

PRODUCT SUMMARY

KODAK KLI-8023 IMAGE SENSOR

8002 X 3 TRI-LINEAR CCD IMAGE SENSOR

DESCRIPTION

The KODAK KLI-8023 Image Sensor is a multispectral, linear solid state image sensor for color scanning applications where ultra-high resolution is required.

The imager consists of three parallel linear photodiode arrays, each with 8000 active photosites for the output of R, G, and B signals. This device offers high sensitivity, high data rates, low noise and negligible lag. Individual electronic exposure control for each color allows the KLI-8023 sensor to be used under a variety of illumination conditions. The imager can be operated in an "Extended Dynamic Range" mode for the most demanding applications.

FEATURES

- 12 line spacing between color channels
- Single shift register per channel
- High offband spectral rejection
- Dark reference pixels provided
- Antireflective glass
- Wide dynamic range, low noise
- Dual dynamic range mode operation
- No image lag
- Electronic exposure control
- High charge transfer efficiency
- Two-phase register clocking
- 74ACT logic compatible clocks
- 6MHz maximum data rate

APPLICATIONS

- Photography
- Medical Imaging
- Scientific Imaging



Parameter	Typical Value
Architecture	3 Channel, RGB Trilinear CCD
Pixel Count	8002 x 3
Pixel Size	9 μm (H) x 9 μm (V)
Pixel Pitch	9 μm
Inter-Array Spacing	108 μm (12 lines effective)
Imager Size	72.0 mm (H) x 0.225 mm (V)
Saturation Signal	185k electrons (Normal DR mode) 400k electrons (Extended DR mode)
Dynamic Range (2 MHz Data Rate)	84 dB (Normal DR mode) 90 dB (Extended DR mode)
Responsivity (wavelength= 460, 540, 650 nm)	14, 17, 26 V/ $\mu\text{J}/\text{cm}^2$
Output Sensitivity	14.4 $\mu\text{V}/\text{electron}$
Dark Current	0.002 pA/pixel
Dark Current Doubling Rate	8° C
Charge Transfer Efficiency	0.999998/Transfer
Photoresponse Non-uniformity	3% Peak-Peak
Lag (First Field)	0.025%
Maximum Data Rate	6 MHz/Channel
Package	CERDIP (Sidebrazed, CuW)
Cover Glass	AR coated, 2 sides

Parameters above are specified at T = 25°C (junction temperature) and 1 MHz clock rates unless otherwise noted.

ORDERING INFORMATION

Catalog Number	Product Name	Description	Marking Code
4H0614	KLI- 8023-AAA-ED-AA	Monochrome, No Microlens, CERDIP Package (leadframe), Clear Cover Glass with AR coating (both sides), Standard Grade	KLI-8023-AAA (Serial Number)
4H0617	KLI- 8023-AAA-ED-AE	Monochrome, No Microlens, CERDIP Package (leadframe), Clear Cover Glass with AR coating (both sides), Engineering Sample	
4H0615	KLI- 8023-DAA-ED-AA	Color (RGB), No Microlens, CERDIP Package (leadframe), Clear Cover Glass with AR coating (both sides), Standard Grade	KLI-8023-DAA (Serial Number)
4H0618	KLI- 8023-DAA-ED-AE	Color (RGB), No Microlens, CERDIP Package (leadframe), Clear Cover Glass with AR coating (both sides), Engineering Sample	
4H0093	KEK-4H0093-KLI-8023-12-5	Evaluation Board (Complete Kit)	N/A

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.

Please address all inquiries and purchase orders to:

Image Sensor Solutions
Eastman Kodak Company
Rochester, New York 14650-2010

Phone: (585) 722-4385
Fax: (585) 477-4947
E-mail: imagers@kodak.com

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