

# OV6930 400 x 400 product brief



available in  
a lead-free  
package

## Industry's Smallest 400 x 400 Image Sensor

With a packaged footprint of only 1.8 mm x 1.8 mm, the OV6930 is the ideal solution for camera applications that require less than a 2.6 mm outside diameter, such as medical endoscopes. The OV6930's unique architecture combines ultra-low power consumption with OmniVision's best-in-class pixel technology, OmniPixel3-HS™, enabling low-light performance of 3300 mV/(lux-sec).

In addition to its small footprint and extraordinary performance, the OV6930 offers raw serial output, allowing cabling up to 14 feet with two wires.

The low-voltage OV6930 provides either full-frame or cropped analog images in RAW RGB format via serial camera control bus (SCCB) interface control.

The device offers an image array capable of operating up to 30 frames per second (fps) in 400 x 400 or 60 fps in 400 x 200 resolution, with simplified exposure control programmable through the SCCB interface. OmniVision's image sensors leverage proprietary technology to improve image quality by reducing or eliminating common lighting/electrical sources of image contamination, such as fixed pattern noise and smearing, to produce a clean, fully stable, color image.

No other image sensor on the market offers high performance and sensitivity in such a small form factor.

Find out more at [www.ovt.com](http://www.ovt.com).



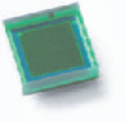
## Applications

- Medical and Dental Devices
- Entertainment Multimedia, Games and Toys
- Security and Surveillance

## Product Features

- OmniPixel3-HS architecture with leading low-light sensitivity (3300 mV/lux-sec)
- optical size of 1/10.6"
- analog output
- automatic/manual control of AEC and AGC
- on-chip phase lock loop (PLL)
- low power consumption
- single 3.3 V power supply
- SCCB interface
- OmniPixel3-HS structure using 0.11  $\mu\text{m}$  process

# OV6930



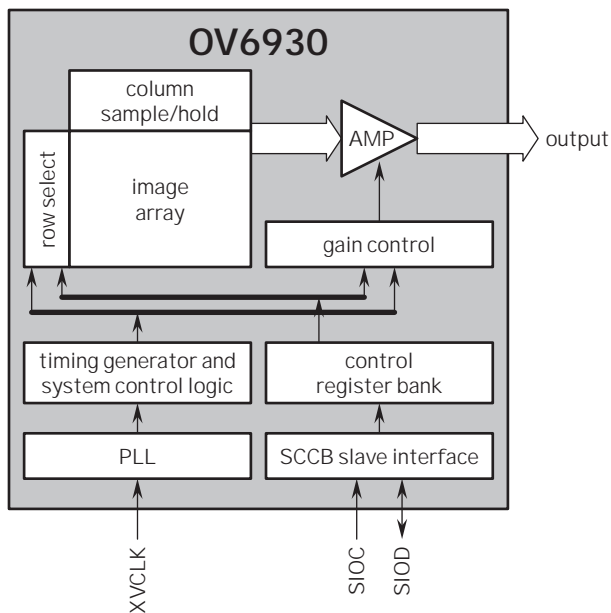
## Ordering Information

- OV06930-A08A (color, analog, 8-pin CSP3)

## Product Specifications

- active array size: 400 x 400
- power supply:
  - analog: 3.3 V  $\pm 5\%$
  - I/O: 3.3 V  $\pm 5\%$
- power requirements:
  - without 75 ohm loading: -10 mW
  - with 75 ohm loading: 80 mW
- temperature range:
  - operating: -20°C to 70°C
  - stable image: 0°C to 50°C
- lens size: 1/10.6"
- output formats: analog signal output
- maximum image transfer rate:
  - 400 x 400: 30 fps
  - 400 x 200: 60 fps
- color mosaic: RGB Bayer pattern
- pixel size: 3.0  $\mu\text{m}$  x 3.0  $\mu\text{m}$
- image area: 1224  $\mu\text{m}$  x 1212  $\mu\text{m}$
- package dimensions: 1815  $\mu\text{m}$  x 1815  $\mu\text{m}$

## Functional Block Diagram



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