

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

IMX377CQT

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

The Exmor R logo features the word "Exmor" in a stylized, italicized font, followed by a large, bold letter "R" enclosed within a square frame.

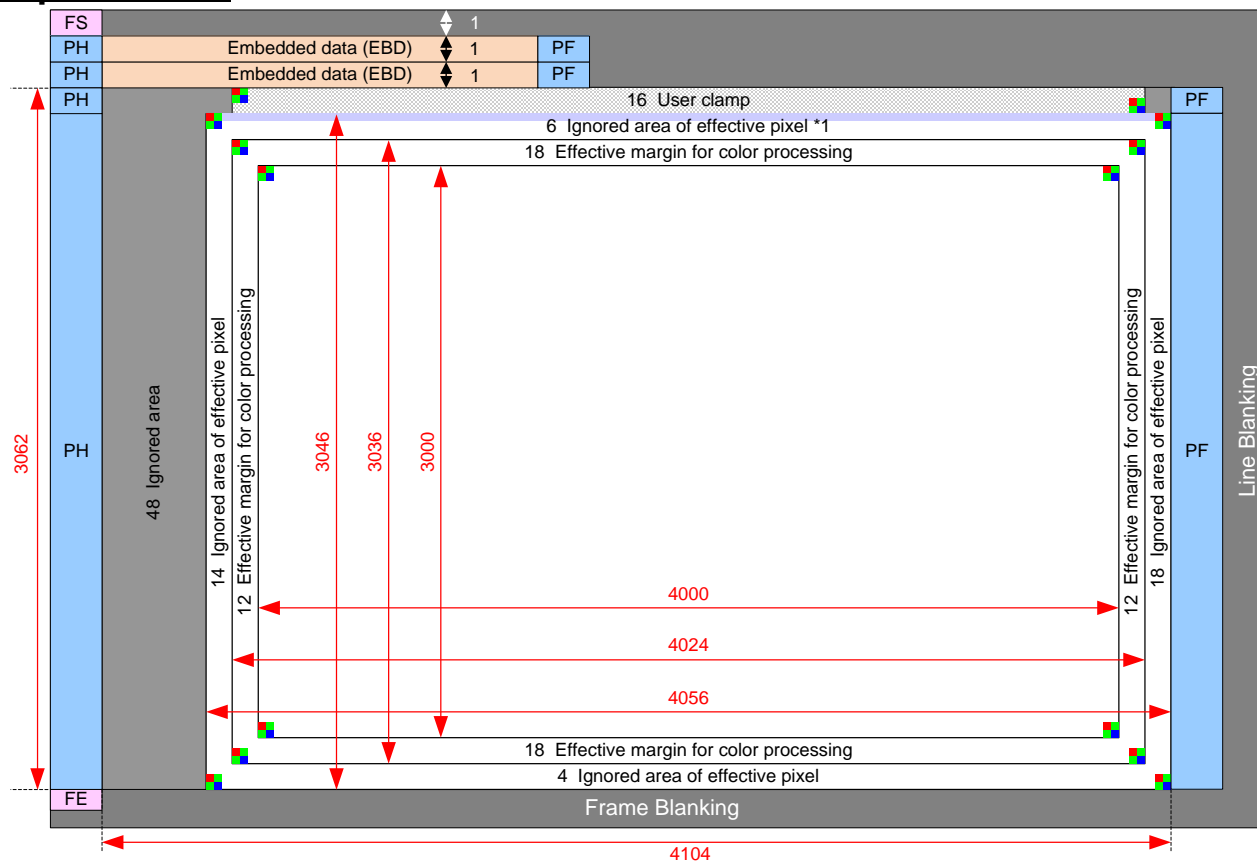
Device Structure

Items	IMX377
Image size	Diagonal 7.81 mm (Type 1/2.3)
Unit cell size	1.55 μm (H) × 1.55 μm (V)
Optical black (All pixel scan)	Horizontal (H) direction : Front 48 pixels, rear 0 pixel Vertical (V) direction : Front 16 pixels, rear 0 pixel

Package Information

Items	IMX377
Package size	12.80 mm (H) × 10.50 mm (V) × 1.95 mm (T)
The number of pin	98 Pin (LGA)

Image Data Output Format



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)

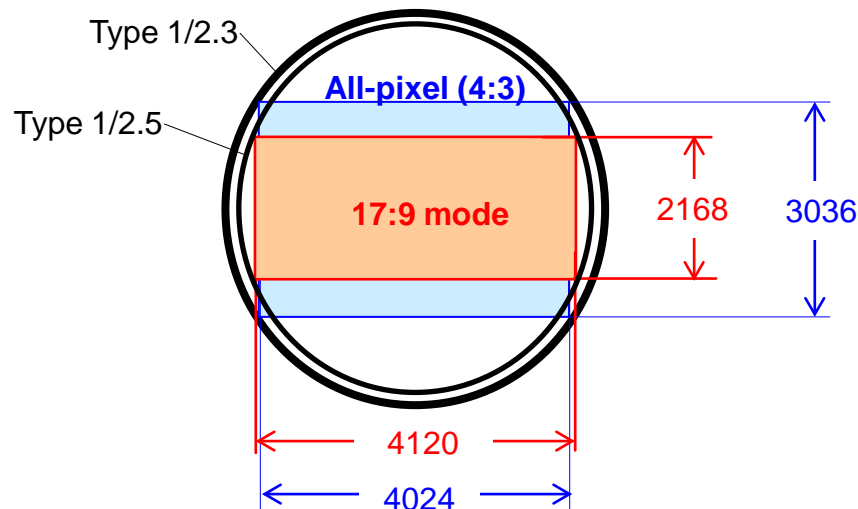
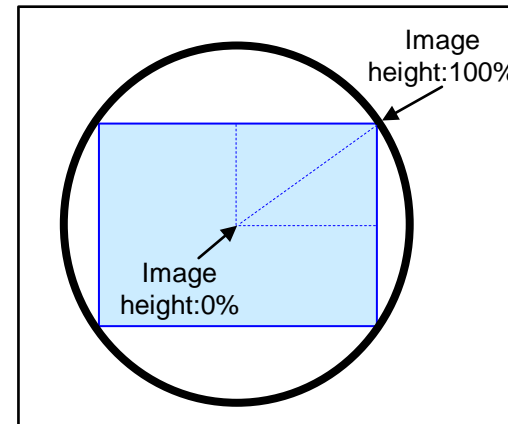
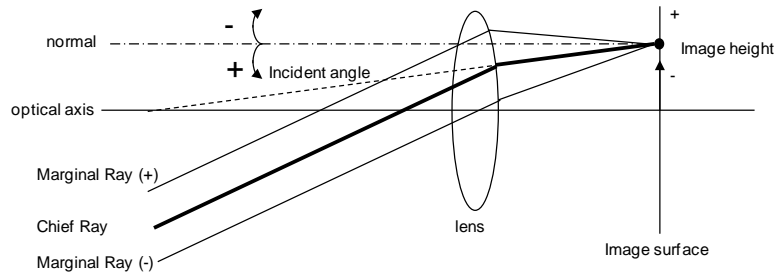
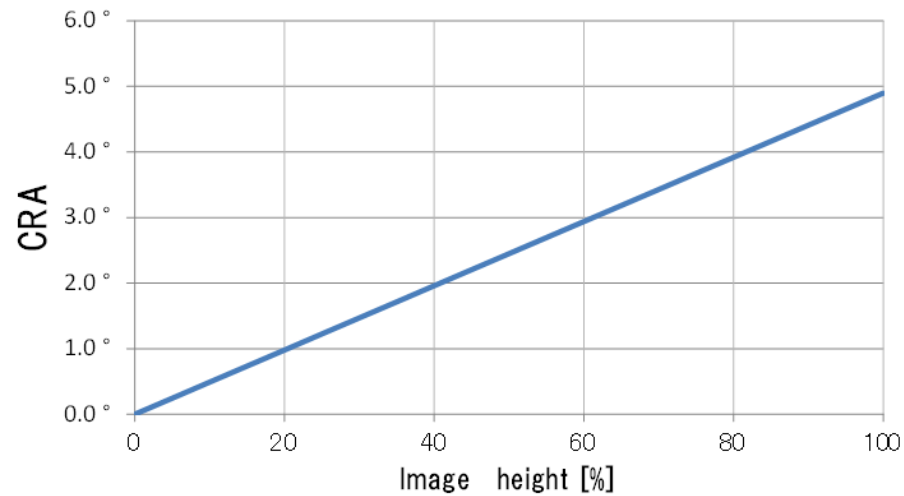


Image Size	Readout drive mode	Recommended recording pixels (pixel)	Frame frequency (frame/s)	Number of A/D conversion bits (bit)	Output data bit length (bit)	Number of MIPI output lanes (lane)	Power Consumption (mW)
Type 1/2.3	All-pixel scan (12bit)	4000 (H) x 3000 (V) <i>All-pixel</i>	34.97	12	12	4	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

* 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.