

# TEST REPORT

**CTK Co., Ltd.**

(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si,  
Gyeonggi-do, 449-100, Korea  
Tel: +82-31-339-9970  
Fax: +82-31-624-9501

REPORT No.:

CTK-2024-03613

Page (1) / (30) 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 : Dec. 10, 2024

**2. Manufacturer**

- Name : HANWHA VISION VIETNAM COMPANY LIMITED
- Address : Lot O-2, Que Vo Industrial Zone extended area, Nam Son ward,  
Bac Ninh city, Bac Ninh province, Vietnam

**3. Use of Report :**

Quality control

**4. Test sample / Model :**

NETWORK CAMERA / QNO-C6083R

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

Dec. 11, 2024~ Dec. 18, 2024

**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.  
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Affirmation	Tested by	Technical Manager
	HyungUk Jeon (Signature)	HoHyun Lee (Signature)

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

Dec 26, 2024

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REPORT No.:

CTK-2024-03613

Page (2) / (27) pages

## 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	3
2.1 Product description	3
2.2 Manufacturer information	4
2.3 Equipment information	6
2.4 Pre-test product images	7
2.5 Testing equipment images	8
3. Test Information	9
3.1 Test item particulars and Possible test case verdicts	9
3.2 General remarks and factory information	9
3.3 Type 4X Test information	10
3.4 NEMA 250-2014 Test list	13
3.5 Attachment 1 – Construction Diagram and installation method	16
3.6 Attachment 2 – Parts List	19
4. Hose Down Test (Clause 5.7)	24
4.1 Test date and environmental conditions	24
4.2 Test Conditions and methods	24
4.3 Attachment 3 – Photographs	25
5. Test result	26
5.1 Test result table	26
5.2 Post-test product images	27


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## 1. Testing laboratory

### 1.1 Testing laboratory information

Lab. Name	CTK Co., Ltd.
Address	113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do Republic of Korea
Tel.	031-339-9970
Fax.	031-624-9501
E-Mail	<a href="mailto:all.yongin@element.com">all.yongin@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 NO. KT119	


## 2. Product description and equipment information



### 2.1 Product description

Product Name	Model Name	Quantity	Comment
NETWORK CAMERA	QNO-C6083R	1 EA	—

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## 2.2 Manufacturer information

Test item description .....		NETWORK CAMERA
Trade Mark .....		 <b>Hanwha Vision</b>
Manufacturer .....		Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
Model/Type reference .....		QNO-C6083R
Ratings .....		Electrical QNO-C6083R PoE 48 V ≡ 0.19A QNO-C8083R PoE 48 V ≡ 0.25 A QNO-C9083R PoE 48 V ≡ 0.25 A  Dimension: 16mm,16mm,31mm,31mm, Ø 93.4 by 293.27 mm Ø 70 by 219.8 mm , Ø 89.8 by 281.97 mm , Ø5*3 by 47.1 mm

<b>List of Attachments (including a total number of pages in each attachment):</b> Attachment 1: 16-18 pages (Construction Diagram including installation method) Attachment 2: 19-23 pages (Parts List) Attachment 3: 25-27 pages (photographs)	
Summary of testing:	
<b>Tests performed (name of test and test clause):</b> Clause 5.7(Hose Down Test)	<b>Testing location:</b> CTK Co., Ltd. 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
<b>Copy of marking plate: The artwork above may be only a draft.</b>	
 <p>             NETWORK CAMERA,QNO-C6083R              PoE(48V... ) 0.19A               M/C: QNO-C6083R/KEX Fac.ID:D              DATE S/N: XXXXXXXXXXXXXXXX              MAC ADDRESS: XX-XX-XX-XX-XX-XX              CAN ICES-3(A)/NMB-3(A)              HANWHA VISION CO.,LTD.              MADE IN KOREA           </p>	 <p>             NETWORK CAMERA, QNO-C8083R              PoE(48V... ) 0.25A               M/C: QNO-C8083R/KEX Fac.ID:D              2023.02 S/N: Serial No.              MAC ADDRESS: XX-XX-XX-XX-XX-XX              CAN ICES-3(A)/NMB-3(A)              HANWHA VISION CO.,LTD.              MADE IN KOREA           </p>



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REPORT No. :  
CTK-2024-03613  
Page (5) / (27) pages



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REPORT No. :  
CTK-2024-03613  
Page (6) / (27) pages

## 2.3 Equipment information

Testing equipment	Model Name	Manufacturer	Manufacturing Number	Calibration Date
25.4mm Nozzle	S3-IP18	CTK	S3-IP18	-
Temperature & Humidity Chamber	TH-GA-408	JEIO TECH	X110169	2024.08.23
Area flow meter	FT220-VM	NURITECH	01	2024-02-28
Stop Watch	NONE	Casio	612Q01R-1	2024-01-23
Digital Vernier Calipers	100 mm	MITUTOYO	A17179462	-



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REPORT No.:  
CTK-2024-03613  
Page (7) / (27) pages

### 2.4 Pre-test product images



Top



Bottom



Front



Rear



Left side



Right side





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REPORT No.:  
CTK-2024-03613  
Page (8) / (27) pages

### 2.5 Testing equipment images



25.4mm Nozzle



Temperature & Humidity Chamber



Area flow meter



Stop Watch



Stop Watch



Digital Vernier Calipers



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REPORT No. :  
CTK-2024-03613  
Page (9) / (27) pages

### 3. Test Information

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

Test item particulars .....	Network Camera
Classification of installation and use .....	Outdoor (Watertight/Corrosion Resistant)
Possible test case verdicts:	
- 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

General remarks:
<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>

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REPORT No.:

CTK-2024-03613

Page (10) / (27) pages

**Name and address of factory (ies):****1. HANWHA VISION VIETNAM COMPANY LIMITED**

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

**2. D-TECH CO., LTD.**

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

Basic Model	QNO-C6083R
Series Model	QNO-C8083R, QNO-C9083R
Model differences	The model differences are only for function not related to the quality of enclosure integrity

**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.

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REPORT No.:

CTK-2024-03613

Page (11) / (27) pages

**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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REPORT No. :  
CTK-2024-03613  
Page (12) / (27) pages

**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> 5.7	Windblown dust protected	No ingress of dust	6
	<u>Vented</u> 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 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 5.9 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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REPORT No. :  
CTK-2024-03613  
Page (13) / (27) pages

**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  Polymeric Materials used is declared as Min. V-2  Used to UL certified material. (See the attachment 2)	N/E
3.5	Corrosion Protection	Stainless steel and/or aluminium are declared as the materials used (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 (See the attachment 1)	P
3.8	Conduit Connection	No conduit connection (See the attachment 1)	N/A
3.9	Hubs and Fittings	No Hubs and Fittings	N/A
3.10	Knockouts	No Knockouts	N/A
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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REPORT No. :  
CTK-2024-03613  
Page (14) / (27) pages

**NEMA 250-2014**

Clause	Requirement + Test	Result – Remark	Verdict
3.14	Gaskets	Gaskets made of a silicone Sponge Rubber (no Elastomeric or Thermoplastic used) (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. 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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REPORT No. :  
CTK-2024-03613  
Page (15) / (27) pages

**NEMA 250-2014**

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 (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 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

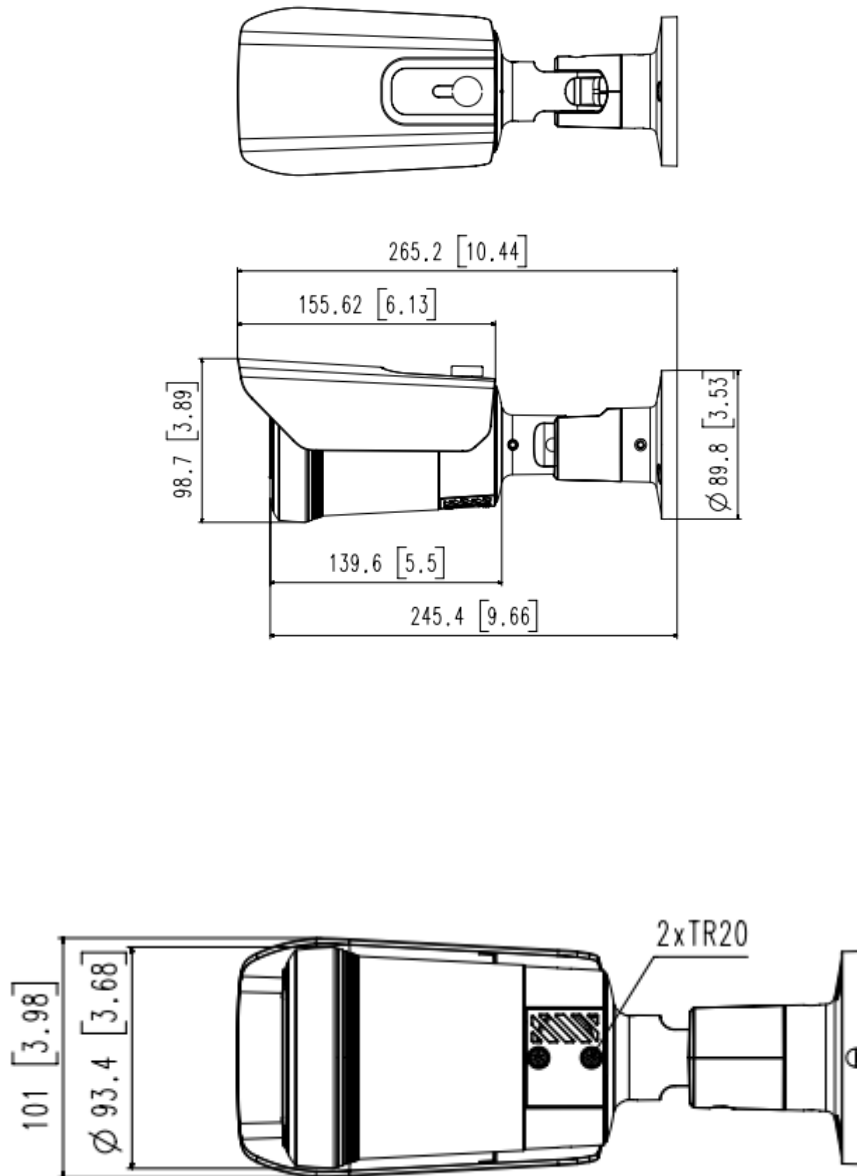


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REPORT No.:  
CTK-2024-03613  
Page (16) / (27) pages

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





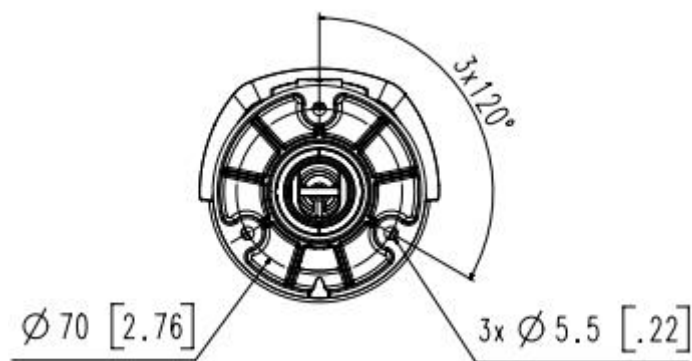
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REPORT No.:

CTK-2024-03613

Page (17) / (27) pages





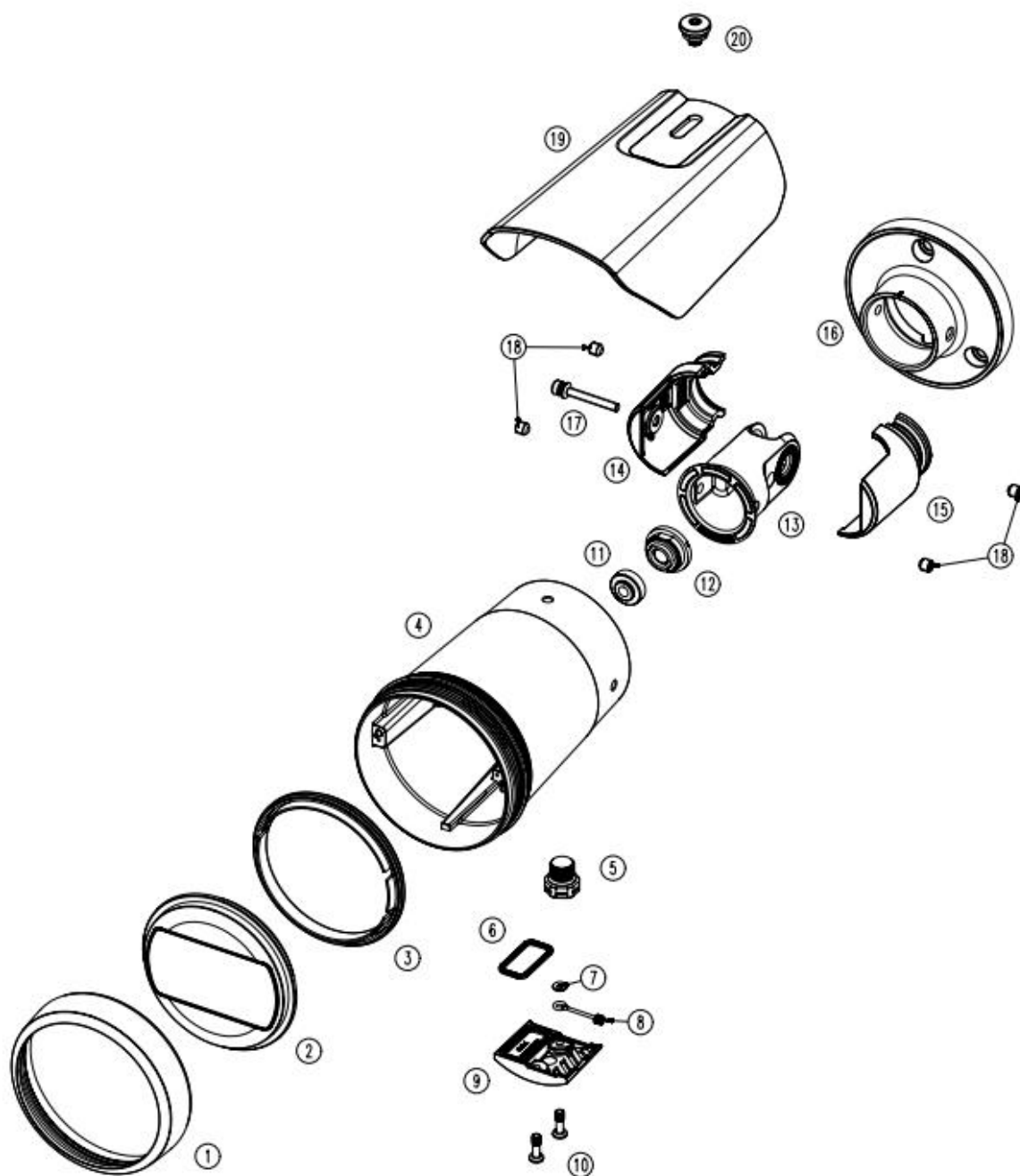
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REPORT No.:

CTK-2024-03613

Page (18) / (27) pages





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REPORT No. :  
CTK-2024-03613  
Page (19) / (27) pages

### 3.6 Attachment 2 – Parts List

No.	품명	한화비전 품번	원소재	참조
1	COVER-FRONT	FC15-008336A	Aluminum (ADC12)	
2	ASSY-FRONT-WINDOW	AM07-015338B	Polycarbonate (LOTTE, QC-1220UR)	난연등급 V2
			Polycarbonate (LOTTE, HN-1068)	난연등급 V0
			Polycarbonate (CHIMEI, PC-6715VT)	
3	GASKET-WINDOW	HP07-001717A	Silicon	O-VMQ-60-BK
4	COVER-BODY	FC15-009385A	Aluminum (ADC12)	
5	VENT-GORE	HP06-001351	PMF100586-WHT	
6	GASKET-DOOR	HP07-001782A	Silicon	O-VMQ-30-GR
7	RING-OP	Z6044004001A	Silicon	O-VMQ-60-BK
8	WIRE-DOOR	EP24-001022A	Silicon	
9	DOOR	FC28-003617A	Aluminum (ADC12)	
10	SCREW-SPECIAL:PH,TR20,M4,L7+5,SUS,FP	FC18-004000A	Stainless steel(SUSXM7)	
11	BUSHING-CABLE	MC06-001185A	Silicon	C-VMQ-50-GR
12	BAFFLE-GUIDE-PANNING	FC29-004667C	Polycarbonate (LOTTE, HN-1068)	난연등급 V0
13	BODY-PAN	FC39-007179A	Aluminum (ADC12)	
14	BODY-TILT-LEFT	FC39-007180A	Aluminum (ADC12)	
15	BODY-TILT-RIGHT	FC39-007181A	Aluminum (ADC12)	
16	BODY-MOUNT	FC39-007182A	Aluminum (ADC12)	
17	SCREW-SEMS : PH(t4.0),T20,M4,L32,SUS,FP,	FC18-006880A	Stainless steel(SUSXM7)	
18	SCREW-SET : T20,M6,L6,SUS,KCP(SERRATION)	FC18-006881A	Stainless steel(SUSXM7)	
19	SHIELD-SUN	FC28-003443B	Polycarbonate (LOTTE, HN-1068)	난연등급 V0
20	KNOB-SCREW-SEMS-SUS	FC28-003805A	Stainless steel(SUSXM7)	



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REPORT No. :  
CTK-2024-03613  
Page (20) / (27) pages



## Component - Plastics

File Number: E56070

CHI MEI CORPORATION  
59-1 SAN CHIA  
JEN TE  
TAINAN, 717 Taiwan



### WONDERLITE: PC-6715VT(f1)(a)

Polycarbonate (PC), pellets

(a) - Ball pressure temperature is in accordance with IEC 60695-10-2 Method B.

(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, 5VA	
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	850 °C	
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746A
1.5 mm	PLC 3	
3.0 mm	PLC 3	
High Amp Arc Ignition (HAI)		UL 746A
1.5 mm	PLC 1	
3.0 mm	PLC 1	
Comparative Tracking Index (CTI)	PLC 2	UL 746A
Dielectric Strength	30 kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 2	UL 746A
Volume Resistivity	1.0E+14 ohms-cm	ASTM D257 IEC 60093
Arc Resistance	PLC 6	ASTM D495
Thermal	Value	Test Method
RTI Elec		UL 746B
1.5 mm	130 °C	
3.0 mm	130 °C	
RTI Imp		UL 746B
1.5 mm	115 °C	
3.0 mm	120 °C	
RTI Str		UL 746B
1.5 mm	125 °C	
3.0 mm	130 °C	
Ball Pressure Test (135°C)	Pass	IEC 60695-10-2
Physical	Value	Test Method
Dimensional Change	0.0 %	ASTM D1042 ISO 2796
Outdoor Suitability	f1	UL 746C

Page 1 of 1

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Form Number: E56070-104200292

Report Date: 9/25/2001  
Last Revised: 10/23/2019 2:00:26 AM





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REPORT No. :  
CTK-2024-03613  
Page (21) / (27) pages



Component - Plastics  
File Number: E115797

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



INFINO: QC-122(+)(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
1.0 mm, ALL	V-2	
1.6 mm, ALL	V-2	
3.2 mm, ALL	V-2	
Flammability Classification		IEC 60695-11-10, -20
1.0 mm, ALL	V-2	
1.6 mm, ALL	V-2	
3.2 mm, ALL	V-2	
Glow Wire Flammability Index		IEC 60695-2-12
1.0 mm	850 °C	
1.6 mm	850 °C	
3.2 mm	850 °C	
Glow Wire Ignition Temperature		IEC 60695-2-13
1.0 mm	875 °C	
1.6 mm	900 °C	
3.2 mm	875 °C	
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746A
1.0 mm	PLC 0	
1.6 mm	PLC 3	
3.2 mm	PLC 2	
High Amp Arc Ignition (HAI)		UL 746A
1.0 mm	PLC 0	
1.6 mm	PLC 0	
3.2 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 0	UL 746A
High Voltage Arc Tracking Rate (HVTR)	PLC 2	UL 746A
Volume Resistivity	1.0E+16 ohms-cm	ASTM D257
Volume Resistivity	1.0E+16 ohms-cm	IEC 60093
Arc Resistance	PLC 5	ASTM D495
Thermal	Value	Test Method
RTI Elec		UL 746B
1.0 mm	80.0 °C	
1.6 mm	130 °C	
3.2 mm	130 °C	



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REPORT No. :  
CTK-2024-03613  
Page (22) / (27) pages

### Component - Plastics

File Number: E115797



Thermal	Value	Test Method
RTI Imp		UL 746B
1.0 mm	80.0 °C	
1.6 mm	125 °C	
3.2 mm	130 °C	
RTI Str		UL 746B
1.0 mm	80.0 °C	
1.6 mm	125 °C	
3.2 mm	130 °C	
Physical	Value	Test Method
Outdoor Suitability	f1	UL 746C

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REPORT No.:

CTK-2024-03613

Page (23) / (27) pages

UL인증



Grade

HN-1068

Component - Plastics

Guide information

[View Certificate of Compliance](#)

E115797

### LOTTE CHEMICAL CORPORATION

56 Gosan-ro, Ulsang-si Gyeonggi-do 16073 KR

#### HN-1068(+)(f1)

Polycarbonate (PC) "INFINO", furnished as pellets

Color	Min. Thk (mm)	Flame Class	HVI	HA	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
ALL	1.5	V-0	3	3	130	130	130
	3.0	V-0	-	-	130	130	130

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 31.8

High-Voltage Arc Tracking Rate (HVTR): -

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity ( $10^4$  ohm-cm): 17

Surface Resistivity ( $10^4$  ohms/square): -

High Volt, Low Current Arc Resis (D495): -

(\*) - 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.

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Report Date: 1998-08-24

Last Revised: 2023-03-21

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#### IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	°C	1.5	960
			3.0	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	°C	1.5	825
			3.0	825
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	°C	-	130
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 179-1	kJ/m <sup>2</sup>	-	-

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REPORT No. :  
CTK-2024-03613  
Page (24) / (27) pages

## 4. Hose Down Test (Clause 5.7)

### 4.1 Test date and environmental conditions

4.1.1 Test date: Dec. 11, 2024~ Dec. 18, 2024

4.1.2 Measured Environmental Conditions

Item	Temperature (°C)	Humidity (% R.H.)	Pressure (kPa)
Measurement	25.7	44.5	90.1

### 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

16mm,16mm,31mm,31mm, Ø 93.4 by 293.27 mm  
Ø 70 by 219.8 mm , Ø 89.8 by 281.97 mm , Ø5\*3 by 47.1 mm  
Test Duration = 156.0 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



### 4.3 Attachment 3 – Photographs

#### 4.3.1 Hose down test



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## 5. Test result

### 5.1 Test result table

Sample No (Model)	Water Flow	Presence of water inside	Result
QNO-C6083R	240 LPM	No	Pass

※ Refer to the product photos after the completion of testing in section 5.2.





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CTK-2024-03613  
Page (27) / (27) pages

### 5.2 Post-test product images



- End -