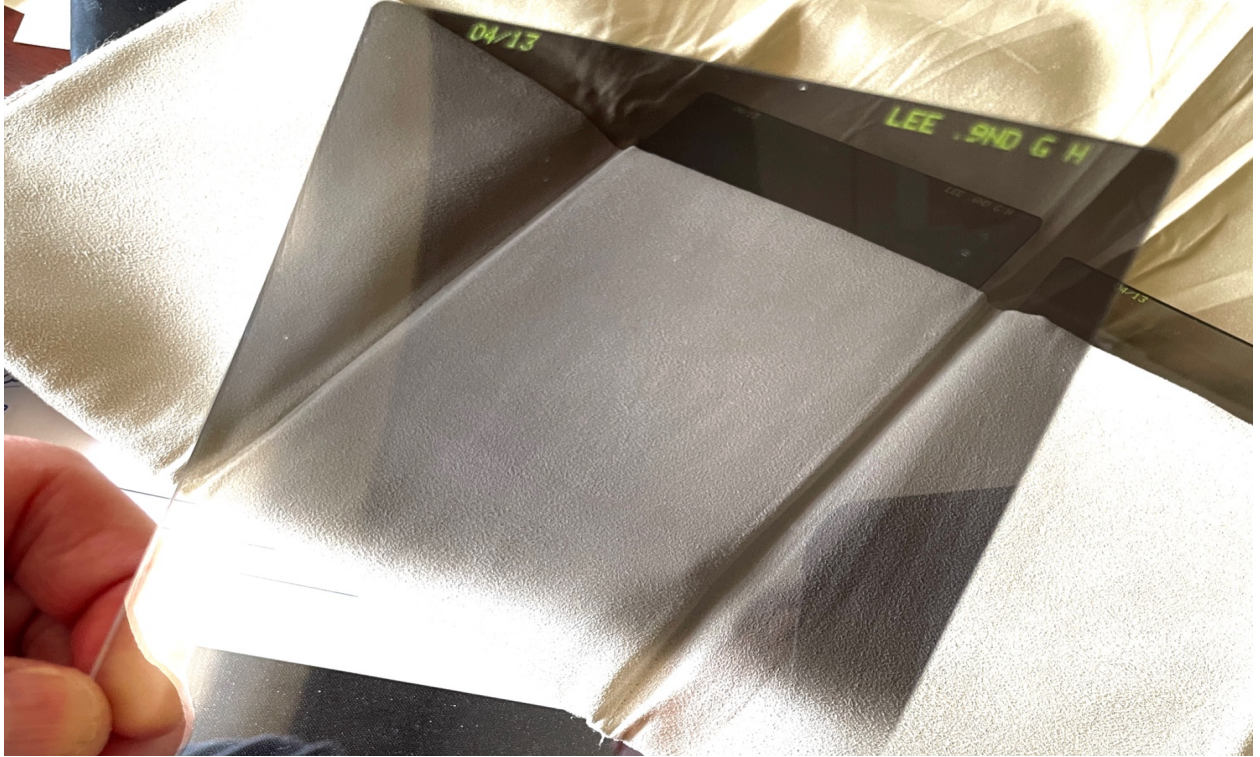
- Reduces amount of light entering the lens – no effect on color/image
- Used typically to reduce light for sunrise/sunset/sky without affecting foreground – capture dynamic range in a single shot
- No adjustment needed – metering and focus the same
- Allows slower shutter speeds without overexposing image
- For water and other slow speeds – use tripod

NDs and Stops of Light

- Manufacturers label grads with numbers – derived from complex math – let's skip that. Ok?

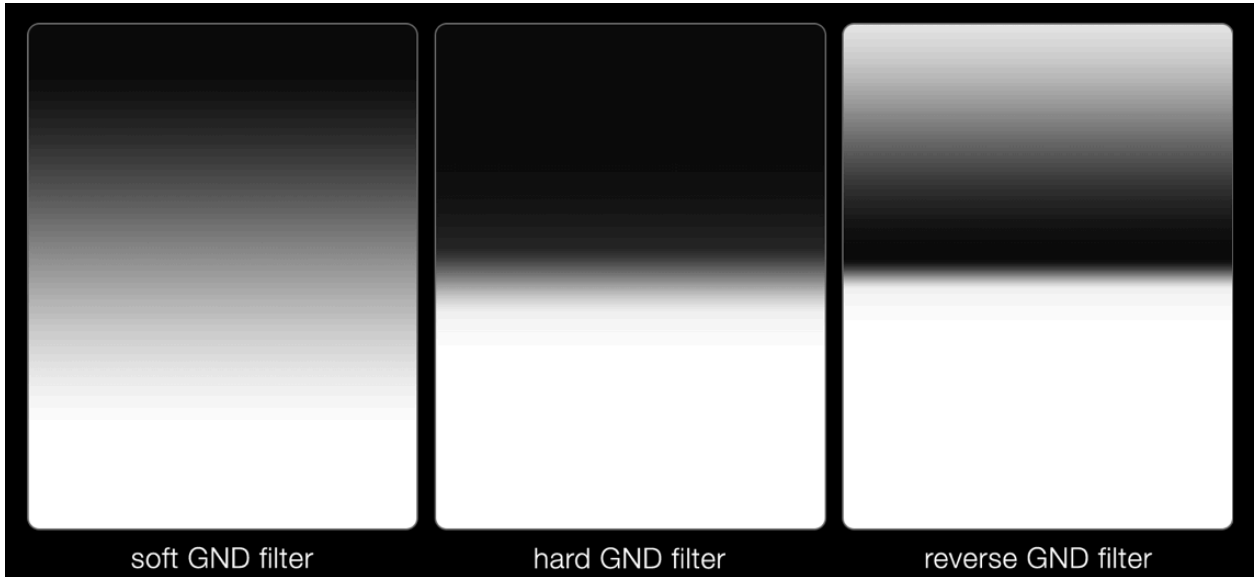
F-Stop Reduction	Optical Density
0	0
1	0.3
2	0.6
3	0.9
4	1.2

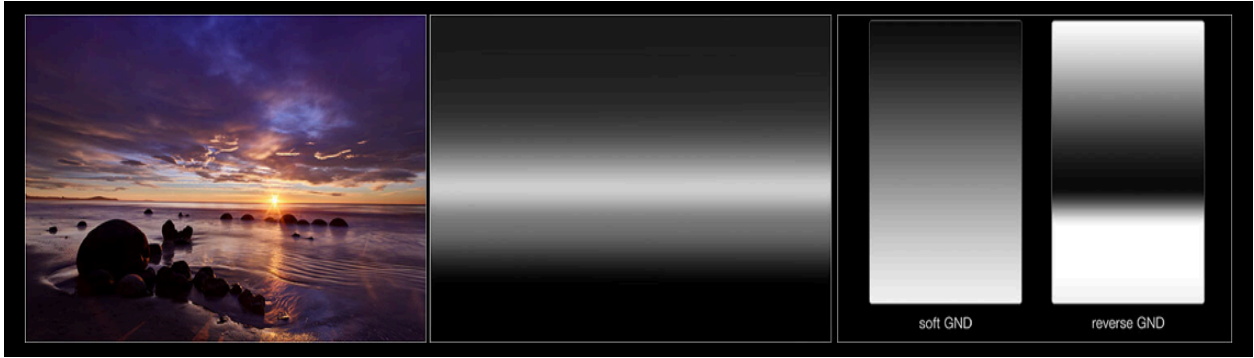
ND Labels



NDs...

- Edge Transition
 - Hard edge
 - Soft Edge
- Reverse – when sun is close to horizon at sunrise/sunset
- What about merging several exposures in HDR? One potential issue is movement of scene elements. Sun flare can also be an issue.





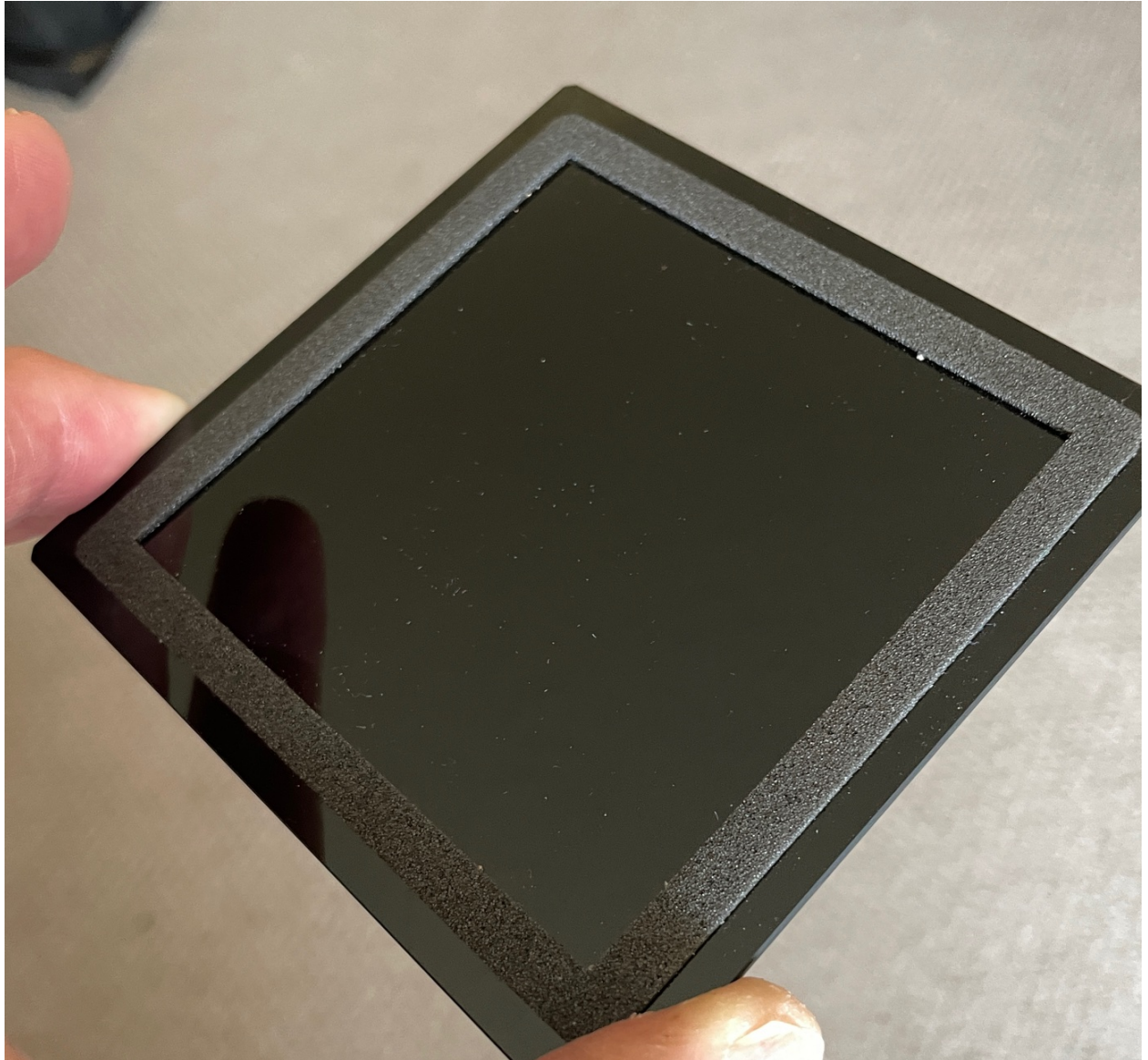
Other

- Cooling, warming, or color compensating. Mostly for film use and often adjusted in post.
- Special effects - IR and star filters

- 2 images used on previous slides from Paul Reiffer via internet

Advanced Minute – The Big Stopper!

- 10 Stop density filter made by Lee filters (Kleenex/tissue analogy)
- 15 stops – Superstopper
- 6 stops – Little Stopper



When to use?

- Enable long exposures to be made in daylight to blur the movement of water, clouds, vegetation and people
- Lee suggests extending the exposure by 960 times – $1/125$ becomes 8 seconds.
- Blurs cloud and water movement

Setup







Using The Big Stopper

- Use tripod
- Compose and focus without the big stopper
- Switch to manual focus mode
- Move to MANUAL and set aperture
- Choose exposure without filter in the usual manner - then use app to calculate speed with the filter
- Put filter on the lens
- Set to BULB mode or set shutter to compensate for filter
- Use remote release for shutter

Free App

