


TEST REPORT

 CTK Co., Ltd. <small>The Power Leader of Global Regulatory Certification</small>	CTK Co., Ltd. (Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-shi Gyeonggi-do KOREA, REPUBLIC OF Tel: +82-31-339-9970 Fax: +82-31-624-9501	REPORT No.: CTK-2021-04101 Page (1) / (21) pages	
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1. Applicant

- Name: Hanwha Techwin Co., Ltd.
- Address: 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt: 2021-10-21

2. Manufacturer

- Name: HANWHA TECHWIN SECURITY VIETNAM CO.,LTD
- Address: Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam

3. **Test sample / Model**: Network Camera / XNV-6123R

4. **Date(s) of test**: 2021-11-05

5. **Test Standard (Method) used**: NEMA 250-2014
Enclosures for Electrical Equipment (1000 Volts Maximum)

6. **Results**: Pass


The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
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Approval	Tested by:	Technical Manager:
	Min-Gi Mun (Signature)	WonHyeon Choi (Signature)

2021-11-12

















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Test item description	: NETWORK CAMERA
Trade Mark	: 
Manufacturer	: Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
Model/Type reference	: XNV-6123R
Ratings	: Electrical DC 12 V  1.38 A PoE (53 V ) 0.37 A Dimension: Ø 180 mm by 565.2 mm, Ø 120 mm by 376.8 mm, Ø 14 mm by 43.96 mm, Ø 25*2 mm by 157 mm, Ø 10*4 mm by 125.6 mm

List of Attachments (including a total number of pages in each attachment):	
Attachment 1: 11-13 pages (Construction Diagram including installation method)	
Attachment 2: 14-15 pages (Parts List)	
Attachment 3: 16-19 pages (photographs)	
Summary of testing:	
Tests performed (name of test and test clause): Clause 5.7(Hose Down Test)	Testing location: CTK Co., Ltd. 142, Dongbu-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea

Copy of marking plate: The artwork above may be only a draft.	
기기명칭: NETWORK CAMERA 모델명: XNV-6123R 정격전압: DC 12V  16.5W/ PoE(53V ) 19.5W M/C: XNV-6123R/KDO  DATE S/N: Serial No. MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-RStW-XNV6123R 상호: 한화테크윈(주) 제조자/제조국가: 한화테크윈(주)/한국	<div style="display: flex; align-items: center;">   <div style="margin-left: 20px;">        </div> </div> <p> NETWORK CAMERA, XNV-6123R DC 12V  1.38A/ PoE (53V ) 0.37A M/C: XNV-6123R/KUS Fac.ID:D  DATE S/N: Serial No. MAC ADDRESS: XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO.,LTD. MADE IN KOREA </p> <div style="text-align: right;">  Rainproof Étanche IP66 and IP67 </div>

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Test item particulars..... : Network Camera
Classification of installation and use : Outdoor (Watertight/Corrosion Resistant)
<p>Possible test case verdicts:</p> <ul style="list-style-type: none"> - 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 evaluated to the test object : N/E

<p>General remarks:</p> <p>"(See Enclosure #)" refers to additional information appended to the report. "(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>
<p>Name and address of factory (ies):</p> <ol style="list-style-type: none"> 1. HANWHA TECHWIN SECURITY VIETNAM CO., LTD Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, 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) <p>General product information:</p> <p>Applied NEMA Rating : 4X Model XNV-6123R is basic model which was tested.</p> <p>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.</p>

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).

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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NEMA 250-2014

Clause	Requirement + Test	Result - Remark	Verdict
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3	CONSTRUCTION		
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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
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		
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NEMA 250-2014			
Clause	Requirement + Test	Result - Remark	Verdict
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	
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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
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

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NEMA 250-2014			
Clause	Requirement + Test	Result - Remark	Verdict
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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NEMA 250-2014			
Clause	Requirement + Test	Result - Remark	Verdict

Test Information

	Hose Down Test: Clause 5.7	P
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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).

Sample Dimension (Ø 16 mm by 50.24 mm, Ø 0.6*4 mm by 7.536 mm, Ø 2*3 mm by 18.84 mm)


Test Duration = 127 secs

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

Test Results

Sample No (Model)	Water Flow	Presence of water inside	Result
XNV-6123R	240 LPM	No	Pass

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List of test equipment used:

Instr. Code	Instrument Type	Range Used	Mfr./Model	Calibration Date	
				Last	Due
S3-IP18	25.4mm Nozzle	25.4 mm	CTK/S3-IP18	-	Checked by calliper below before using
S1-SW2	Stop Watch	0.01 s	CASIO/ NONE	2021-03-19	2023-03-03
C-S1-D09	Steel Measuring Tape	5 m	KOMELON/KMC-74N	2021-06-23	2023-06-18
S3-IP23	Water flow meter	250LPM	Nuri tech/ Z-6504	2021-07-08	2022-06-30
C-S1-D02	DIGITAL VERNIER CALIPER	150 mm	MITUTOYO/150 mm	2021-08-28	2022-08-18



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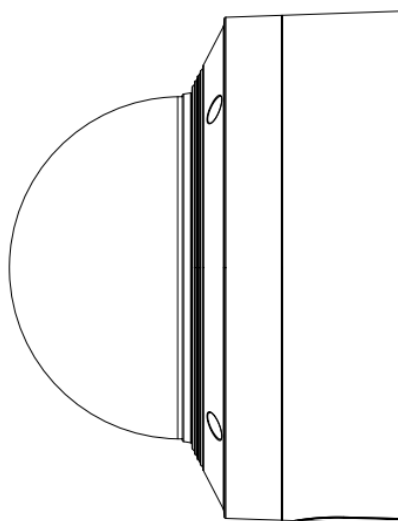
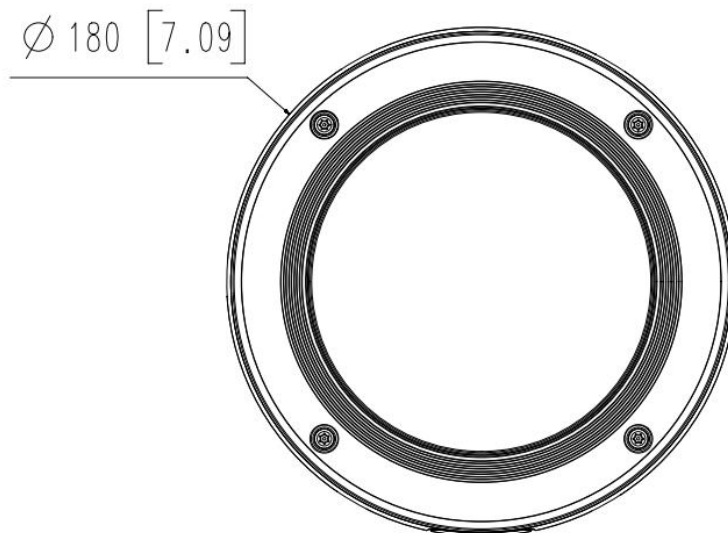
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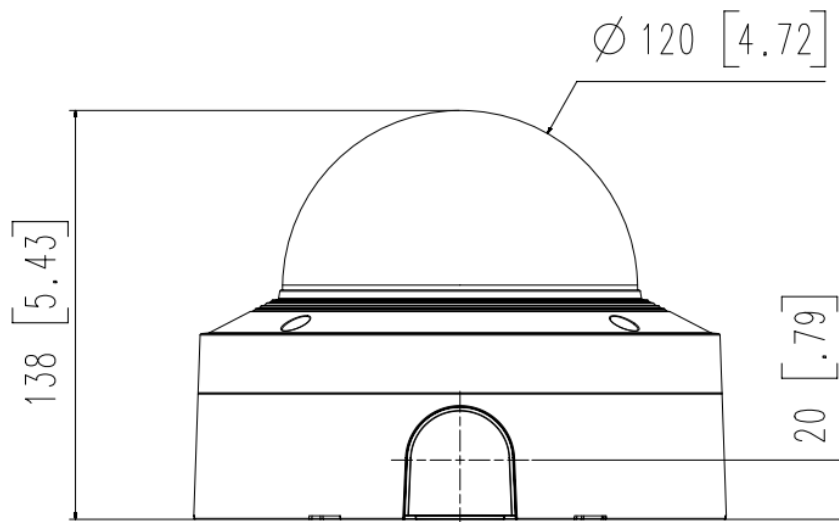
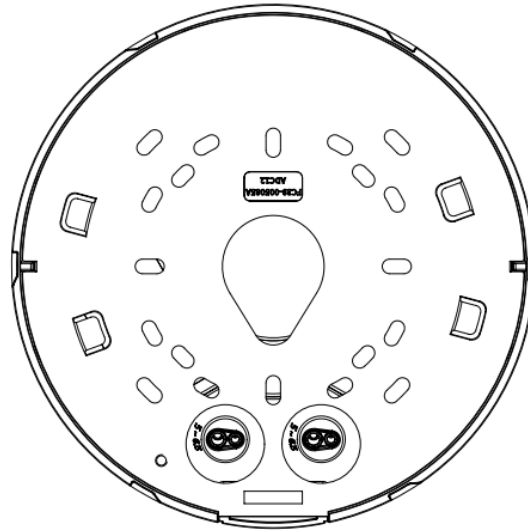
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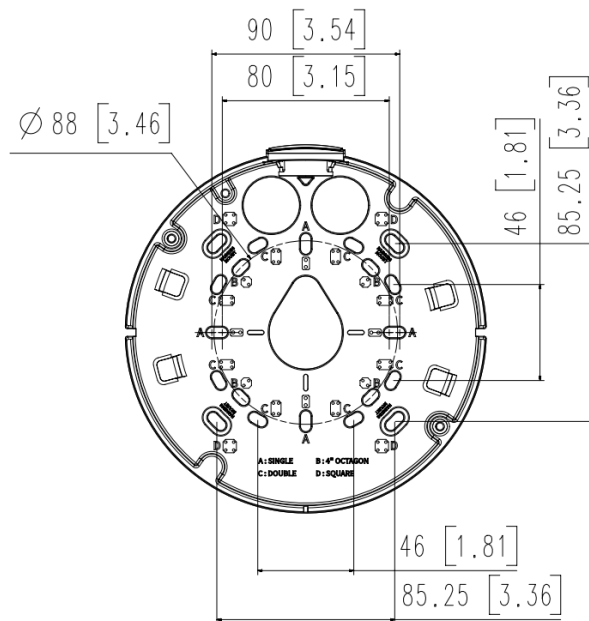
Attachment 1 – Construction Diagram and installation method



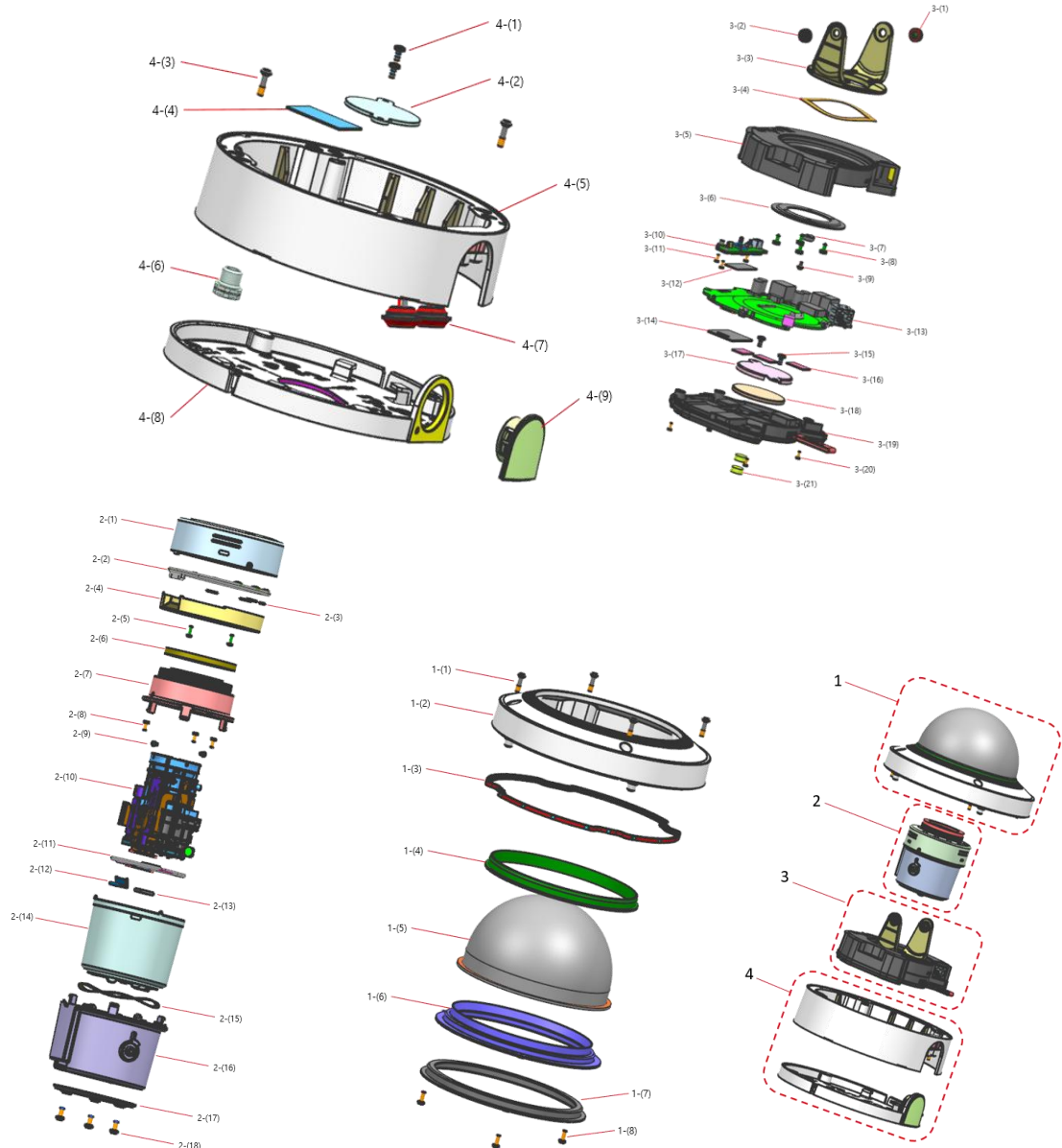
Attachment 1 – Construction Diagram and installation method



Attachment 1 – Construction Diagram and installation method



Attachment 2 – Parts List





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Attachment 2 – Parts List

No	Part Number	Part Name	QTY	Material Type
1-1)	FC18-004000A	SCREW-BUILT-IN TORX20,0.7,15,NQ,4	4	
1-2)	FC29-014388A	CASE-TOP XNV-6123R, WISENET	1	ALDC
1-3)	FC10-001149A	RUBBER-TOP-XNV-6081Z,SILICON	1	SILICON RUBBER
1-4)	HP07-001670A	GASKET-DOME XNV-6123R	1	SILICON RUBBER
1-5)	FC15-007576B	COVER-OPTICAL 12X FRAM HD,PC TRP	1	PC
1-6)	FC29-014475A	HOOD-DOME XNV-6123R	1	PC
1-7)	FC09-013136A	BRACKET-DOME XNV-6123R	1	SECC
1-8)	Z9642308001	MACHINE SCREW(M3XL8,Ni,PAN HEAD)	3	
2-1)	FC29-014390A	HOLDER-IR XNV-6123R	1	PC
2-2)	AM06-010306A	ASSY,PCB-XNV-6123R IR LED	1	
2-3)	FC28-002363A	PAD-THERMAL W8,D4,T1	4	SILICONE
2-4)	EP07-001660A	SINK,HEAT-XNV-6123R	1	ALDC
2-5)	Z6003019601A	SCREW-TAPTYPE,6003-001438,BH,+,B,M2,L6	2	
2-6)	FC29-014389A	HOOD LENS XNV-6123R	1	PSR
2-7)	FC29-014391A	HOLDER LENS XNV-6123R	1	PC
2-8)	Z6001055201A	SCREW-MACHINE,6001-001708,BH,+,M2,L5,ZP	3	
2-9)	Z6003020401A	SCREW-TAPTYPE,6003-001453,BH,+,B,M1.7,L	2	
2-10)	AM07-010961B	ASSY,VCL-12X-B XL1 EXPORT	1	
2-11)	AM06-010302A	ASSY,PCB-XNV-6123R SENSOR	1	
2-12)	Z7409043401A	SHIELD FOAM GASKET 570	1	
2-13)	FC28-003056A	PAD-THERMAL-10X10XT2,K=7W/M-K	1	SILICONE
2-14)	FC15-008561A	COVER REAR INNER XNV-6123R	1	ALDC
2-15)	FC18-005134A	WASHER,WAVE-TILT XPLUS,WAVE WASHER,56	1	SUS
2-16)	FC15-008560A	COVER REAR XNV-6123R	1	PC
2-17)	FC30-007870A	PLATE ROTATE XNV-6123R	1	PC
2-18)	Z9642306007	MACHINE SCREW(M3xL6,Zn-B,넵비[머리])	3	
3-1)	Z6003012501A	4748 TAPTITE SCREW M3 L6	2	
3-2)	FC10-001068A	RUBBER-TILT 9020,SILICON	2	SILICON RUBBER
3-3)	FC39-006704A	FRAME PAN XNV-6123R	1	PC
3-4)	FC18-006039A	WASHER,WAVE-PAN-XNV-9083R,WAVE WASHER,65	1	SUS
3-5)	FC39-006538A	FRAME-MAIN-TOP-XNV-9083R,ADC12	1	ALDC
3-6)	FC30-007520A	PLATE-PAN-XNV-9083R	1	SUS
3-7)	FC29-011838A	STOPPER-PAN XNV-6081Z,AL	1	AL
3-8)	Z6003015201A	SCREW-TAPTYPE,6003-000261,BH,+,B,M3,L	4	
3-9)	FC18-005325A	SCREW-MACHINE,M2,L4,PWH,...WHITE	1	
3-10)	AM06-009928A	ASSY,PCB-XNV-9083R USB	1	
3-11)	Z6001055201A	SCREW-MACHINE,6001-001708,BH,+,M2,L5,ZP	3	
3-12)	FC10-001203A	RUBBER-SD,XNV-9082R	1	SILICON RUBBER
3-13)	AM06-010310A	ASSY,PCB-XNV XNO 6123R MAIN	1	
3-14)	AM06-009943A	ASSY,PCB-KL720 MODULE	1	
3-15)	Z6001053501A	SCREW-MACHINE,6001-001476,BH,+,M3,L6,Ni	2	
3-16)	FC28-003049A	PAD-THERMAL-17X11XT1,K=7W/M-K	3	SILICONE
3-17)	FC09-009905A	BRACKET-YOKE-XNV-6081Z,SECC	1	SECC
3-18)	EP10-001189A	MAGNET-OD44-T3.0-N35UH	1	
3-19)	FC39-006537A	FRAME-MAIN-BOT-XNV-9083R,ADC12	1	ALDC
3-20)	Z6001055201A	SCREW-MACHINE,6001-001708,BH,+,M2,L5,ZP	4	
3-21)	HP07-001672A	GASKET-XNV-9083R,CONDUCTIVE SPONGE,10PL	2	
4-1)	Z6001053501A	SCREW-MACHINE,6001-001476,BH,+,M3,L6,Ni	2	
4-2)	FC09-009874A	BRACKET-MAGNET-XNV-6081Z,SECC	1	SECC
4-3)	FC18-004000A	SCREW-BUILT-IN TORX20,0.7,15,NQ,4	2	
4-4)	FC28-002823A	PAD-THERMAL-PET-38X25XT1,K=7W/M-K	1	SILICONE
4-5)	FC29-010814B	CASE-BOTTOM-XNV-9083R,ADC12	1	ALDC
4-6)	HP06-001350	VENT-GORE PMF100319,MEMBRANE,SCREW IN	1	
4-7)	MC06-001042A	BUSHING-CABLE SET,SILICON,PNV-9080R	2	SILICON RUBBER
4-8)	FC39-005085A	MOUNT-PLATE-XNV-6081Z,ADC12	1	ALDC
4-9)	FC15-006682B	COVER-BOT-XNV-6081Z,PC	1	PC



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Attachment 2 – Parts List

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 (mm)	Flame Class	HWM	HAI	RTI Elec	RTI Imp	RTI 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

Dielectric Strength (kV/mm): 20

High-Voltage Arc Tracking Rate (HVTR): 0

Dimensional Stability (%): 0

Inclined Plane Tracking (IPT): -

Volume Resistivity (10⁸ ohm-cm): 7

High Volt, Low Current Arc Resis (D495): 5

(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 Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.38	V-2 (ALL)
			1.5	V-2 (ALL)
			3.0	V-2 (ALL)
Glow-Wire Flammability (GWI)	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 ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-

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Attachment 2 – Parts List



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 IEC 60243-1
Volume Resistivity	1.0E+17 ohms-cm	ASTM D257 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

Attachment 3 – Photographs

<Photo 1 > Test Unit





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Attachment 3 – Photographs

<Photo 2 > Hose down test





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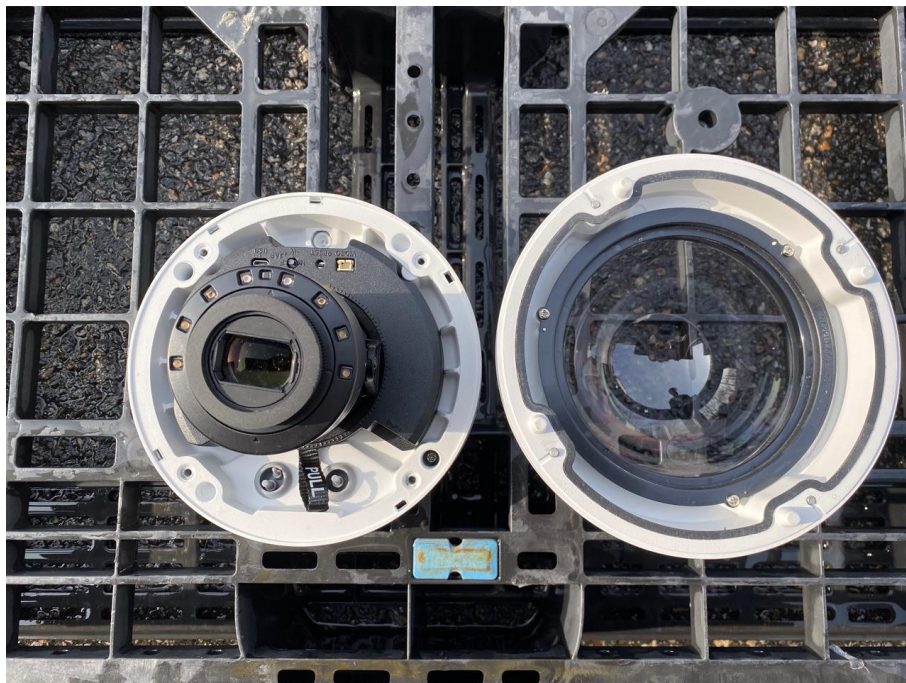
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Attachment 3 – Photographs

<Photo 3 > Test Result



<Photo 4 > Test Result





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Attachment 3 – Photographs

<Photo 5 > Test Result

