CMOS CAMERA MODULES

your BEST camera module partner

KLT-G2K-OV8856 V1.1

OmniVision OV8856 MIPI Interfaccia Messa a fuoco fissa 8MP Modulo telecamera

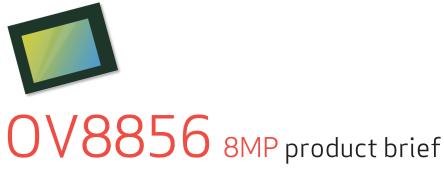


Modulo telecamera n.	KLT-G2K-OV8856 V1.1
Sensore d'immagine	OV8856
EFL	2.93 mm
F.NO	2.0
Pixel	3264 x 2448
Vista ad angolo	75°
Tipo di lente	1/4 pollice
Dimensioni dell'obiettivo	6.50 x 6.50 x 4.62 mm
Dimensione del modulo	14.05 x 7.80 mm
Tipo di modulo	Messa a fuoco fissa
Interfaccia	MIPI



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High Performance PureCel[®] Sensor Brings 8-Megapixel Selfies to Mainstream Smartphones

available in a lead-free package

OmniVision's OV8856 is a new 1/4-inch 8 megapixel PureCel sensor designed for front- and rear-facing camera applications in mainstream mobile devices. Built on advanced 1.12-micron pixel architecture, the extremely compact OV8856 offers industry-leading image quality and improved performance when compared with previous-generation 8-megapixel image sensors.

The 1/4-inch OV8856 leverages OmniVision's PureCel pixel architecture to capture full-resolution 8-megapixel images and video at 30 frames per second (fps), and 1080p high-definition (HD) video at 60 fps. The power-efficient OV8856 sensor also supports interlaced high dynamic range (iHDR) for clear images and video in high- and low-light conditions. Using a highspeed four-lane MIPI interface, the OV8856 can output full-resolution, 8-megapixel 30 fps video over two MIPI lanes without requiring any data compression.

The OV8856 is one of the smallest 8-megapixel sensors on the market, and is approximately 15 percent smaller than OmniVision's previous-generation OV8858 image sensor. The OV8856 can fit into a 6.5 mm x 6.5 mm fixed-focus module with a z-height of approximately 4 mm.

Find out more at www.ovt.com.





Applications

- Cellular Phones PC Multimedia
- Tablets

Product Features

- 1.12 µm x 1.12 µm pixel
- optical size of 1/4"
- 32.9° CRA for < 5mm Z-height
- programmable controls for frame rate, mirror and flip, cropping, and windowing
 8k bits of embedded one-time
- supports images sizes: 8MP (4:3, 3264x2448), 8MP (16:9, 3264x1836) EIS 1080p (2112x1188), 1080p (1920x1080), EIS 720p (1408x792), and more
- 8MP at 30 fps (720Mbps/4-lane or 1.44Gbps/2-lane)
- two on-chip phase lock loops (PLLs)
- two-wire serial bus control (SCCB)
- programmable (OTP) memory
- image quality control: defect pixel correction, automatic black level calibration, lens shading correction and alternate row HDR

OV08856-GA4A (color, chip probing, 200 µm backgrinding, reconstructed wafer with good die)

Product Specifications

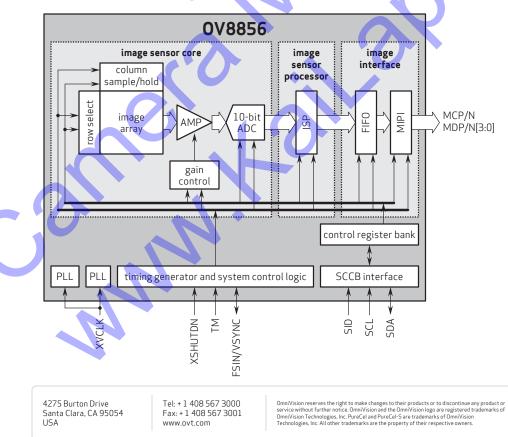
- active array size: 3264 x 2448
- power supply:
 core: 1.14 1.26V (1.2V nominal)
 analog: 2.6 3.0V (2.8V nominal)
 I/0: 1.7 1.9V (1.8V)
- power requirements:
 active: 150 mW - standby: 0.8 uW
- XSHUTDN: 1 µW
- temperature range:
 operating: -30°C to +85°C junction temperature stable image: 0°C to +60°C junction
- temperature
- output interfaces: up to 4-lane MIPI serial output
- output formats: 10-bit RGB RAW
- lens size: 1/4
- lens chief ray angle: 32.9° non-linear

input clock frequency: 6 - 27 MHz

OV8856

- max S/N ratio: 36.5 dB
- dynamic range: 70 dB @ 8x gain
- maximum image transfer rate: - 3264x2448: 30 fps - 3264x1836: 30 fps
- 2112x1188: 60 fps 1920x1080: 60 fps
- 1408x792: 90 fps
- sensitivity: 480 mV/lux-se
- scan mode: progressive
- pixel size: 1.12 μm x 1.12 μm
- dark current: 12 e⁻/sec
- @ 60°C junction temperature
- image area: 3678.336 µm x 2767.68 µm
- die dimensions: - COB: 4806 μm x 3969 μm - RW: 4856 μm x 4019 μm

Functional Block Diagram





Version 1.2, September, 2016