AR0135CS-ADD

Advance Information

1/3-Inch 1.2Mp CMOS Digital Image Sensor with Global Shutter

AR0135CS Blemish Specifications Addendum

ON Semiconductor®

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ADDENDUM

Introduction

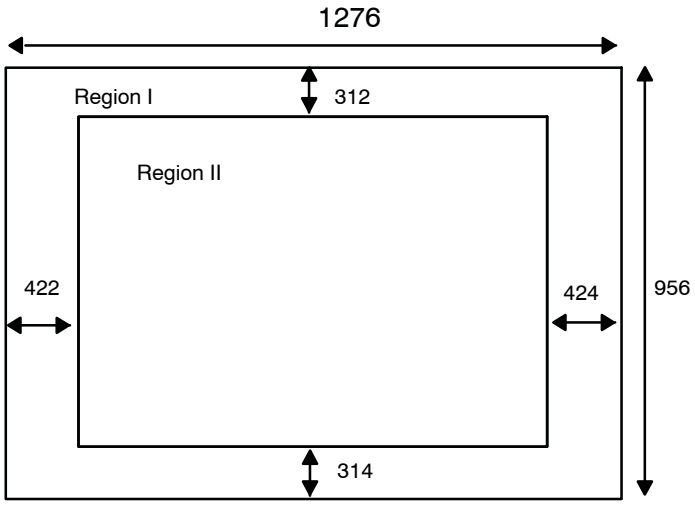
This document describes the blemish specification of ON Semiconductor's AR0135CS image sensor. This document supplements the AR0135CS data sheet and outgoing defect specification with the blemish specifications specific to the 25° CRA Monochrome version. The standard data sheet should be referenced for a complete description of this 1/3−inch CMOS digital image sensor. The specifications contained in this addendum supersede the specifications listed in the referenced data sheet.

The data discussed in this document applies to the following part numbers.

- AR0135CS2M25SUEA0−DPBR Mono, 25° CRA, IBGA
- AR0135CS2M25SUEA0−DPBR1 Mono, 25° CRA, IBGA
- AR0135CS2M25SUEA0−DRBR Mono, 25° CRA, IBGA
- AR0135CS2M25SUEA0−DRBR1 Mono, 25° CRA, IBGA
- AR0135CS2M25SUEA0−TPBR Mono, 25° CRA, IBGA
- AR0135CS2M25SUEA0−TRBR Mono, 25° CRA, IBGA

Sensor Defects Specifications

The sensor array is partitioned into two regions: Region I and Region II. These dimensions are defined in Figure 1.



NOTE: Two border pixels are excluded from each edge.

Figure 1. Sensor Array

This document contains information on a new product. Specifications and information herein are subject to change without notice.

Defect Specifications

Table 1 summarizes each type of defect.

Table 1. DEFECT SPECIFICATION

Defect Types	Region		Test Number
	I	II	
Large blemish defect	0	0	1
Blemish defect	3	0	2

NOTE: All specifications address operation is at T_A = 25°C (±3°C) and V_{AA} = V_{AA_PIX} = V_{AA_PLL} = 2.8 V, V_{DD} = 1.8 V, V_{DD_IO} = 2.8 V. Image sensor is tested without a lens. Multiple images are captured and analyzed in monochrome format.

Test Conditions

- Measured with f/13 collimated light source
- Full resolution images (four frames) are captured using a 2.5 ms integration time with a midlevel scene illumination such that sensor output is about 2050 LSBs. Frames are averaged for analysis.
- Sensor column gain is 1x, digital gain is 1x.

Defect Definitions

Test 1: Large Blemish Defect

A large blemish defect is defined as a group of 51 or more adjacent pixels whose average value differs by 10% as compared to the mean value of the array when the sensor is operated as specified in the Test Conditions section.

Test 2: Blemish Defect

A blemish defect is defined as a group of 20 or more adjacent pixels whose average value differs by 10% as compared to the mean value of the array when the sensor is operated as specified in the Test Condition section. When present, no two blemish defects' centroid can be closer than 480 pixels to each other.

PUBLICATION ORDERING INFORMATION

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