

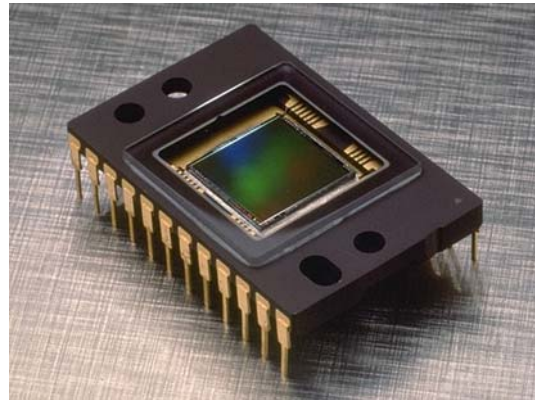
PRODUCT SUMMARY

KODAK KAI-1010 IMAGE SENSOR

1008 (H) X 1018 (V) PROGRESSIVE SCAN INTERLINE CCD IMAGE SENSOR

DESCRIPTION

The KODAK KAI-1010 Image Sensor is a high-resolution monochrome charge coupled device (CCD) device whose non-interlaced architecture makes it ideally suited for video, electronic still and motion/still camera applications. The device is built using an advanced true two-phase, double-polysilicon, NMOS CCD technology. The p+n-pn- photodetector elements eliminate image lag and reduce image smear while providing antiblooming protection and electronic-exposure control. The total chip size is 10.15 (H) mm x 10.00 (V) mm.



FEATURES

- Front Illuminated Interline Architecture
- Progressive Scan (Non-interlaced)
- Electronic Shutter
- On-Chip Dark Reference Pixels
- Low Dark Current
- High Sensitivity Output Structure
- Dual Output Shift Registers
- Antiblooming Protection
- Negligible Lag
- Low Smear (0.01% with microlens)

APPLICATIONS

- Industrial Imaging

Parameter	Typical Value
Architecture	Interline CCD, Non-Interlaced
Total Number of Pixels	1024 (H) x 1024 (V)
Number of Effective Pixels	1008 (H) x 1018 (V)
Number of Active Pixels	1008 (H) x 1018 (V)
Number of Outputs	1 or 2
Pixel Size	9 μm (H) x 9 μm (V)
Active Image Size	9.1 mm (H) x 9.2 mm (V) 12.9 mm (diagonal)
Optical Fill-Factor	60%
Saturation Signal	>50,000 electrons
Output Sensitivity	12 μV /electron
Dark Noise	50 electrons rms
Dark Current	<0.5 nA/cm ²
Quantum Efficiency (wavelength = 500 nm)	37%
Blooming Suppression	>100 X
Maximum Data Rate	20 MHz/Channel (2 channels)
Image Lag	Negligible
Package	CERDIP
Cover Glass	AR Coated (both sides)

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
2H4115	KAI- 1010-ABA-CD-AE	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Engineering Sample	KAI-1010M Serial Number
2H4614	KAI- 1010-ABA-CD-BA	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Standard Grade	KAI-1010M Serial Number
2H4121	KAI- 1010-ABA-CR-AE	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass with AR coating (2 sides), Engineering Sample	KAI-1010M Serial Number
2H4613	KAI- 1010-ABA-CR-BA	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass with AR coating (2 sides), Standard Grade	KAI-1010M Serial Number

Please 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.

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