

# CMOS CAMERA MODULES



your BEST camera module partner

#### KLT-A4K-OV2680-3025

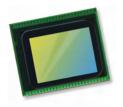
## OmniVision OV2680 MIPI Interfaccia Messa a fuoco fissa 2MP Modulo telecamera



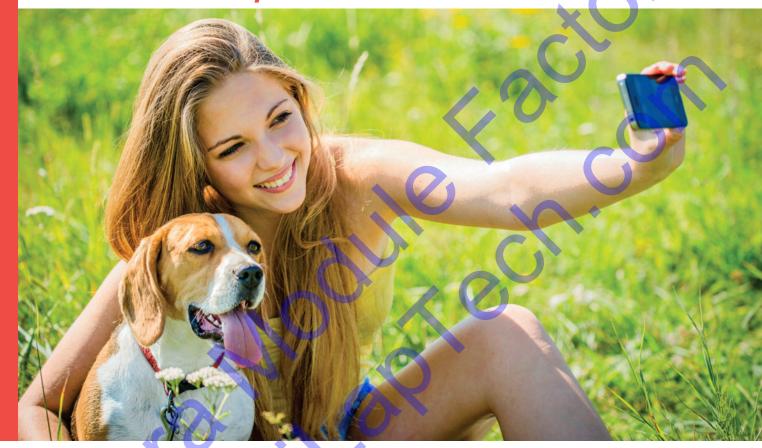
Modulo telecamera n.	KLT-A4K-OV2680-3025
Sensore d'immagine	OV2680
EFL	2.95 mm
F.NO	2.8
Pixel	1616 x 1216
Vista ad angolo	60°
Tipo di lente	1/5 pollice
Dimensioni dell'obiettivo	6.50 x 6.50 x 4.80 mm
Dimensione del modulo	6.60 x 15.05 mm
Tipo di modulo	Messa a fuoco fissa
Interfaccia	MIPI



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# 0V2680/0V2685 2MP product brief





available in a lead-free package

# Cost-Effective, Low-Power 2-Megapixel Sensors for Feature Phones, Smartphones and Tablets

The OV2680 (RAW) and OV2685 (SoC) are costeffective, low-power 2-megapixel CameraChip™ sensors for feature phones and front-facing camera applications in smartphones and tablets. The 1/5-inch sensors leverage a 1.75-micron OmniPixel3-HS™ pixel to deliver high quality 2-megapixel images and video at 30 frames per second (fps). The sensors' high sensitivity and low dark current deliver exceptional image and video quality, even in low-light conditions.

The OV2680 and OV2685 are cost-effective upgrade solutions to the OV2659 & OV2675 CameraChip sensors with a smaller footprint and smaller die size.

Compared to previous generations, the OV2680 and OV2685 offer improved image quality with the latest OmniPixel3-HS pixel architecture. Using OmniVision's proprietary sensor technology, both sensors reduce or eliminate common lighting and electrical sources of image contamination, such as fixed pattern noise, smearing, etc., to produce a clean, stable, color image.

The OV2680 and OV2685 both feature a single-lane MIPI interface, which allows for a simple design with modern basebands.

Find out more at www.ovt.com.



### **Applications**

- Ultrabooks
- PC Multimedia
- Games
- Home Entertainment
- Cellular and Picture Phones
- Tablets
- Toys

■ 0V02680-H47A (color, lead-free, 47-pin CSP5) ■ 0V02685-H53A (color, lead-free, 53-pin CSP5)

#### **Product Features**

- one clock lane) with a maximum of 750 Mbps data transfer rate
- support for output formats: 0V2680: 10-bit RAW RGB
  - 0V2685: 10-bit RAW RGB, 8-bit YUV
- programmable controls for frame rate, mirror and flip, cropping, and windowing auto black level calibration
- low operating voltage and low power consumption for embedded portable applications
- supports global analog gain

- MIPI and D-PHY specification (contains high sensitivity and low dark current for low-light conditions
  - supports free-running clock and gated clock
  - supports down-sampling and binning mode

  - defect correction capability
  - supports horizontal and vertical subsampling

### **Product Specifications**

- active array size: 1616 x 1216
- power supply:
- **0V2680** core: 1.58V ±3%
- 0V2685 core: 1.7 1.9V analog: 2.6 3.0V I/0: 1.7 3.0V

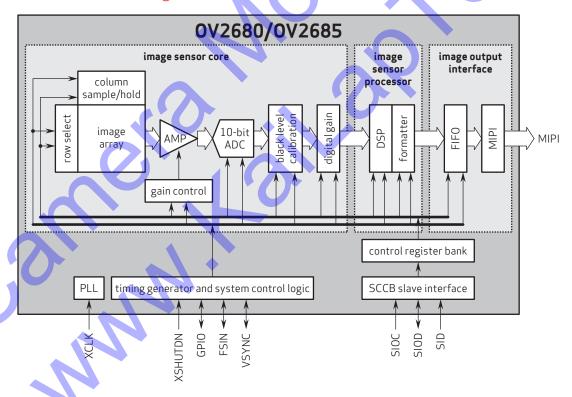
- power requirements: OV2680 active: 123 mW
- OV2685 active: 259 mW
- XSHUTDN: <1 μA
- temperature range: operating: -30°C to +85°C junction
- temperature
- stable image: 0°C to +50°C junction
- output formats: 10-bit RGB RAW, 8-bit YUV (0V2685)

■ lens size: 1/5"

OV2680/OV2685

- lens chief ray angle: 28.5° non-linear
- input clock frequency: 6 27 MHz
- maximum image transfer rate: 30 fps
- scan mode: progressive
- maximum exposure interval: 1 frame - 4 t<sub>ROW</sub>
- **pixel size:** 1.75 μm x 1.75 μm
- image area: 2840 μm x 2150 μm
- package/die dimensions: 0V2680 CSP5: 4180 μm x 3480 μm 0V2685 CSP5: 4454 μm x 4014 μm

### Functional Block Diagram



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