

Important Information about CMOS Image Sensors

CMOS sensors provide significant benefits not available in other digital imaging technologies. Due to their low-power consumption and ability to record High Definition images and beyond, CMOS image sensors are increasingly used by Sony and other camera manufacturers for imaging applications including camcorders, cell phone, to electronic cinematography. Sony and other industry professional cameras specifically utilize CMOS sensors that are known as active pixel sensors ("APS"). These sensors scan images an entire row at a time, from top to bottom. This method enables very high speed multiple outputs through parallel channels.

Commonly known as "rolling shutter", this technique makes it possible to greatly increase the number of pixels that can be read in a specific period of time. High-speed processing provides real time capturing and processing of high-definition video images. CMOS cameras can not only record and playback, high-quality still images with HD+ resolution, but can also to capture and process high-definition video with fine color gradation and detail.

CMOS sensors are ideal for clearly capturing in slow motion an exploding balloon or a golf swing. The image remains distinctly clear using a high frame rate with no increase in power consumption. These significant benefits, unavailable in other digital imaging technologies, can, however, be compromised, in very limited conditions.

Typically, these conditions occur when shooting scenes containing prominent flashing lights or other flash photography. Examples of these conditions include: evening police activity where police lights are being used, evening storms where lightning fill the sky, scenes with numerous flashes emanating from other cameras (e.g wedding scene) , and other conditions with numerous multiple bright lights flashing simultaneously. Under these limited conditions) , CMOS sequential reading or "rolling shutter" may result in some image distortion or banding. This phenomenon is a normal attribute of APS CMOS sensors and not the signal of a malfunction or defect of any kind.