Kodak
Image Sensor Solutions

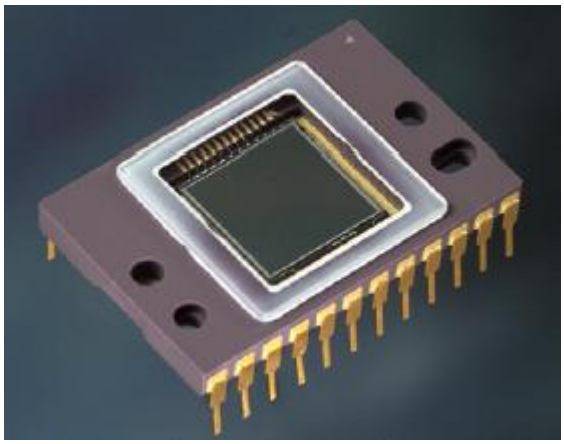
PRODUCT SUMMARY

KODAK KAF-0261 IMAGE SENSOR

512 (H) X 512 (V) FULL FRAME CCD IMAGE SENSOR

DESCRIPTION

The KODAK KAF-0261 Image Sensor is a high performance, charge coupled device (CCD) designed for a wide range of image sensing applications in the 0.3µm to 1.1µm wavelength band. The sensor is built with a true two-phase CCD technology employing a transparent gate. This technology simplifies the support circuits that drive the sensor and reduces dark current without compromising charge capacity. The transparent gate results in spectral response increased ten times at 400nm, compared to a front side illuminated standard polysilicon gate technology. The sensitivity is increased 50% over the rest of the visible wavelengths. The low dark current of the KAF-0261 makes this device suitable for low light imaging applications without sacrificing in charge capacity. The clock selectable on-chip output amplifiers have been specially designed to meet two different needs. The first is a high sensitivity 2-stage output with 10µV/e- charge to voltage conversion ratio. The second is a single stage output with 3.5µV/e- charge to voltage conversion ratio.



Parameter	Typical Value
Architecture	Full Frame CCD
Number of Active Pixels	512 (H) x 512 (V)
Pixel Size	20 µm (H) x 20 µm (V)
Active Image Size	10.2 mm (H) x 10.2 mm (V)
Chip Size	11.3 mm (H) x 11.6 mm (V)
Optical Fill Factor	100%
Output Sensitivity High Sensitivity Output High Dynamic Range Output	 10 µV/electron 2.0 µV/electron
Saturation Signal High Sensitivity Output High Dynamic Range	 200,000 electrons 500,000 electrons
Readout Noise (1 MHz)	22 electrons rms
Dark Current (25° C, Accumulation Mode)	<30 pA/cm2
Dark Current Doubling Rate	6 °C
Dynamic Range (Sat Sig/Dark Noise) High Sensitivity Output	83 dB
High Dynamic Range Output Range	87 dB
Quantum Efficiency (450, 550, 650 nm)	35%, 55%, 58%
Maximum Data Rate High Sensitivity Output High Dynamic Range Output	 5 MHz 2 MHz
Transfer Efficiency	>0.99997
Package	CERDIP Package
Cover Glass	Clear or AR coated, 2 sides

.

FEATURES

- Front Illuminated Full-Frame Architecture
- 512(H) x 512(V) Photosensitive Pixels
- Transparent Gate True Two Phase Technology (Enhanced Spectral Response)
- 20µm (H) x 20µm (V) Pixel Size
- 1:1 Aspect Ratio with 100% Fill Factor
- Single Readout Register
- 2 Clock Selectable Outputs
- High Gain Output (10 µV/e-) for low noise, Low Gain Output (3.5 µV/e-) for high dynamic range
- Low Dark Current (<30pA/cm2 at T=25° C)

APPLICATIONS

- Scientific Imaging

Kodak
Image Sensor Solutions

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H0808	KAF- 0261-AAA-CD-BA	Monochrome, No Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Standard Grade	KAF- 0261-AAA S/N
4h0809	KAF- 0261-AAA-CD-AE	Monochrome, No Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Engineering Sample	
4H0810	KAF- 0261-AAA-CP-BA	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Standard Grade	
4H0811	KAF- 0261-AAA-CP-AE	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Engineering Sample	
4H0081	KEK-4H0081-KAF-0261-12-5	Evaluation Board (Complete Kit)	N/A

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

For all reference documentation, please visit our Web Site at www.kodak.com/go/imagers.

Please address all inquiries and purchase orders to:

Image Sensor Solutions
Eastman Kodak Company
Rochester, New York 14650-2010

Phone: (585) 722-4385
Fax: (585) 477-4947
E-mail: imagers@kodak.com

Kodak reserves the right to change any information contained herein without notice. All information furnished by Kodak is believed to be accurate.