

Diagonal 7.81mm (Type 1/2.3) approximately 12.35 M effective pixels
CMOS Image Sensor with Square Pixel

IMX377EQH5

Features

- ◆ High image quality
 - 1.55um pixel characteristics
- ◆ High speed
 - Still image (4000 x 3000) 35 fps@12-bit, 40fps@10-bit
 - 4k2k 60fps
- ◆ Interface
 - MIPI I/F

Functions

- ◆ Input clock frequency : 6 to 27MHz
- ◆ Input Interface : I²C
- ◆ Output interface : MIPI D-PHY (4-lane)
- ◆ R, G, B primary color
- ◆ R, G, B primary color mosaic filters on chip
- ◆ Power specification : 2.8V / 1.8V / 1.2V
- ◆ Guaranteed operating temperature : -10 to +75 °C
- ◆ Performance guarantee temperature : -10 to +60 °C
- ◆ Function : Horizontal arbitrary cropping function

Use

- ◆ consumer use digital still camera,
consumer use camcorder

Exmor 

Chip Information

Items	IMX377
Chip size	10.200 mm (H) × 8.000 mm (V) (include scribe area)
The number of pin	103 Pin

Diagram illustrating the effective area of the image sensor for the 1080p60 mode. The diagram shows the dimensions of the image area and the margins for color processing.

Dimensions:

- Total width: 4104
- Total height: 3062
- Effective width: 4000
- Effective height: 3000

Margins and Ignored Areas:

- 18 Effective margin for color processing (horizontal)
- 18 Effective margin for color processing (vertical)
- 4 Ignored area of effective pixel (bottom)
- 6 Ignored area of effective pixel *1 (top)
- 16 User clamp (top)
- 18 Ignored area of effective pixel (right)
- 14 Ignored area of effective pixel (left)
- 12 Effective margin for color processing (left)
- 12 Effective margin for color processing (right)

Other Labels:

- PH (Picture Header)
- PF (Picture Footer)
- FE (Frame End)
- Frame Blanking
- Line Blanking
- 48 Ignored area (left)

Readout Modes

When Using Type 1/2.3 Approx. 12.35M Pixels (4:3), Type 1/2.5 Approx. 9.03M Pixels (Approx. 17:9)

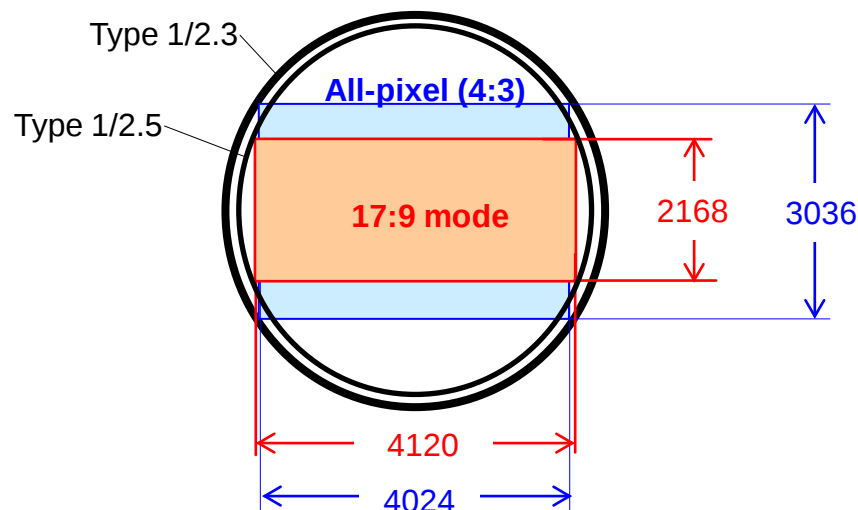
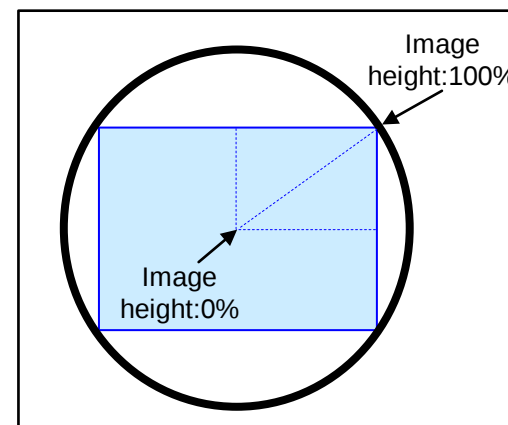
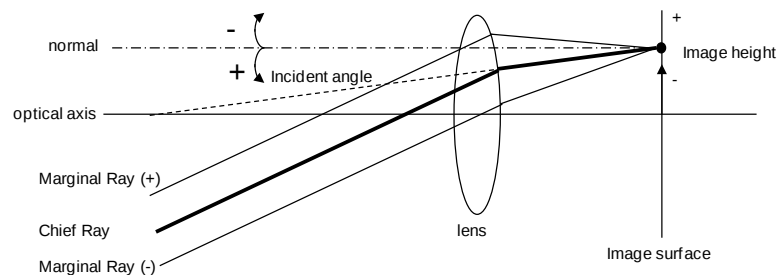
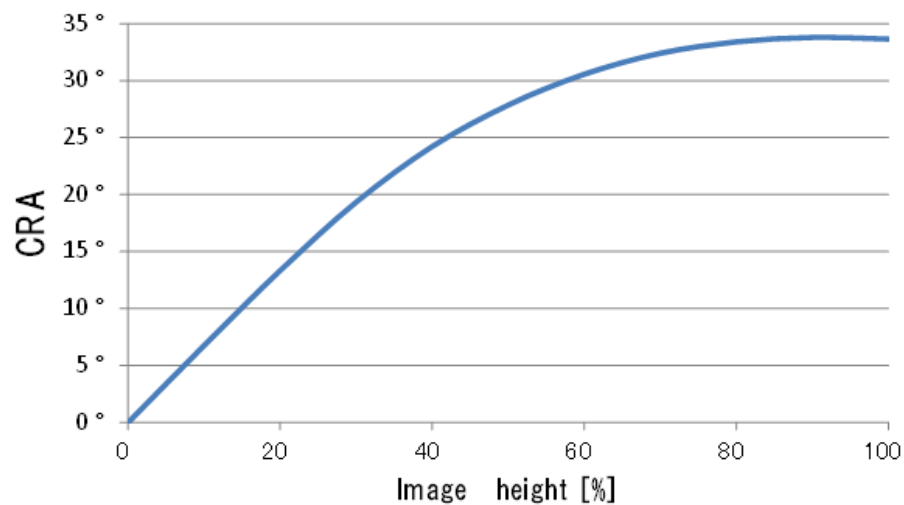


Image Size	Readout drive mode	Recommended recording pixels (pixel)	Frame frequency (frame/s)	Number of A/D conversion bits (bit)	Output data bit length (bit)	Number of MIPI output lanes (lane)	Power Consumption (mW)
Type 1/2.3	All-pixel scan (12bit)	4000 (H) x 3000 (V) <i>All-pixel</i>	34.97	12	12	4	393
Type 1/2.5	All-pixel scan (10bit)	3840 (H) x 2160 (V) <i>4k2k/60fps</i>	59.94	10	10	4	305
Type 1/2.5	Horizontal/vertical 2/2-line binning	2048 (H) x 1080 (V) <i>1080p/120fps</i>	119.88	10	12	4	374
Type 1/2.5	Vertical 1/3 subsampling horizontal 3 binning	1364 (H) x 720 (V) <i>720p/300fps</i>	299.70	10	12	4	375

Relation between image height and CRA (Type 1/2.3)



CRA vs. Image height



List of Trademark Logos and Definition Statements



* 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 ExmorTM pixel adopted column parallel A/D converter to back-illuminated type.