

PRODUCT SUMMARY

KODAK KAF-0402 IMAGE SENSOR

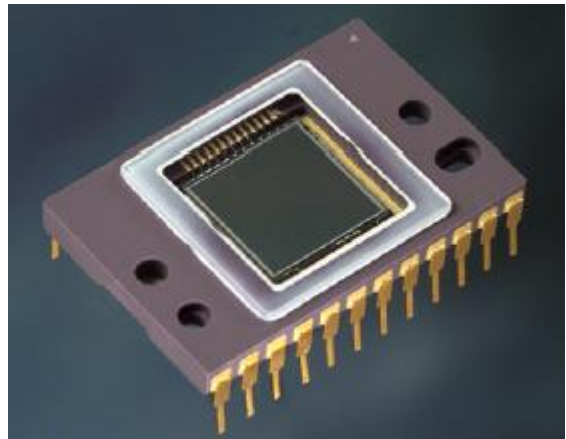
768 (H) X 512 (V) FULL FRAME CCD IMAGE SENSOR

DESCRIPTION

The KODAK KAF-0402 Image Sensor is a high performance monochrome area CCD (charge-coupled device) image sensor with 768H x 512V photoactive pixels. It is designed for a wide range of image sensing applications in the 350 nm to 1000 nm wavelength band. Low dark current and good charge capacity result in 76 dB dynamic range at room temperature. 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, reduces the dark current without compromising charge capacity, and significantly increases the optical compared to traditional front illuminated full frame sensors. Optional microlenses focus the majority of the light through the transparent gate, increasing the optical response further.

APPLICATIONS

- Scientific Imaging



Parameter	Typical Value
Architecture	Full Frame CCD; Enhanced Response
Total Number of Pixels	784 (H) x 520 (V)
Number of Active Pixels	768 (H) x 512 (V) = approx. 0.4M
Pixel Size	9.0 μ m (H) x 9.0 μ m (V)
Imager Size	6.91(H) mm x 4.6(V) mm
Die Size	8.4mm (H) x 5.5mm (V)
Aspect Ratio	3:2
Saturation Signal	100,000 electrons
Quantum Efficiency (with microlens)	Peak: 77% 400 nm: 45%
Quantum Efficiency (no microlens)	Peak: 65% 400 nm: 30%
Output Sensitivity	10 μ V/e-
Read Noise	15 electrons
Dark Current	<10pA/cm ² at 25°C
Dark Current Doubling Temperature	6.3°C
Dynamic Range	76 dB
Charge Transfer Efficiency	>0.99999
Blooming Suppression	None
Maximum Data Rate	10 MHz
Package	CERDIP Package (sidebrazed)
Cover Glass	Clear or AR coated, 2 sides

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H0332	KAF- 0402-AAA-CB-B1	Monochrome, No Microlens, CERDIP Package (sidebrazed), Clear Cover Glass (no coatings), Grade 1	KAF- 0402-AAA S/N
4H0333	KAF- 0402-AAA-CB-B2	Monochrome, No Microlens, CERDIP Package (sidebrazed), Clear Cover Glass (no coatings), Grade 2	
4H0334	KAF- 0402-AAA-CB-AE	Monochrome, No Microlens, CERDIP Package (sidebrazed), Clear Cover Glass (no coatings), Engineering Sample	
4H0238	KAF- 0402-AAA-CP-B1	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Grade 1	
4H0239	KAF- 0402-AAA-CP-B2	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Grade 2	
4H0240	KAF- 0402-AAA-CP-AE	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Engineering Sample	
4H0234	KAF- 0402-ABA-CD-B1	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Grade 1	KAF- 0402-ABA S/N
4H0235	KAF- 0402-ABA-CD-B2	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Grade 2	
4H0236	KAF- 0402-ABA-CD-AE	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Engineering Sample	
4H0230	KAF- 0402-ABA-CP-B1	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Grade 1	
4H0231	KAF- 0402-ABA-CP-B2	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Grade 2	
4H0232	KAF- 0402-ABA-CP-AE	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass, no coatings, Engineering Sample	
4H0077	KEK-4H0077-KAF-0402-12-5	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:

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