

OV6650 Color CMOS CIF (352 x 288) CAMERACHIP[™] OV6150 B&W CMOS CIF (352 x 288) CAMERACHIP[™]

General Description

The OV6650 (color) and OV6150 (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. The devices incorporate a 352 x 288 image array capable of operating at up to 30 frames per second (fps). 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, and more, are programmable through the SCCB interface. The device can be programmed to provide image output in different 8-bit formats.

Features

- 108,472 total pixels
- 1/7" optical size
- Wide dynamic range, anti-blooming, zero smearing
- Progressive Scan
- Electronic exposure/gain/white balance control
- Image quality controls:
 - Brightness
 - Gamma
 - Saturation
 - Sharpness
 - Hue
- Internal synchronization
- Line exposure option
- SCCB programmable:
 - Color saturation
 - Brightness
 - Hue
 - Windowing
 - White balance
 - Exposure time
 - Gain

Applications

- Picture Phones
- Cellular Phones
- Toys
- PDAs
- PC Multimedia

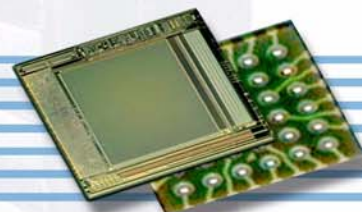
Key Specifications

Array Size		352 x 288 (CIF)
Power Supply	Core	2.5VDC $\pm$ 10%
	Analog	2.5VDC $\pm$ 4%
	I/O	2.25V to 3.3V
Power Requirements	Active	20 mW
	Standby	30 μ W
Temperature Range	Operation	0°C to 70°C
	Stable Image	0°C to 50°C
Output Formats		• YUV/YCbCr 4:2:2 • RGB 4:2:2 • Raw RGB Data
Lens Size		1/7"
Maximum Image Transfer Rate		30 fps
Sensitivity	B&W	2.20 V/Lux-sec
	Color	1.12 V/Lux-sec
S/N Ratio		46 dB
Dynamic Range		62 dB
Scan Mode		Progressive
Maximum Exposure Interval		312 x t _{ROW}
Gamma Correction		0.45
Pixel Size		5.6 μ m x 5.6 μ m
Dark Current		30 mV/s
Well Capacity		63 Ke
Fixed Pattern Noise		< 0.03% of V _{PEAK-TO-PEAK}
Image Area		1.97 mm x 1.61 mm
Package Dimensions		3425 μ m x 3485 μ m

Note: All specifications at 5,000°K ambient light

Ordering Information

Product	Package
OV06650-K06A (Color)	CSP-22
OV06150-K06A (B&W)	CSP-22





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