

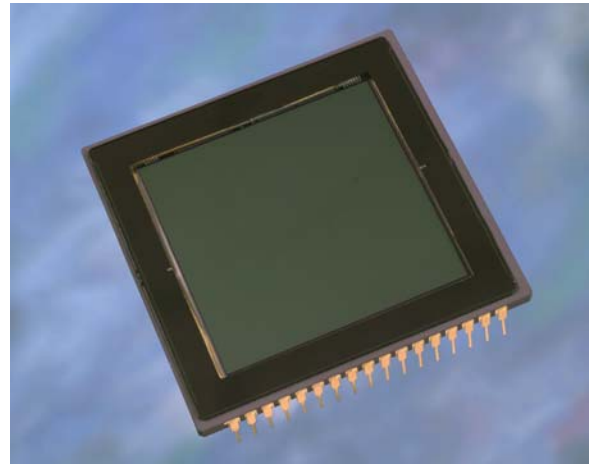
PRODUCT SUMMARY

KODAK KAF-16803 IMAGE SENSOR

4096 (H) X 4096 (V) FULL FRAME CCD IMAGE SENSOR

DESCRIPTION

The KAF-16803 image sensor is a redesigned version of the popular KAF-16801E image sensor (4096 x 4096 pixel resolution) with enhancements that specifically target the needs of high performance digital radiography applications. Improvements include enhanced quantum efficiency for improved DQE at higher spatial frequencies, lower noise for improved contrast in areas of high density, and anti-blooming protection to prevent image bleed from over exposure in regions outside the patient. Utilizing Kodak's proprietary single gate ITO process and micro-lens technology, the KAF-16803 image sensor with its large imaging area and small pixel size provides the sensitivity, resolution and contrast necessary for high quality digital radiographs. To simplify device integration, the KAF-16803 image sensor uses the same pin-out and package as the KAF-16801E image sensor.



FEATURES

- High Resolution
- Large Image Area
- High Quantum Efficiency
- Low Noise Architecture
- Broad Dynamic Range

APPLICATIONS

- Digital radiography
- Astronomy
- Life Sciences

Parameter	Typical Value
Architecture	Full Frame CCD; Square Pixels
Total Number of Pixels	4145 (H) x 4128 (V) = 17.1 Mp
Number of Effective Pixels	4127 (H) x 4128 (V) = 17 Mp
Number of Active Pixels	4096 (H) x 4096 (V) = 16.8 Mp
Pixel Size	9 μm (H) x 9 μm (V)
Active Image Size	36.8mm (H) x 36.8mm (V) 52.1mm Diagonal
Aspect Ratio	1:1
Horizontal Outputs	1
Saturation Signal	100 K e ⁻
Output Sensitivity	22 $\mu\text{V}/\text{e}^-$
Quantum Efficiency (550nm)	60%
Responsivity (550 nm)	28.7 V/ $\mu\text{J}/\text{cm}^2$
Read Noise (f=4 MHz)	9 e ⁻
Dark Signal (T=25°C)	3 e ⁻ /pix/sec
Dark Current Doubling Temperature	6.3° C
Linear Dynamic Range (f=4 MHz, T=25 C)	80 dB
Blooming Protection (4ms exposure time)	> 100X saturation exposure
Maximum Data Rate	10 MHz
Package	CERDIP (Sidebraced, CuW)
Cover Glass	AR coated, 2 sides and Taped Clear

All parameters above are specified at T = 25 ° C, unless noted otherwise.

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H2053	KAF-16803-ABA-DD-BA	Monochrome, Microlens, CERDIP Package (sidebrazed, CuW), AR coated 2 sides, Standard grade	KAF-16803-ABA (Serial Number)
4H0863	KAF-16803-ABA-DD-AE	Monochrome, Microlens, CERDIP Package (sidebrazed, CuW), AR coated 2 sides, Engineering sample	
4H2054	KAF-16803-ABA-DP-BA	Monochrome, Microlens, CERDIP Package (sidebrazed, CuW), Taped clear coverglass, Standard grade	
4H0865	KAF-16803-ABA-DP-AE	Monochrome, Microlens, CERDIP Package (sidebrazed, CuW), Taped clear coverglass, Engineering sample	

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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