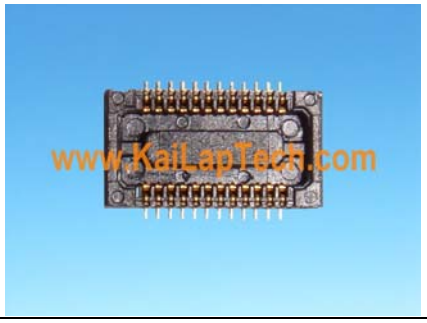
CMOS CAMERA MODULES

your BEST camera module partner

KLT-P8K-IMX323 V1.0

SONY IMX323 MIPI et Parallèle DVP Interface Mise au point fixe 2MP M12 Module de caméra

Module de caméra No.	KLT-P8K-IMX323 V1.0
Capteur d'image	IMX323
EFL	1.05 mm
F.NO	2.4
Pixel	1985 x 1105
Angle de vue	210°
Type d'objectif	1/2.9 pouce
Dimensions de l'objectif	13.00 x 13.00 x 23.73 mm
Taille du module	22.00 x 22.00 mm
Type de module	Mise au point fixe
Interface	MIPI et Parallèle DVP
Modèle d'objectif IMT	IMT-2B12E007-6

Référence du connecteur d'accouplement. DF30FC-24DS-0.4V / FH12-24S-0.5SH
 
Connecteur d'accouplement sur la carte principale. Vendu séparément.

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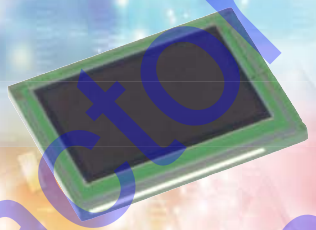
SONY

IMX323LQN



Diagonal 6.23 mm (Type 1/2.9)
Approx. 2.19M-Effective Pixel Color CMOS Image Sensor

Full HD Support High Sensitivity CMOS Image Sensor with a Super Small Package for Industrial Applications

Sony has commercialized the "IMX323LQN" CMOS Image Sensor that realizes a compact and thin package while maintaining low illumination performance equal to that of the existing Sony product (IMX222LQJ*) that improved sensitivity in the near infrared region for industrial applications.
WLCSP (Wafer Level Chip Size Package) technology is used to realize a smaller size while maintaining performance such as visibility. The package size has been reduced to 1/8 the volume of the previous product, which helps to greatly reduce the set size.

* See the New Product Information released in August 2013

- Frame rate 30 frame/s
- On-chip 10-bit/12-bit ADC
- Pixel size: 2.8 µm-square unit pixel
- Compact and thin package using WLCSP technology
  7.55mm (H) × 5.75mm (V) × 0.77mm (t)
- Improved sensitivity in the near infrared range

Exmor

* Exmor is a trademark of Sony Corporation. The Exmor is a version of Sony's high performance CMOS image sensor with high-speed processing, low noise and low power dissipation by using column-parallel A/D conversion.

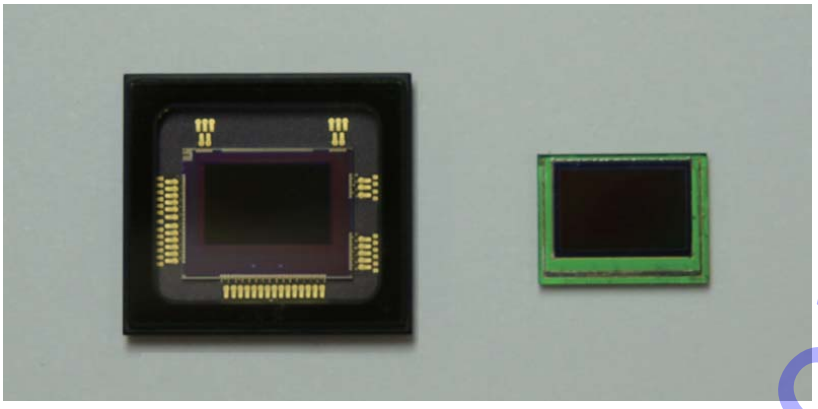
Compact and thin package

The IMX323LQN is the first Sony CMOS image sensor for industrial applications to use WLCSP (Wafer Level Chip Size Package) technology, which realized a reduced package size and thickness (7.55mm (H) × 5.75mm (V) × 0.77mm(t)) compared to the existing product IMX222LQJ (12.8mm (H) × 10.8mm (V) × 1.95mm (t)). This makes it possible to shrink the set board size, which helps to reduce the camera size (Photograph 1).

Improved sensitivity in the near infrared range

Improved picture quality at low illumination is strongly demanded of cameras for industrial applications. To meet this demand, Sony also applied technology to the IMX323LQN that increases sensitivity in the near infrared range as well as the visible light range. This makes it possible to obtain clear images that enable to sufficiently discriminate subjects even under moonlit conditions. (Photograph 2).

＜photograph 1＞ Comparison of existing product and IMX323LQN packages



Existing product IMX222LQJ　　New product IMX323LQN

＜Photograph 2＞ Image sample

Conditions: 0.1 lx, F1.4 (ADC 12 bit mode, 30 frame/s)

Existing product IMX222LQJ Gain 42 dB

New product IMX323LQN Gain 45 dB

＜Table 1＞ **Device Structure**

Item	Existing product IMX222LQJ	New product IMX323LQN
Image size	Diagonal 6.4 mm (Type 1/2.8)	Diagonal 6.23 mm (Type 1/2.9)
Number of effective pixels	1984 (H) × 1225 (V)　Approx. 2.43M pixels	1985 (H) × 1105 (V)　Approx. 2.19M pixels
Unit cell size	2.8 µm (H) × 2.8 µm (V)	
Supply voltage	2.7 V / 1.8 V / 1.2 V	
Package	94 pin LGA	80 pin CSP BGA
Gain	0 to 42 dB (0.3 dB Step)	0 to 45 dB (0.3 dB Step)

＜Table 2＞ **Image Sensor Characteristics**

Item		IMX222LQJ	IMX323LQN	Remarks
Sensitivity (F5.6)	Typ.	510 mV		1/30s accumulation

＜Table 3＞ **Basic Drive Mode**

Drive mode	Recommended number of recording pixels	ADC	Frame rate
Full HD	1920 (H) × 1080 (V)　Approx. 2.07M pixels	10 bit	30 frame/s
		12 bit	30 frame/s
HD	1280 (H) × 720 (V)　Approx. 9.2M pixels	10 bit	60 frame/s
		12 bit	30 frame/s

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