



Product Overview

KAI-04050: Interface Transfer CCD Image Sensor, 4.1 MP

[For complete documentation, see the data sheet](#)

Product Description

The KAI-04050 Image Sensor is a 4-megapixel CCD in a 1" (16 mm diagonal) optical format. Based on the TRUESENSE 5.5 micron Interline Transfer CCD Platform, the sensor features broad dynamic range, excellent imaging performance, and a flexible readout architecture that enables use of 1, 2, or 4 outputs. The sensor supports full resolution readout up to 32 frames per second, while a Region of Interest (ROI) mode enables partial readout of the sensor at even higher frame rates. A vertical overflow drain structure suppresses image blooming and enables electronic shuttering for precise exposure control.

The sensor is available with the TRUESENSE Sparse Color Filter Pattern, a technology which provides a 2x improvement in light sensitivity compared to a standard color Bayer part.

The sensor shares common pin-out and electrical configurations with other devices based on the TRUESENSE 5.5 micron Interline Transfer CCD Platform, allowing a single camera design to support multiple members of this sensor family.

Features

- Bayer Color Pattern, TRUESENSE Sparse Color Filter Pattern, and Monochrome configurations
- Progressive scan readout
- Flexible readout architecture
- High frame rate
- High sensitivity
- Low noise architecture
- Excellent smear performance
- Package pin reserved for device identification

Applications

- Intelligent Transportation Systems
- Machine Vision
- Medical
- Scientific

Part Electrical Specifications

Product	Compliance	Status	Type	Megapixels	Frame Rate (fps)	Optical Format	Shutter Type	Pixel Size (μm)	Color	Package Type
KAI-04050-AAA-JP-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Mono	CPGA-67
KAI-04050-AAA-JP-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Mono	CPGA-67
KAI-04050-ABA-JD-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Mono	CPGA-67
KAI-04050-ABA-JD-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Mono	CPGA-67
KAI-04050-ABA-JP-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Mono	CPGA-67
KAI-04050-ABA-JP-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Mono	CPGA-67
KAI-04050-CBA-JB-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-CBA-JB-B2	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-CBA-JB-B2-T	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-CBA-JD-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-CBA-JD-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-FBA-JB-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-FBA-JB-B2	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-FBA-JB-B2-T	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-FBA-JD-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-FBA-JD-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Bayer Color	CPGA-67
KAI-04050-PBA-JD-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Sparse CFA	CPGA-67
KAI-04050-PBA-JD-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Sparse CFA	CPGA-67
KAI-04050-QBA-JD-AE	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Sparse CFA	CPGA-67
KAI-04050-QBA-JD-BA	Pb-free Halide free	Active	Interline CCD	4.1	32	1 inch	Electronic	5.5 x 5.5	Sparse CFA	CPGA-67

For more information please contact your local sales support at www.onsemi.com

Created on: 7/11/2015