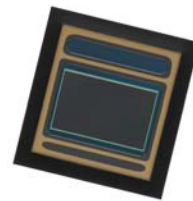




Sony's CMOS Image Sensor for Automotive

IMX390CQV

1/2.7-type 2.45megapixels CMOS image sensor



1. Industry First* simultaneous LFM and HDR
Realizes simultaneous LFM and HDR functions by using Sony's original pixel architecture and exposure methods. LED traffic signs and LED lights of vehicles can be accurately recognized while enabling HDR image capture with no highlight blowout or loss of shadow detail in situations of dramatic contrast, such as when entering or exiting tunnels.
2. High Sensitivity
Achieves highest sensitivity in 2.0 megapixel class automotive cameras* to capture high-quality color images even in low light conditions such as 0.1 lux, which is equivalent to moonlight.
3. Meeting quality standards for automotive camera
 - AEC-Q100 Grade 2
 - Development process complies with ISO26262
 - ASIL C functional safety requirements

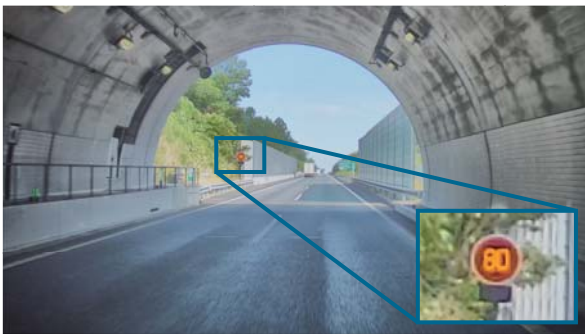
Product Features

- Number of recommended recording pixels:
WUXGA 1920 (H) × 1200 (V) approx. 2.30M pixel
Full-HD 1920 (H) × 1080 (V) approx. 2.07M pixel
- Readout rate
Maximum frame rate in Full HD 1080P mode:
60 fps@AD10bit, 40fps@AD12bit
- High dynamic range (HDR) function
- LED Flicker mitigation (LFM) function
- Variable-speed shutter function
(resolution 1H units)
- 10-bit / 12-bit A/D converter on chip
- CDS / PGA function
- Interface
MIPI CSI-2 serial output (2lane/4lane)
- AEC-Q100 Grade 2
- ISO26262 / ASIL C

Product Specifications

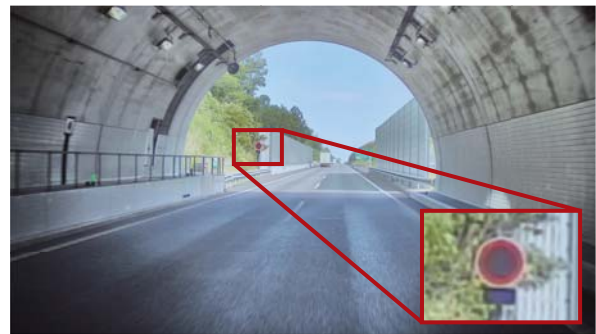
Model name		IMX390CQV
Number of effective pixels		2017 (H) x 1217 (V) 2.45 megapixels
Image size		Diagonal 6.67mm (type 1/2.7)
Unit cell size		3.0μm (H) x 3.0μm (V)
Frame rate	WUXGA	10bit 50fps, 12bit 30fps
	Full HD	10bit 60fps, 12bit 40fps
Dynamic range (EMVA1288 standard)		120dB
Sensitivity (F5.6 standard value, 1/30 second storage time)		1953mV (green pixel)
Saturation signal (minimum value)		700mV
Power supply	Analog	2.9V
	Digital	1.2V
	Interface	1.8V
Interface		MIPI CSI-2 serial output (2lane/4lane)
Package		96pin plastic BGA
Package size		10.0mm x 10.6mm

Image captured with "IMX390"



Simultaneous LFM and HDR

Image captured with "IMX290"



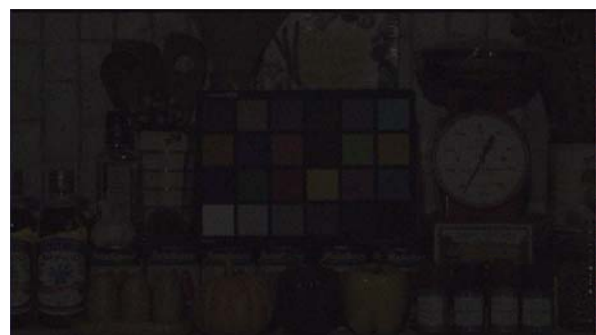
HDR function only

Image captured with "IMX390"



IMX390 under 0.1 lux light condition

Visual contact image



Visual image under 0.1 lux light condition