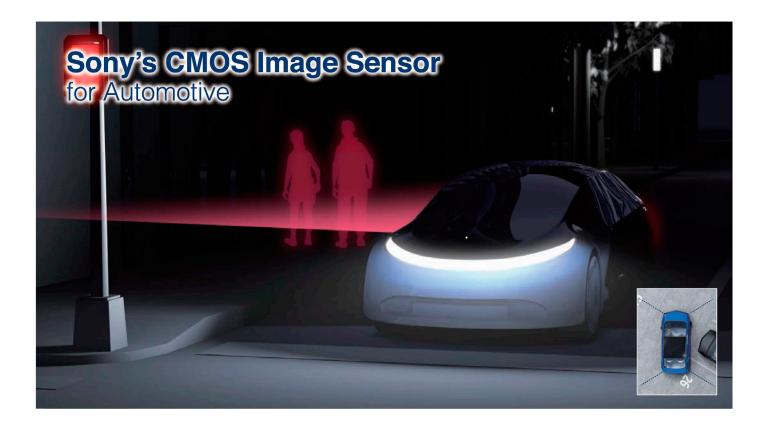
## SONY





The ISX019 is a System on Chip with the stacked structure consists of a high performance image sensor and a processing engine for automotive surround and rear view camera use.

- The image sensor uses a back-illuminated pixel technology to realize high sensitivity and low noise, and the logic chip realizes large-scale circuit by state-of-the-art process in smaller chip with low power consumption.
- 2. High Dynamic Range (HDR) function is realized by digital overlap method of combining multiple frames on chip.
- 3. "Super Contrast" is one of the built-in function, which enhances the contrast of picture.

## **Product Features**

- Sensitivity 4x improvement than conventional product.
- Conversion Gain Switching (HCG mode / LCG mode)
- Power consumption 40% reduction than conventional product
- High Dynamic Range (HDR) function
  - 100dB@60fps by 2-frame combination
  - 120dB@30fps by 3-frame combination.
- Super Contrast function
- AE/AWB control function
- External communication interface: I2C
- Output interface:
  - CMOS Parallel / MIPI CSI-2 Serial
- Output format : YCbCr format
- 12-bit / 10-bit A/D converter
- Serial-NOR-Flash control function
- AEC-Q100 Grade 2 qualified

## **Product Specifications**

Model name		ISX019
Number of recommended recording pixels		1280 (H) X 960 (V) approx. 1.23M pixels
Image size		Diagonal 4.69mm (type 1/3.8)
Unit cell size		2.9µm (H) X 2.9µm (V)
Frame rate	QVGA	60fps, 50fps, 30fps, 25fps
	V480	60fps, 50fps, 30fps, 25fps
Scaling Output mode		VGA, WVGA, XGA, HD720, WXGA, Quad-VGA
Sensitivity (Standard value@ Lens F5.6, 1/30 second exposure time)		7.7V/lux • sec (HCG mode, green pixel)
Power supply	Analog	2.9V
	Digital	1.1V
	Interface	1.8V
Power consumption		250mW (DOL3F@30fps)
Interface		- CMOS parallel output (8-bit Multiplex)
		- MIPI CSI-2 serial data output (4-lane / 2-lane)
Package		72pin BGA
Package size		6.65mm X 7.3mm

## Image under low light



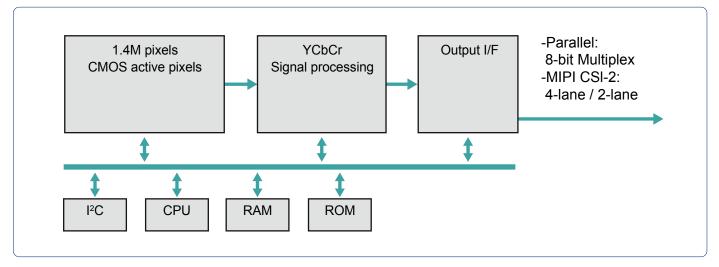
ISX019



**Conventional Product** 

ISX019 can recognize color information of traffic cone on far side of the parking lot.

**Block Diagram** 



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