

TEST REPORT

**CTK Co., Ltd.**

5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,
Gyeonggi-do, Republic of Korea
Tel: +82-31-339-9970
Fax: +82-31-624-9501

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CTK-2026-00744
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1. Applicant

- Name : Hanwha Vision Co., Ltd.
- Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13488 KOREA
- Date of Receipt : Feb. 04, 2026

2. Manufacturer

- Name : Hanwha Vision Co., Ltd.

3. Use of Report :

For submission to customer

4. Test sample / Model :

NETWORK CAMERA / XND-A9014R

5. Date(s) of test :

Feb. 11, 2026 ~ Mar. 13, 2026

6. Test Standard (Method) used :

IEC 60529:1989 +A1:1999+A2:2013

7. Testing Environment :

Temperature: (25 ± 10) °C, Humidity: (50 ± 25) % R.H.
Pressure: (96 ± 10) kPa

8. Test Results :

Refer to the test results

9. Location of Test :

☒ Permanent Testing Lab ☐ On Site Testing
(113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of
korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

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Approval	Tested by	Technical Manager
	Name: HongBeom Jeon (Signature) 	Name: HoHyun Lee (Signature) 

Remark. This report is not related to ISO/IEC 17025, KOLAS accreditation and relevant regulation.

Mar. 19, 2026

CTK Co., Ltd.



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1. Testing laboratory

1.1 Testing laboratory information

Lab. Name	CTK Co., Ltd.
Representative	Young Joseph Seungwon
Address	5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Tel.	+82-31-339-9970
Fax.	+82-31-624-9501
E-Mail	all.youngin@element.com
Website	www.elementkorea.kr

1.2 Testing laboratory accreditation status

Country	Classification	Accreditation Number	Logo
International	KOLAS	TESTING NO. KT119	

※ CTK Co., Ltd. is an independent third-party testing laboratory and is not affiliated with the manufacturer (Hanwha Vision Co., Ltd.) or any of its parent or subsidiary companies.

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2. Sample description and equipment information

2.1 Sample description

Sample Name	Model Name	S/N	Date of Manufacture	Quantity	Comment
Network Camera	XND-A9014R	ZX3H70GL10000NF	2026.01	1 EA	-

2.2 Model description

Basic Model	XND-A9014R
Series model	XND-A8014R, XND-A6014R
Model differences	Differences between the base model and the image sensor.

2.3 Equipment information

Testing equipment	Model Name	Manufacturer	Manufacturing Number	Next Cal. Date
Dust Chamber	NONE	JFM	S5-IP02	Feb. 20, 2027
Water flow meter with Drip box	M-15	LZT	200971	Feb. 11. 2027
Drip box	Drip Box, IPX1/ IPX2	Kingpo	ZH13388-1	
Steel measuring meter	5.5 m	KOMELON	225851	Jan. 13, 2028
Push Pull Gage	FB30K	Imada	83805	2027-01-12
Test Rod Probe Ø1.0	TRP-02	ED&D	S1-J15	2027-05-16

※ All test equipment used for this testing was calibrated in accordance with the manufacturer's requirements, and the calibration ranges cover the measurement values recorded in this report.



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2.4 Pre-test sample images

2.4.1 Test sample



Top



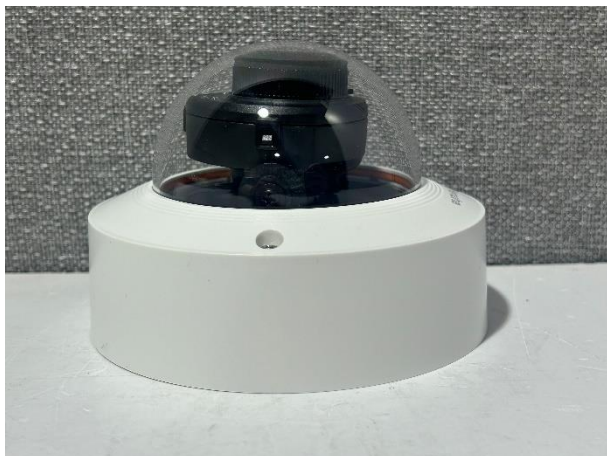
Bottom



Front



Rear



Left side



Right side



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2.5 Testing equipment images

2.5.1 Test equipment



Push Pull Gage



Test Rod Probe Ø1.0



Dust Chamber



Water flow meter with Drip box



Steel measuring meter



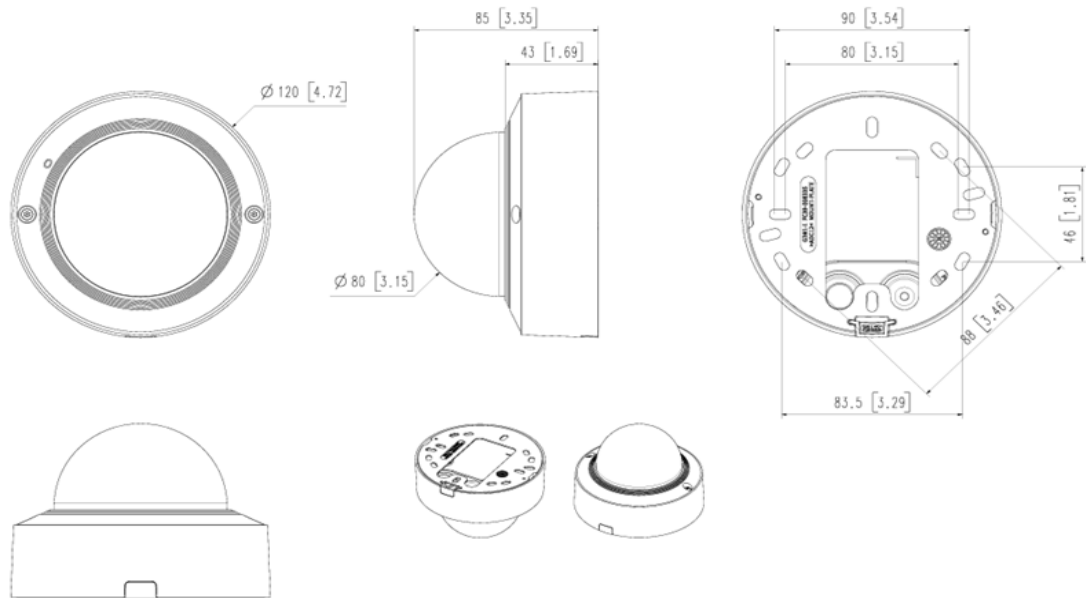
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2.6 Sample appearance

Enclosure dimensions [unit : mm]



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3. Degrees of protection provided by enclosures (IP code)

3.1 Test date and environmental conditions

3.1.1 Test date: Feb. 11, 2026 ~ Mar. 13, 2026

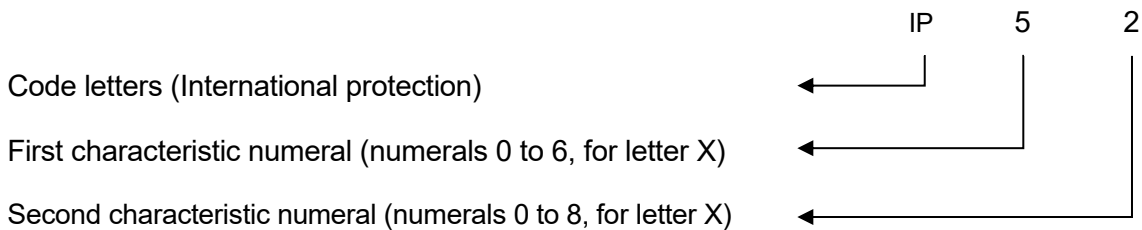
3.1.2 Measured Environmental Conditions

Item	Temperature (°C)	Humidity (% R.H.)	Pressure (kPa)
Measurement	20.4	35.2	100.2

3.2 Test conditions and methods

3.2.1 Test standard: IEC 60529:1989+A1:1999+A2:2013

3.2.2 Arrangement of the IP code



3.2.2.1 Degree of protection against access to hazardous parts indicated by the first characteristic numeral

First characteristic numeral	Degree of protection	Application
5	Protected against access to hazardous parts with a wire. The access probe of 1.0 mmØ, shall not penetrate. Test force: 1 N ± 10 %	☒

3.2.2.2 Degree of protection against solid foreign objects indicated by the first characteristic numeral



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First characteristic numeral	Degree of protection	Application
5	Dust Testing Equipment Whether reductions in pressure below the atmospheric pressure are present or not, ingress of dust is not totally preventive, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety. (The talcum powder must pass through a calibrated sieve with a 50 µm wire mesh, spaced at 75 µm intervals in a square pattern. Additionally, the bulk density of the talcum powder should be 2 kg/m³)	—
	Category 1: Enclosures where the normal working cycle of the equipment causes reductions in air pressure within the enclosure below that of the surrounding air, for example, due to thermal cycling effects. Products in volume: 960.84 cm³ → 0.96 L Target intake volume (Products in volume 80): 76.86 L Suction volume (Max product in volume 60): 57.65 LPH → 0.96 LPM Actual Suction volume: 76.86 L Suction pressure (Up to 2 kPa): 1.76 kPa Test time (Up to 8 time): 8 hr	☒
¹⁾ The full diameter of the object probe shall not pass through an opening of the enclosure. Due to the simultaneous requirement specified in table 2, the definition “shall not penetrate” is given in table 1.		

3.2.2.3 Degree of protection against water indicated by the second characteristic numeral

Second characteristic numeral	Degrees of protection	Application
2	When outskirts of the product have been tilted by 15° Water that drops verticality has to be harmless. Drip box Fig.3, Enclosure in 4 fixed positions of 15° tilt Water flow rate: 3 mm/min Duration of test: 2.5 min for each position of tilt	☒



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3.3 Test Setup and During-test sample images

3.3.1 Evidence of test setting



Prove test



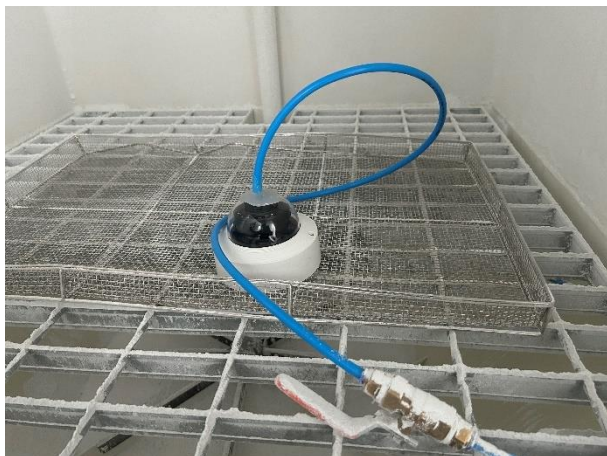
Prove test



Prove test



Prove test



Dust test



Waterproof test

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3.4 Test result**3.4.1 Test result table**

IP code	Evaluation Criteria	Test Results	Remark
IP 5X	No ingress of Probe	Normal	-
	No ingress of dust	Normal	
IP X2	No ingress of water	Normal	

※ Refer to the sample images after the completion of testing in section 3.5.

3.5 Post-test sample images

3.5.1 Sample internal images after test [The first characteristic numeral test]



3.5.2 Sample internal images after test [The second characteristic numeral test]



- End -