

# OV7955 NTSC product brief



available in  
a lead-free  
package

## Driving Down the Cost of Rear-View Cameras

The OV7955 is a high-performance, low-power automotive image sensor designed to offer improved image quality while reducing the cost of rear-view camera applications. Featuring the automotive industry's smallest AEC-Q100 qualified package (aCSP), OV7955 enables a new generation of ultra-compact cameras that fit the most challenging size requirements.

The OV7955 features OmniVision's proprietary high-sensitivity OmniPixel3-HS™ pixel architecture, offering industry-leading low-light performance, dynamic range and signal-to-noise ratio (SNR).

Additionally, the OV7955 offers features new to the automotive industry, including on-chip memory for power on register settings and crop and resize functionality. The built-in memory reduces the overall bill of materials and size of the camera, while the crop and resize feature allows single camera designs to be used in multiple vehicle platforms, cropping the active array while the sensor scales it back up to NTSC format.

The OV7955 measures only 5.7 x 5.4 mm and offers an operating temperature range of -40°C and 105°C.

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

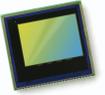
## Applications

- Rear View Camera
- Surround View
- Smart Automotive Camera
- Drive Recorder
- Lane Departure Warning
- Blind Spot Detection
- Night Vision with Active Illumination

## Product Features

- industry's smallest automotive package
- exceptional low-light performance for 1 lux requirements
- VGA
- color and B&W sensor options
- automatic exposure/gain with 16 zone control
- crop and resize
- built-in memory for custom register settings
- aperture/gamma control
- low power consumption
- AEC-Q100 qualified
- 2 layer multicolor overlay
- defective pixel correction
- optimized for digital progressive and analog applications
- single 3.3 V power supply

# OV7955



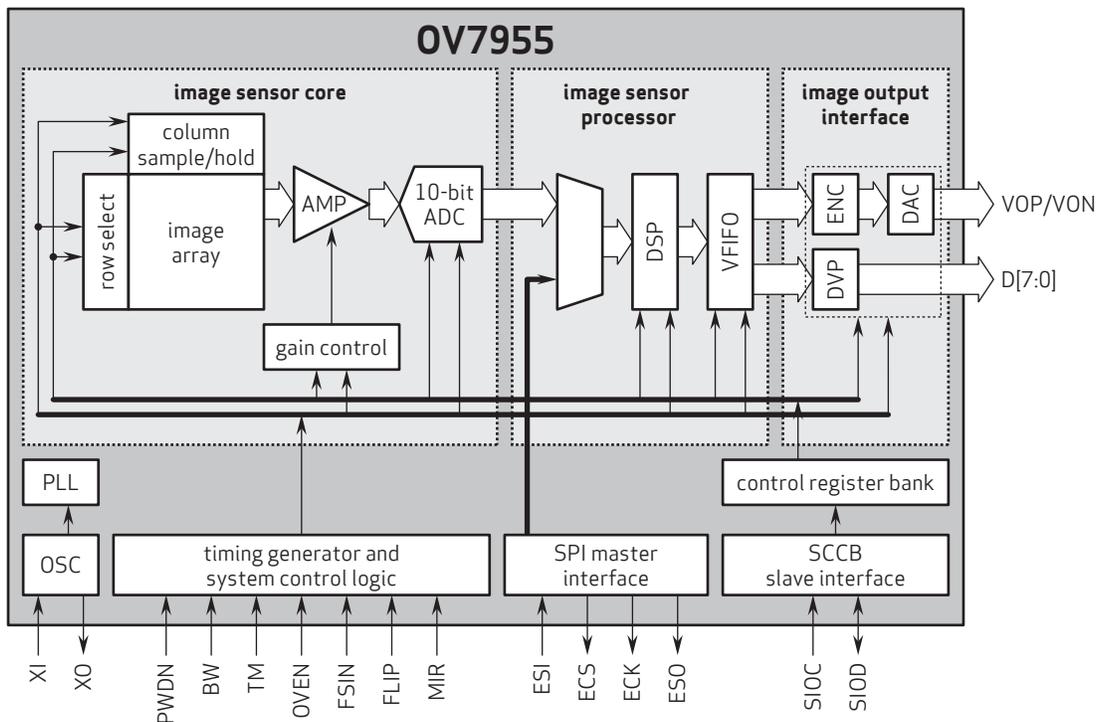
## Ordering Information

- OV07955-E53V-PF (color, NTSC, lead-free, 53-pin aCSP™ with protective film)

## Product Specifications

- active array size: 672 x 492
- power supply:
  - core: 1.5V
  - analog: 3.3V
  - I/O: 1.8 - 3.3V
- power requirements:
  - active: 200 mW
  - standby: 20  $\mu$ A
- temperature range:
  - operating: -40°C to 105°C
- output formats: NTSC, digital progressive
- optical size:
  - NTSC: 1/3.6"
- lens chief ray angle: supports up to 25°
- maximum image transfer rate:
  - NTSC: 60 fields per second
  - digital: 60 frames per second
- sensitivity: 12 V/lux-sec
- shutter: rolling shutter
- max S/N ratio: 38 dB
- dynamic range: 71 dB @ 8x gain
- scan mode: progressive
- pixel size: 6.0  $\mu$ m x 6.0  $\mu$ m
- dark current: 16 mV/s @ 50°C junction temperature
- image area: 4032  $\mu$ m x 2952  $\mu$ m
- package dimensions: 5660  $\mu$ m x 5360  $\mu$ m

## Functional Block Diagram



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