

## Product Overview

### KAI-02050: Interline Transfer CCD Image Sensor, 1.9 MP

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

The KAI-02050 Image Sensor is a 2-megapixel CCD in a 2/3" (11 mm diagonal) optical format. Based on an advanced 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 for full resolution readout up to 68 frames per second. A vertical overflow drain structure suppresses image blooming and enables electronic shuttering for precise exposure control. Other features include low dark current, negligible lag, and low smear.

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

### Features

- Color or 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) | Output Interface | Color       | Package Type |
|-----------------------|------------------------|--------|---------------|------------|------------------|----------------|--------------|-----------------|------------------|-------------|--------------|
| KAI-02050-AAA-JP-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CPGA-67      |
| KAI-02050-AAA-JP-BA   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CPGA-67      |
| KAI-02050-ABA-FD-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CLCC-64      |
| KAI-02050-ABA-FD-BA   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CLCC-64      |
| KAI-02050-ABA-JD-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CPGA-67      |
| KAI-02050-ABA-JD-BA   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CPGA-67      |
| KAI-02050-ABA-JP-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CPGA-67      |
| KAI-02050-ABA-JP-BA   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Mono        | CPGA-67      |
| KAI-02050-CBA-FD-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CLCC-64      |
| KAI-02050-CBA-JB-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |
| KAI-02050-CBA-JD-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |
| KAI-02050-FBA-FD-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CLCC-64      |
| KAI-02050-FBA-FD-BA   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CLCC-64      |
| KAI-02050-FBA-JB-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |
| KAI-02050-FBA-JB-B2   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |
| KAI-02050-FBA-JB-B2-T | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |
| KAI-02050-FBA-JD-AE   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |
| KAI-02050-FBA-JD-BA   | Pb-free<br>Halide free | Active | Interline CCD | 1.9        | 68               | 2/3 inch       | Electronic   | 5.5 x 5.5       | Analog           | Bayer Color | CPGA-67      |

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