



KLT-P4MA-IMX219 V1.0

SONY IMX219 MIPI串行接口 自动对焦 800万像素 摄像头模组



摄像头模组型号	KLT-P4MA-IMX219 V1.0
图像感光芯片	IMX219
焦距	2.93 mm
光圈	2.0
像素	3296 x 2480
可视角度	75°
镜头类型	1/4 英寸
镜头尺寸	8.50 x 8.50 x 4.62 mm
模组尺寸	31.90 x 9.80 mm
模组类型	自动对焦
接口	MIPI串行

配对连接器型号: 24-5804-030-000-829



主板上的对应连接器。分开售卖。

[Product Brief]

Ver.1.0

IMX219

Diagonal 4.60mm (Type 1/4.0) 8M Pixel CMOS Image Sensor with Square Pixel for Color Cameras

Description

IMX219 is a diagonal 4.60mm (Type 1/4.0) CMOS active pixel type image sensor with a square pixel array and 8.08M effective pixels. This chip operates with three power supplies, analogue 2.8V, digital 1.2 V, and IF 1.8 V, and has low power consumption. High sensitivity, low dark current, and no smear are achieved through the adoption of R, G, and B primary color pigment mosaic filters. This chip features an electronic shutter with variable charge-storage time.

In addition, this product is designed for use in cellular phone and tablet pc. When using this for another application, Sony does not guarantee the quality and reliability of product. Therefore, don't use this for applications other than cellular phone and tablet pc. Consult your Sony sales representative if you have any questions.

Functions and Features

- ◆ Back-illuminated CMOS image sensor Exmor R™
- ◆ 2-wire serial communication circuit on chip
- ◆ CSI2 serial data output (selection of 4lane/2lane)
- ◆ Timing generator, H and V driver circuits on chip
- ◆ CDS/PGA on chip
- ◆ 10-bit A/D converter on chip
- ◆ Automatic optical black (OB) clamp circuit on chip
- ◆ PLL on chip (rectangular wave)
- ◆ High sensitivity, low dark current, no smear
- ◆ Excellent anti-blooming characteristics
- ◆ Variable-speed shutter function (1 H units)
- ◆ R, G, B primary color pigment mosaic filters on chip
- ◆ Max. 30frame/s in all-pixel scan mode
- ◆ Pixel rate: 280 [Mpixel/s] (All-pixels mode)
- ◆ 180 frame/s @720p with 2x2 analog (special) binning, 60 frame/s @1080p with V-crop
- ◆ Datarate: Max.755Mbps/lane (@4lane), 912Mbps/Lane(@2lane)

Device Structure

◆ CMOS image sensor	
◆ Image size	: Diagonal 4.60mm (Type 1/4.0)
◆ Total number of pixels	: 3296(H) × 2512(V) approx. 8.28M pixels
◆ Number of effective pixels	: 3296(H) × 2480(V) approx. 8.17M pixels
◆ Number of active pixels	: 3280(H) × 2464(V) approx. 8.08M pixels
◆ Chip size	: 5.095mm (H) × 4.930mm (V) (w/ Scribe)
◆ Unit cell size	: 1.12μm (H) × 1.12μm (V)
◆ Substrate material	: Silicon

Functional Description

Block diagram



Exmor R

* Exmor R is a trademark of Sony Corporation. The Exmor R is a Sony's CMOS image sensor with significantly enhanced imaging characteristics including sensitivity and low noise by changing fundamental structure of Exmor™ pixel adopted column parallel A/D converter to back-illuminated type.

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Application circuits shown, if any, are typical examples illustrating the operation of the devices. Sony cannot assume responsibility for any problems arising out of the use of these circuits.