

## **CMOS CAMERA MODULES**



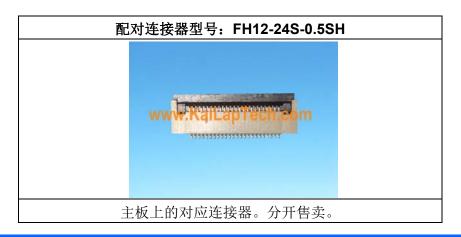
your BEST camera module partner

#### **KLT-L5PSF-OV7676 V1.0**

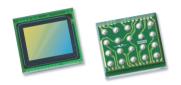
OmniVision OV7676 DVP并行接口 和 SPI 接口 固定焦距 30万像素 VGA 摄像头模组



摄像头模组型号	KLT-L5PSF-OV7676 V1.0
图像感光芯片	OV7676
焦距	2.39 mm
光圈	2.8
像素	640 x 480 (VGA)
可视角度	51°
镜头类型	1/7.5 英寸
镜头尺寸	4.97 x 4.97 x 3.52 mm
模组尺寸	20.00 x 12.50 mm
模组类型	固定焦距
接口	DVP并行



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OV7676 VGA product brief





# Cost-Effective VGA Sensor Delivers Best-In-Class Pixel Performance to Wide Range of Consumer Applications

OmniVision's high performance OV7676 is a costeffective 1/7.5-inch system-on-a-chip (SOC) VGA sensor that brings best-in-class pixel performance to a wide range of applications, including mobile phones, tablets, wearables, notebooks, and IP network cameras.

Utilizing OmniVision's 3-micron OmniPixel3-HS™ technology, the OV7676 achieves best-in-class low-light sensitivity, signal-to-noise ratio, full-well capacity (FWC), quantum efficiency and low-power consumption. The OV7676 supports serial peripheral interface (SPI) and digital video port (DVP) interface customization for both smartphone and feature phone platforms.

When used as a front-facing camera solution in smartphones, tablets and notebooks, the OV7676 also supports video-in-video functionality, allowing users to record and stitch together video being recorded simultaneously by the front- and rear-facing cameras.

The OV7676 fits into a  $2.73 \times 2.47$  mm chip-scale package (CSP).

Find out more at www.ovt.com.





#### **Applications**

- Mobile Phones
- PC Mulitmedia

■ Toys

■ Digital Still Cameras

#### **Product Features**

- support for image sizes: VGA (640x480), QVGA (320x240) and CIF (352x288)
- support for output formats: RAW RGB and YUV output with DVP and SPI port
- on-chip phase lock loop (PLL)
- built-in 1.8V regulator for digital block
- capable of maintaining register values at software power down
- programmable controls for frame rate, mirror and flip, AEC/AGC, and windowing

- support for horizontal and vertical sub-sampling
- automatic image control functions:
- automatic exposure control (AEC) automatic white balance (AWB)
- automatic black level calibration (ABLC)
- image quality controls: defect pixel correction and lens shading correction
- support for black sun cancellation
- standard serial SCCB interface
- parallel I/O tri-state configurability and programmable polarity

## OV7676

■ 0V07676-H20A (color, lead-free, 20-pin CSP5)

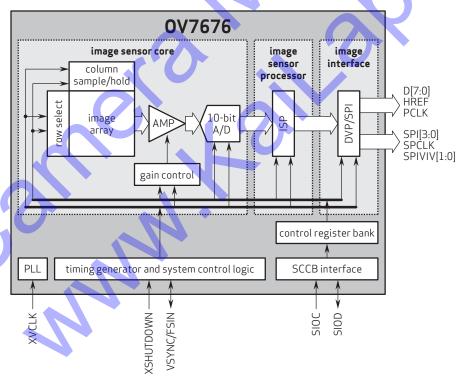
#### **Product Specifications**

- active array size: 640 x 480

- power supply:
  analog: 2.8V ±5%
  core: 1.8VDC ±5% (internal regulator)
- I/O: 2.8V, 1.8V
- power requirements: - I<sub>DD-A</sub>: 15 mA
- I<sub>DD-IO</sub>: 17 mA XSHUTDOWN: <15 μA
- temperature range:
  operating: -30°C to +70°C junction temperature
  - stable image: 0°C to +50°C junction temperature
- output formats: YUV422, RAW RGB
- lens size: 1/7.5"
- lens chief ray angle: 26.6°
- input clock frequency: 6 27 MHz
- scan mode: progressive

- maximum image transfer rate:VGA: 30 fps
- QVGA: 60 fps
- CIF: 30 fps
- sensitivity: 1900 mV/lux-sec
- shutter: rolling shutter
- max S/N ratio: 38 dB
- dynamic range: 70.4 dB @ 8x gain
- maximum exposure interval:  $506 \times t_{ROW}$
- pixel size: 3 µm x 3 µm
- dark current: 6 mV/sec @ 60°C junction temperature
- image area: 1962 µm x 1482 µm
- package dimensions: CSP5: 2734 μm x 2474 μm

### Functional Block Diagram



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