

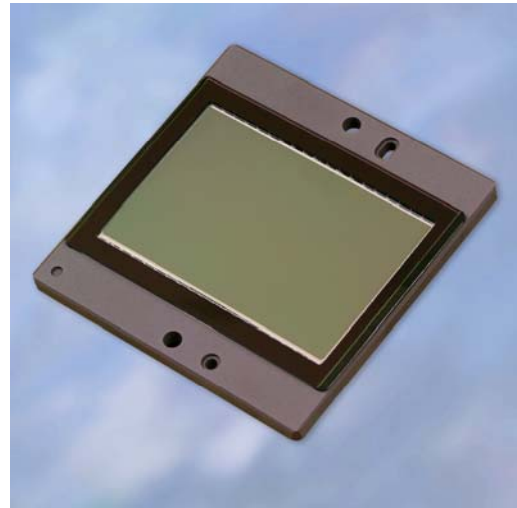
SUMMARY SPECIFICATION

KODAK KAI-16000 IMAGE SENSOR

4872 (H) X 3248 (V) INTERLINE TRANSFER PROGRESSIVE SCAN CCD

DESCRIPTION

The KODAK KAI-16000 is an interline transfer CCD offering 16 million pixels at up to 3 frames per second through 2 outputs. This image sensor is organized into an array of 4,872(H) x 3,248(V) with 7.4 micron square pixels and full 35mm optical format. As an interline transfer CCD, the KAI-16000 includes additional features such as progressive scan readout, electronic shutter, low noise, high dynamic range, and blooming suppression. These features make the KAI-16000 the perfect sensor for applications in Industrial, Aerial, Security, and Scientific markets.

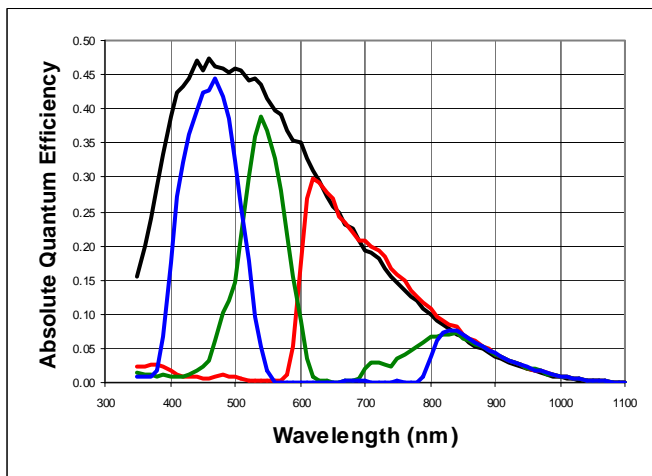


FEATURES

- 16 Million pixel resolution
- Electronic shutter
- 35mm Optical format
- Progressive scan readout
- High sensitivity
- Fast Frame rate
- >60 dB dynamic range

APPLICATIONS

- Industrial
- Aerial Photography
- Security
- Scientific



Parameter	Typical Value
Architecture	Interline CCD; Progressive Scan
Total Number of Pixels	4960 (H) x 3324 (V) = 16.6M
Number of Effective Pixels	4904 (H) x 3280 (V) = 16.1M
Number of Active Pixels	4872 (H) x 3248 (V) = 15.8M
Pixel Size	7.4 μm (H) x 7.4 μm (V)
Active Image Size	36.1 mm (H) x 24.0 mm (H) 43.3 mm (diagonal)
Aspect Ratio	3:2
Number of Outputs	1 or 2
Saturation Signal	30,000 electrons
Output Sensitivity	30 $\mu\text{V}/\text{e}$
Quantum Efficiency KAI-16000-AXA (500nm)	45%
Quantum Efficiency KAI-16000-CXA R(630nm), G(540nm), B(470nm)	42%, 37%, 30%
Read Noise (f=30MHz)	16 electrons
Dark Current	< 0.5 nA/cm ²
Dark Current Doubling Temperature	7 °C
Dynamic Range	65 dB
Charge Transfer Efficiency	0.99999
Blooming Suppression	> 100X
Smear	< -80 dB
Image Lag	< 10 electrons
Maximum Data Rate	30 MHz per channel
Package	40 pin Pin Grid Array
Cover Glass	AR coated, 2 sides

All parameters above are specified at T = 40°C

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H0856	KAI-16000-AAA-JR-B1	Monochrome, No Microlens, PGA Package, Taped Clear Cover Glass with AR coating (2 sides), Grade 1	KAI-16000-AAA (Serial Number)
4H0857	KAI-16000-AAA-JR-B2	Monochrome, No Microlens, PGA Package, Taped Clear Cover Glass with AR coating (2 sides), Grade 2	
4H0858	KAI-16000-AAA-JR-AE	Monochrome, No Microlens, PGA Package, Taped Clear Cover Glass with AR coating (2 sides), Engineering Grade	
4H2001	KAI-16000-AAA-JD-B1	Monochrome, No Microlens, PGA Package, Sealed Clear Cover Glass with AR coating (2 sides), Grade 1	
4H2002	KAI-16000-AAA-JD-B2	Monochrome, No Microlens, PGA Package, Sealed Clear Cover Glass with AR coating (2 sides), Grade 2	
4H2003	KAI-16000-AAA-JD-AE	Monochrome, No Microlens, PGA Package, Sealed Clear Cover Glass with AR coating (2 sides), Engineering Grade	
4H0850	KAI-16000-AXA-JD-B1	Monochrome, Special Microlens, PGA Package, Clear Cover Glass with AR coating (both sides), Grade 1	KAI-16000-AXA (Serial Number)
4H0851	KAI-16000-AXA-JD-B2	Monochrome, Special Microlens, PGA Package, Clear Cover Glass with AR coating (both sides), Grade 2	
4H0852	KAI-16000-AXA-JD-AE	Monochrome, Special Microlens, PGA Package, Clear Cover Glass with AR coating (both sides), Engineering Grade	
4H0853	KAI-16000-CXA-JD-B1	Color (Bayer RGB), Special Microlens, PGA Package, Clear Cover Glass with AR coating (both sides), Grade 1	KAI-16000-CXA (Serial Number)
4H0854	KAI-16000-CXA-JD-B2	Color (Bayer RGB), Special Microlens, PGA Package, Clear Cover Glass with AR coating (both sides), Grade 2	
4H0855	KAI-16000-CXA-JD-AE	Color (Bayer RGB), Special Microlens, PGA Package, Clear Cover Glass with AR coating (both sides), Engineering Grade	

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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