TEST REPORT

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Yongin-si, Gyeonggi-do, Republic of Korea
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REPORT No.:
CTK-K-2026-00645

1. Applicant

- Name : Hanwha Vision Co., Ltd.
- Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt : Jan. 20, 2025

2. Manufacturer

- Name : Hanwha Vision Co., Ltd.

3. Use of Report : For submission to customer

4. Test sample / Model : NETWORK CAMERA / XNO-A9084R

5. Date(s) of test : Feb. 04, 2025 ~ Feb. 11, 2025

6. Test Standard (Method) used : IEC 60529:1989 +A1:1999+A2:2013

7. Testing Environment : Temperature: (25 ± 10) ℃, 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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This test report is related to the accreditation of KOLAS and KS Q ISO/IEC 17025 by Korea Laboratory Accreditation Scheme.

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

The above testing certificate is the accredited test result by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

Jul. 24, 2026

Accredited by KOLAS, Republic of KOREA **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.	1551-9871
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	KOLAS

※ 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.

2. Sample description and equipment information

2.1 Sample description

Product Name	Model Name	Quantity	Comment
NETWORK CAMERA	XNO-A9084R	1 EA	-

2.2 Model description

Basic Model .....:	XNO-A9084R
Series model .....:	XNO-A8084R , TNO-A9084ER
Model differences .....:	XNO-A8084R Use of the same external shape and materials (case, finishing material, PCB, cable, etc.), differences in fixed lens inside the product. TNO-A9084ER Color, battery, and the assembly status of the conduit adapter (installation solution)

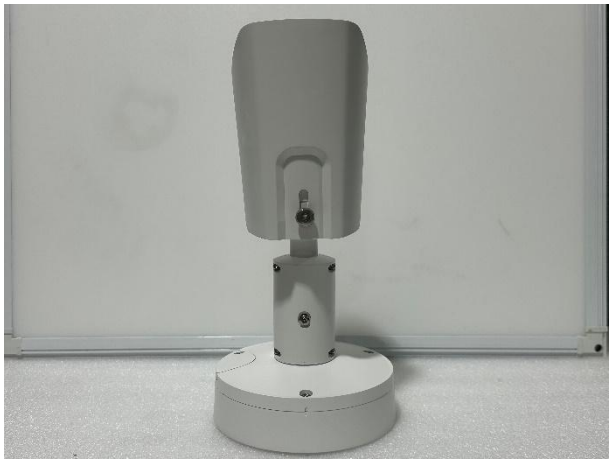
2.3 Equipment information

Testing equipment	Model Name	Manufacturer	Manufacturing Number	Next Cal. Date
Stop Watch	NONE	Casio	612Q01R-1	Jan. 23, 2026
Push Pull Gage	FB30K	Imada	83805	Jan. 16, 2026
Test Rod Probe Ø1.0	TRP-02	ED&D	S1-J15	May. 16, 2027
Dust Chamber	NONE	JFM	S3-IP36	Mar. 28, 2025
Immersion tank	Cage for IPX7 / IPX8	Kingpo	-	-
Steel measuring meter	5.5 m	KOMELON	225851	Jan. 16, 2026

※ 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.

2.4 Pre-test sample images

2.4.1 Test sample



Top



Bottom



Front



Rear



Left side



Right side

2.5 Testing equipment images

2.5.1 Test equipment



Stop Watch



Push Pull Gage



Test Rod Probe Ø1.0



Dust Chamber



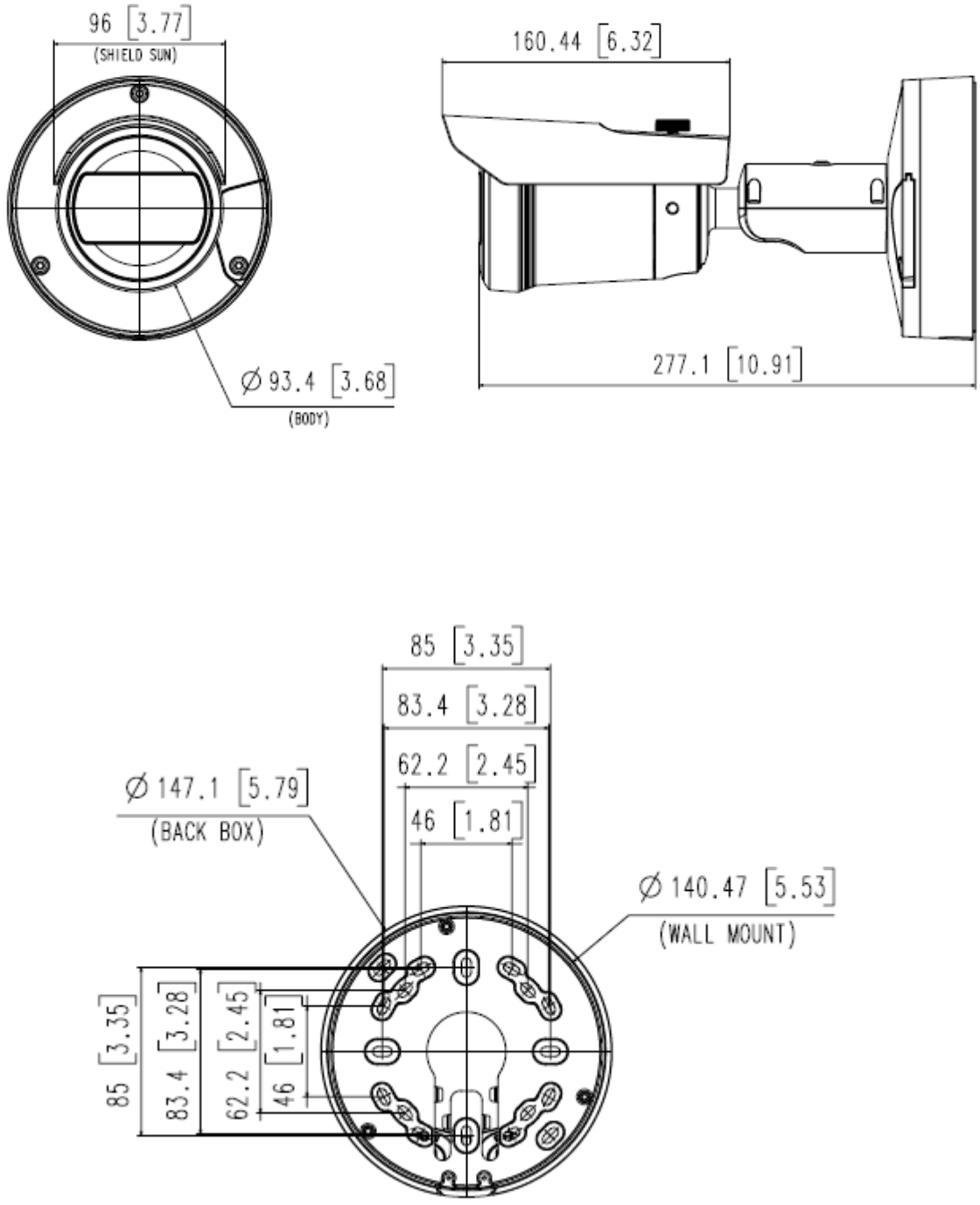
Immersion tank



Steel measuring meter

2.6 Sample appearance

Enclosure dimensions [unit : mm]



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

3.1 Test date and environmental conditions

3.1.1 Test date: Feb. 04, 2025 ~ Feb. 11, 2025

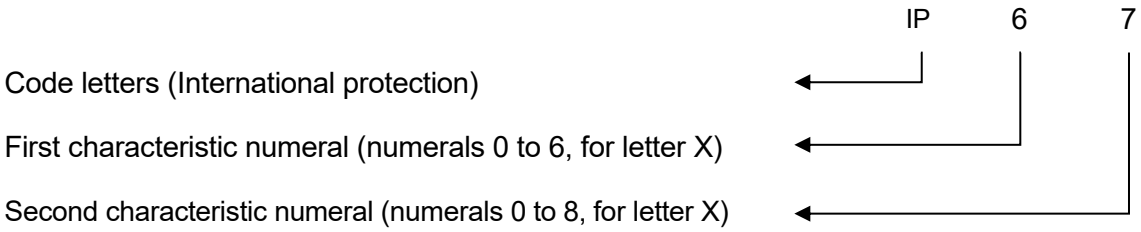
3.1.2 Measured Environmental Conditions

Item	Temperature (℃)	Humidity (% R.H.)	Pressure (kPa)
Measurement	19.2	42.9	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
6	Protected against access to hazardous parts with a wire. The access probe of 1.0 mmØ, shall not penetrate. Test force: 1 N ± 10 %	☒
NOTE In the case of the first characteristic numerals 3, 4, 5 and 6, protection against access to hazardous parts is satisfied if adequate clearance is kept. The adequate clearance should be specified by the relevant product committee in accordance with 12.3. Due to the simultaneous requirement specified in table 2, the definition “shall not penetrate” is given in table 1.		

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

First characteristic numeral	Degree of protection	Application
6	In Dust Testing Equipment, the test sample must have no ingress of dust after testing atmospheric pressure present condition for 8 h. (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) Products in volume .....: **5 996** cm³ → **6** L Target intake volume (Products in volume 80) .....: **479.68** L Suction volume (Max product in volume 60) .: **359.76** LPH → **6** LPM Actual Suction volume .....: **6** L Suction pressure (Up to 2 kPa) .....: **1.80** kPa Test time (Up to 8 time) .....: **8** h	☒
[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
7	Sink the product in the water by the Pressure and Time according to regulation and the product must not be harmed. Immersion tank water-level on enclosure with: ☐ height equal to or greater than 850 mm: the highst point of enclosures located 0.15 m below the surface of the water ☒ height less than 850 mm: the lowest point of enclosures located 1 m below the surface of the water Duration of test: 30 min	☒

3.3 Test Setup and During-test sample images

3.3.1 Evidence of test setting (1)



Probe test



Probe test



Probe test



Probe test



Probe test



Probe test

3.3.2 Evidence of test setting (2)



Dust test



Dust test



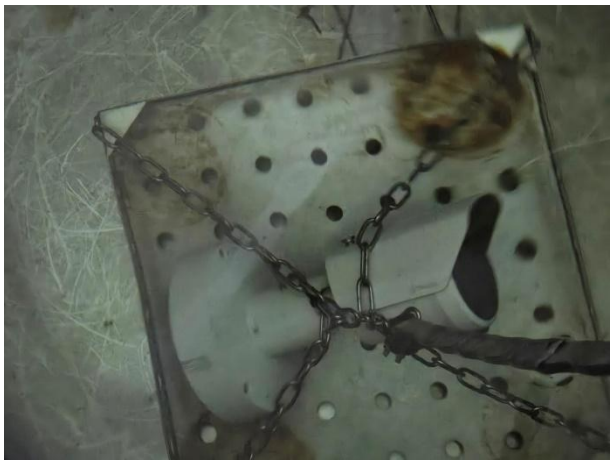
Dust test Monitor



Digital Vacuum pressure



Water test



Water test

3.4 Test result

3.4.1 Test result table

IP code	Evaluation Criteria	Test Results	Remark
IP 6X	No ingress of Probe	Normal	-
	No ingress of dust	Normal	-
IP X7	No ingress of water	Normal	-

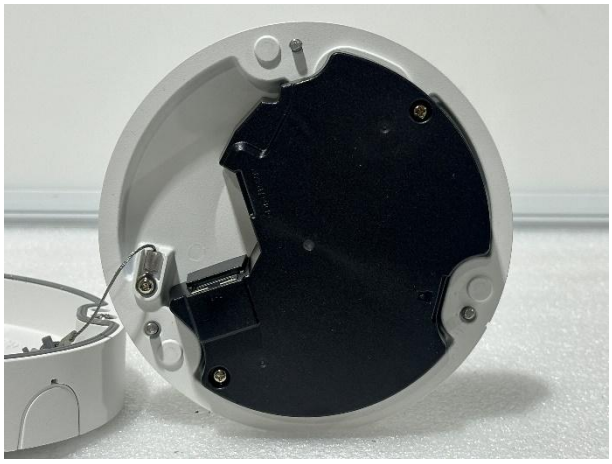
※ Refer to the sample photos after the completion of testing in section 3.5.

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 -