

Diagonal 8mm (Type 1/2) CCD Image Sensor for EIA B/W Video Cameras

Description

The ICX428ALL is an interline CCD solid-state image sensor suitable for EIA B/W video cameras with a diagonal 8mm (Type 1/2) system. Basic characteristics such as sensitivity, smear, dynamic range and S/N are improved drastically through the adoption of EXview HAD CCD™ technology.

This chip features a field period readout system and an electronic shutter with variable charge-storage time. This chip is compatible with the pins of the ICX248AL and has the same drive conditions.

EXview HAD CCD™ has different spectral characteristics from the current CCD.

Features

- High sensitivity
- Low smear
- High D range
- High S/N
- High resolution and low dark current
- Excellent antiblooming characteristics
- Continuous variable-speed shutter
- Substrate bias: Adjustment free (external adjustment also possible with 6 to 14V)
- Reset gate pulse: 5Vp-p adjustment free (drive also possible with 0 to 9V)
- Horizontal register: 5V drive

Device Structure

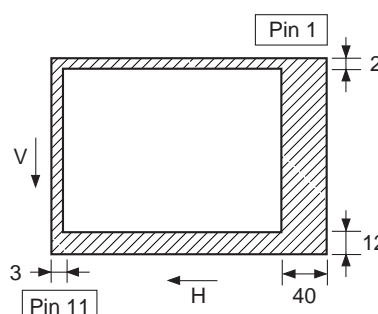
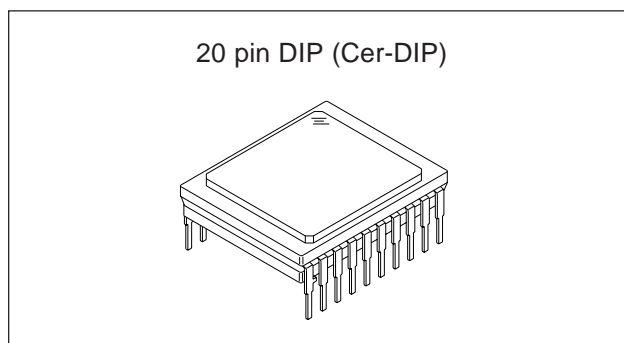
- Interline CCD image sensor
- Optical size: Diagonal 8mm (Type 1/2)
- Number of effective pixels: 768 (H) × 494 (V) approx. 380K pixels
- Total number of pixels: 811 (H) × 508 (V) approx. 410K pixels
- Chip size: 7.40mm (H) × 5.95mm (V)
- Unit cell size: 8.4μm (H) × 9.8μm (V)
- Optical black:
 - Horizontal (H) direction: Front 3 pixels, rear 40 pixels
 - Vertical (V) direction: Front 12 pixels, rear 2 pixels
- Number of dummy bits:
 - Horizontal 22
 - Vertical 1 (even fields only)
- Substrate material: Silicon

EXview HAD CCD™

* EXview HAD CCD is a trademark of Sony Corporation.

EXview HAD CCD is a CCD that drastically improves light efficiency by including near infrared light region as a basic structure of HAD (Hole-Accumulation-Diode) sensor.

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Optical black position
(Top View)