OV6630 Color CMOS CIF (352 x 288) CAMERACHIP™
OV6130 B&W CMOS CIF (352 x 288) CAMERACHIP™

General Description

The OV6630 (color) and OV6130 (black and white) CMOS CAMERACHIPS™ are single-chip video/imaging camera devices designed to provide a high level of functionality in a single, small-footprint package. Both devices incorporate a 352 x 288 image array capable of operating at up to 60 frames per second (fps) in QCIF mode. Proprietary sensor technology utilizes advanced algorithms to cancel Fixed Pattern Noise (FPN), eliminate smearing, and drastically reduce blooming. All required camera functions including exposure control, gamma, gain, white balance, color matrix, color saturation, hue control, windowing, etc., are programmable through the serial SCCB interface. Both devices can be programmed to provide image output in different 4-bit, 8-bit, and 16-bit formats.

Features

- 101,376 pixels, 1/4" lens, CIF/QCIF format
- Progressive scan readout
- Data formats:
  - YCbCr 4:2:2
  - GRB 4:2:2
  - RGB Raw Data
- 8/16 bit video data:
  - ITU-601
  - ITU-656
  - ZV port
- Wide dynamic range, anti-blooming, zero smearing
- Electronic exposure/gain/white balance control
- Image enhancement - brightness, contrast, gamma, saturation, sharpness, windowing, etc.
- Internal/external synchronization
- Frame exposure/line exposure option
- 3.3-Volt operation, low power dissipation
  - < 20 mA active power
  - < 10 µA in power-save mode
- Gamma correction (0.45/0.55/1.00)
- SCCB programmable:
  - Color saturation, brightness, hue, white balance, exposure time, gain

Ordering Information

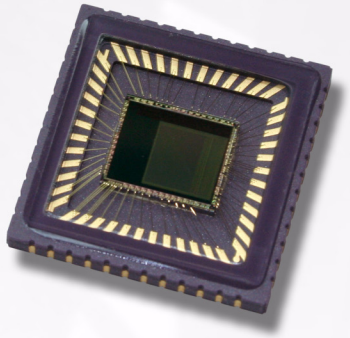
Product	Package
OV06630-C00A (Color)	CLCC-48
OV06130-C00A (B&W w/ microlens)	CLCC-48

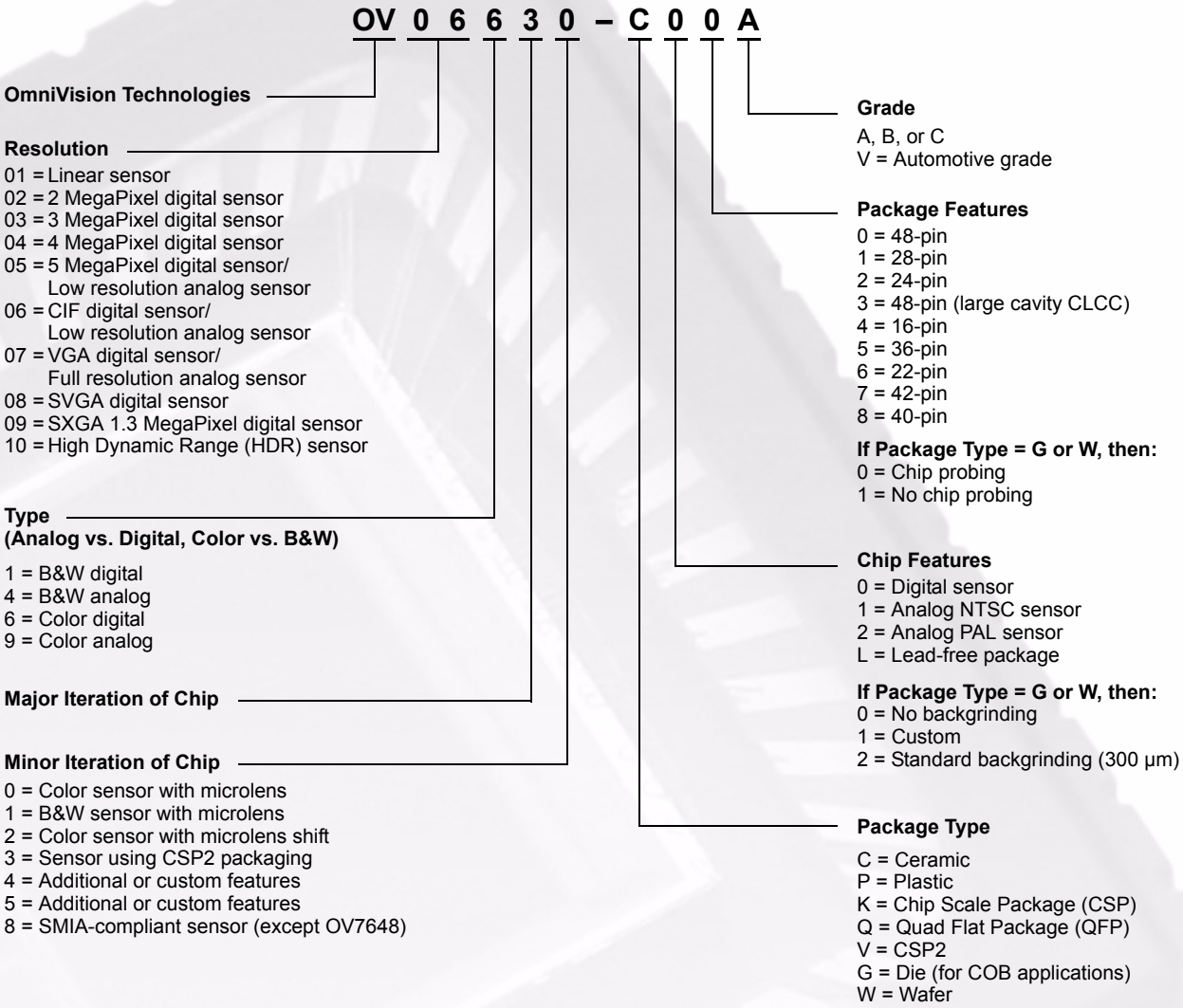
Applications

- Video Conferencing
- Video Phone
- Video Mail
- Still Image
- PC Multimedia

Key Specifications

Array Size	**CIF**	352 x 288
	QCIF	176 x 144
Pixel Size		9 µm x 8.2 µm
Image Area		3.1 mm x 2.5 mm
Maximum Frames/Sec		Up to 60 fps
Electronics Exposure		Up to 500:1 (for selected fps)
Scan Mode		Progressive
Gamma Correction		0.45/0.55/1.00
Min. Illumination (3000K)	**OV6630**	< 3 lux @ f1.2
	OV6130	< 0.5 lux @ f1.2
S/N Ratio		> 48 dB (AGC off, Gamma = 1)
Fixed Pattern Noise		< 0.03% of $V_{PEAK-TO-PEAK}$
Dark Current		< 0.2 nA/cm^2
Dynamic Range		> 72 dB
Power Supply		3.0 to 3.6 VDC 5VDC/3.3VDC (DIO)
Power Requirements	**Active**	< 20 mA
	Standby	< 10 µA
Package		48 pin LCC





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