

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

Ordering Information

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

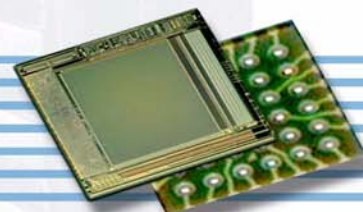
Applications

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

Key Specifications

	Array Size	352 x 288 (CIF)
Power Supply	Core	2.5VDC ± 10%
	Analog	2.5VDC ± 4%
	I/O	2.25V to 3.3V
Power Requirements	Active	20 mW
	Standby	30 µW
Temperature Range	Operation	0°C to 70°C
	Stable Image	0°C to 50°C
	Output Formats	<ul style="list-style-type: none"> • 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 µm x 5.6 µm
	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 µm x 3485 µm

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





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For further information, contact OmniVision Technologies at info@ovt.com or any of our sales offices:

USA Headquarters

1341 Orleans Drive
Sunnyvale, CA 94089
USA

Tel: +1 408 542 3000
Fax: +1 408 542 3001

Email: salesAmerica@ovt.com

Beijing Branch

3119 EverBright Nat. Trust Bldg.
No. 11 South Zhong Guan Cun Road
Haiden Dist. Beijing 100081

Tel: +86 10 6848 6964
Fax: +86 10 6848 6882

Email: salesChina@ovt.com

Hong Kong Branch

Flat 1-2, 8/F
Ever Gain Plaza Tower 1
88 Container Port, Kwai Chung
New Territories, Hong Kong

Tel: +852 2403 4011
Fax: +852 2403 4018

Email: salesChina@ovt.com

Korea Branch

ORIX Bldg. 405
755-5 Banbae-dong
Seocho-Ku, Seoul South Korea

Tel: +82 2 4378 2811
Fax: +82 2 4378 2813

Email: salesKorea@ovt.com

Europe Branch

Albany House
14 Shute End, Wokingham
Berkshire, RG40 1BJ, UK

Tel: +44 1189 740 191
Fax: +44 1189 740 204

Email: salesEurope@ovt.com

Shanghai Branch

Room 201, #12 Building
498 Guo Shoujing Road
Shanghai 201203

Tel: +86 21 5080 3390
Fax: +86 21 5080 3389

Email: salesChina@ovt.com

Taiwan Branch

3F-7, #700, Chung Cheng Road
Chung-ho City, Taipei Hsein
Taiwan, R.O.C.

Tel: +886 2 8227 3770
Fax: +886 2 8227 3773

Email: salesTaiwan@ovt.com

Japan Branch

333 New State Manor, 2-23-1
Yoyogi, Shibuya-Ku, Tokyo
151-0053

Tel: +81 3 5333 8235
Fax: +81 3 5333 8236

Email: salesJapan@ovt.com

Shenzhen Branch

Room 1511
3027 Sherman Road
Central Shenzhen 518033

Tel: +86 755 8328 9329
Fax: +86 755 8328 9327

Email: salesChina@ovt.com

www.ovt.com