

KLT-B9MF-IMX377 V1.0**SONY IMX377 MIPI e DVP Paralelo Interface Foco Fixo 12.35MP
M12 Módulo de Câmera**

| | |
|-----------------------------|-----------------------------|
| Módulo de câmara No. | KLT-B9MF-IMX377 V1.0 |
| Sensor de imagem | IMX377 |
| EFL | 4.1 mm |
| F.NO | 2.5 |
| Pixel | 4056 x 3046 |
| Ângulo de visão | 90°(D) 77°(H) 59°(V) |
| Tipo de lente | 1/2.3 polegada |
| Dimensões da lente | 17.20 x 17.20 x 26.80 mm |
| Tamanho do Módulo | 42.09 x 24.20 mm |
| Tipo de Módulo | Foco Fixo |
| Interface | MIPI e DVP Paralelo |

Acasalamento Parte conector No. AXE540124

Conector de acoplamento na placa principal. Vendido separadamente.

[Product Information]

IMX377CQT

Ver.1.0

Diagonal 7.81 mm (Type 1/2.3) CMOS Image Sensor with Square Pixel for Color Cameras

Description

The IMX377CQT is a diagonal 7.81 mm (Type 1/2.3) CMOS image sensor with a color square pixel array and approximately 12.35 M effective pixels. 12-bit digital output makes it possible to output the signals of approximately 12.35 M effective pixels with high definition for shooting still pictures. It also operates with three power supply voltages : analog 2.8 V, digital 1.2 V, and 1.8 V for I/O interface and achieves low power consumption. Furthermore, it realizes 12-bit digital output for shooting high-speed and high-definition moving pictures by horizontal and vertical addition and subsampling. Realizing high-sensitivity, low dark current, this sensor also has an electronic shutter function with variable integration time.

In addition, this product is designed for use in consumer use digital still camera and consumer use camcorder. When using this for another application, Sony Semiconductor Solutions Corporation does not guarantee the quality and reliability of product. Therefore, don't use this for applications other than consumer use digital still camera and consumer use camcorder.

In addition, individual specification change cannot be supported because this is a standard product.

Consult your Sony Semiconductor Solutions Corporation sales representative if you have any questions.

Features

- ◆ CMOS active pixel type pixels
- ◆ Input clock frequency 6 to 27 MHz
- ◆ MIPI Specifications (CSI-2 high-speed serial interface)
- ◆ All-pixel scan mode
 - Various readout modes (*)
- ◆ High-sensitivity, low dark current, no smear, excellent anti-blooming characteristics
- ◆ Vertical and horizontal arbitrary cropping function
- ◆ Variable-speed shutter function (minimum unit: 1 horizontal period)
- ◆ Low power consumption
- ◆ H driver, V driver and I²C communication circuit on chip
- ◆ CDS/PGA on chip: Gain +27 dB (step pitch 0.1 dB)
- ◆ 10-bit/12-bit A/D conversion on chip
- ◆ R, G, B primary color mosaic filters on chip
- ◆ All-pixel simultaneous reset supported
- ◆ 98-pin high-precision ceramic package

* Please refer to the datasheet for binning/subsampling details of readout modes.

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

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Device Structure

- ◆ CMOS image sensor
- ◆ Image size Diagonal 7.81 mm (Type 1/2.3)
- ◆ Total number of pixels 4152 (H) × 3062 (V) approx. 12.71 M pixels
- ◆ Number of effective pixels
 - Type 1/2.3 approx. 12.35 M pixels use 4056 (H) × 3046 (V) approx. 12.35 M pixels
 - Type 1/2.5 approx. 9.03 M pixels use 4152 (H) × 2174 (V) approx. 9.03 M pixels
- ◆ Number of active pixels
 - Type 1/2.3 approx. 12.35 M pixels use 4024 (H) × 3036 (V) approx. 12.22 M pixels diagonal 7.81 mm
 - Type 1/2.5 approx. 9.03 M pixels use 4120 (H) × 2168 (V) approx. 8.93 M pixels diagonal 7.22 mm
- ◆ Number of recommended recording pixels
 - Type 1/2.3 approx. 12.35 M pixels use 4000 (H) × 3000 (V) 12.00 M pixels aspect ratio 4:3
 - Type 1/2.5 approx. 9.03 M pixels use 4096 (H) × 2160 (V) approx. 8.85 M pixels aspect ratio approx. 17:9
- ◆ Chip size 10.200 mm (H) × 8.000 mm (V) (include scribe area)
- ◆ Unit cell size 1.55 μm (H) × 1.55 μm (V)
- ◆ Optical black
 - Horizontal (H) direction : Front 0 pixel, rear 0 pixel
 - Vertical (V) direction : Front 16 pixels, rear 0 pixel
- ◆ Package 98 pin LGA

Image Sensor Characteristics

(Tj = 60 °C)

| Item | | Value | Remarks |
|--------------------|------|------------|--------------------|
| Sensitivity (F5.6) | Typ. | 976 digit | 1/30 s integration |
| Saturation signal | Min. | 2799 digit | |

Basic Drive Mode

Type 1/2.3 Approx. 12.35 M Pixels (4:3)

| Drive mode | Number of recording pixels | Max frame rate [frame/s] | Output data bit length [bit] |
|-----------------|---|--------------------------|------------------------------|
| Readout mode 0 | 4000 (H) × 3000 (V) 12.00 M pixels | 34.97 | 12 |
| Readout mode 1 | 4000 (H) × 3000 (V) 12.00 M pixels | 39.96 | 10 |
| Readout mode 1A | 4000 (H) × 3000 (V) 12.00 M pixels | 29.97 | 10 |
| Readout mode 2 | 2000 (H) × 1500 (V) 3.00 M pixels | 59.94 | 12 |
| Readout mode 3 | 1332 (H) × 998 (V) approx. 1.33 M pixels | 59.94 | 12 |
| Readout mode 4 | 1332 (H) × 1000 (V) approx. 1.33 M pixels | 239.76 | 12 |
| Readout mode 5 | 2000 (H) × 750 (V) 1.50 M pixels | 239.76 | 10 |
| Readout mode 6 | 1332 (H) × 332 (V) approx. 0.44 M pixels | 299.70 | 12 |
| Readout mode 7 | 1332 (H) × 332 (V) approx. 0.44 M pixels | 29.97 | 12 |
| Readout mode 8 | 1332 (H) × 174 (V) approx. 0.23 M pixels | 659.34 | 12 |

Type 1/2.5 Approx. 9.03 M Pixels (Approx. 17:9)

| Drive mode | Number of recording pixels | Max frame rate [frame/s] | Output data bit length [bit] |
|-----------------|---|--------------------------|------------------------------|
| Readout mode 0 | 4096 (H) × 2160 (V) approx. 8.85 M pixels | 29.97 | 12 |
| Readout mode 1 | 3840 (H) × 2160 (V) approx. 8.29 M pixels | 59.94 | 10 |
| Readout mode 1A | 3840 (H) × 2160 (V) approx. 8.29 M pixels | 59.94 | 10 |
| Readout mode 2 | 2048 (H) × 1080 (V) approx. 2.21 M pixels | 119.88 | 12 |
| Readout mode 2A | 2048 (H) × 1080 (V) approx. 2.21 M pixels | 119.88 | 12 |
| Readout mode 3 | 1364 (H) × 720 (V) approx. 0.98 M pixels | 119.88 | 12 |
| Readout mode 4 | 1364 (H) × 720 (V) approx. 0.98 M pixels | 299.70 | 12 |
| Readout mode 6 | 1364 (H) × 240 (V) approx. 0.33 M pixels | 419.58 | 12 |
| Readout mode 8 | 1364 (H) × 124 (V) approx. 0.17 M pixels | 839.16 | 12 |