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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



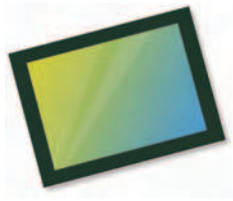
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OV13855 13MP product brief



13-Megapixel PureCel®Plus Sensor Brings High-End Imaging Capabilities to Mainstream Smartphones



available in
a lead-free
package

OmniVision's high performance OV13855 is a 13-megapixel PureCel®Plus image sensor designed to bring high-quality imaging to rear-facing camera applications in mainstream smartphones. It is also well-suited for front-facing and dual camera applications in high-end mobile devices. In addition to best-in-class pixel performance, this third generation 13-megapixel sensor also offers advanced features, such as phase detection autofocus (PDAF).

Built on OmniVision's PureCel®Plus pixel technology, the OV13855 delivers significant improvements in low-light performance, color crosstalk reduction, and angular response when compared with previous-generation 13-megapixel sensors. The OV13855 captures full-

resolution 13-megapixel still images at 30 frames per second (fps) and records ultra-high resolution 4K2K video at 30 fps or 1080p full high definition (HD) at 60 fps.

The OV13855 fits in 8.5 x 8.5 mm autofocus modules with z-heights of less than 5 mm for rear cameras, and 7.5 x 7.5 mm fixed focus modules with z-heights of less than 4.5 mm for high-end front-facing cameras. The sensor is available in non-PDAF (OV13858) and monochrome (OV13355) versions for front-facing and dual camera applications.

Find out more at www.ovt.com.



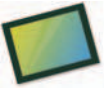
Applications

- Smartphones and Feature Phones
- Tablets
- PC Multimedia
- Wearables

Product Features

- 1.12 μm x 1.12 μm pixel
- optical size of 1/3.06"
- 33.15° CRA
- support for PDAF
- 13MP at 30 fps
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- supports images sizes:
 - 13MP (4224x3136)
 - 10MP (4224x2376)
 - 3MP (2112x1568), and more
- total embedded one-time programmable (OTP) memory: 1024 bytes, 416 bytes for customer use, remaining bytes for internal use
- support for output formats: 10-bit RGB RAW
- interlaced row HDR output
- two-wire serial bus control (SCCB)
- MIPI serial output interface (1-, 2-lane, or 4-lane)
- two on-chip phase lock loops (PLLs)
- 2x binning support
- image quality controls:
 - defect pixel correction
 - automatic black level calibration
 - lens shading correction
- built-in temperature sensor
- suitable for module size of 8.5 x 8.5 x <5 mm

OV13855



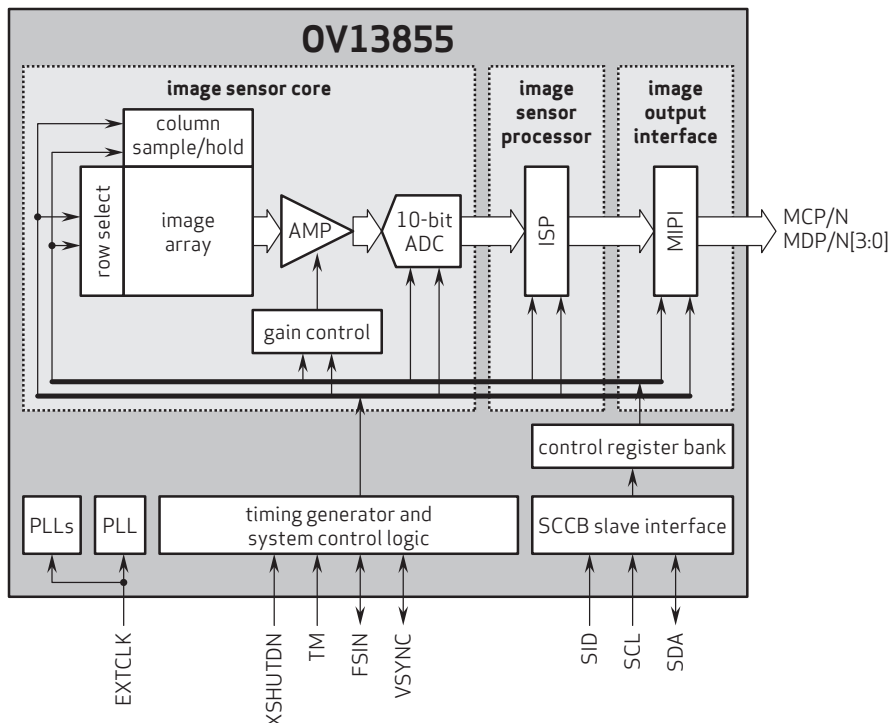
Ordering Information

- OV13855-GA5A (color, chip probing, 150 μm backgrinding, reconstructed wafer)

Product Specifications

- active array size: 4256 x 3168
- power supply:
 - core: 1.14 - 1.26V (1.2V nominal)
 - analog: 2.7 - 3.0V (2.8V nominal)
 - I/O: 1.7 - 1.9V (1.8V nominal)
- power requirements:
 - active: 233 mW (based on ISP ON)
 - standby: 1 mW
 - XSHUTDOWN: <10 μA
- temperature range:
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +60°C junction temperature
- output interfaces: 4-lane MIPI serial output
- output formats: 10-bit RGB RAW
- lens size: 1/3.06"
- input clock frequency: 6 - 27 MHz
- lens chief ray angle: 33.15° non-linear
- maximum image transfer rate:
 - 13MP (4224x3136): 30 fps
 - 10MP (4224x2376): 30 fps
 - 3MP (2112x1568): 60 fps
- sensitivity: 3900 e⁻/Lux-sec
- max S/N ratio: 36.5 dB
- dynamic range: 65 dB @ 1x gain
- minimum exposure: 4-row
- maximum exposure: VTS-8
- pixel size: 1.12 μm x 1.12 μm
- dark current: 6 e⁻/sec @ 60°C junction temperature
- image area: 4749.70 μm x 3535.49 μm
- die dimensions:
 - COB: 5868 μm x 4950 μm
 - RW: 5918 μm x 5000 μm

Functional Block Diagram



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