OV08B 8-megapixel product brief

1/4" 8 Megapixel Image Sensor for Smartphone Cameras

lead free

available in a lead-free package

OmniVision's OV08B is a 1.12 micron, 8 megapixel (MP) image sensor designed for the broad smartphone camera markets. Built on backside-illumination pixel technology, the OV08B provides the best combination of performance, features, cost and power consumption in a 1/4 inch optical format, making it an ideal option for customers upgrading image sensors either for front-facing or rear-facing cameras, enabling full-resolution imaging, ultrawide field of view and telephoto optical zoom.

The OV08B's compact 1/4 inch optical format enables 5.1 x 6.5 mm fixed-focus modules for front-facing cameras with pads on the top and bottom of the sensor to reduce X dimension for better narrow-bezel designs.

The OV08B supports full 8MP resolution at 30 frames per second (fps) using either two or four MIPI lanes, which provides maximum design flexibility for multicamera configurations. Other output options include high definition video of 1080p at 60 fps and 720p at 90 fps. The OV08B also offers Bayer imaging and a 4-cell binning capability for better low-light video performance.

Find out more at www.ovt.com.

OmniVision

OV08B

Applications

- Mobile Phones
- Tablets
- PC Multimedia
- Web Camera

Product Features

- 1.12 µm x 1.12 µm BSI pixel architecture
- optical size of 1/4"
- 32.9° CRA for <5 mm Z-height
- programmable controls for:
  - frame rate
  - mirror and flip
  - cropping
  - windowing
- supports images sizes:
  - 8MP (4:3) (3264x2448)
  - 6MP (3264x1836)
  - 1080p (1920x1080)
  - 720p (1280x720), and more
- 8MP at 30 fps (720 Mbps/4-lane or 1.44 Gbps/2-lane)
- two on-chip phase lock loops (PLLs)
- two-wire serial bus control (I2C)
- 4k bits (512 bytes) of embedded one-time programmable (OTP) memory
- image quality control:
  - defect pixel correction
  - automatic black level calibration
  - lens shading
- supports MIPI 4-lane serial output interface
- suitable for module size 8.5 x 8.5 x ~4 mm

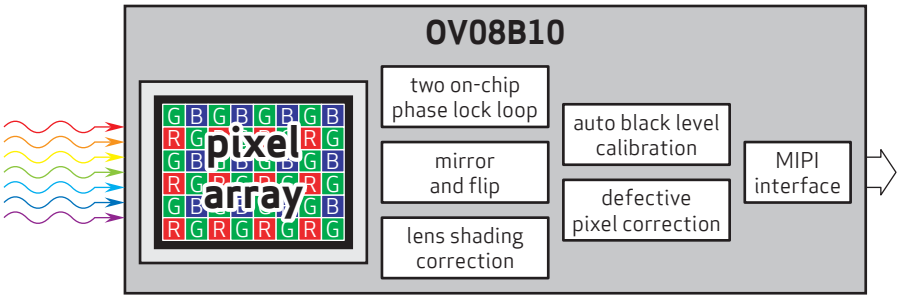
Ordering Information

- **OV08B10-GA5A-Z**
  (color, chip probing, 150 µm backgrinding, reconstructed wafer with good die)

Product Specifications

- **active array size:** 3264 x 2448
- **power supply:**
  - **analog:** 2.6 - 3.0V (2.8V nominal)
  - **core:** 1.14 - 1.26V (1.2V nominal)
  - **I/O:** 1.7 - 1.9V (1.8V)
- **temperature range:**
  - **operating:** -35°C to +85°C junction temperature
  - **stable image:** 0°C to +60°C junction temperature
- **output formats:** RAW10
- **lens size:** 1/4"
- **lens chief ray angle:** 32.9°
- **input clock frequency:** 6 - 27 MHz
- **maximum image transfer rate:**
  - **8MP (3264x2448):** 30 fps
  - **6MP (3264x1836):** 30 fps
  - **1080p (1920x1080):** 60 fps
  - **720p (1280x720):** 90 fps
  - **VGA (640x480):** 120 fps
- **scan mode:** progressive
- **pixel size:** 1.12 µm x 1.12 µm
- **image area:** 3673.6 µm x 2759.68 µm
- **package dimensions:**
  - **COB:** 4304 µm x 4459 µm

Functional Block Diagram



4275 Burton Drive
Santa Clara, CA 95054
USA

Tel: + 1 408 567 3000
Fax: + 1 408 567 3001
www.ovt.com

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