

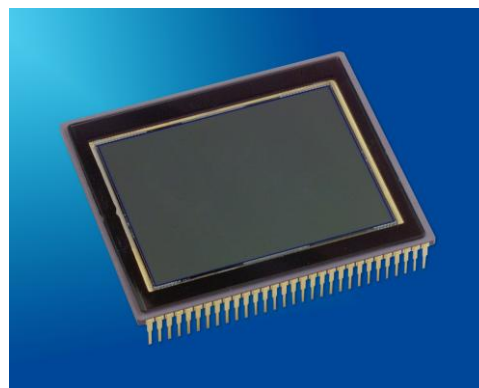
PRODUCT SUMMARY

KODAK KAF-31600 IMAGE SENSOR

6496 (H) X 4872 (V) FULL FRAME CCD COLOR IMAGE SENSOR

DESCRIPTION

The KAF-31600 is a dual output, high performance color array CCD (charge coupled device) image sensor with 6496(H) x 4872(V) 6.8 μ m square pixels, designed for digital still camera applications. Each pixel contains anti-blooming protection to prevent image corruption during high light level conditions. Each of the pixels are selectively covered with red, green or blue pigmented filters for color separation. Microlenses are added for improved sensitivity. The photoactive pixels are surrounded by a border of buffer and light-shielded pixels. Total chip size is 46.05mm x 35.0mm and is housed in a 60 pin, 2.200" x 1.870" (55.89 x 44.96mm) dual in line ceramic package with 0.070" (1.78mm) pin spacing.



FEATURES

- Ultra-high resolution
- Broad dynamic range
- Low noise architecture
- Large active imaging area

APPLICATIONS

- Professional Digital Still Cameras and Camera Backs

| Parameter | Typical Value |
|---|------------------------------------|
| Architecture | Full Frame CCD; with Square Pixels |
| Total Number of Pixels | 6606 (H) x 4954 (V) = 32.8M |
| Number of Effective Pixels | 6536 (H) x 4912 (V) = 32.1M |
| Number of Active Pixels | 6496 (H) x 4872 (V) = 31.6M |
| Pixel Size | 6.8 μ m (H) x 6.8 μ m (V) |
| Imager Size | 55.2 mm (diagonal) |
| Chip Size | 46.05mm (H) x 35.0mm (V) |
| Aspect Ratio | 4:3 |
| Saturation Signal | 60 K e ⁻ |
| Charge to Voltage Conversion | 24 μ V/e ⁻ |
| Quantum Efficiency (RGB) | 37%, 43%, 36% |
| Read Noise (f=24 MHz) | 16 e ⁻ |
| Dark Signal (T=40°C) | 2 mV |
| Dark Current Doubling Temperature | 6.3° C |
| Linear Dynamic Range (f=24 MHz, T=40 C) | 70.5 dB |
| Charge Transfer Efficiency (HCTE/VCTE) | 0.999995 0.999999 |
| Blooming Protection (4ms exposure time) | 1000X saturation exposure |
| Maximum Data Rate | 24 MHz |
| Readout Mode | Dual output only |

All parameters are specified at T = 20° C unless otherwise noted.

ORDERING INFORMATION

| Catalog Number | Product Name | Description | Marking Code |
|----------------|----------------------------|--|---------------------|
| 4H0700 | KAF-31600-CXA-DD-AA | Color (Bayer RGB), Special Microlens, CERDIP Package (sidebrazed, CuW), Clear Cover Glass with AR coating (both sides), Standard Grade | KAF-31600-CX S/N |
| 4H0701 | KAF-31600-CXA-DD-AE | Color (Bayer RGB), Special Microlens, CERDIP Package (sidebrazed, CuW), Clear Cover Glass with AR coating (both sides), Engineering Sample | |
| 4H0814 | KEK-4H0814-KAF-31600-12-24 | 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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