

PRODUCT SUMMARY

KODAK KAI-1003 IMAGE SENSOR

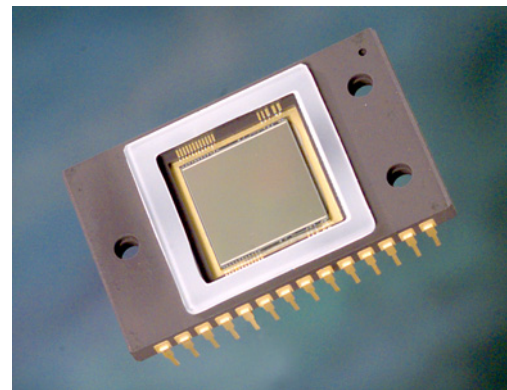
1024 (H) X 1024 (V) PROGRESSIVE SCAN INTERLINE CCD IMAGE SENSOR

DESCRIPTION

The KODAK KAI-1003 Image Sensor is a high-performance megapixel monochrome image sensor designed for a wide range of medical imaging and machine vision applications.

The 12.8 μm square pixels with microlenses provide high sensitivity and the large capacity results in large dynamic range. The two output, split horizontal register and several binning modes allow a 15 to 60 frame per second (fps) video rate for the progressively scanned images.

The vertical overflow drain structure provides antiblooming protection, and enables electronic shuttering for precise exposure control. Other features include low dark current, negligible lag and low smear.



FEATURES

- 1 Megapixel Progressive Scan Interline CCD
- 1024 (H) x 1024 (V) Imaging Pixels
- 12.8 μm Square Pixels
- 13.1 mm Square Imaging Area
- Microlenses for Increased Sensitivity
- Large capacity (170ke)
- Split Horizontal Register for 1 or 2 Outputs
- Binning to 1 x 2 or 2 x 2

Parameter	Typical Value
Architecture	Interline CCD, Non-Interlaced
Photosensitive Pixels	1024 (H) x 1024 (V)
Pixel Size	12.8 μm (H) x 12.8 μm (V)
Photosensitive Area	13.1 mm (H) x 13.1 mm (V)
Saturation Signal	170,000 electrons
Output Sensitivity	7.5 μV /electron
Dark Noise	50 electrons rms
Dark Current (Typical)	<0.5 nA/cm ²
Dynamic Range	70 dB
Quantum Efficiency (wavelength = 500, 540, 600 nm)	32%, 30%, 24%
Blooming Suppression	100 X
Image Lag	Negligible
Smear	<0.03%
Maximum Data Rate	20 MHz/Channel (2 channels)

APPLICATIONS

- Industrial Imaging
- Medical Imaging
- Scientific Imaging

ORDERING INFORMATION

Catalog Number	Product Name	Description
2H4831	KAI- 1003-AAA-CR-AE	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass with AR coating (2 sides), Engineering Sample
2H4828	KAI- 1003-AAA-CR-B2	Monochrome, No Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass with AR coating (2 sides), Grade 2
2H4440	KAI- 1003-ABA-CD-AE	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Engineering Sample
2H4544	KAI- 1003-ABA-CD-B2	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Clear Cover Glass with AR coating (both sides), Grade 2
2H4833	KAI- 1003-ABA-CR-AE	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass with AR coating (2 sides), Engineering Sample
2H4825	KAI- 1003-ABA-CR-B2	Monochrome, Telecentric Microlens, CERDIP Package (sidebrazed), Taped Clear Cover Glass with AR coating (2 sides), Grade 2

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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