

# TEST REPORT

|                                                                                                                                                                       |                                                                                                                                                          |                                                        |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--|
| <br>CTK Co., Ltd.<br><small>The Power Leader of Global Regulatory Compliance</small> | <b>CTK Co., Ltd.</b><br>5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,<br>Gyeonggi-do, Republic of Korea<br>Tel: +82-31-339-9970<br>Fax: +82-31-624-9501 | REPORT No.:<br>CTK-2024-01789<br>Page (1) / (12) pages |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--|

## 1. Applicant

- Name : Hanwha Vision Co., Ltd
- Address : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,  
Gyeonggi-do, 13488 KOREA
- Date of Receipt : MAY 31, 2024

## 2. Manufacturer

- Name : Hanwha Vision Co., Ltd

## 3. Use of Report :

For customer submission

## 4. Test sample / Model :

NETWORK CAMERA / TNV-C7013RC

## 5. Date(s) of test :

JUN 17, 2024 ~ JUN 18, 2024

## 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 :

Clause 4. Refer to the test results

## 9. Location of Test :

☒ Permanent Testing Lab ☐ On Site Testing  
(5 Dongbu-ro 221beon-gil, 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: KyuNam Park (Signature) | Name: HoHyun Lee (Signature) |

Remark. This report is not related to KOLAS accreditation and relevant regulation.

JUN 21, 2024

CTK Co., Ltd.



## Table of contents

|                                                        |    |
|--------------------------------------------------------|----|
| 1. Testing Laboratory_____                             | 3  |
| 1.1 Testing laboratory information .....               | 3  |
| 1.2 Testing laboratory accreditation status .....      | 3  |
| 2. Product description and Equipment information _____ | 4  |
| 2.1 Product description .....                          | 4  |
| 2.2 Equipment information .....                        | 4  |
| 2.3 Pre-test product images .....                      | 5  |
| 2.4 Testing equipment images.....                      | 6  |
| 2.5 Product Appearance.....                            | 7  |
| 3. Test conditions and methods_____                    | 8  |
| 3.1 Test duration .....                                | 8  |
| 3.2 Test conditions .....                              | 8  |
| 3.3 Testing Image .....                                | 10 |
| 4. Test result _____                                   | 11 |
| 4.1 Test Result Table.....                             | 11 |
| 4.2 Post-Test Product Images .....                     | 12 |

|                                                                                                                                                                    |                                                                                                                                                                     |                                                                 |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--|
|  <p><b>CTK Co., Ltd.</b><br/>The Prime Leader of Global Regulatory Compliance</p> | <p><b>CTK Co., Ltd.</b><br/>5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,<br/>Gyeonggi-do, Republic of Korea<br/>Tel: +82-31-339-9970<br/>Fax: +82-31-624-9501</p> | <p>REPORT No.:<br/>CTK-2024-01789<br/>Page (3) / (12) pages</p> |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--|

## 1. Testing Laboratory

### 1.1 Testing laboratory information

|           |                                                                               |
|-----------|-------------------------------------------------------------------------------|
| Lab. Name | CTK Co., Ltd.                                                                 |
| 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    | <a href="mailto:ctk@e-ctk.com">ctk@e-ctk.com</a>                              |
| Website   | <a href="http://e-ctk.com">e-ctk.com</a>                                      |

### 1.2 Testing laboratory accreditation status

| Country       | Classification | Accreditation Number | Logo                                                                                  |
|---------------|----------------|----------------------|---------------------------------------------------------------------------------------|
| International | KOLAS          | TESTING<br>NO. KT119 |  |

|                                                                                                                                                                                    |                                                                                                                                                                         |                                                                          |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--|
|  <p><b>CTK Co., Ltd.</b><br/> <small>The Prime Leader of Global Regulatory Compliance</small></p> | <p><b>CTK Co., Ltd.</b><br/> 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,<br/> Gyeonggi-do, Republic of Korea<br/> Tel: +82-31-339-9970<br/> Fax: +82-31-624-9501</p> | <p>REPORT No.:<br/> <b>CTK-2024-01789</b><br/> Page (4) / (12) pages</p> |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--|

## 2. Product description and Equipment information

### 2.1 Product description

| Product Name   | Model Name  | Quantity | Comment |
|----------------|-------------|----------|---------|
| NETWORK CAMERA | TNV-C7013RC | 1 EA     | -       |

### 2.2 Equipment information

| Testing equipment   | Model Name | Manufacturer | Manufacturing Number | Calibration Date |
|---------------------|------------|--------------|----------------------|------------------|
| Push Pull Gage      | FB30K      | Imada        | 83805                | 2025-01-23       |
| Test Rod Probe Ø1.0 | TRP-02     | ED&D         | C-S1-J15             | 2027-05-16-      |
| Dust Chamber        | NONE       | JFM          | S5-IP02              | 2025-02-23       |

## 2.3 Pre-test product images



Top



Bottom



Front



Rear



Left side



Right side

## 2.4 Testing equipment images



Push Pull Gauge



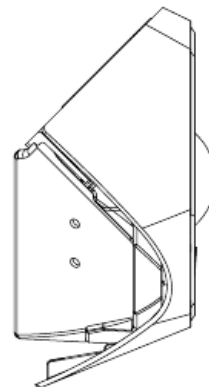
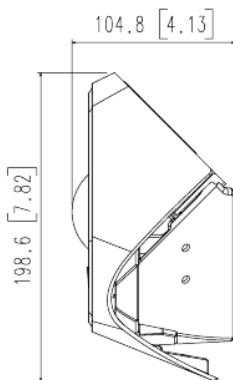
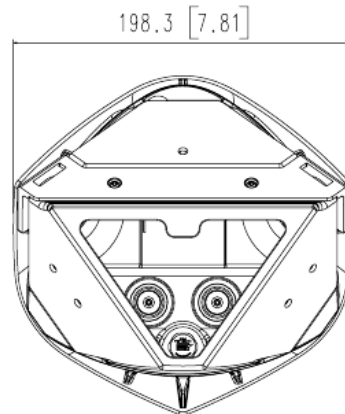
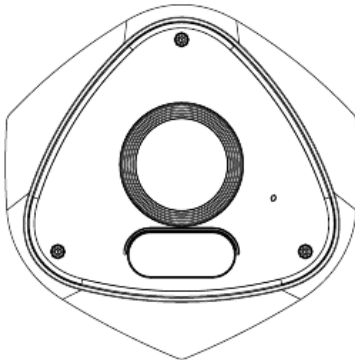
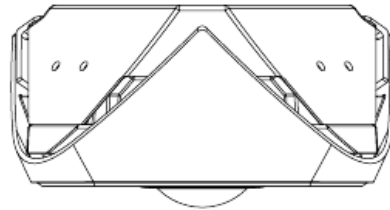
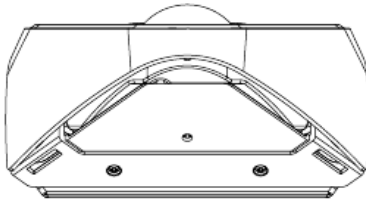
Test Rod Probe Ø1.0



Dust Chamber

## 2.5 Product Appearance

Enclosure Dimensions [Unit : mm]



### 3. Test conditions and methods

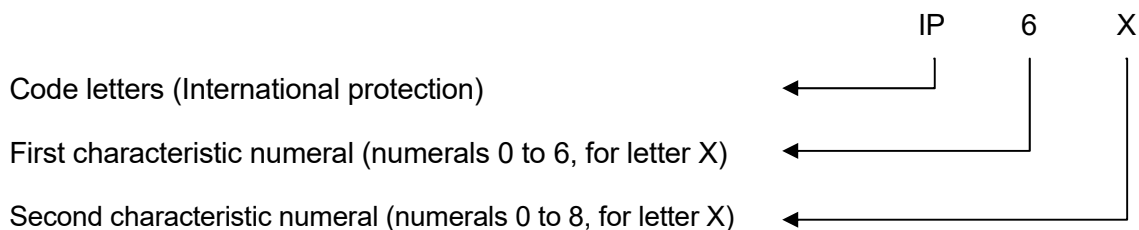
#### 3.1 Test duration

3.1.1 Test Date : JUN 17, 2024 ~ JUN 18, 2024

#### 3.2 Test conditions

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.<br>The access probe of 1.0 mmØ, shall not penetrate.<br>Test force: 1 N ± 10 % | <input checked="" type="checkbox"/> |

**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                                                                                                                                                                                                                           | <p>In Dust Testing Equipment, the test sample has to have no ingress of dust after testing atmospheric pressure present condition for 8 hr.</p> <p>(Talcum powder have to go through the measured sieve by <math>\Phi</math> 50 um wire that are spacing 75 um in squared, per volume and union Talcum powder have to be 2 kg/m<sup>3</sup>)</p> <p>Products in volume .....: <b>4 127.27 cm<sup>3</sup> → 4.13 L</b></p> <p>Target intake volume (Products in volume 80) .....: <b>330.18 L</b></p> <p>Suction volume (Max product in volume 60) .....: <b>247.64 LPH → 4.13 LPM</b></p> <p>Actual Suction volume .....: <b>4.13 L</b></p> <p>Suction pressure (Up to 2 kPa) .....: <b>1.77 kPa</b></p> <p>Test time (Up to 8 time) .....: <b>8 hr</b></p> | <input checked="" type="checkbox"/> |
| <sup>1)</sup> 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |

### 3.3 Testing Image

#### 3.3.1 Test Environment Set-up Images



Dust test



Dust test



Dust test Monitor



Digital vacuum pressure gauge

## 4. Test result

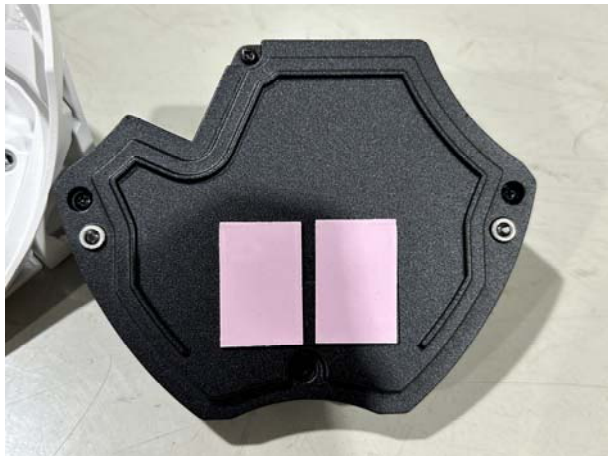
### 4.1 Test Result Table

| IP code | Evaluation Criteria      | Test Results  | Remark |
|---------|--------------------------|---------------|--------|
| IP 6X   | No penetration of probe. | <b>Normal</b> | -      |
|         | No ingress of dust.      | <b>Normal</b> | -      |

※ Refer to the sample images after the test is completed. (Clause 4.2)

## 4.2 Post-Test Product Images

### 4.2.1 Product internal images after test [The First characteristic Numeral Test]



- End -