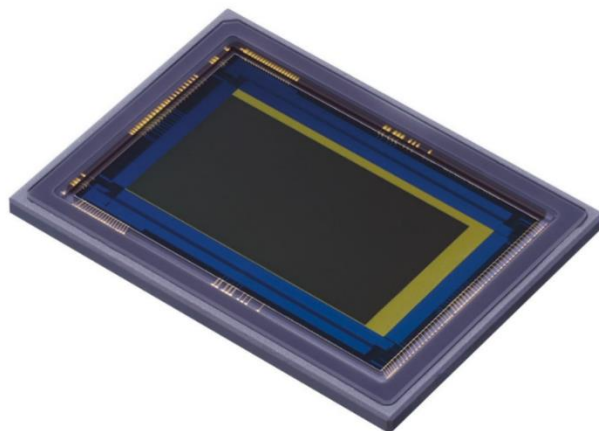


# High Sensitivity 35mm Full-frame CMOS

35MMFHDXSMA(Mono) / 35MMFHDXSCA (RGB)



*This sensor is a solid-state CMOS area scan image sensor of 47.7mm diagonal (larger than 35 mm full frame) with 2.76 million effective 19um square pixels. As the successor to the 35MMFHDXS series, this new sensor features a larger detector area, higher effective resolution, higher frame rate, with lower power consumption and simpler power requirements. The sensor also features selectable vertical start positions (98 fps in all-pixel readout, 115 fps in FHD readout, and 300 fps in 360- row readout). Dark current is also reduced for long exposure times. The large, high sensitivity, 19 um x 19 um pixel enables capturing motion imagery in night time environments.*

*\*35MMFHDXS\_A series consists of 35MMFHDXSCA (color) and 35MMFHDXSMA (monochrome).*

## Comparison of the sensor sensitivity

Still image of Byodo-in Temple shot with the video camera at the midnight



General video camera

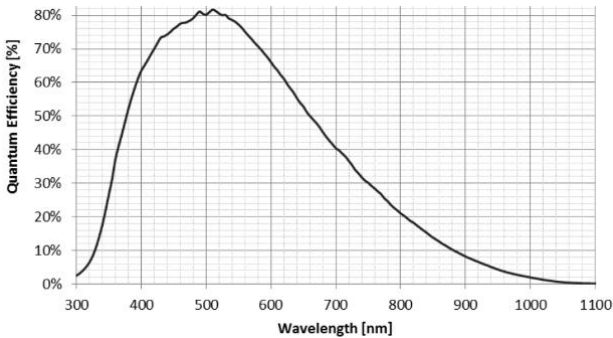


35MMFHDXSCA (color)

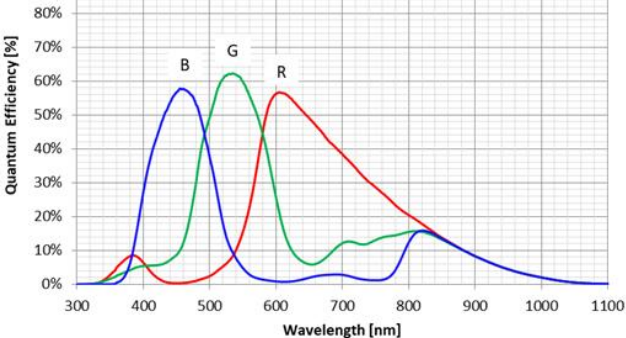
# Specifications

	35MMFHDXSMA	35MMFHDXSCA
Filter Type	Monochrome	RGB
Sensitivity(e-/lx/sec)	2,100,000	1,100,000
Sensor Size	41.04 mm x 24.32 mm	
Number of Effective Pixels	2160 x 1280 (Horizontal x Vertical)	
Pixel Size	19 um x 19 um	
Scan Type	Progressive Scan	
Shutter	Rolling shutter	
Maximum Frame Rate (All Pixels)	98 fps	
Saturation	61,000 e @gain x1	
Dark Random Noise	2.2 e rms @gain x16, room temperature	
Dark Current	60 e/sec @room temperature	
Drive Frequency	21 MHz	
Output Channels	16 ch analog outputs	
Power Consumption	1.7 W (Typ.) @All pixels readout at 60 fps	
Power Supply Voltages	5.0 V, 3.3 V	
Package Type	180 pin ceramic PGA	
Package Size	60.9 mm x 44.6 mm x 3.57 mm (External electrodes are not included)	
Quantum Efficiency Plot	See diagram below	

35MMFHDXSMA (Mono)





35MMFHDXSCA (RGB)




\* The contents of this specification are subject to change without notice.

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