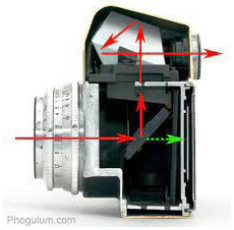
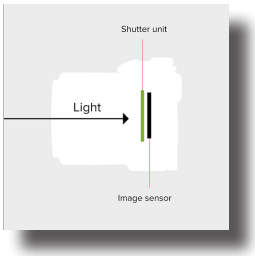
Mirrorless vs. DSLR Cameras

How DSLR Cameras work

- DSLR means because it reflects light around inside the camera using mirrors.
- These cameras are just like but instead use a digital sensor to record the image.
- Light enters the camera and is into an optical viewfinder without the need for any digital processing.
- When the is pressed the whole way, the mirror moves out of the way, allowing light to hit the sensor. This is the clicking sound that they make.
- Mirrorless cameras don't use
- The light travels through the lens where the image is processed into a digital file.
- The image is shown on the of the camera known as the electronic viewfinder.
    - When the shutter button is pressed, the image from the
    - This is just like a
- Most camera manufactures have pivoted their efforts to
- DSLR's are still being but the lines are not being advanced.
- Mirrorless cameras are

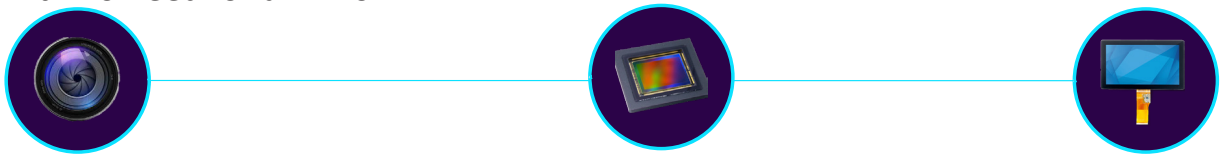




The Mirror

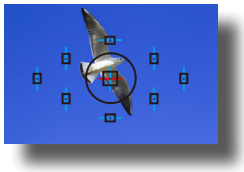
- DSLR cameras use a to flip the image up to the viewfinder.
- Once the shutter button is pressed, the so the image is instead bounced into the sensor and recorded.

- Mirrorless cameras use the captured on the camera sensor to record the image with no need for a mirror.

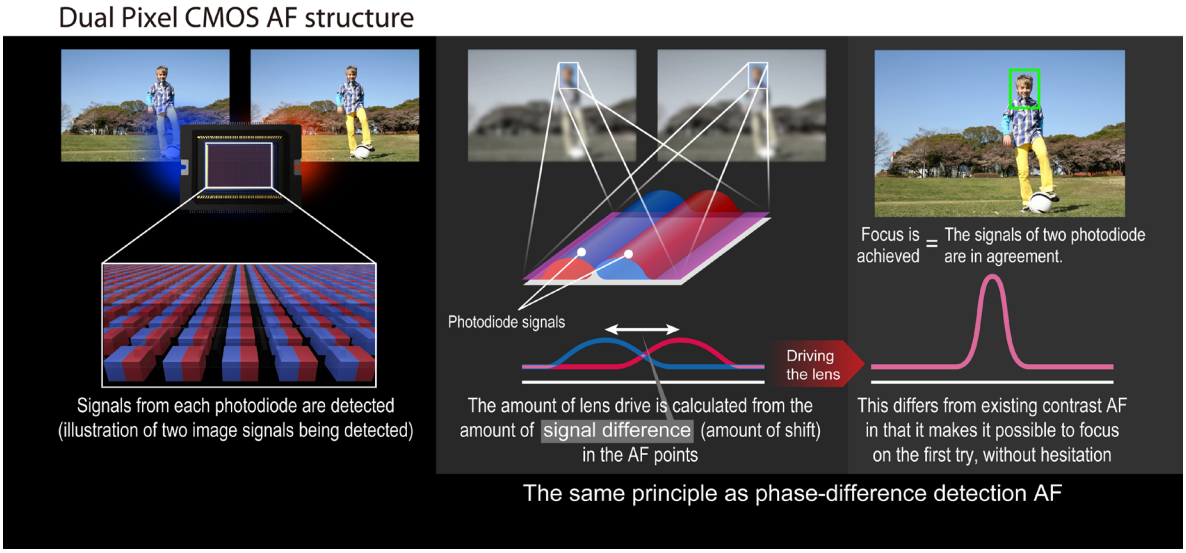


- Some photographers still prefer the , but more importantly the live view drains the cameras battery.

Autofocus



- DSLR' traditionally used a focusing tech, known as
- Mirrorless cameras originally used a slower and less effective focusing system, which uses the sensor to detect the highest amount of contrast, thus focusing the image.



- Mirrorless cameras were the first to put their focusing systems on the to make focusing quicker.

The camera may move the focus motor in the wrong direction first, and may pass through proper focus as it searches for optimal contrast.

  - They also phase detection and contrast detection.
  - DSLR's have gone this route recently too while also having sensors.
- At this point the systems have basically converged and offer the of focusing.

Viewfinders

- DSLR' traditionally used a focusing tech, known as .
- As mentioned earlier, DSLR's have to display the image and often a liveview on the cameras screen.
- Mirrorless cameras don't have an only the live view.
  - This means the needs to be great with high refresh rates and resolution to keep up with the quality of the actual reflected image bounced on to the viewfinder.

    - When there is the screen can sometimes struggle to keep up and offer dull, grainy or jerky images.
    - The benefit to the electronic viewfinder is that the image the final output where looking through an optical viewfinder doesn't show you how aperture or shutter will change the final shot. This makes DSLR's more dependent on metering.

- Despite the development of mirrorless cameras, it's still easier to track and shots with DSLR's because there is no lag time with an optical viewfinder.

Size

- One of the biggest draws of mirrorless technology is that it is because it doesn't have mirrors that have to flip.
- Lenses are still generally the as DSLR cameras though.
- There is also little space for making buttons smaller and much more done on the screen (which is usually larger than on a DSLR).

Lenses

- Since DSLR's are a technology developed there are decade's worth development and lenses.
- Now with companies moving camera's there is little development in these lenses. created by Nikon and Canon allow for DSLR lenses to be used on mirrorless cameras.
- All manufactures now have a fairly of lenses for their mirrorless cameras.

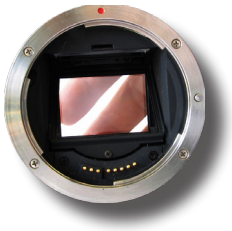
Video

- Since mirrorless provides a they are superior to DSLR's for video.
- It also helps that camera makers are their mirrorless lines; generally leaving DSLR's to stagnate.
- There are DSLR's that are capable of shooting high quality,
- 6 and 8K are only available in though.
- If video is an occasional need are fine but if anything more, go for a mirrorless camera.

Battery Life

- Entry level DSLR cameras will typically shoot on a single charge while mirrorless cameras will shoot only 400 on a charge.
- Relying on the really drains the cameras battery while shooting.
- Just like DSLR's and battery grips are available.
- Most mirrorless cameras which is a convenient option.

Dust



- In a mirrorless camera the since there are not mirrors directly behind the lens.
- It is also mirrorless cameras for this reason.

Which to choose

- DSLR advantages include:
  - DSLR's are big, easy to grip and have making it easier to use choose settings.
  - The is a preference for some.
  - Their batteries will easily than mirrorless.
  - They are often cameras as well.
  - These are regarded as the best cameras
  - There are a compared to mirrorless cameras.
  - Theses cameras are
- DSLR disadvantages include:
  - Mentioned as an advantage, is also a disadvantage when carrying.
  - Manufactures are putting into advancing DLR's… they are being sunsetted.
  - They are but need cleaned less often.
  - They are not as adept at
  - They are because of the moving mirrors.
- Mirrorless camera advantage are:
  - The camera body is to hold and carry.
  - They are than most SLR cameras.
  - The sensor is
  - Without physically moving parts (mirrors) they can capture in a second that DSLR's can.
- Mirrorless camera disadvantages:
  - Mirrorless cameras more often.
  - They are than most DSLR's.
  - Their is smaller, harder for large hands.
  - They consume
  - They aren't as effective in

	MIRRORLESS	DSLR	RESULT
Autofocus	Contrast & Phase on chip	Contrast & Phase on chip	Tie
Viewfinder	Electronic	Optical and Electronic	Tie
Size	Thin w/o lens	Thick w/o lens	Mirrorless
Lenses	Few lenses, can use adaptor	More lenses and cheaper, not developing	Tie
Video	6k & 8k	4K	Mirrorless
Battery	Roughly 3/4 less on charge	Very efficient	DSLR
Dust	Easier to clean, more accessible to dust	Less accessible to dust, hard to clean	Tie
Price	Higher starting point	More affordable	DSLR
Future Proofing	Innovating evolving	Stagnant	Mirrorless
Action & Low light	Less effective	Rather capable	DSLR
OVERALL	Wins in size, video, future proofing	Wins in battery, price low light/action	DRAW