



KLT-P4MA-IMX219 V1.2

SONY IMX219 MIPI Interface Mise au point automatique 8MP Module de caméra



Module de caméra No.	KLT-P4MA-IMX219 V1.2
Capteur d'image	IMX219
EFL	2.5 mm
F.NO	2.2
Pixel	3296 x 2480
Angle de vue	84°(D) 71.2°(H) 56.4°(V)
Type d'objectif	1/4 pouce
Dimensions de l'objectif	8.50 x 8.50 x 4.43 mm
Taille du module	31.90 x 9.80 mm
Type de module	Mise au point automatique
Interface	MIPI

Référence du connecteur d'accouplement.	24-5804-030-000-829
	
Connecteur d'accouplement sur la carte principale. Vendu séparément.	

[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.

Sony reserves the right to change products and specifications without prior notice.

This information does not convey any license by any implication or otherwise under any patents or other right.

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.