

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-2025-00754

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 : Feb. 19, 2025

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 / QNF-C9010V

5. Date(s) of test :

Mar. 05, 2025~ Mar. 12, 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.
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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.

Mar 20, 2025

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REPORT No. :
CTK-2025-00754
Page (2) / (28) 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	5
2.4 Pre-test product images	6
2.5 Testing equipment images	7
3. Test Information	8
3.1 Test item particulars and Possible test case verdicts	8
3.2 General remarks and factory information	8
3.3 Type 4X Test information	9
3.4 NEMA 250-2014 Test list	11
3.5 Attachment 1 – Construction Diagram and installation method	14
3.6 Attachment 2 – Parts List	16
4. Hose Down Test (Clause 5.7)	25
4.1 Test date and environmental conditions	25
4.2 Test Conditions and methods	25
4.3 Attachment 3 – Photographs	26
5. Test result	27
5.1 Test result table	27
5.2 Post-test product images	28

 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-2025-00754 Page (3) / (28) pages	
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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	all.yongin@element.com
Website	www.elementkorea.kr

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	QNF-C9010V	1 EA	—

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2.2 Manufacturer information

Test item description		NETWORK CAMERA
Trade Mark		 Hanwha Vision
Manufacturer		Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
Model/Type reference		QNF-C9010V
Ratings		Electrical PoE 48 V  6.7 W, PoE 48 V  0.14 A Dimension: Ø120 by 376.8 mm, Ø51.64 by 162.14 mm, Ø25 by 78.5 mm Ø5.2*2 by 32.65 mm

List of Attachments (including a total number of pages in each attachment): Attachment 1: 14-20 pages (Construction Diagram including installation method) Attachment 2: 21-24 pages (Parts List) Attachment 3: 26-28 pages (photographs)	
Summary of testing:	
Tests performed (name of test and test clause): Clause 5.7(Hose Down Test)	Testing location: CTK Co., Ltd. 5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Copy of marking plate: The artwork above may be only a draft.	
제품명칭: NETWORK CAMERA 모델명: QNF-C9010V 정격전압: PoE(48V ) 6.7W M/C: QNF-C9010/KDO 2025.02 S/N: Serial No. MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-R-HWVS-QNFC9010V 상호: 한화비전(주) 제조사/제조국가: 한화비전(주)/한국  IP66	       NETWORK CAMERA, QNF-C9010V PoE (48V ) 0.14A M/C: QNF-C9010V/KEX Fac.ID:D FAB 2025 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 Rainproof Étanche IP66

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REPORT No. :
CTK-2025-00754
Page (5) / (28) pages

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	TH-GA-408	JEIO TECH	X110169	Aug.23,2025
Area flow meter	Z-6504	FLOWTECH	229400	Jan.16,2026
Stop Watch	NONE	Casio	612Q01R-1	Jan.15,2027
Digital Vernier Calipers	100 mm	MITUTOYO	A17179462	-



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REPORT No. :
CTK-2025-00754
Page (6) / (28) pages

2.4 Pre-test product images



Top



Bottom



Front



Rear



Left side



Right side



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REPORT No.:
CTK-2025-00754
Page (7) / (28) 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-2025-00754

Page (8) / (28) 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:
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☐ comma / ☒ point is used as the decimal separator. Clause numbers between brackets refer to clauses in NEMA 250-2014
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)



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REPORT No.:

CTK-2025-00754

Page (9) / (28) pages

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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REPORT No. :
CTK-2025-00754
Page (10) / (28) 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-2025-00754
Page (11) / (28) pages

3.4 NEMA 250-2014 Test list

NEMA 250-2014			
Clause	Requirement + Test	Result – Remark	Verdict
3	CONSTRUCTION		
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 ² (1 in ²) 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-2025-00754
Page (12) / (28) 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

4	MARKING		
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

5	DESIGN TESTS		
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-2025-00754
Page (13) / (28) 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

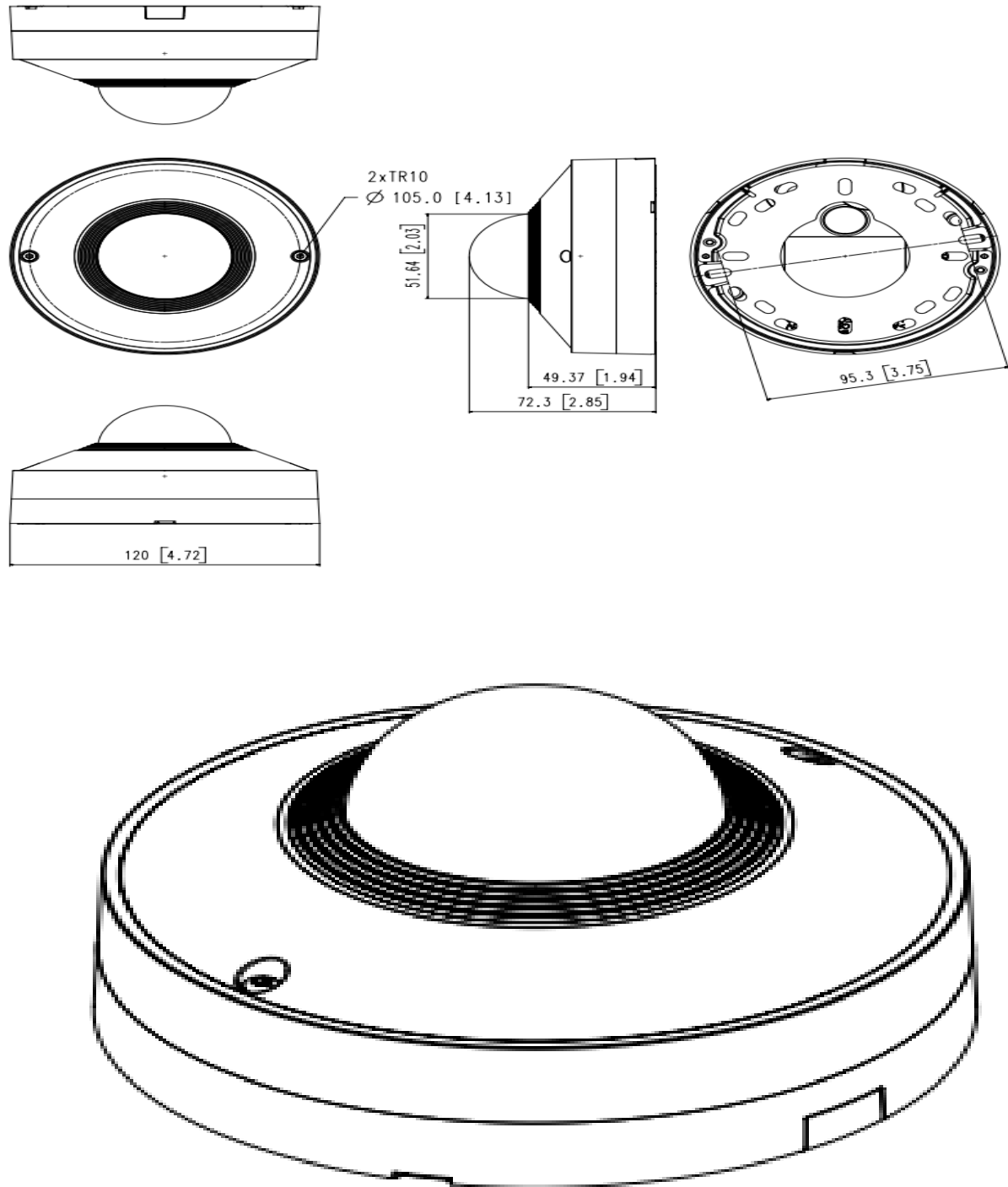


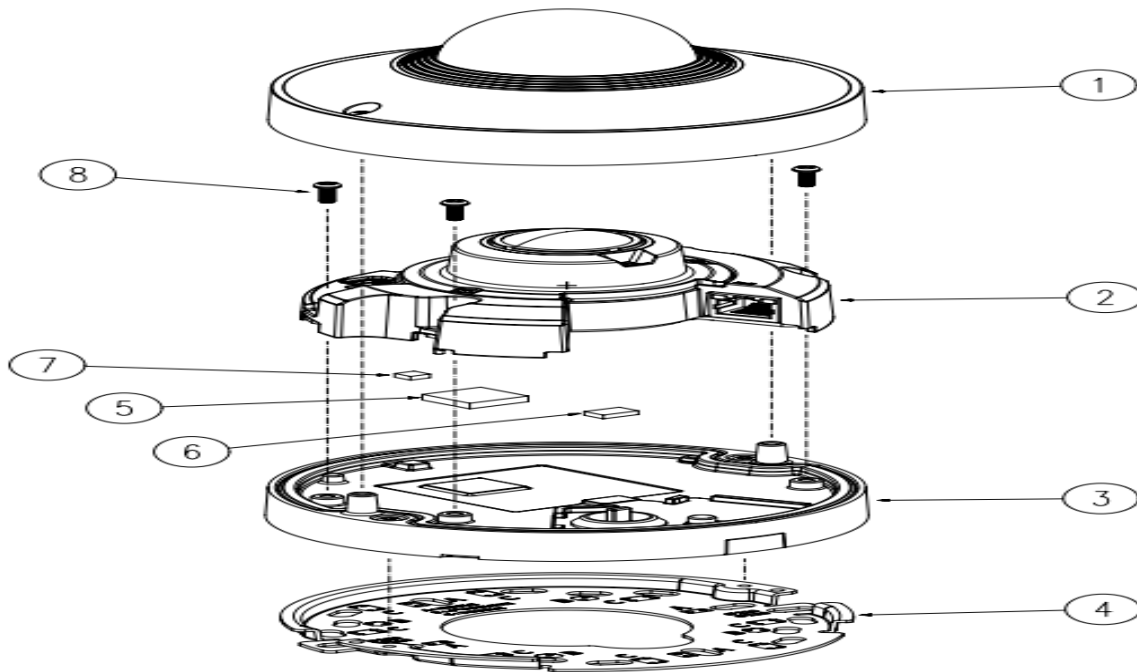
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REPORT No.:
CTK-2025-00754
Page (14) / (28) pages

3.5 Attachment 1 – Construction Diagram and installation method



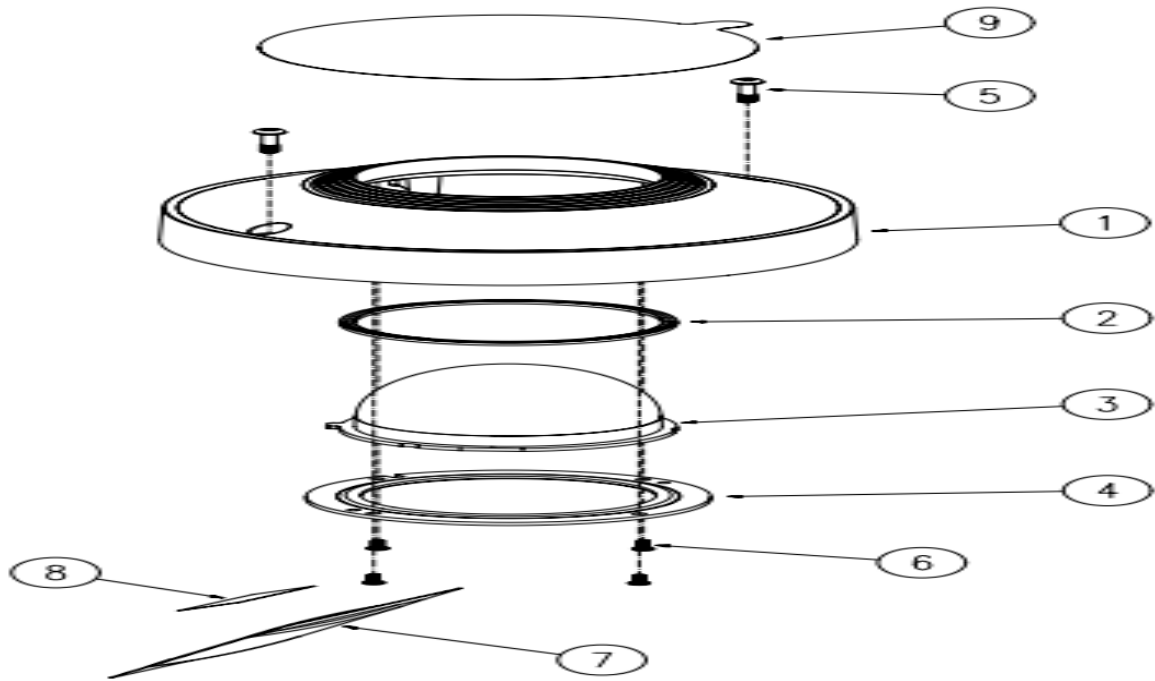


NO.	PART NO.	PART NAME	Spec	Q'TY
1	AM07-017599A	ASSY, CASE-TOP; QNF-C9010V		1
2	AM07-017600A	ASSY, MAIN-FRAME; QNF-C9010V		1
3	AM07-017619A	ASSY, CASE-BOTTOM; QNF-C9010V		1
4	FC39-007699A	MOUNT-PLATE; QNV-C8013R; SUS		1
5	FC28-004033A	PAD-THERMAL_15*15; K=7W/M-K, T3.0		1
6	FC28-003740A	PAD-THERMAL-9X6XT2, 7W/M-K		1
7	HP07-001255A	GASKET-QND_SHIELD_FOAM; 5*5, 2		1
8	Z9642308001	SCREW-MACHINE: PH, +, M3, L8, WHT, FP		3

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REPORT No. :
CTK-2025-00754
Page (16) / (28) pages

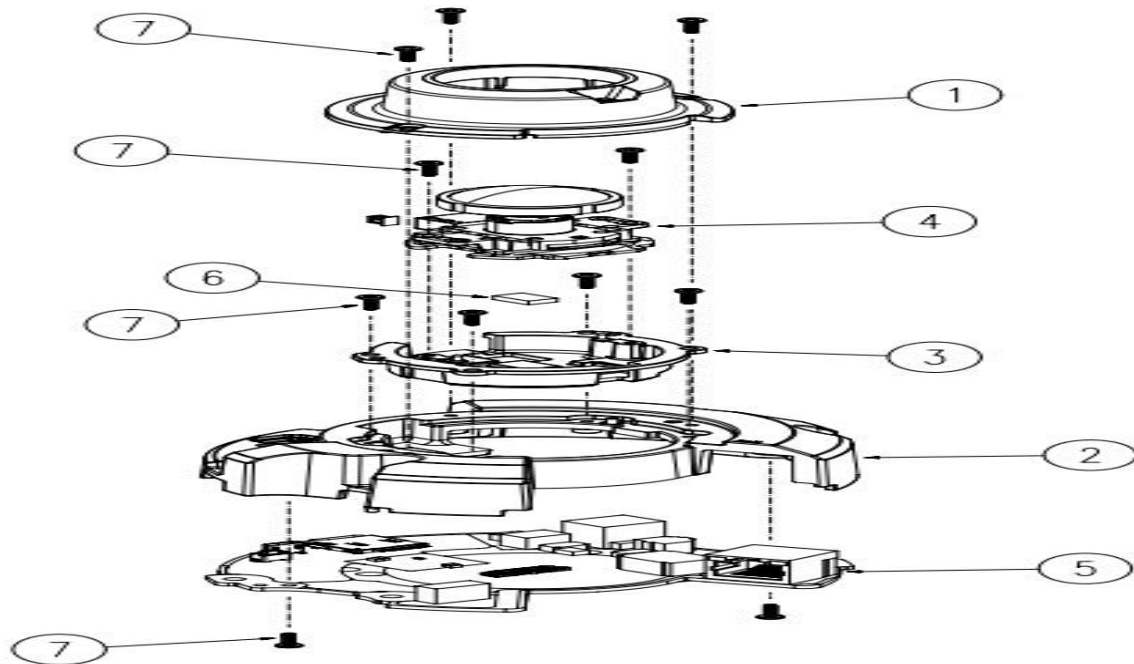


NO.	PART NO.	PART NAME	Spec	Q'TY
1	FC29-018186A	CASE-TOP_QNF-C9010V;DC		1
2	HP07-000254B	GASKET-DOME;SILICONE,XNV-6011,BLK		1
3	FC15-007584B	COVER-DOME_HC;TRP,T2.0,OD52		1
4	FC09-018406A	BRACKET-DOME;QNF-C9010V;SECC		1
5	FC18-005354B	SCREW-MACHINE_;BH,FP,0.5,10,-,2.6,5.35,2		2
6	Z6001055101A	SCREW-MACHINE : BH,+,M2,L4,BLK,FP		4
7	PM02-006673A	SILICAGEL-DESIKHAN-1.5G		1
8	RM04-000145A	TAPE-DOUBLE SIDED;3M 6408,T0.1,W25,L25		1
9	FC36-001442B	SHEET-PROTECT WINDOW;TPE5010,D82,T0.1		1

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REPORT No. :
CTK-2025-00754
Page (17) / (28) pages



NO.	PART NO.	PART NAME	Spec	Q'TY
1	AM07-017605A	ASSY, LENS-HOLDER; QNF-C9010V		1
2	FC39-007983A	FRAME-MAIN_QNF-C9010V; DC		1
3	EP07-002141A	SINK, HEAT-SNESOR_QNF-C9010V; DC		1
4	AM07-017443A	ASSY-MODULE-QNF-C9010 FISH		1
5	AM06-011763A	ASSY, PCB-QNF-C9010V NETWORK		1
6	FC28-003740A	PAD-THERMAL-9X6XT2, 7W/M-K		1
7	Z9642206007	SCREW-MACHINE: BH, +, M2, L6, BLK, FP		11

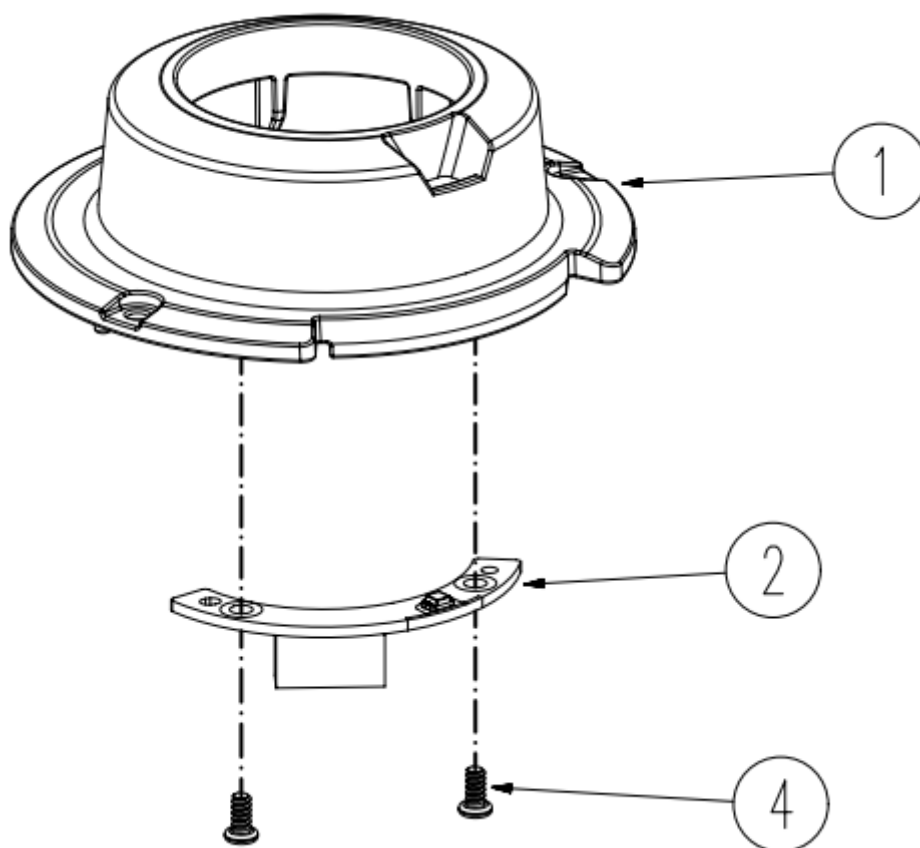
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REPORT No. :

CTK-2025-00754

Page (18) / (28) pages



NO.	PART NO.	PART NAME	Spec	Q'TY
1	FC29-018185A	HOLDER-LENS;QNF-C9010V;BLACK;PC		1
2	AM06-011761A	ASSY,PCB-QNF-C9010V PHOTO		1
3	EP02-005569A	HARNESS-1.25HOUSING;1:1,WIRE,BL,4P-4P,65	Cable	1
4	Z6003019801A	SCREW-TAPTITE:PL,+,M2,L4,WHT,B-TYPE		2

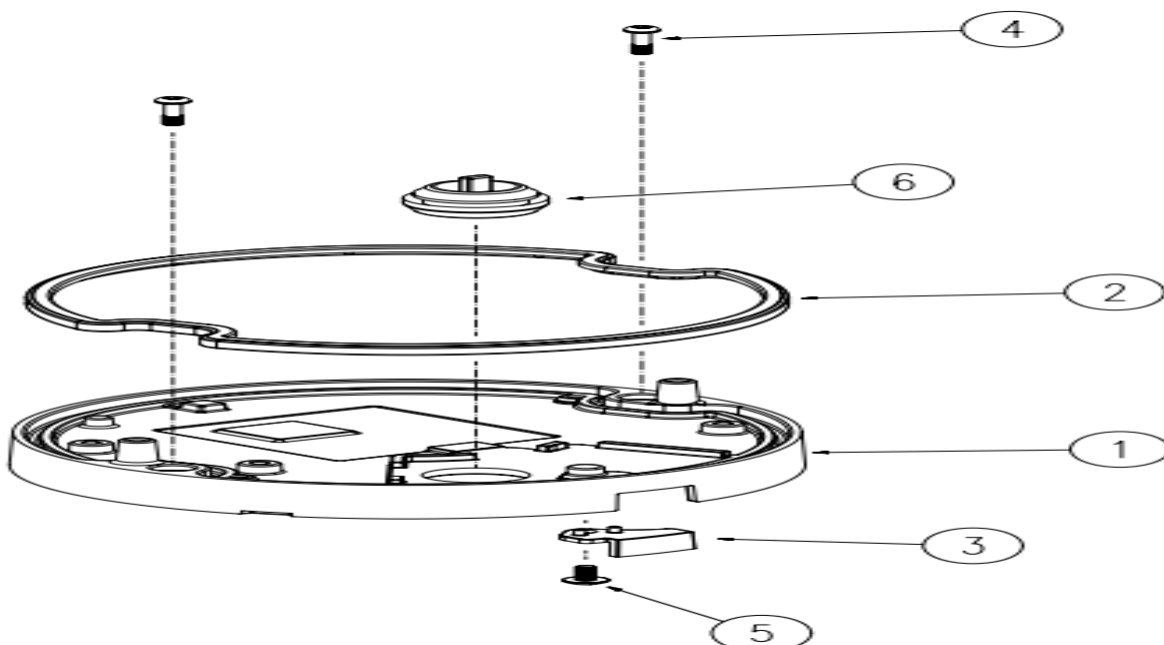
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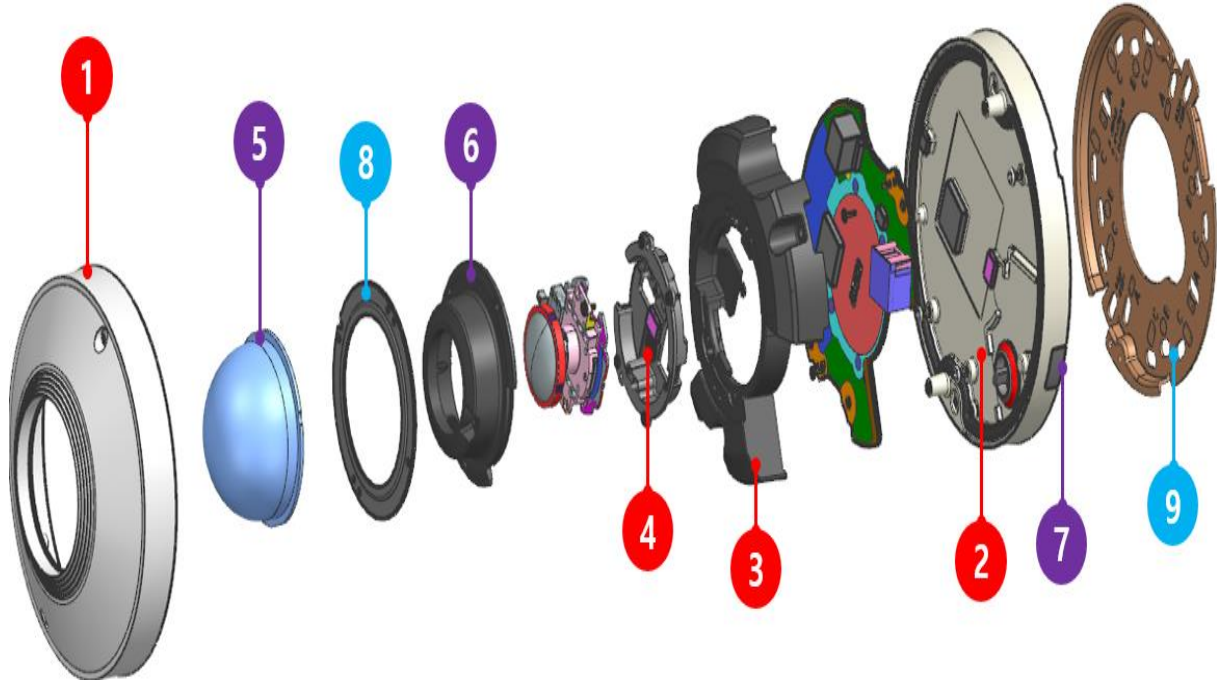
REPORT No.:

CTK-2025-00754

Page (19) / (28) pages



NO.	PART NO.	PART NAME	Spec	Q'TY
1	FC29-018210A	CASE-BOTTOM; QNF-C9010V;ALDC,WHITE		1
2	HP07-001916A	GASKET-BOTTOM;QNV-C8013R;RB		1
3	FC29-017269B	CAP-CABLE;QNF-C9010V;PC		1
4	FC18-005354B	SCREW-MACHINE_;BH,FP,0.5,10,-,2.6,5.35,2		2
5	Z6001047201A	SCREW_TH_M3L6		1
6	MC06-001203A	BUSHING-CABLE-FLEXIBLE;SILICON,TUBE T0.5		1



No.	부품코드	부품명	재료	Wall thickness	Material	Maker	Grade No.	UL94	UL746C
1	FC29-018186A	CASE-TOP;QNF-C9010V	DC	3.0	ADC12	-	-	-	-
2	FC29-018210A	CASE-BOTTOM;QNF-C9010V	DC	2.0	ADC12	-	-	-	-
3	FC39-007983A	FRAME-MAIN;QNF-C9010V	DC	3.0	ADC12	-	-	-	-
4	EP07-002141A	SINK,HEAT-SENSOR;QNF-C9010V	DC	2.0	ADC12	-	-	-	-
5	FC15-007584B	COVER-DOME_HC;TRP,T2.0,OD52	MD	2.0	PC	MITSUBISHI	S2000VUR	V-2	f1
6	FC29-018185A	HOLDER-LENS;QNF-C9010V	MD	1.7	PC	LOTTE	HN-1068	V-0	f1
7	FC29-017269B	CAP-CABLE;QNF-C9010V	MD	2.0	PC	LOTTE	HN-1068	V-0	f1
8	FC09-018406A	BRACKET-DOME;QNF-C9010V	PD	1.6	SECC	-	-	-	-
9	FC39-007699A	MOUNT-PLATE;QNV-C8013R	PD	1.2	SUS304	-	-	-	-

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REPORT No.:

CTK-2025-00754

Page (21) / (28) pages

3.6 Attachment 2 – Parts List

Level	ASSY 구분	품 번	품 명	규 격	물종	구분	Qty
0	기구	QNF-C9010V/VEX	QNF-C9010V/VEX				
.1	기구	AM07-017598A	ASSY,FINAL-QNF-C9010V		A	N	1
.2	기구	AM07-017599A	ASSY,CASE-TOP;QNF-C9010V		A	N	1
...3	기구	AM07-017715A	ASSY,SUB-CASE-TOP;QNF-C9010V		A	N	1
....4	기구	FC29-018186A	CASE-TOP_QNF-C9010V;DC		DC	N	1
....4	기구	FC15-007584B	COVER-DOME_HC;TRP,T2.0,OD52		MD	-	1
....4	기구	HP07-000254B	GASKET-DOME;SILICONE;XNV-6011,BLK		RB	-	1
....4	기구	FC09-018406A	BRACKET-DOME;QNF-C9010V;SECC		PD	N	1
....4	기구	FC36-001442B	SHEET-PROTECT WINDOW;TPE5010,D82,T0.1		ETC	-	1
....4	기구	FC18-005354B	SCREW-MACHINE ;BH,FP,0.5,10,-,2.6,5.35,2		SC	-	2
....4	기구	Z6001055201A	SCREW-MACHINE : PL,+,M2,L5,BLK,FP		SC	-	4
...3	기구	PM02-006673A	SILICAGEL-DESIKHAN-1.5G		ETC	-	1
...3	기구	RM04-000145A	TAPE-DOUBLE SIDED;3M 6408,T0.1,W25,L25		ETC	-	1
..2	기구	AM07-017600A	ASSY,MAIN-FRAME;QNF-C9010V		A	N	1
...3	기구	AM07-017605A	ASSY,LENS-HOLDER;QNF-C9010V		A	N	1

Level	ASSY 구분	품 번	품 명	규 격	물종	구분	Qty
....4	기구	FC29-018185A	HOLDER-LENS;QNF-C9010V;BLACK;PC		MD	N	1
....4	기구	AM06-011761A	ASSY,PCB-QNF-C9010V PHOTO	회로	ETC	N	1
....4	기구	EP02-005569A	HARNESS-1.25HOUSING;1:1,WIRE,BL,4P-4P,65	회로 (케이블)	ETC	N	1
....4	기구	Z6003019801A	SCREW-TAPTITE;PL,+,M2,L4,WHT,B-TYPE		SC	-	2
...3	기구	FC39-007983A	FRAME-MAIN_QNF-C9010V;DC		DC	N	1
...3	기구	EP07-002141A	SINK,HEAT-SNESOR_QNF-C9010V;DC		DC	N	1
...3	기구	AM07-017443A	ASSY-MODULE-QNF-C9010 FISH	광학 (렌즈모듈)	ETC	-	1
...3	기구	AM06-011763A	ASSY,PCB-QNF-C9010V NETWORK	회로	ETC	N	1
...3	기구	FC28-003740A	PAD-THERMAL-9X6XT2,7W/M-K		ETC	-	1
...3	기구	Z6001055101A	SCREW-MACHINE;6001-001707,BH,+,M2,L4,ZP		SC	-	11
..2	기구	AM07-017619A	ASSY,CASE-BOTTOM;QNF-C9010V		A	N	1
...3	기구	FC29-018210A	CASE-BOTTOM; QNF-C9010V;ALDC,WHITE		DC	D	1
...3	기구	HP07-001916A	GASKET-BOTTOM;QNV-C8013R;RB		RB	-	1
...3	기구	FC29-017269B	CAP-CABLE;QNF-C9010V;PC		MD	-	1
...3	기구	FC18-005354B	SCREW-MACHINE ;BH,FP,0.5,10,-,2.6,5.35,2		SC	-	2

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REPORT No. :
CTK-2025-00754
Page (22) / (28) pages

Level	ASSY 구분	품 번	품 명	규 격	물종	구분	Qty
...3	기구	Z6001047201A	SCREW_TH_M3L6		SC	-	1
...3	기구	MC06-001203A	BUSHING-CABLE-FLEXIBLE;SILICON,TUBE T0.5		RB	-	1
.2	기구	FC39-007699A	MOUNT-PLATE;QNV-C8013R;SUS		DC	-	1
.2	기구	FC28-004033A	PAD-THERMAL_15*15;K=7W/M-K,T3.0		ETC	-	1
.2	기구	FC28-003740A	PAD-THERMAL-9X6XT2,7W/M-K		ETC	-	1
.2	기구	HP07-001255A	GASKET-QND_SHIELD_FOAM;5*5,2		ETC	-	1
.2	기구	Z9642308001	SCREW-MACHINE;PH,+;M3,L8,WHT,FP		SC	-	3
.1	포장	AM07-017641A	ASSY,PACKING-QNF-C9010V		A	N	1
.2	포장	AM07-017717A	ASSY,ACCESSORY-QNF-C9010V		A	N	1
...3	기구	FC29-010029B	CAP-INSTALLER_RJ45;POM		ETC	-	1
...3	기구	MC06-001203A	BUSHING-CABLE-FLEXIBLE;SILICON,TUBE T0.5		RB	-	1
...3	기구	TO03-001136A	WRENCH-TORX_T10_L120		ETC	-	1
...3	포장	PM02-000985A	BAG,ZIPPER-PM02-000985A;100X150,TRP,LDPE		PK	-	1
.2	포장	PM02-005534Y	PACKING CASE-QNF-C9010V;COLOR		PK	N	1
.2	포장	PM02-003622G	CARTON,MASTER-DOME-H;H-VISION		PK	-	0.125

Level	ASSY 구분	품 번	품 명	규 격	물종	구분	Qty
.2	포장	PM02-007323A	CUSHION-AIR;QNF-C9010V		PK	N	1
.2	포장	PM02-000994A	BAG-PE;200X300,TRP,LDPE		PK	-	1
.2	포장	PT01-006212A	MANUALS-QG;QNF-C9010V,15LAN,M,WB		PK	N	1
.1	포장	PT03-002454M	LABEL-RATING-CAM-EXPORT-BASIC;AJ059		PK	-	1
.1	포장	PT03-000153V	LABEL-PACKING-UL,FCC,CE,EAC,KC,CM		PK	-	1
.1	포장	Z6804068102A	CT_BOX_LABEL_TYPE_1		PK	-	0.125



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REPORT No.:
CTK-2025-00754
Page (23) / (28) pages

Component - Plastics			Yellow Card™
UL			
HN-1068(+)(f1)			
LOTTE CHEMICAL CORPORATION			File Number: E115797
58 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			
Flame Rating	Value	Test Method	
1.5 mm, ALL	V-0	UL 94	
3.0 mm, ALL	V-0	IEC 60695-11-10, -20	
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			
Hot-wire Ignition (HWI) (1.5 mm)	PLC 3	UL 746A	
High Amp Arc Ignition (HAI) (1.5 mm)	PLC 3	UL 746A	
Comparative Tracking Index (CTI)	PLC 3	UL 746A	
Dielectric Strength	32 kV/mm	ASTM D149	
Volume Resistivity	1.0E+17 ohms-cm	ASTM D257	
Thermal			
RTI Elec	Value	Test Method	
1.5 mm	130 °C	UL 746B	
3.0 mm	130 °C		
RTI Imp		UL 746B	
1.5 mm	130 °C		
3.0 mm	130 °C		
RTI Str		UL 746B	
1.5 mm	130 °C		
3.0 mm	130 °C		
Ball Pressure Test (130°C)	Pass	IEC 60695-10-2	
Physical	Value	Test Method	
Outdoor Suitability	f1	UL 746C	

Page 1 of 1
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Form Number: E115797-103587012
Report Date: 8/24/1998
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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.

Component - Plastics			Yellow Card™
UL			
S-2000V+(f1), S-2001V+(f1)			
MITSUBISHI ENGINEERING-PLASTICS CORP			File Number: E41179
ENVIRONMENT & QUALITY ASSURANCE DEPT			
SHIODOME SUMITOMO-BLDG 25TH FL			
1-9-2 HIGASHI-SHINBASHI			
MINATO-KU, TOKYO 105-0021 Japan			
S-2000V+(f1), S-2001V+(f1)			
Polycarbonate (PC), unreinforced, pellets			
(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: "NF" for grade			
NXG5050, "N" for grade NXG5030, "N" for grade MB2112+, "S1" for grade F20-54, "V" for grades			
S-2000+(f1), S-2001+(f1), S-2003+(f1), the last letter "L" for grade CFH2520+, "W" for ELV2010			
included in Grade ELV20(a5)+, "V" for grade MB2210+.			
Flammability			
Flame Rating	Value	Test Method	
0.38 mm, ALL	V-2	UL 94	
1.5 mm, ALL	V-2	IEC 60695-11-10, -20	
3.0 mm, ALL	V-2		
Electrical			
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 0		
3.0 mm	PLC 0		
Comparative Tracking Index (CTI)	PLC 2	UL 746A	
Dielectric Strength	20 kV/mm	ASTM D149	
High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL 746A	
Volume Resistivity	1.0E+7 ohms-cm	ASTM D257	
Arc Resistance	PLC 5	ASTM D495	

Page 1 of 2
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REPORT No. :
CTK-2025-00754
Page (24) / (28) pages

Component - Plastics S-2000V+(f1), S-2001V+(f1)



Thermal	Value	Test Method
RTI Elec		UL 746B
0.35 mm	80.0 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
RTI Imp		UL 746B
0.35 mm	80.0 °C	
1.5 mm	115 °C	
3.0 mm	115 °C	
RTI Str		UL 746B
0.35 mm	80.0 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
Physical	Value	Test Method
Dimensional Change	0.0 %	ASTM D1042 ISO 2796
Outdoor Suitability	f1	UL 746C

Page 2 of 2
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REPORT No. :
CTK-2025-00754
Page (25) / (28) pages

4. Hose Down Test (Clause 5.7)

4.1 Test date and environmental conditions

4.1.1 Test date: Feb. 18, 2025~ Feb. 25, 2025

4.1.2 Measured Environmental Conditions

Item	Temperature (°C)	Humidity (% R.H.)	Pressure (kPa)
Measurement	16.5	40.2	98.1

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

Ø120 by 376.8 mm, Ø51.64 by 162.14 mm, Ø25 by 78.5 mm

Ø5.2*2 by 32.65 mm

Test Duration = 108.34 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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REPORT No.:
CTK-2025-00754
Page (26) / (28) pages

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
QNF-C9010V	240 LPM	No	Nomal

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



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REPORT No.:
CTK-2025-00754
Page (28) / (28) pages

5.2 Post-test product images



- End -