

TEST REPORT

 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, KOREA, REPUBLIC OF Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2019-03501 Page(1) / (21) Pages	
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1. Applicant

- Name: Hanwha Techwin Co., Ltd.
- Address: Hanwha Techwin R&D center, 6 Pangyo-ro 319Beon-gil,
Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt: 2019-08-08

2. Manufacturer

- Name: HANWHA TECHWIN (TIANJIN) CO.,LTD.
- Address: No.11 Weiliu Rd, Micro-Electronic Industrial
Park, TEDA, Tianjin, 300385, People's Republic of China

3. Test sample / Model: NETWORK THERMAL CAMERA / TNO-3030T

4. Date(s) of test: 2019-08-08 to 2019-08-09

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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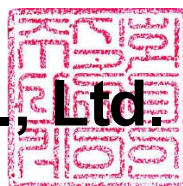
Approval	Tested by:	Technical Manager:
	WonHyeon Choi	YenHwang Jung

(Signature)

(Signature)

2019-09-04

CTK Co., Ltd.



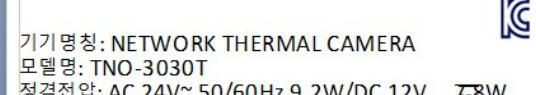
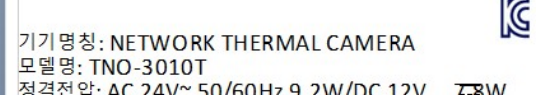
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Test item description	NETWORK THERMAL CAMERA
Trade Mark	
Manufacturer	No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China
Model/Type reference	TNO-3030T
Ratings	Electrical : AC24V, 50Hz, 0.7A / DC12V, 0.65A / PoE Dimension : Ø 112.28 mm by 196.22 mm

List of Attachments (including a total number of pages in each attachment):
Attachment 1: 12-14 pages (Construction Diagram including installation method)
Attachment 2: 15-16 pages (Parts List)
Attachment 3: 17-21 pages (photographs)

Summary of testing:	
Tests performed (name of test and test clause): Clause 5.7(Hose Down Test)	Testing location: CTK Co., Ltd. (Ho-Dong) 113, Yejik-ro Cheoin-gu, Yongin-shi Gyeonggi-do KOREA, REPUBLIC OF

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

 NETWORK THERMAL CAMERA MODEL: TNO-3030T AC 24V~50/60Hz 0.7A/DC 12V 0.65A PoE (48V) 0.18A M/C: TNO-3030T/KEU Fac. ID: D 제조년월 S/N: [제조번호] MAC ADDRESS: XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO.,LTD. MADE IN KOREA 	 기기명칭: NETWORK THERMAL CAMERA 모델명: TNO-3030T 정격전압: AC 24V~ 50/60Hz 9.2W/DC 12V 0.65A PoE(48V) 0.18A M/C: TNO-3030T/KDO 제조년월 S/N: [제조번호] MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-R-StW-TNO3030T 상호: 한화테크윈 (주) 제조사/제조국가: 한화테크윈 (주)/한국 
 NETWORK THERMAL CAMERA MODEL: TNO-3010T AC 24V~50/60Hz 0.7A/DC 12V 0.65A PoE (48V) 0.18A M/C: TNO-3010T/KEU Fac. ID: D 제조년월 S/N: [제조번호] MAC ADDRESS: XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO.,LTD. MADE IN KOREA 	 기기명칭: NETWORK THERMAL CAMERA 모델명: TNO-3010T 정격전압: AC 24V~ 50/60Hz 9.2W/DC 12V 0.65A PoE(48V) 0.18A M/C: TNO-3010T/KDO 제조년월 S/N: [제조번호] MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-R-StW-TNO3030T 상호: 한화테크윈 (주) 제조사/제조국가: 한화테크윈 (주)/한국 

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 NETWORK THERMAL CAMERA MODEL: TNO-3020T AC 24V~50/60Hz 0.7A/DC 12V 0.65A PoE (48V) 0.18A M/C: TNO-3020T/KEU Fac. ID: D  제조년월 S/N:[제조번호] MAC ADDRESS: XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO.,LTD. MADE IN KOREA 	 기기명칭: NETWORK THERMAL CAMERA 모델명: TNO-3020T 정격전압: AC 24V~ 50/60Hz 9.2W/DC 12V 8.7W PoE(48V 8.7W M/C: TNO-3020T/KDO  제조년월 S/N:[제조번호] MAC ADDRESS: XX-XX-XX-XX-XX-XX 인증번호: R-R-StW-TNO3030T 상호: 한화테크윈(주) 제조자/제조국가: 한화테크윈(주)/한국 
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Test item particulars..... : NETWORK THERMAL 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 evaluated to the test object : N/E

**CTK Co., Ltd.**

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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 TECHWIN (TIANJIN) CO.,LTD.

No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China

2. D-TECH CO.,LTD.

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

3. 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

General product information:

Applied NEMA Rating : 4X

Model TNO-3030T is basic model which was tested.

Basic Model	TNO-3030T
Series model	TNO-3010T, TNO-3020T, TNO-3010TRA, TNO-3020TRA

Model differences:

Use of the same external shape and materials (case, finishing material, PCB, cable, etc.), differences in electronic parts inside the product.

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).

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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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-0 (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	No Mounting (See the attachment 1)	N/A
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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4.1	Type Designations	"Type 4X" Marking is declared to be on the product before on the market	P
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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
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

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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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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 112.28 mm by 196.22 mm)

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
TNO-3030T	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	2019-04-03	2021-04-03
S1-D09	Steel Measuring Tape	5 m	KOMELON/KMC-74N	2019-07-02	2021-07-02
S3-IP20	Water flow meter	250LPM	Nuri tech/Z-4007	2019-07-04	2020-07-04
S1-D01	DIGITAL VERNIER CALIPER	200 mm	MITUTOYO/200 mm	2019-04-03	2020-04-03



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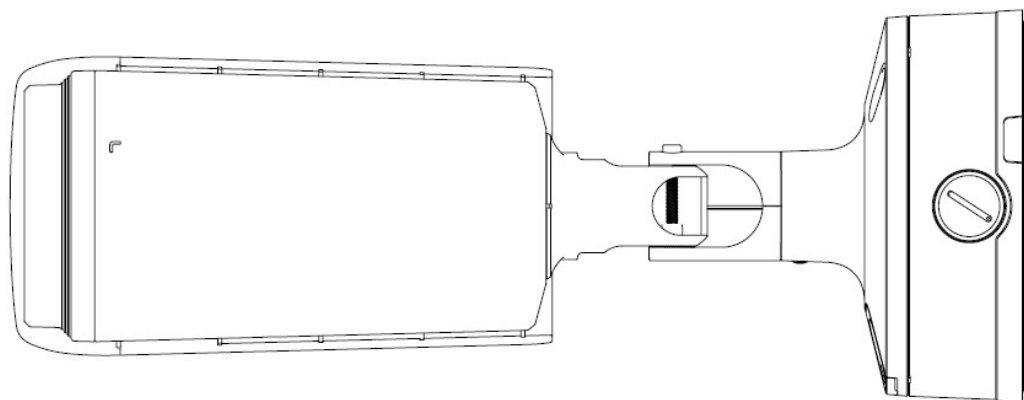
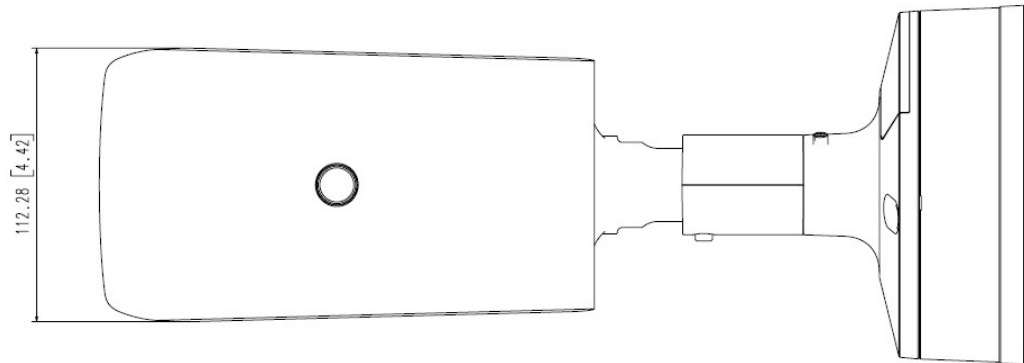
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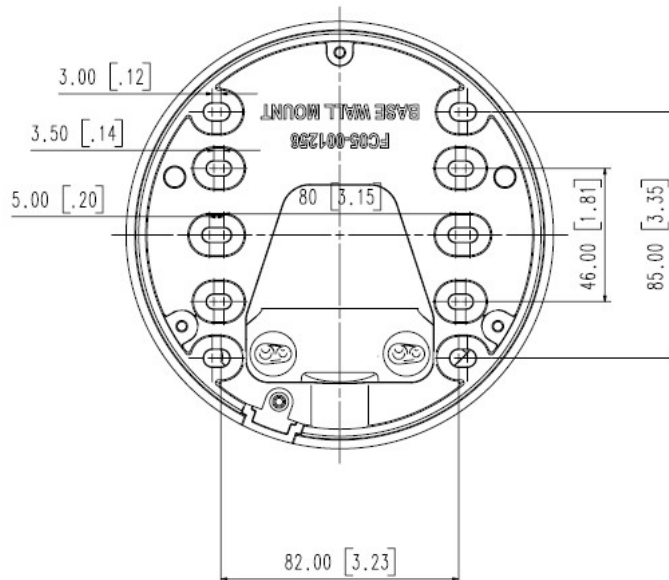
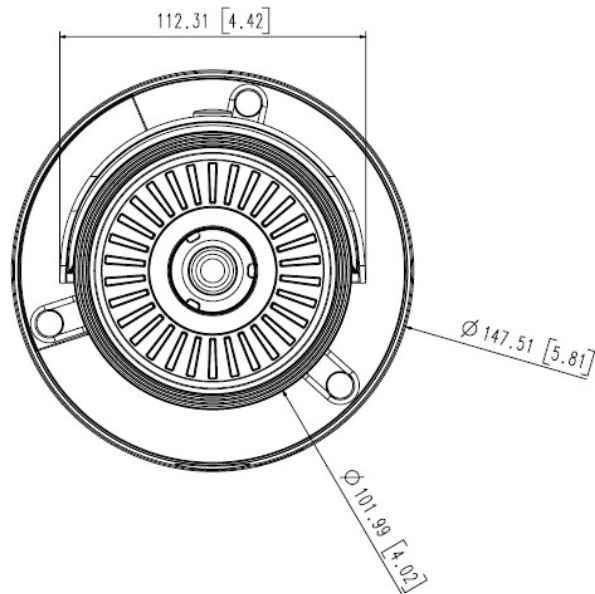
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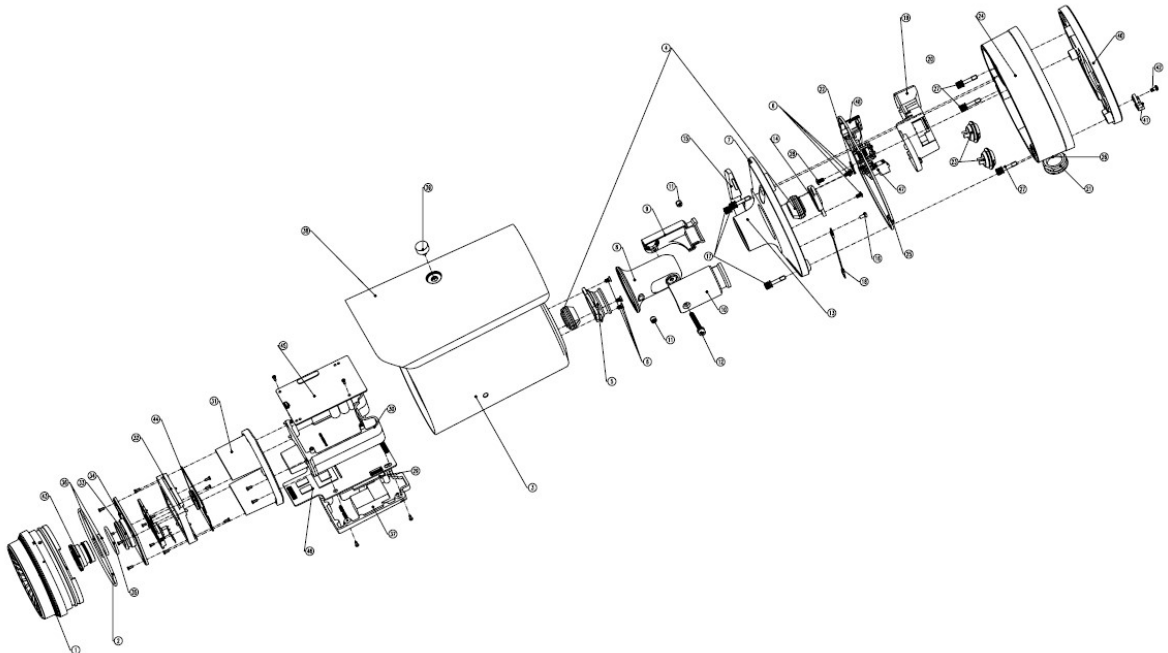
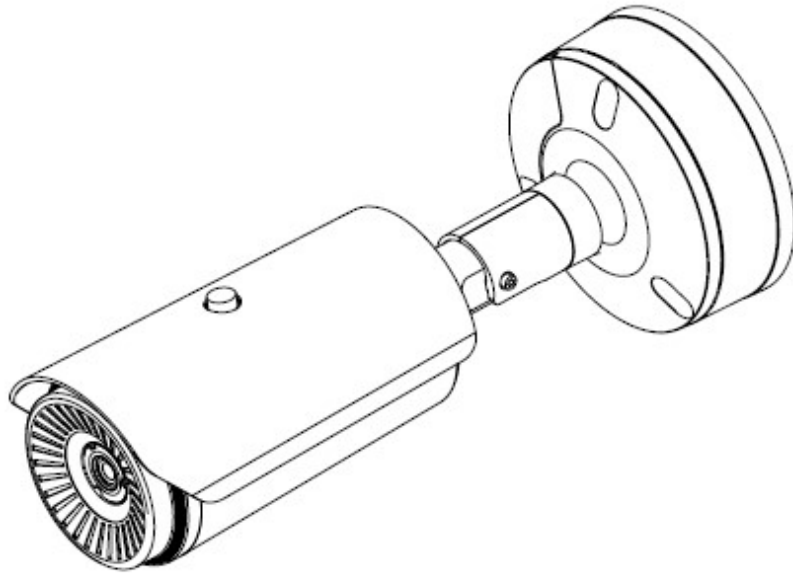
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NO	PART No.	PART NAME	MATERIAL	ea
		TNO-3030T		1
1	FC15-007219A	COVER-FRONT;TNO-30XX	ADC12 + Spray	1
2	FC18-004516A	O-RING-D1 88.57-D2 2.62,TNO-4040,SILICON	Silicone rubber (Hs, 60) ※ Quad ring	1
3	FC15-005953B	COVER-REAR;ADC12,TNO-4040	ADC12 + Spray	1
4	HP07-001180A	GASKET-CABLE-XNO6080R;SILICON RUBBER	RUBBER	2
5	FC29-002456B	GUIDE-PANNING-SNO6084R;ALDC	ADC12	1
6	Z6003007801A	MACHINE SCREW(FLAT HEAD/캡시,M3xL6 N)	FH, M3.0 x L6	6
7	HP07-001179A	GASKET-BUTTON-XNO6080R;SILICON RUBBER	RUBBER	1
8	FC39-001271E	BODY-PANNING_WHITE;ADC12,TNO-4040	ADC12 + Spray	1
9	FC39-001270D	BODY-TILT LEFT_WHITE;ADC12,TNO-4040	ADC12 + Spray	1
10	FC39-001269D	BODY-TILT RIGHT_WHITE;ADC12,TNO-4040	ADC12 + Spray	1
11	Z6004041101A	SETSCREW_SRN_M6P1L6	SCREW	3
12	Z6011000601A	HEXAGON_REC_M4L30	Double SEMS, M4 x L30	1
13	FC15-005958B	COVER-TOP BACK BOX;ADC12,TNO-4040	ADC12 + Spray	1
14	FC15-005367A	COVER-CABLE GASKET_XNO-6080R;ADC	ADC12	1
15	FC28-002443C	DOOR-BB BUTTON-WHITE;ADC12,TNO-4040	ADC12 + Spray	1
16	Z9642306007	MACHINE SCREW(M3xL6, Zn-B,넵비머리)	M3 x L6, Black	1
17	FC18-003309A	SCREW-MACHINE-HSHC;4.0,7,20,DOUBLE SEMS,	Double SEMS, M4 x L20	3
18	RM01-003400A	WIRE,METALIC-SAFETY-SNO-8081R;STS 304	-	1
19	FC15-005954A	COVER-INTERFACE;PC,TNO-4040	PC NH1035 K2261	1
20	Z9642306007	MACHINE SCREW(M3xL6, Zn-B,넵비머리)	M3 x L6, Black	2
21	FC29-003420D	CAP-BOLT_3120V;PL8;PC(POLYCARBONATE)	ADC12 + Spray	1
22	FC09-006670A	BRACKET-WIRE-SNO-8081R;SUS304,1.2	-	1
23	MC06-001042A	BUSHING-CABLE SET;SILICON,PNV-9080R	SILICON	2
24	FC29-008671C	CASE-BOTTOM BB-WHITE;ADC12,TNO-4040	ADC12 + Spray	1
25	HP07-001178A	GASKET-BACKBOX-XNO6080R;SILICON RUBBER	SILICON	1
26	FC18-001028A	O-RING;Ø2.8, OD27.5,SILICON,GRAY	SILICON RUBBER	1
27	FC18-003309A	SCREW-MACHINE-HSHC;4.0,7,20,DOUBLE SEMS,	Double SEMS, M4 x L20	3
28	Z9642306007	MACHINE SCREW(M3xL6, Zn-B,넵비머리)	M3 x L6, Black	1
29	FC28-002821A	PAD-THERMAL-38X25XT2,K=7W/M-K	38 x 25 x 2t	2
30	FC29-012123A	HOLDER-PBA NETWORK POWER;TNO-30XX	AL 선삭	1
31	FC29-009743A	HOLDER-CAMERA FOR 13TO35;TNO-4040,ADC12	ADC12 + 가공	1
32	FC29-012119A	HOLDER-SENSOR;TNO-30XX	Aluminum 60xx + 가공	1
33	FC29-012118A	HOLDER-LENS;TNO-30XX	Aluminum 60xx + Anodizing (Black) + 가공	1
34	RM04-001069A	TAPE-TEMP. FOR HOLDER_TNO-4040	3M 9473	1
35	FC18-005316A	O-RING-D1 28.24-D2 2.62,TNO-30XX	Silicone rubber (Hs, 60), YELLOW	1
36	FC18-005317A	O-RING-D1 20.29-D2 2.62,TNO30XX	Silicone rubber (Hs, 60)Cool Gray 10S	1
37	EP07-001237A	SINK, HEAT-TNO-4040;ADC12	ADC12	1
38	FC28-002972A	SHIELD-SUN;PC,TNO-30XX	ASA	1
39	FC28-002617A	KNOB-SHIELD SUN;ADC12,TNO-4040	ADC12 + Spray	1
40	FC05-001256C	BASE-WALL MOUNT_WHITE;ADC12,TNO-3030	ADC12 + Spray	1
41	FC29-008748B	CAP-CABLE SLOT_WHITE;PC,TNO-4040	PC	1
42	Z9642306007	MACHINE SCREW(M3xL6, Zn-B,넵비머리)	SCREW	1
43	EP14-002413A	LENS SET-QVGA_13.7MM_F1.0_SUNNY,THERMAL	13.7mm LENS	1
44	AM06-009053A	ASSY,PCB-TNO-3030T SENSOR	PCB	1
45	AM06-007366A	ASSY,PCB-XNO-6085R POWER	PCB	1
46	AM06-009053A	ASSY,PCB-TNO-3030T MAIN	PCB	1
47	AM06-007673B	ASSY,PCB-INTERFACE-TNO-4040T_SURGE	PCB	1
48	AM06-007678B	ASSY,PCB-SD CARD-TNO-4040T	PCB	1
49	AM07-010819B	ASSY,IRIS GENERAL-THERMAL;SHUTTER_T1	-	1



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Component - Plastics

File Number: E67171

LG CHEM LTD

128 Yeoui-daero Yeongdeungpo-gu, Seoul 07336 KR



LI996(&)

Acrylonitrile Styrene Acrylate (ASA), pellets

(&) - May be replaced by one, two, or three numbers and/or letter, except Grade AF367SH and XR401B

Flammability	Value	Test Method
Flame Rating		UL 94
2.0 mm, ALL	V-0	IEC 60695-11-10, -20
3.0 mm, ALL	V-0	
Electrical	Value	Test Method
Hot-wire Ignition (HWI)		UL 746
2.0 mm	PLC 4	
3.0 mm	PLC 4	
High Amp Arc Ignition (HAI)		UL 746
2.0 mm	PLC 0	
3.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 2	UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2	UL 746
Arc Resistance	PLC 5	ASTM D495
Thermal	Value	Test Method
RTI Elec		UL 746
2.0 mm	50.0 °C	
3.0 mm	50.0 °C	
RTI Imp		UL 746
2.0 mm	50.0 °C	
3.0 mm	50.0 °C	
RTI Str		UL 746
2.0 mm	50.0 °C	
3.0 mm	50.0 °C	



Component - Plastics

File Number: E115797

Lotte Advanced Materials Co Ltd

56 Gosan-ro, Uiwang-si Gyeonggi-do 437-711 KR



INFINO: NH-1035(+)

Polycarbonate (PC), pellets

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

Flammability	Value	Test Method
Flame Rating		UL 94
1.5 mm, ALL	V-0	IEC 60695-11-10, -20
2.0 to 2.7 mm, ALL	V-0, 5VB	
Electrical	Value	Test Method
Hot-wire Ignition (HWI) (1.5 mm)	PLC 2	UL 746
High Amp Arc Ignition (HAI) (1.5 mm)	PLC 2	UL 746
Comparative Tracking Index (CTI)	PLC 2	UL 746
Thermal	Value	Test Method
RTI Elec		UL 746
1.5 mm	80.0 °C	
2.0 to 2.7 mm	80.0 °C	
RTI Imp		UL 746
1.5 mm	80.0 °C	
2.0 to 2.7 mm	80.0 °C	
RTI Str		UL 746
1.5 mm	80.0 °C	
2.0 to 2.7 mm	80.0 °C	



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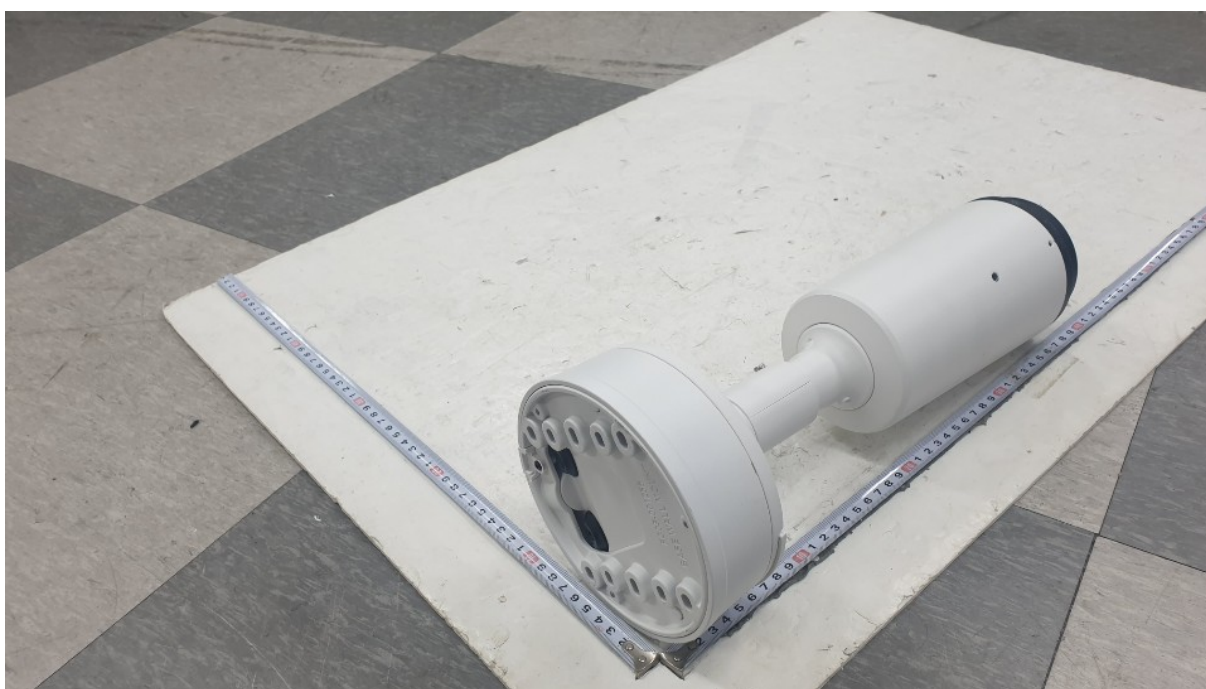
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Attachment 3 – Photographs

<Photo 1 > Test Unit



<Photo 2 > Test Unit





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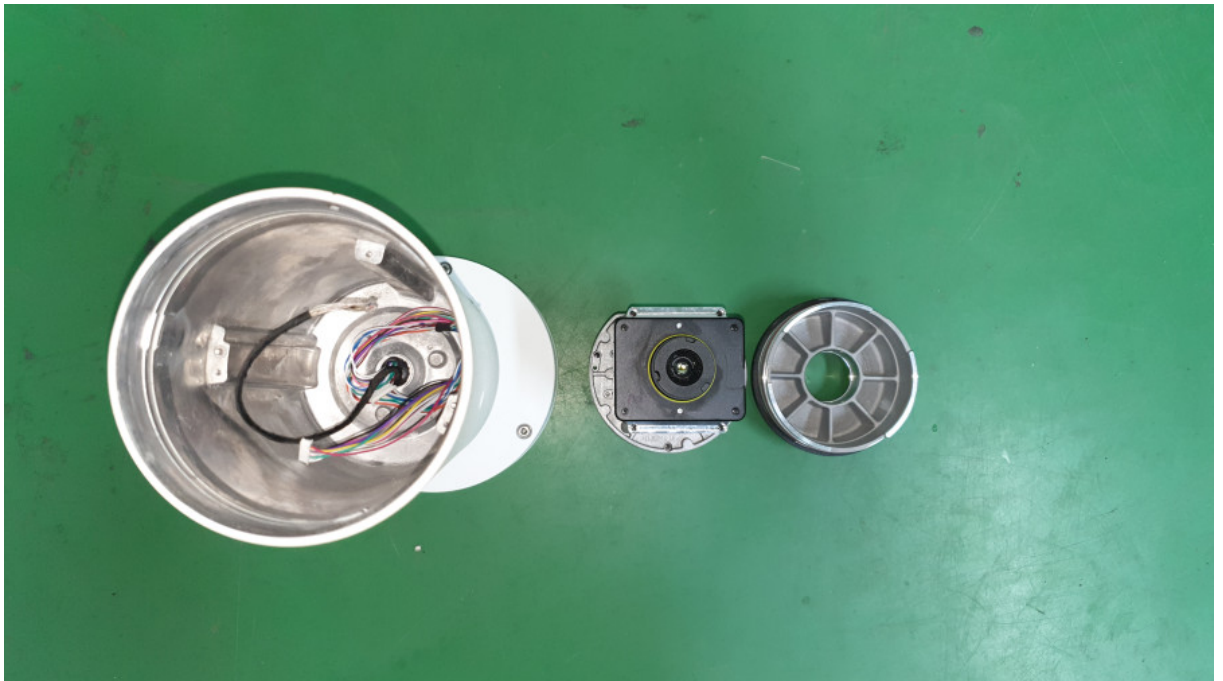
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Attachment 3 – Photographs

<Photo 3 > Hose down test



<Photo 4 > Test Result



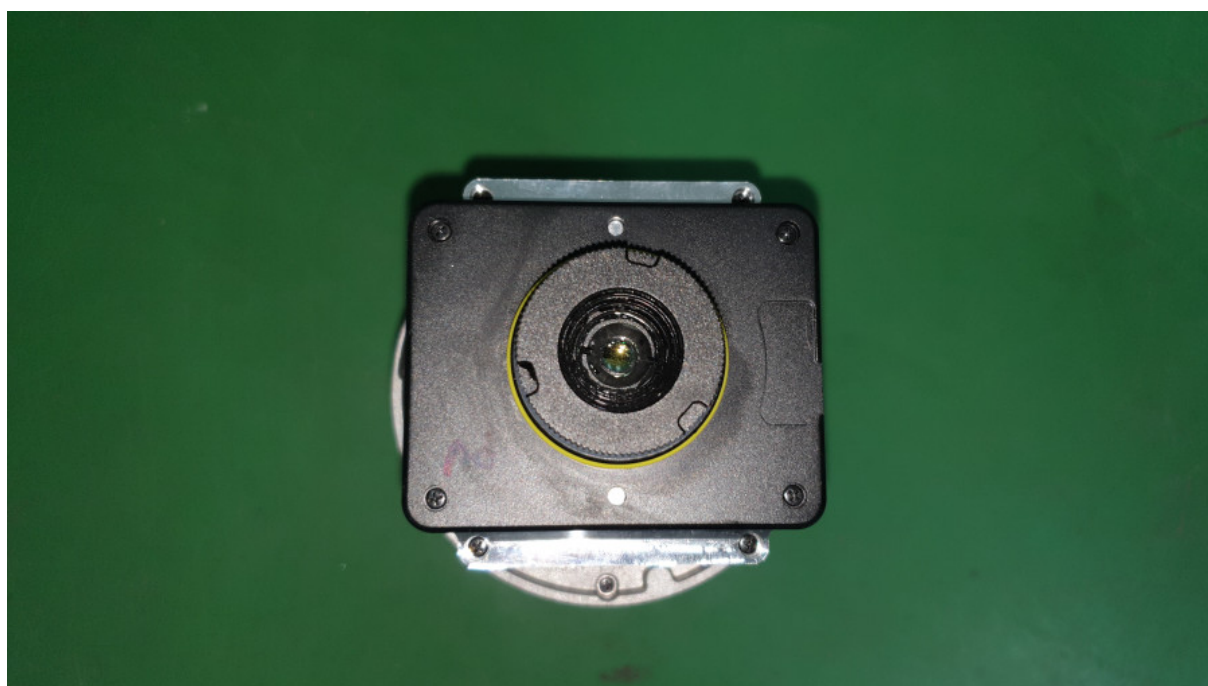
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Attachment 3 – Photographs

<Photo 5 > Test Result



<Photo 6 > Test Result





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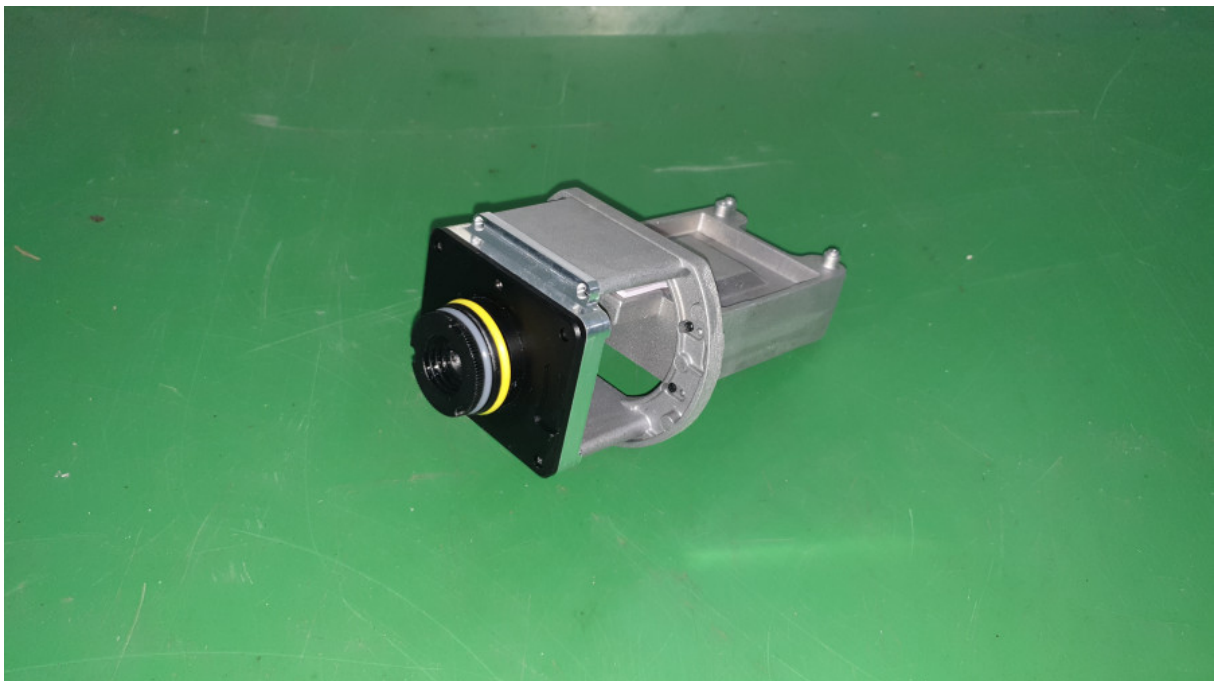
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Attachment 3 – Photographs

<Photo 7 > Test Result



<Photo 8 > Test Result





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Attachment 3 – Photographs

<Photo 9 > Test Result

