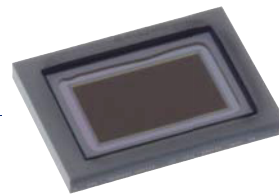


IMX290NQV

1/2.8-type 2.13megapixels CMOS image sensor



1. Realizes the capture of high-resolution color images even under dark condition

- Employs a back-illuminated structure and also have an expanded photodiode area, which improve sensitivity more than double compared to the existing same pixel size product.
- Incorporates programmable gain amplifier capable of amplifying electric signals up to 72 dB

2. Supports HDR system when combined with a compatible ISP by setting 2 or 3 multiple exposure time, and thereby significantly extends dynamic range compared with conventional models.

3. Includes a pixel structure with heightened sensitivity to near infrared light

Product Features

- Number of recommended recording pixels: 1920 (H) × 1080 (V) approx. 2.07M pixel
- Readout rate
Maximum frame rate in Full HD 1080P mode: 120 frame / s
- High dynamic range (HDR) function
- Variable-speed shutter function (resolution 1H units)
- 10-bit / 12-bit A/D converter on chip
- CDS / PGA function
- Supports I/O switching
CMOS logic parallel SDR output
Low voltage LVDS (150 m Vp-p) serial (2 ch / 4 ch / 8 ch switching) DDR output
CSI-2 serial data output (2 Lane / 4 Lane, RAW10 / RAW12 output)
- AEC-Q100 Grade 2

Product Specifications

Model name		IMX290NQV
Number of effective pixels		1945 (H) x 1097 (V) 2.13 megapixels
Image size		Diagonal 6.46mm (type 1/2.8)
Unit cell size		2.9μm (H) x 2.9μm (V)
Frame rate	Full HD 1080P	10bit 120fps, 12bit 60fps
	HD 720P	10bit 120fps, 12bit 60fps
Sensitivity (F5.6 standard value, 1/30 second storage time)		1300mV (green pixel)
Saturation signal (minimum value)		913mV
Power supply	Analog	2.9V
	Digital	1.2V
	Interface	1.8V
Interface		Parallel CMOS / MIPI CSI-2 Low voltage version serial LVDS
Package		78pin BGA
Package size		9.6mm x 7.0mm

Image captured with the "IMX290"



0.08lx, F1.4, 33.3msec exposure time, 63dB gain

Image captured with conventional technology



0.08lx, F1.4, 33.3msec exposure time, 48dB gain

Image captured with the "IMX290"



0.1lx, F1.4, 33.3msec exposure time, 42dB gain

Image captured with conventional technology



0.1lx, F1.4, 33.3msec exposure time, 42dB gain