Product Specification

Product: InnoCAM_DCM_IMX335

Product Part Number: INV-IMX335-5MP

Revision: Rev 1.0

Document No: INV427

Contact us: sales@innowave.design

REVISION HISTORY

Revision	Description of change	Changed by	Date
1.0	Initial Draft	Jamie Lynn	01/13/2026

APPROVAL

Company	Name	Signature	Date
InnoWave Design LLC	Jamie Lynn		01/13/2026
InnoWave Design LLC	Miki Pe'er		01/14/2026

Contents

Product Specification **4**

1. General **4**
1.1. Specifications 4
1.2. Layout and Pin Descriptions 5

2. Enviroment Requirements **6**
2.3. Operating Temperature 6
2.4. Storage Temperature 6
2.5. Humidity 6
2.6. Thermal Shock 6
2.7. High Temperature Test 6
2.8. Low Temperature Test 6

3. Reliability Requirements **6**
3.1. Drop Test 6
3.3. Salt Fog Test 6
3.4. ESD (Electronic Discharge) 6

4. Product Performance Verification **7-8**
4.1. Electrical Parameters 7
4.2. Image Test Parameters 7
4.3. Mechanical Parameters 8
4.4. Environmental and Reliability Test Parameters 8

5. Product Identification TBD **8**

9 Packaging **9**

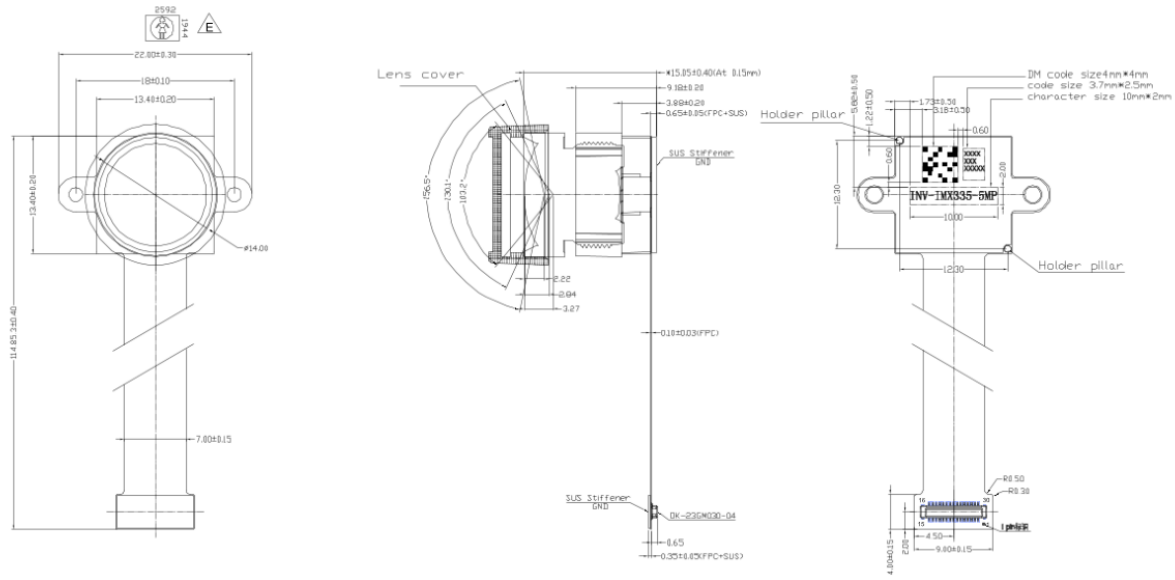
1. General

The Sony IMX335 is a 5-megapixel CMOS image sensor, designed for security, surveillance, and industrial cameras. It uses a 1/2.8-type back-illuminated (BSI) STARVIS™ architecture, delivering high sensitivity and low-light performance, including good results in near-infrared conditions. The sensor supports HDR (DOL-HDR), runs up to ~30 fps at full resolution, and outputs data over MIPI CSI-2, making it well suited for compact, high-quality imaging systems.

1.1. Specifications

Sensor Make and Model	Sony IMX335 (Color STRAVIS)
Sensor Type	CMOS
Resolution	5.04MP
Active array size	2592(H) x 1944(V) pixels
Pixel Size	2um x 2um
Optical Format	1/2.8" (diagonal ~ 6.52 mm)
Size	13.4x13.4mm
Chroma	Color (RGB Bayer, STARVIS)
Substrate material	Silicon
Frame Rate	Up to 60 fps @ full resolution (10-bit output), up to 60 fps common in modules; lower rates at different bit depths or in cropped/binned modes
Input Voltage	Analog ~2.9 V, Digital ~1.2 V, Interface ~1.8 V typical (triple supply)
Input Clock Frequency	6–27 MHz / 37.125 MHz / 74.25 MHz typical
Operating Temperature Range	–30 °C to +85 °C
Field of View (FOV) degrees	Flush Lens – D=130°, H=93°, V=103.2° Custom Option - D=156.5°, H=130.1°, V=103.2°.
Aperture (F#)	1.1 ± 10%
TV Distortion	<-19%
Focus Range	10cm-25cm
Lens Size	1/2.8" 2G4P+IR (650nm)
Lens Type	Flush

1.2. Layout



Pin Assignment	
1	NC
2	AVDD
3	DVDD
4	DOVDD
5	DVDD
6	MCLK
7	NC
8	NC
9	SCL
10	SDA
11	RESET
12	NC
13	NC
14	NC
15	NC
16	MDN1
17	MDP1
18	DGND
19	MDN3
20	MDP3
21	DGND
22	MDN0
23	MDP0
24	DGND
25	MDN2
26	MDP2
27	DGND
28	MCN
29	MCP
30	AGND

* Due to the flush lens, the diagonal field of view (DFOV) and horizontal field of view (HFOV) are as follows: DFOV =130°, HFOV =93°

Notes:

1. * is Critical Dimension
2. Power Supply:
   AVDD – 2.8V to 3.0V (2.9V Typical)
   DOVDD – 1.7V to 1.9V (1.8V Typical)
   DVDD – 1.1V to 1.3V (1.2V Typical)
3. Lens with 650 Filter
4. SLAMODE0=0, Sensor IIC address 0x34(write), 0x35(read)
5. RESET: Active Low
6. Connector: OK-23GM030-04
7. Matching Connector: OK-23GF030-04

Figure 1: camera module assembly layout

Environment Requirements:

2.1. Operating Temperature

The camera module shall be fully functional when ambient temperature is between -20°C to 60°C with image quality remaining stable. Test duration is 24 hours.

2.2. Storage Temperature

The camera module shall withstand storage temperatures between -30°C to 70°C. Test duration is 48 hours.

2.3. Humidity

The camera module shall withstand humidity at or below 90% RH under non-condensing conditions for 24 hours.

2.4. Thermal Shock

The camera module shall withstand the following temperatures (with humidity off)
-30°C to 70°C
20 min cycles (10 min dwell, 5 min ramp, 10 min dwell)

2.5. High Temperature Test

60C, humidity off, 24 hours

2.6. Low Temperature Test

-20C, humidly off, 24 hours

Stable image is -30°C to 70°C junction temperature. The sensor functions but image quality may be noticeably different at temperatures outside of stable image range. Image quality remains stable between 0°C to 50°C.

3. Reliability Requirements

3.1. Drop Test

The camera module shall withstand a 1.2m Drop in packaging onto Concrete (12 drops) Random Positions

3.2. Salt Fog Test

Condition: 5%nacl solvent Test duration：24H

3.3. ESD (Electronic Discharge)

The camera module shall withstand Electrostatic Discharge of
8KV Contact Discharge
12KV Air Discharge
10 Times for a Second

4. Product Performance Verification

To verify the camera module performance, the following tests will be conducted at either the factory during production or as an initial qualification characterization in either the factory laboratory or at the InnoWave laboratory.

4.1. Electrical Parameters

Parameter	Test Frequency
Current consumption – Standby	Initial Qualification
Current consumption – Idle	Initial Qualification
Current consumption – Viewfinder	Initial Qualification
Current consumption – Capture	Initial Qualification

Table 5: Electrical parameter measurements

4.2. Image Test Parameters

Parameter	Test Frequency
Thermal Shock	Initial Qualification
Humidly	Initial Qualification
High Temperature Test	Initial Qualification
Low Temperature Test	Initial Qualification
Drop Test	Initial Qualification
Random Vibration Test	Initial Qualification
Salt Fog Test	Initial Qualification
ESD Test	Initial Qualification

Table 6: Image parameter measurements

4.3. Mechanical Parameters

Parameter	Test Frequency
X Dimension (mm)	Initial Qualification
Y dimension (mm)	Initial Qualification
Z Dimension (mm)	Initial Qualification

Table 7: Mechanical parameter measurements

4.4. Environmental and Reliability Test Parameters

Parameter	Test Frequency
Thermal Shock	Initial Qualification
Humidly	Initial Qualification
High Temperature Test	Initial Qualification
Low Temperature Test	Initial Qualification
Drop Test	Initial Qualification
Random Vibration Test	Initial Qualification
Salt Fog Test	Initial Qualification
ESD Test	Initial Qualification

Table 8: Environmental and Reliability parameter measurements

5. Product Identification

All modules will be marked with an identification number using laser marking or bar code label.

6. Packaging

The package will prevent damage to the components during transport and will be suitable for electrostatic-sensitive devices. The single camera modules shall be delivered in a reusable tray of anti-static plastic material. Several cameras shall be packed in one tray.
The tray has separate holders for each camera module.

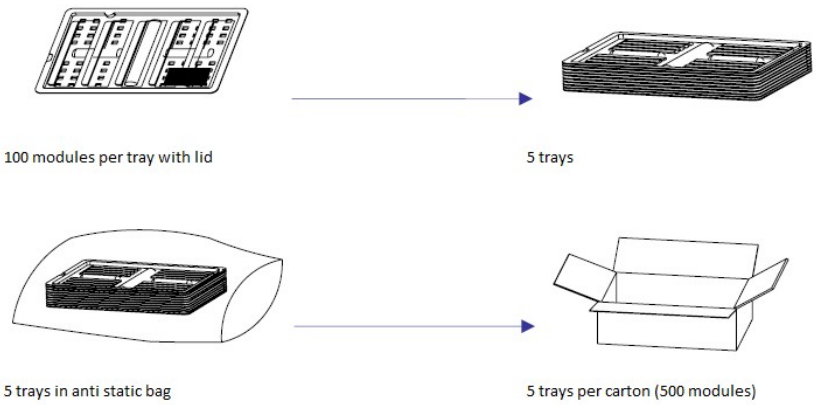


Figure 3: Packaging Example