

# TEST REPORT

**CTK Co., Ltd.**

5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,  
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Fax: +82-31-624-9501

REPORT No.:

CTK-2025-02838

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**1. Applicant**

- Name : Hanwha Vision Co., Ltd
- Address : 6, Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,  
Gyeonggi-do, 13488 Republic of Korea
- Date of Receipt : Sep. 02, 2025

**2. Manufacturer**

- Name : Hanwha Vision Co., Ltd

**3. Use of Report :**

Quality control

**4. Test sample / Model :**

LENS MODULE / SLA-F2480WDA

**5. Date(s) of test :**

Oct. 20, 2025~ Oct. 27, 2025

**6. Test Standard (Method) used :**

NEMA 250-2014

Enclosures for Electrical Equipment (1000 Volts Maximum)

**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

(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. This report cannot be reproduced or copied without the written consent of CTK.

|          |                                |                              |
|----------|--------------------------------|------------------------------|
| Approval | Tested by                      | Technical Manager            |
|          | Name: HyungUk Jeon (Signature) | Name: HoHyun Lee (Signature) |

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

Oct. 28, 2025

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|                                                                                   |                                                                                                                                                          |                                                         |  |
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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         | <a href="mailto:all.youngin@element.com">all.youngin@element.com</a>          |
| Website        | <a href="http://www.elementkorea.kr">www.elementkorea.kr</a>                  |

### 1.2 Testing laboratory accreditation status

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

## 2. Product description and equipment information

### 2.1 Product description

| Product Name | Model Name   | Quantity | Comment |
|--------------|--------------|----------|---------|
| LENS MODULE  | SLA-F2480WDA | 1 EA     | —       |

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## 2.2 Manufacturer information

**Test item description** ..... : LENS MODULE**Trade Mark** .....**Manufacturer** .....

Lot O-2, Que Vo Industrial Zone extended area, Nam Son ward,  
Bac Ninh province, Vietnam

173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea  
(Suwon Industrial Complex)

**Model/Type reference** ..... : SLA-F2480WDA**Ratings** .....

Electrical  
DC5 V  0.25 A

Dimension:  
Ø110 by 345.4 mm, Ø68 by 213.52 mm, Ø7 by 21.98 mm, Ø16 by  
50.24 mm, Ø5\*2 by 31.4 mm

**List of Attachments (including a total number of pages in each attachment):**

Attachment 1: 15-17 pages (Construction Diagram including installation method)

Attachment 2: 18-20 pages (Parts List)

Attachment 3: 22-24 pages (photographs)

**Summary of testing:****Tests performed (name of test and test clause):**  
**Clause 5.7(Hose Down Test)****Testing location:**

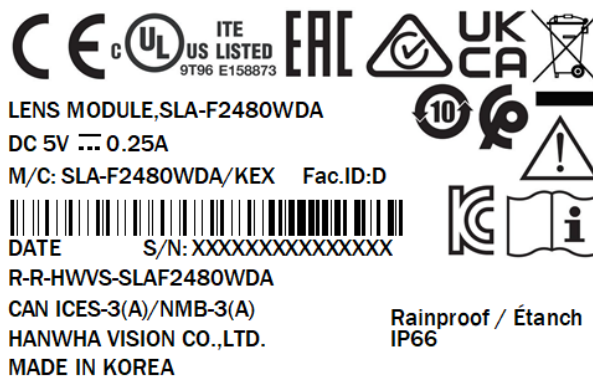
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Copy of marking plate: The artwork above may be only a draft.



## 2.3 Equipment information

| Testing equipment              | Model Name | Manufacturer | Manufacturing Number | Next Cal. Date |
|--------------------------------|------------|--------------|----------------------|----------------|
| 25.4mm Nozzle                  | S3-IP18    | CTK          | S3-IP18              | -              |
| Temperature & Humidity Chamber | C4-340     | Weisstechnik | 54260023190010       | Feb.06,2026    |
| Area flow meter                | Z-6504     | FLOWTECH     | 229400               | Jan.16,2026    |
| Steel measuring meter          | 5.5 m      | KOMELON      | 225851               | Jan.16,2026    |
| Stop Watch                     | NONE       | Casio        | 612Q01R-1            | Jan.15,2027    |
| Digital Vernier Calipers       | 100 mm     | MITUTOYO     | A17179462            | -              |



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## 2.4 Pre-test product 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



25.4mm Nozzle



Temperature & Humidity Chamber



Area flow meter



Steel measuring meter



Stop Watch



Digital Vernier Calipers

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### 3. Test Information

#### 3.1 Test item particulars and Possible test case verdicts

|                                                     |                                          |
|-----------------------------------------------------|------------------------------------------|
| Test item particulars .....                         | LENS MODULE                              |
| Classification of installation and use .....        | Outdoor (Watertight/Corrosion Resistant) |
| <b>Possible test case verdicts:</b>                 |                                          |
| - test case does not apply to the test object ..... | N/A                                      |
| - test object does meet the requirement.....        | P (Pass)                                 |
| - test object does not meet the requirement .....   | F (Fail)                                 |
| - test case does not evaluate to the test object:   | N/E                                      |
|                                                     |                                          |

#### 3.2 General remarks and factory information

|                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General remarks:</b>                                                                                                                                                                                                                                                                                                                                                           |
| <p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>Clause numbers between brackets refer to clauses in NEMA 250-2014</p> |
| <b>Name and address of factory (ies):</b>                                                                                                                                                                                                                                                                                                                                         |
| <p>1. HANWHA VISION VIETNAM COMPANY LIMITED</p> <p>Lot O-2, Que Vo Industrial Zone extended area, Nam Son ward, Bac Ninh city, Bac Ninh province, Vietnam</p> <p>2. D-TECH CO., LTD.</p> <p>173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea (Suwon Industrial Complex)</p>                                                                                           |



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### 3.3 Type 4X Test information

**Type 4X**

Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against access to hazardous parts; to provide a degree of protection of the equipment inside the enclosure against ingress of solid foreign objects (falling dirt and windblown dust); to provide a degree of protection with respect to harmful effects on the equipment due to the ingress of water (rain, sleet, snow, splashing water, and hose directed water); that provides an increased level of protection against corrosion; and that will be undamaged by the external formation of ice on the enclosure.

**Table 2-1**  
**Comparison of Specific Applications of Enclosures for Indoor Nonhazardous (Unclassified) Locations**

| Provides a Degree of Protection against the Following Conditions                        | Type of Enclosure |     |     |     |     |     |     |     |     |     |
|-----------------------------------------------------------------------------------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                                                                         | 1                 | 2   | 4   | 4X  | 5   | 6   | 6P  | 12  | 12K | 13  |
| Access to hazardous parts                                                               | X                 | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of solid foreign objects (falling dirt)                                         | X                 | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of water (dripping and light splashing)                                         | ...               | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of solid foreign objects (circulating dust, lint, fibers, and flyings **)       | ...               | ... | X   | X   | ... | X   | X   | X   | X   | X   |
| Ingress of solid foreign objects (settling airborne dust, lint, fibers, and flyings **) | ...               | ... | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of water (hosedown and splashing water)                                         | ...               | ... | X   | X   | ... | X   | X   | ... | ... | ... |
| Oil and coolant seepage                                                                 | ...               | ... | ... | ... | ... | ... | ... | X   | X   | X   |
| Oil or coolant spraying and splashing                                                   | ...               | ... | ... | ... | ... | ... | ... | ... | ... | X   |
| Corrosive agents                                                                        | ...               | ... | ... | X   | ... | ... | X   | ... | ... | ... |
| Ingress of water (occasional temporary submersion)                                      | ...               | ... | ... | ... | ... | X   | X   | ... | ... | ... |
| Ingress of water (occasional prolonged submersion)                                      | ...               | ... | ... | ... | ... | ... | X   | ... | ... | ... |

\*\* These fibers and flyings are not considered Class III type ignitable fibers or combustible flyings. For Class III type ignitable fibers or flyings see the *National Electrical Code*®, Article 500.5(D).

**Table 2-2**  
**Comparison of Specific Applications of Enclosures for Indoor & Outdoor Nonhazardous (Unclassified) Locations**

| Provides a Degree of Protection Against the Following Conditions                 | Type of Enclosure |     |     |     |     |     |     |     |     |     |
|----------------------------------------------------------------------------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                                                                  | 3                 | 3X  | 3R  | 3RX | 3S  | 3SX | 4   | 4X  | 6   | 6P  |
| Access to hazardous parts                                                        | X                 | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of solid foreign objects (falling dirt)                                  | X                 | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of water (dripping and light splashing)                                  | X                 | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Ingress of water (rain, snow, and sleet **)                                      | X                 | X   | X   | X   | X   | X   | X   | X   | X   | X   |
| Sleet ***                                                                        | ...               | ... | ... | ... | X   | X   | ... | ... | ... | ... |
| Ingress of solid foreign objects (windblown dust, lint, fibers, and flyings****) | X                 | X   | ... | ... | X   | X   | X   | X   | X   | X   |
| Ingress of water (hosedown and splashing water)                                  | ...               | ... | ... | ... | ... | ... | X   | X   | X   | X   |
| Corrosive agents                                                                 | ...               | X   | ... | X   | ... | X   | ... | X   | ... | X   |
| Ingress of water (occasional temporary submersion)                               | ...               | ... | ... | ... | ... | ... | ... | ... | X   | X   |
| Ingress of water (occasional prolonged submersion)                               | ...               | ... | ... | ... | ... | ... | ... | ... | ... | X   |

\*\* External operating mechanisms are not required to be operable when the enclosure is ice covered.

\*\*\* External operating mechanisms are operable when the enclosure is ice covered. See subsection 5.6.

\*\*\*\* These fibers and flyings are not considered Class III type ignitable fibers or combustible flyings. For Class III type ignitable fibers or flyings see the *National Electrical Code*®, Article 500.5(D).

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**Table 5-1A**  
**Degrees of Protection Against Access to Hazardous Parts**

| Enclosure Type | Test Conditions | Degree of Protection                                    |                                               | Corresponding IP First Characteristic Numeral |
|----------------|-----------------|---------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
|                |                 | Brief Description                                       | Definition                                    |                                               |
| 4X             | 5.7             | Protected against access to hazardous parts with a wire | An access probe of 1.0 mm shall not penetrate | 6                                             |

**Table 5-1B**  
**Degrees of Protection Against Solid Foreign Objects**

| Enclosure Type | Test Conditions                          | Degree of Protection     |                    | Corresponding IP First Characteristic Numeral |
|----------------|------------------------------------------|--------------------------|--------------------|-----------------------------------------------|
|                |                                          | Brief Description        | Definition         |                                               |
| 4X             | <u>Non-vented</u><br>5.7                 | Windblown dust protected | No ingress of dust | 6                                             |
|                | <u>Vented</u><br>5.5.1 Dust Blast Method |                          |                    |                                               |

**Table 5-1C**  
**Degrees of Protection against Water**

| Enclosure Type | Test Conditions | Degree of Protection                  |                                                                        | Corresponding IP Second Characteristic Numeral |
|----------------|-----------------|---------------------------------------|------------------------------------------------------------------------|------------------------------------------------|
|                |                 | Brief Description                     | Definition                                                             |                                                |
| 4X             | 5.7             | Protected against hose directed water | Water projected against the enclosure in any direction shall not enter | 6<br>No Ingress Allowed*                       |

**Table 5-1D**  
**Additional Protection**

| Enclosure Type | Test Conditions    | Additional Protection                                                       |                                                                                                       | Corresponding IP Second Characteristic Numeral |
|----------------|--------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------|
|                |                    | Brief Description                                                           | Definition                                                                                            |                                                |
| 4X             | 5.6<br>5.9<br>5.10 | Special corrosion protection and undamaged by the external formation of ice | Enclosure provides increased corrosion protection and is not damaged by ice that forms on the outside | None                                           |

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**3.4 NEMA 250-2014 Test list**

| NEMA 250-2014 |                               |                                                                                                                                                                                    |         |
|---------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause        | Requirement + Test            | Result – Remark                                                                                                                                                                    | Verdict |
| <b>3</b>      | <b>CONSTRUCTION</b>           |                                                                                                                                                                                    |         |
| 3.1           | General                       |                                                                                                                                                                                    | P       |
| 3.2           | Units of Measurement          |                                                                                                                                                                                    | P       |
| 3.3           | Materials-General             | Enclosures are made of metal or polymeric materials                                                                                                                                | P       |
| 3.4           | Materials-Polymeric           | More than 650 mm <sup>2</sup> (1 in <sup>2</sup> ) in area<br><br>Polymeric Materials used is declared as Min. V-2<br><br>Used to UL certified material.<br>(See the attachment 2) | N/E     |
| 3.5           | Corrosion Protection          | Stainless steel and/or aluminium are declared as the materials used<br>(See the attachment 2)                                                                                      | N/E     |
| 3.6           | Openings                      | No openings in Product                                                                                                                                                             | N/A     |
| 3.7           | Mounting                      | Mounting means are external to the equipment cavity<br>(See the attachment 1)                                                                                                      | P       |
| 3.8           | Conduit Connection            | No conduit connection<br>(See the attachment 1)                                                                                                                                    | N/A     |
| 3.9           | Hubs and Fittings             | No Hubs and Fittings                                                                                                                                                               | N/A     |
| 3.10          | Knockouts                     | See the Attachment 1                                                                                                                                                               | P       |
| 3.11          | External Operating Mechanisms | No External Operating Mechanisms                                                                                                                                                   | N/A     |
| 3.12          | Access to Interior            | Needs tool to open unit                                                                                                                                                            | P       |
| 3.13          | Closing Hardware              | No closing Hardware                                                                                                                                                                | N/A     |

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**NEMA 250-2014**

| Clause | Requirement + Test  | Result – Remark                                                                                                           | Verdict |
|--------|---------------------|---------------------------------------------------------------------------------------------------------------------------|---------|
| 3.14   | Gaskets             | Gaskets made of a silicone Sponge Rubber (no Elastomeric or Thermoplastic used)<br>(See clause 5.14 and the attachment 2) | P       |
| 3.15   | Observation Windows | No Observation Window                                                                                                     | N/A     |

|          |                                 |                                                                                                                                                               |     |
|----------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <b>4</b> | <b>MARKING</b>                  |                                                                                                                                                               |     |
| 4.1      | Type Designations               | “Type 4X” Marking is declared to be on the product before on the market                                                                                       | P   |
| 4.2      | Supplemental Markings           | Supplemental Marking (watertight/corrosion resistant) is declared to be used when it is on the market.<br>The required marking shall be added on the product) | P   |
| 4.3      | Location of Markings            | See the Attachment 3                                                                                                                                          | P   |
| 4.4      | Enclosure Orientation           | No Particular Mounting Orientation                                                                                                                            | N/A |
| 4.5      | Conduit Hubs and Closure Plates | No Conduit Hubs and Closure Plates                                                                                                                            | N/A |
| 4.6      | Equipment Openings              | No Openings on Unit                                                                                                                                           | N/A |
| 4.7      | Drainage Openings               | No Drain Openings                                                                                                                                             | N/A |

|          |                                                                              |                                                                     |     |
|----------|------------------------------------------------------------------------------|---------------------------------------------------------------------|-----|
| <b>5</b> | <b>DESIGN TESTS</b>                                                          |                                                                     |     |
| 5.1      | General                                                                      | See Table 5-1A to 5-1D and 5.1.5 in the General product information | P   |
| 5.2      | Tests For Protection Against Access to Hazardous Parts                       | Rated 4X                                                            | N/A |
| 5.3      | Tests for Protection Against Ingress of Water (Dripping and Light Splashing) | Rated 4X                                                            | N/A |

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| Clause | Requirement + Test                                                                                              | Result – Remark                                                                                                                                                 | Verdict |
|--------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 5.4    | Tests for Protection Against Ingress of Water (Rain)                                                            | Rated 4X                                                                                                                                                        | N/A     |
| 5.5    | Tests for Protection Against Ingress of Solid Foreign Objects (Setting Airborne Dust, Lint, Fibers, And Flings) | Non-vented<br>(See clause 5.7)                                                                                                                                  | N/A     |
| 5.6    | External Icing Test                                                                                             | No external cavities to trap water when mounted in the normal position.                                                                                         | N/A     |
| 5.7    | Tests for Protection Against Ingress of Water (Hosedown)                                                        | No entry of water<br>See the test information                                                                                                                   | P       |
| 5.8    | Indoor Corrosion Protection (Rust-Resistance Test (24-Hour Salt Spray Test))                                    | See clause 3.5                                                                                                                                                  | N/E     |
| 5.9    | Outdoor Corrosion Protection                                                                                    | See clause 3.5                                                                                                                                                  | N/E     |
| 5.10   | Corrosion Protection-Type 3X, 3RX, 3SX, 4X Or 6P Enclosures                                                     | See clause 3.5                                                                                                                                                  | N/E     |
| 5.11   | Test for Protection Against Ingress of Water (Temporary Submersion)                                             | Rated 4X                                                                                                                                                        | N/A     |
| 5.12   | Test for Protection Against Ingress of Water (Prolonged Submersion)                                             | Rated 4X                                                                                                                                                        | N/A     |
| 5.13   | Oil Exclusion Test                                                                                              | Rated 4X                                                                                                                                                        | N/A     |
| 5.14   | GASKET MATERIAL TESTS                                                                                           | The product itself(including gaskets) was conditioned at 70 °C for 168 hrs according to 5.14.3(Alternate Evaluation) before performing relevant required tests. | P       |
| 5.15   | Test for Sharpness of Edges                                                                                     | No sharp edges                                                                                                                                                  | P       |





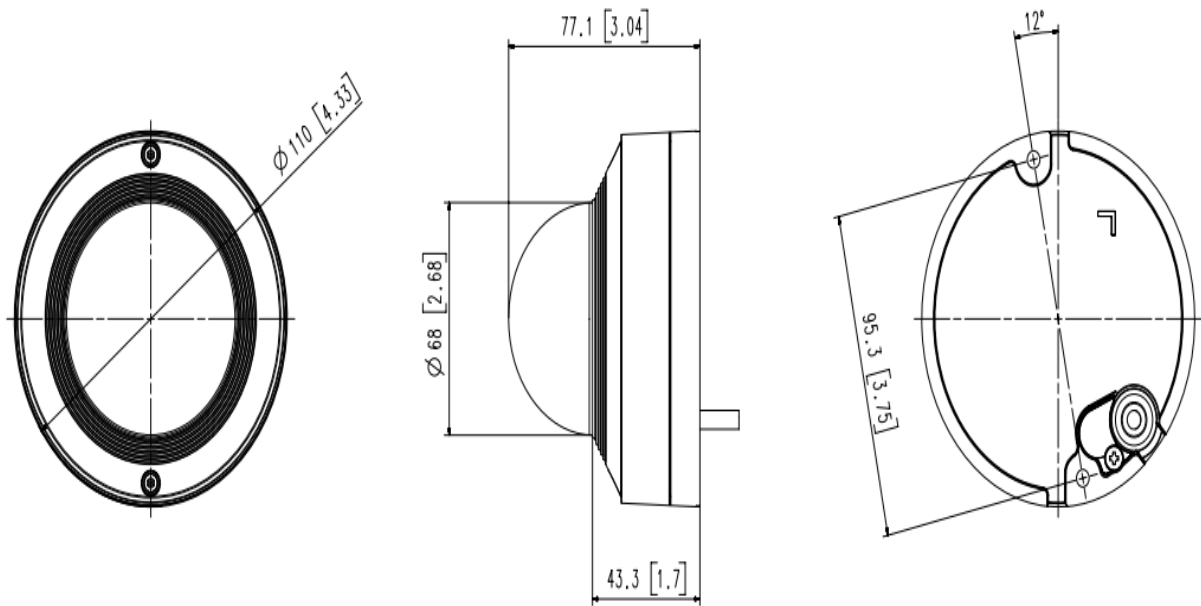
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### 3.5 Attachment 1 - Construction Diagram and installation method

#### 3.5.1 Construction Diagram



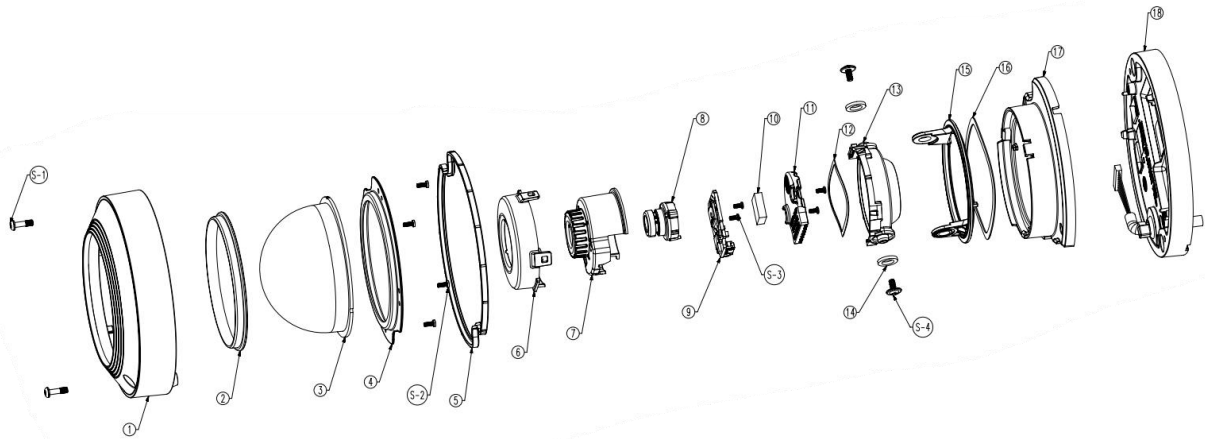


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### 3.5.2 installation method





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### 3.6 Attachment 2 - Parts List

#### 3.6.1 Parts List (1)



### Component - Plastics

File Number: E115797

LOTTE CHEMICAL CORPORATION  
56 GOSAN-RO  
UIWANG-SI, GYEONGGI-DO 16073 Republic of Korea



INFINO: HN-1068(+)(f1)

Polycarbonate (PC), pellets

(+) - May be replaced by one, two, or three numbers and/or letter(s)

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

| Flammability                         | Value           | Test Method              |
|--------------------------------------|-----------------|--------------------------|
| Flame Rating                         |                 | UL 94                    |
| 1.5 mm, ALL                          | V-0             | IEC 60695-11-10, -20     |
| 3.0 mm, ALL                          | V-0             |                          |
| Glow Wire Flammability Index         |                 | IEC 60695-2-12           |
| 1.5 mm                               | 960 °C          |                          |
| 3.0 mm                               | 960 °C          |                          |
| Glow Wire Ignition Temperature       |                 | IEC 60695-2-13           |
| 1.5 mm                               | 825 °C          |                          |
| 3.0 mm                               | 825 °C          |                          |
| Electrical                           | Value           | Test Method              |
| Hot-wire Ignition (HWI) (1.5 mm)     | PLC 3           | UL 746                   |
| High Amp Arc Ignition (HAI) (1.5 mm) | PLC 3           | UL 746                   |
| Comparative Tracking Index (CTI)     | PLC 3           | UL 746                   |
| Dielectric Strength                  | 32 kV/mm        | ASTM D149<br>IEC 60243-1 |
| Volume Resistivity                   | 1.0E+17 ohms-cm | ASTM D257<br>IEC 60093   |
| Thermal                              | Value           | Test Method              |
| RTI Elec                             |                 | UL 746                   |
| 1.5 mm                               | 130 °C          |                          |
| 3.0 mm                               | 130 °C          |                          |
| RTI Imp                              |                 | UL 746                   |
| 1.5 mm                               | 130 °C          |                          |
| 3.0 mm                               | 130 °C          |                          |
| RTI Str                              |                 | UL 746                   |
| 1.5 mm                               | 130 °C          |                          |
| 3.0 mm                               | 130 °C          |                          |
| Ball Pressure Test (130°C, 3.00 mm)  | Pass            | IEC 60695-10-2           |
| Physical                             | Value           | Test Method              |
| Outdoor Suitability                  | f1              | UL 746C                  |



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### 3.6.2 Parts List (2)

Component - Plastics

E41179

**MITSUBISHI ENGINEERING-PLASTICS CORP**

ENVIRONMENT & QUALITY ASSURANCE DEPT, DIV 1, SHIODOME SUMITOMO-BLDG 25TH FL., 1-9-2 HIGASHI-SHINBASHI, MINATO-KU TOKYO 105-0021 JP

**S-2000V+(f1), S-2001V+(f1), S-2003V+(f1)**

**Polycarbonate (PC), unreinforced, furnished as pellets**

| Color                                   | Min Thk<br>(mm) | Flame<br>Class | HWM | HAI                                            | RTI<br>Elec | RTI<br>Imp | RTI<br>Str |
|-----------------------------------------|-----------------|----------------|-----|------------------------------------------------|-------------|------------|------------|
| ALL                                     | 0.38            | V-2            | -   | -                                              | 80          | 80         | 80         |
|                                         | 1.5             | V-2            | 3   | 0                                              | 125         | 115        | 125        |
|                                         | 3.0             | V-2            | 3   | 0                                              | 125         | 115        | 125        |
| Comparative Tracking Index (CTI): 2     |                 |                |     | Inclined Plane Tracking (IPT): -               |             |            |            |
| Dielectric Strength (kV/mm): 20         |                 |                |     | Volume Resistivity (10 <sup>4</sup> ohm-cm): 7 |             |            |            |
| High-Voltage Arc Tracking Rate (HVT): 0 |                 |                |     | High Volt, Low Current Arc Resis (D495): 5     |             |            |            |
| Dimensional Stability (%): 0            |                 |                |     |                                                |             |            |            |

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

+ - Suffix optional, exceptions: The following cannot be used as optional suffixes: "T" for grade 2030, "A" for 1501, 1502, 1511, 1521 & 2502, "N" for NXG5050, NXG5030, NXG5501, & CGF-(v)(u), "S1" for F20-54.

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1992-10-01

Last Revised: 2004-03-23

Underwriters Laboratories Inc®

**IEC and ISO Test Methods**

| Test Name                      | Test Method     | Units             | Thickness<br>Tested (mm) | Value     |
|--------------------------------|-----------------|-------------------|--------------------------|-----------|
| Flammability                   | IEC 60695-11-10 | Class (color)     | 8.38                     | V-2 (ALL) |
|                                |                 |                   | 1.5                      | V-2 (ALL) |
|                                |                 |                   | 3.0                      | V-2 (ALL) |
| Glow-Wire Flammability (GWFI)  | IEC 60695-2-12  | C                 | -                        | -         |
| Glow-Wire Ignition (GWIT)      | IEC 60695-2-13  | C                 | -                        | -         |
| IEC Comparative Tracking Index | IEC 60112       | Volts (Max)       | -                        | -         |
| IEC Ball Pressure              | IEC 60695-10-2  | C                 | -                        | -         |
| ISO Heat Deflection (1.80 MPa) | ISO 75-2        | C                 | -                        | -         |
| ISO Tensile Strength           | ISO 527-2       | MPa               | -                        | -         |
| ISO Flexural Strength          | ISO 178         | MPa               | -                        | -         |
| ISO Tensile Impact             | ISO 8256        | kJ/m <sup>2</sup> | -                        | -         |
| ISO Izod Impact                | ISO 180         | kJ/m <sup>2</sup> | -                        | -         |
| ISO Charpy Impact              | ISO 179-2       | kJ/m <sup>2</sup> | -                        | -         |

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## 4. Hose Down Test (Clause 5.7)

### 4.1 Test date and environmental conditions

4.1.1 Test date: Oct. 20, 2025~ Oct. 27, 2025

4.1.2 Measured Environmental Conditions

| Item        | Temperature (°C) | Humidity (% R.H.) | Pressure (kPa) |
|-------------|------------------|-------------------|----------------|
| Measurement | 20.1             | 57.7              | 101.2          |

### 4.2 Test Conditions and methods

#### 4.2.1 Description of Test

The enclosure and its external mechanisms were subjected to a stream of water from a hose that has a 25.4 mm (1 in) inside diameter nozzle and delivers at least 240 L (65 gal) per minute. The nozzle was held from 3.0 to 3.5 m (10 to 12 feet) from the enclosure, and the spray of water was directed at all points of potential water entry such as seams, joints, external operating mechanisms, and such. The nozzle was moved along each test point one time at a uniform rate of 6 mm/sec (1/4 in/sec).

#### 4.2.2 Sample Dimension

Ø110 by 345.4 mm, Ø68 by 213.52 mm, Ø7 by 21.98 mm, Ø16 by 50.24 mm,  
Ø5\*2 by 31.4 mm

Test Duration = 110.42 secs

#### 4.2.3 Acceptance conditions

The enclosure shall be considered to have met the requirements if at the conclusion of the test no water has entered the enclosure





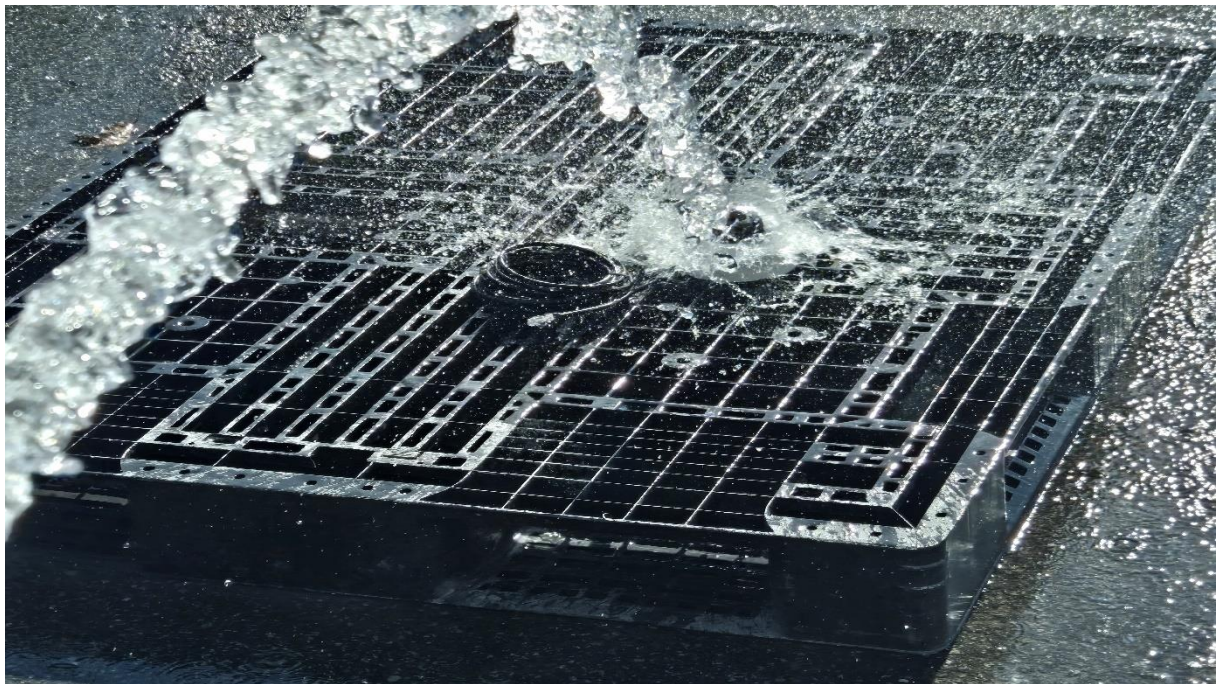
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### 4.3 Attachment 3 - Photographs

#### 4.3.1 Hose down test





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**4.4 Test result****4.4.1 Test result table**

| Sample No (Model) | Water Flow | Presence of water inside | Result |
|-------------------|------------|--------------------------|--------|
| SLA-F2480WDA      | 240 LPM    | No                       | Normal |

※ Refer to the product photos after the completion of testing in section 4.5.



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### 4.5 Post-test product images

#### 4.5.1 Test sample image



- End -