

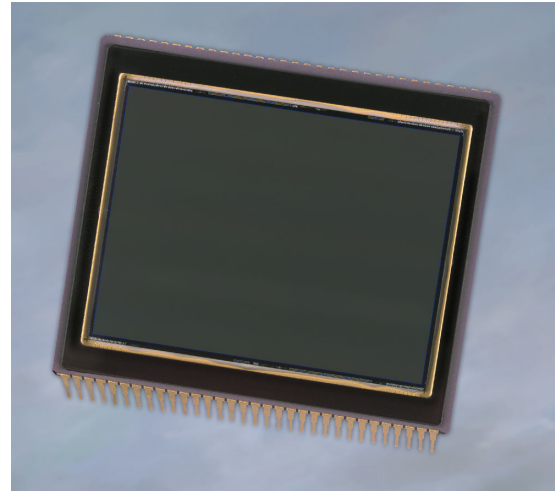
PRODUCT SUMMARY

KODAK KAF-39000 IMAGE SENSOR

7216 (H) X 5412 (V) FULL FRAME CCD IMAGE SENSOR

DESCRIPTION

The KODAK KAF-39000 is a dual output, high performance CCD (charge coupled device) image sensor with 7216(H) x 5412(V) photoactive pixels designed for a wide range of color and monochrome image sensing applications. Each pixel contains anti-blooming protection by means of a lateral overflow drain thereby preventing image corruption during high light level conditions. In the color version, each of the 6.8 μ m square pixels are selectively covered with red, green or blue pigmented filters for color separation. The sensor is housed in a 64 pin, 59.61 x 50.80 mm DIL ceramic package with 1.78 mm pin spacing.



FEATURES

- Ultra-high resolution
- Broad dynamic range
- Low noise architecture
- Large active imaging area

APPLICATIONS

- Professional Digital Still Cameras and Camera Backs
- Industrial Imaging
- Aerial Photography

Parameter	Typical Value
Architecture	Full Frame CCD; with Square Pixels
Total Number of Pixels	7326 (H) x 5494 (V) = 40.2 M
Number of Effective Pixels	7256 (H) x 5452 (V) = 39.5M
Number of Active Pixels	7216 (H) x 5412 (V) = 39.0M
Pixel Size	6.8 μ m (H) x 6.8 μ m (V)
Active Image Size	49.0 mm (H) x 36.8 mm (V) 61.3 mm (diagonal)
Aspect Ratio	4:3
Horizontal Outputs	2
Saturation Signal	60 K e ⁻
Output Sensitivity	26 μ V/e ⁻
Quantum Efficiency (color version) R (610nm) G (540nm) B (470nm)	20%, 23%, 18%
Quantum Efficiency (monochrome version) (560nm)	30%
Read Noise (f=24 MHz)	16 e ⁻
Dark Signal (T=40°C)	4 mV
Dark Current Doubling Temperature	6.3° C
Linear Dynamic Range (f=24 MHz, T=40 C)	71.4 dB
Horizontal Charge Transfer Efficiency	0.999995
Vertical Charge Transfer Efficiency	0.999999
Blooming Protection (4ms exposure time)	1000X saturation exposure
Maximum Data Rate	24 MHz
Package	CERDIP (sidebrazed, CuW)
Cover Glass	AR coated, 2 sides

All parameters above are specified at T = 25° C, unless noted otherwise.

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H0762	KAF-39000-CAA-DD-AA	Color (Bayer RGB), No Microlens, CERDIP Package (sidebrazed, CuW), Clear Cover Glass with AR coating (both sides), Standard Grade	KAF-39000-CA [Serial Number]
4H0763	KAF-39000-CAA-DD-AE	Color (Bayer RGB), No Microlens, CERDIP Package (sidebrazed, CuW), Clear Cover Glass with AR coating (both sides), Engineering Grade	
4H0946	KAF-39000-AAA-DD-AA	Monochrome, No Microlens, CERDIP Package (sidebrazed, CuW), Clear Cover Glass with AR coating (both sides), Standard Grade	KAF-39000-AA [Serial Number]
4H0947	KAF-39000-AAA-DD-AE	Monochrome, No Microlens, CERDIP Package (sidebrazed, CuW), Clear Cover Glass with AR coating (both sides), Engineering Grade	
4H0845	KEK-4H0845-KAF-39000-12-24	Evaluation Board (Complete Kit)	N/A

Please see the User's Manual (MTD/PS-0881) for information on the Evaluation Kit for this part.

Please see ISS Application Note "Product Naming Convention" (MTD/PS-0892) for a full description of naming convention used for KODAK image sensors.

Address all inquiries and purchase orders to:

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