

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-2017-01588 Page(1) / (25) Pages	
---	---	--	--

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: 2017-07-25

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 CAMERA / XNO-6085R* (*N:NT/P:PAL)

4. Date(s) of test: 2017-08-17

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.
This report shall not be reproduced except in full without the written approval of CTK

Affirmation	Tested by: WonHyeon. Choi.  (signature)	Technical Manager: YongGon. Kim  (signature)
-------------	--	---

2017-08-23

CTK Co., Ltd.

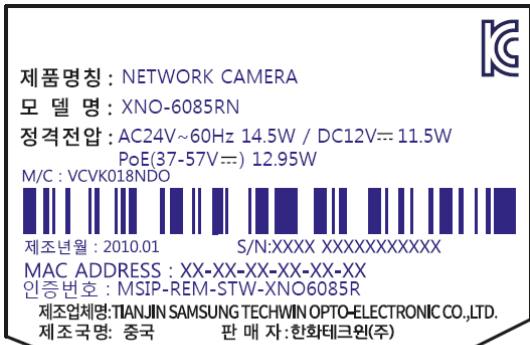
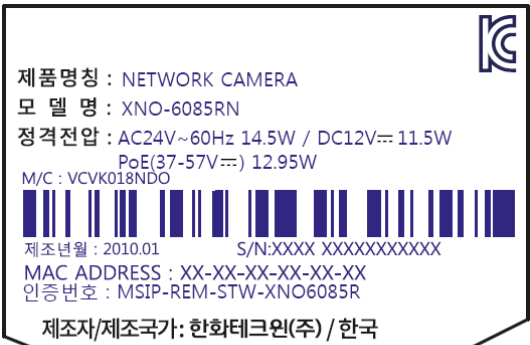
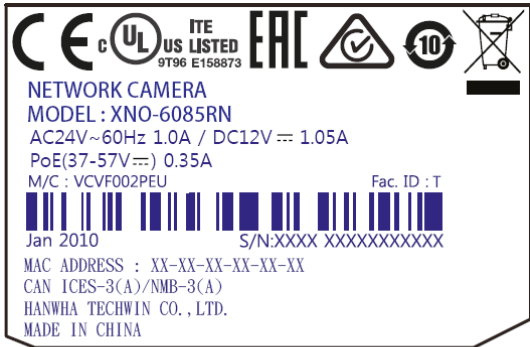
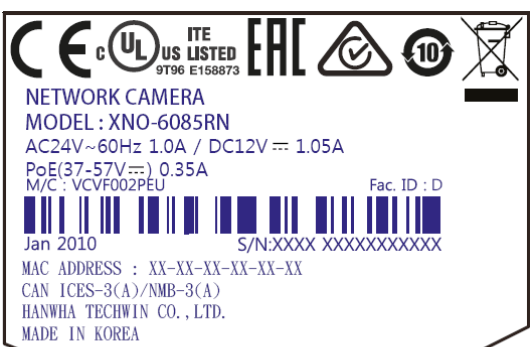


 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, KOREA, REPUBLIC OF Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2017-01588 Page(2) / (25) Pages	
---	---	--	--

Test item description :	NETWORK CAMERA
Trade Mark :	WISeNET
Manufacturer	No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China
Model/Type reference :	XNO-6085R* (*N:NT/P:PAL)
Ratings :	Electrical : AC24V/DC12V/POE Dimension : 147.5 mm by 147.5 mm by 388.6 mm

List of Attachments (including a total number of pages in each attachment): Attachment 1: 12-16 pages (Construction Diagram including installation method) Attachment 2: 17-20 pages (Parts List) Attachment 3: 21-25 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.			
 PT03-002454C	 PT03-002454A		
 PT03-002454B	 PT03-002454B		

 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-2017-01588 Page(3) / (25) Pages	

 NETWORK CAMERA MODEL : XNO-6085RP AC24V~50Hz 1.0A / DC12V ≒ 1.05A PoE(37-57V≒) 0.35A M/C : VCVF002PEU Fac. ID : T  Jan 2010 S/N:XXXX XXXXXXXXXXXXX MAC ADDRESS : XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO., LTD. MADE IN CHINA	 NETWORK CAMERA MODEL : XNO-6085RP AC24V~50Hz 1.0A / DC12V ≒ 1.05A PoE(37-57V≒) 0.35A M/C : VCVF002PEU Fac. ID : D  Jan 2010 S/N:XXXX XXXXXXXXXXXXX MAC ADDRESS : XX-XX-XX-XX-XX-XX CAN ICES-3(A)/NMB-3(A) HANWHA TECHWIN CO., LTD. MADE IN KOREA
PT03-002454B	PT03-002454B

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 evaluated to the test object :	N/E

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
General product information: Applied NEMA Rating : 4X Model XNO-6085R* (*N:NT/P:PAL) is basic model which was tested.



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-2017-01588

Page(4) / (25) Pages

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			



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-2017-01588
Page(6) / (25) Pages

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

 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-2017-01588 Page(7) / (25) Pages	
---	---	--	--

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-0 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		
----------	----------------	--	--

 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-2017-01588 Page(8) / (25) Pages	
---	---	--	--

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	
----------	---------------------	--

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

 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-2017-01588 Page(9) / (25) Pages	
---	--	---	--

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

 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-2017-01588 Page(10) / (25) Pages	
---	---	---	--

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

Test Information

	Hose Down Test : Clause 5.7	P
--	------------------------------------	----------

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(147.5 mm by 147.5 mm by 388.6 mm)

Test Duration = 177.3 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
XNO-6085R*(*N:NT/P:PAL)	240 LPM	No	Pass

 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-2017-01588 Page(11) / (25) Pages	
---	--	--	--

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	2016-03-16	2018-03-16
S1-D09	Steel Measuring Tape	5 m	KOMELON/KMC-74N	2013-06-11	2018-06-11
S3-IP20	Water flow meter	250LPM	Nuri tech/Z-4007	2017-04-14	2018-04-14
S1-D04	DIGITAL VERNIER CALIPER	150 mm	MITUTOYO/150 mm	2016-11-08	2017-11-08



CTK Co., Ltd.

(Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-si,
Gyeonggi-do, KOREA, REPUBLIC OF

Tel: +82-31-339-9970

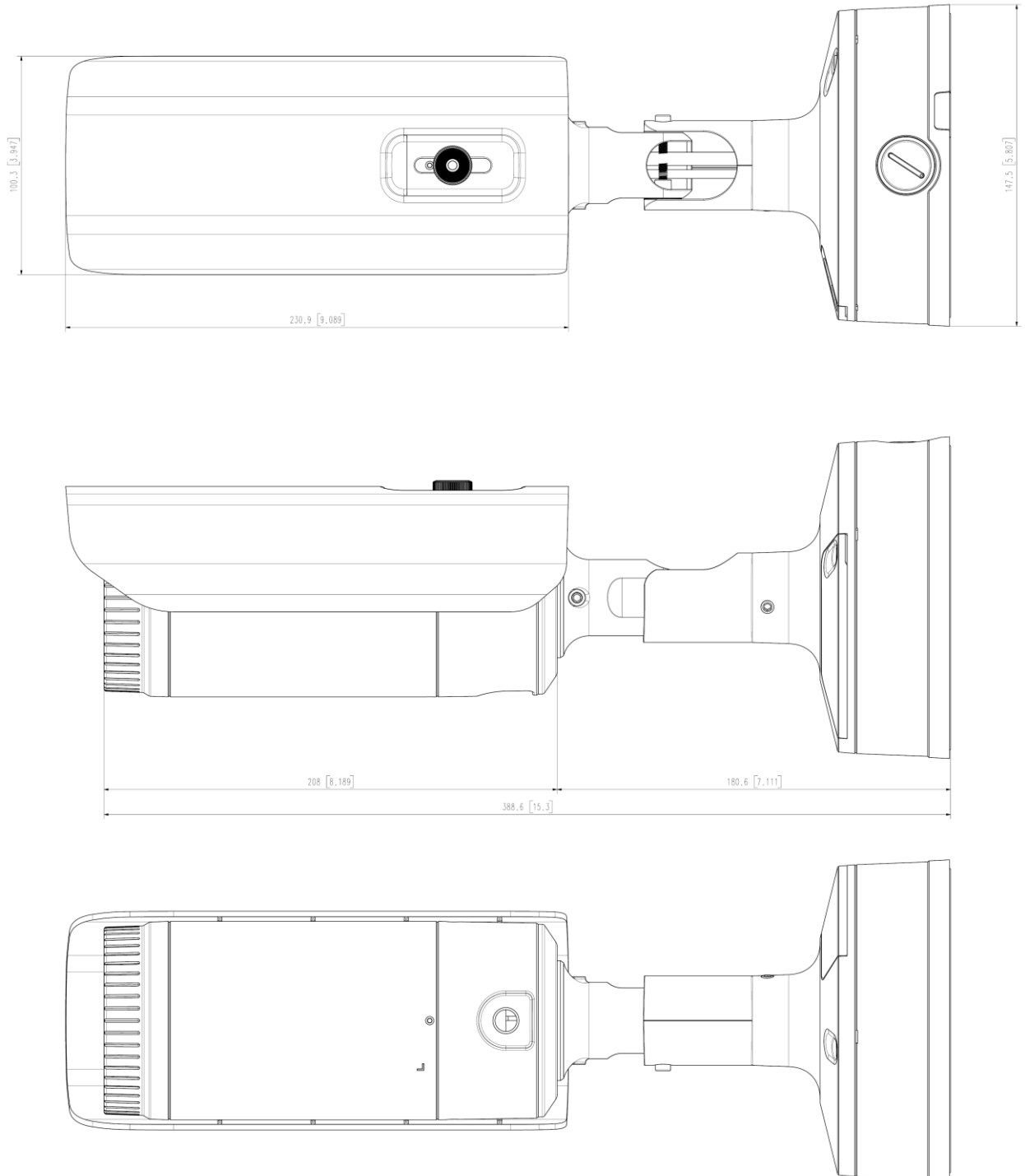
Fax: +82-31-624-9501

Report No.:

CTK-2017-01588

Page(12) / (25) Pages

Attachment 1 – Construction Diagram and installation method





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

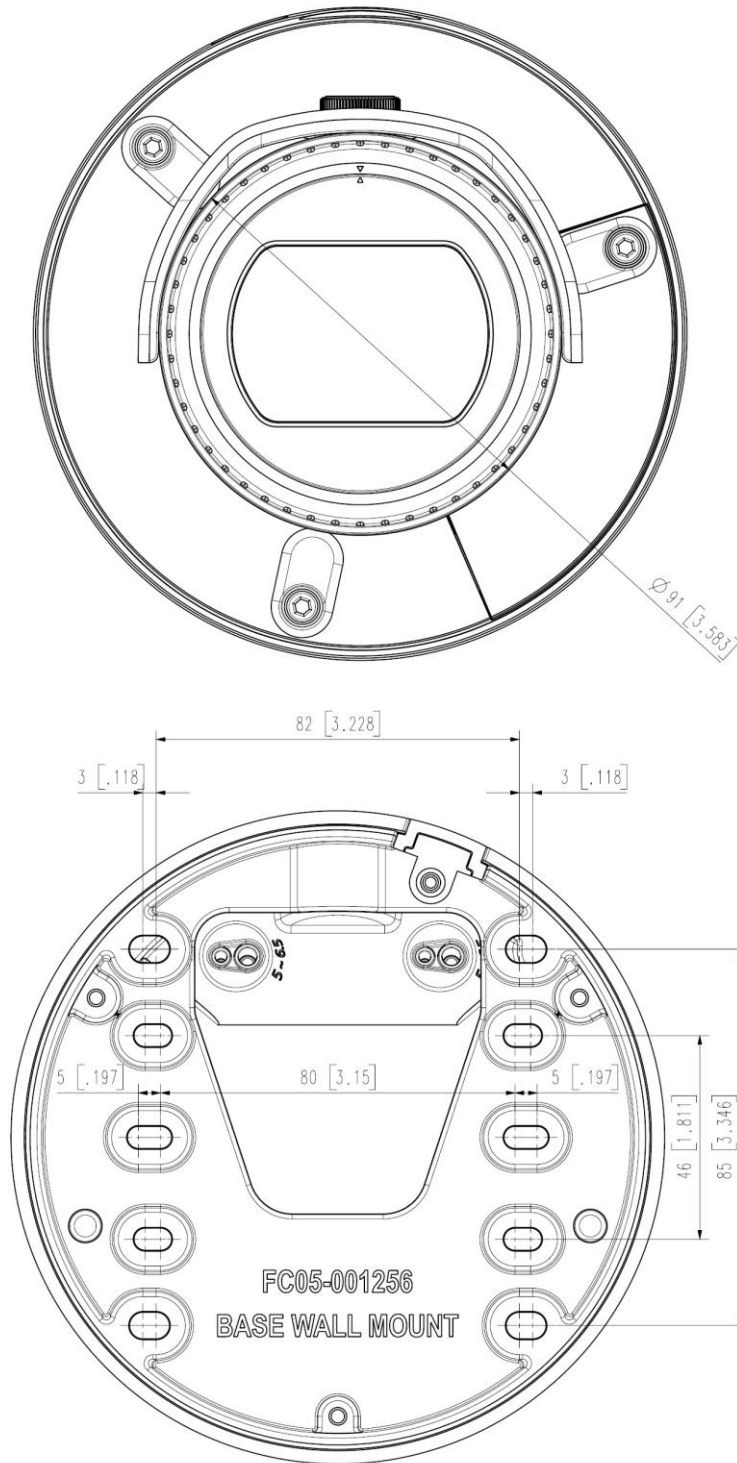
Fax: +82-31-624-9501

Report No.:

CTK-2017-01588

Page(13) / (25) Pages

Attachment 1 – Construction Diagram and installation method





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

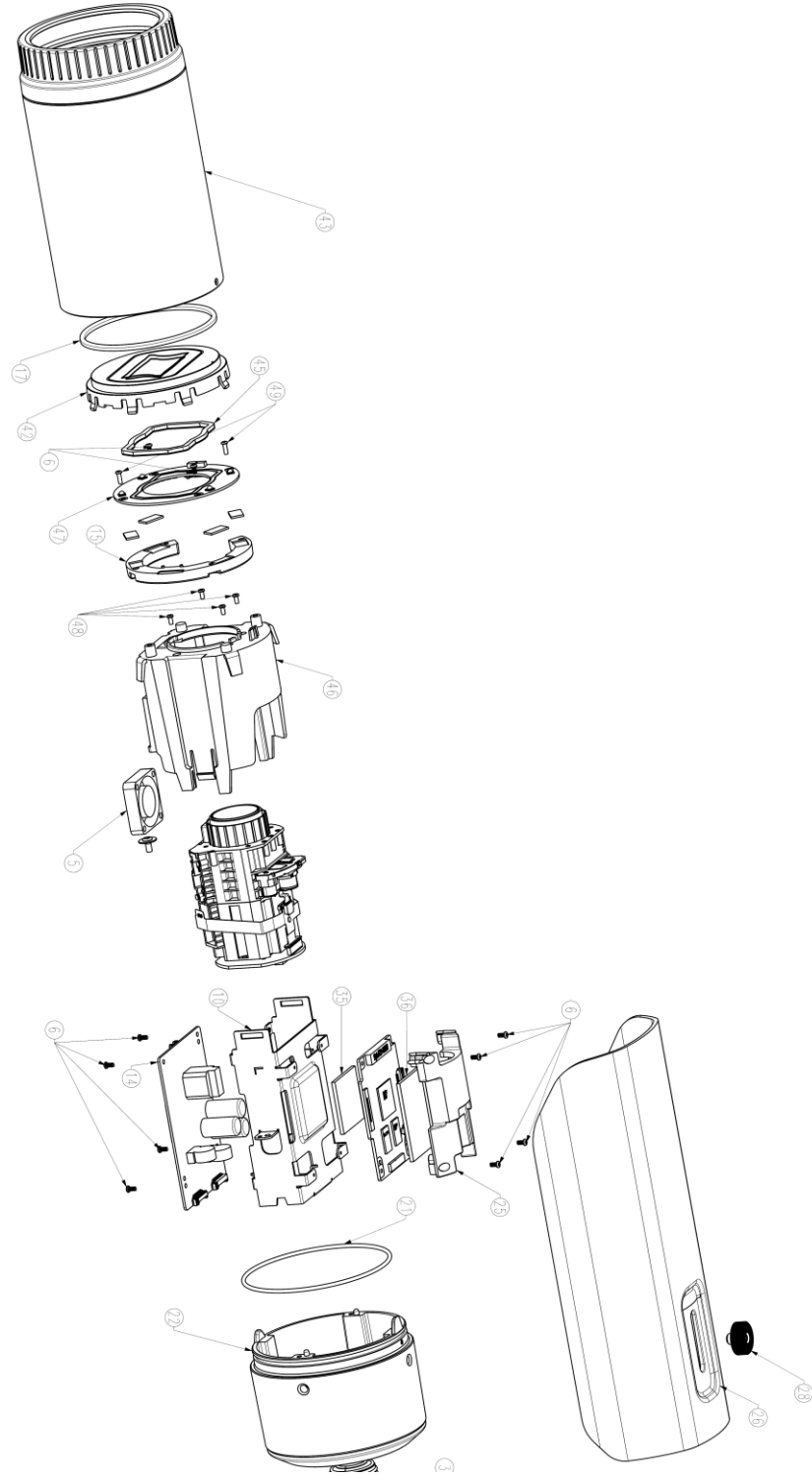
Fax: +82-31-624-9501

Report No.:

CTK-2017-01588

Page(14) / (25) Pages

Attachment 1 – Construction Diagram and installation method





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

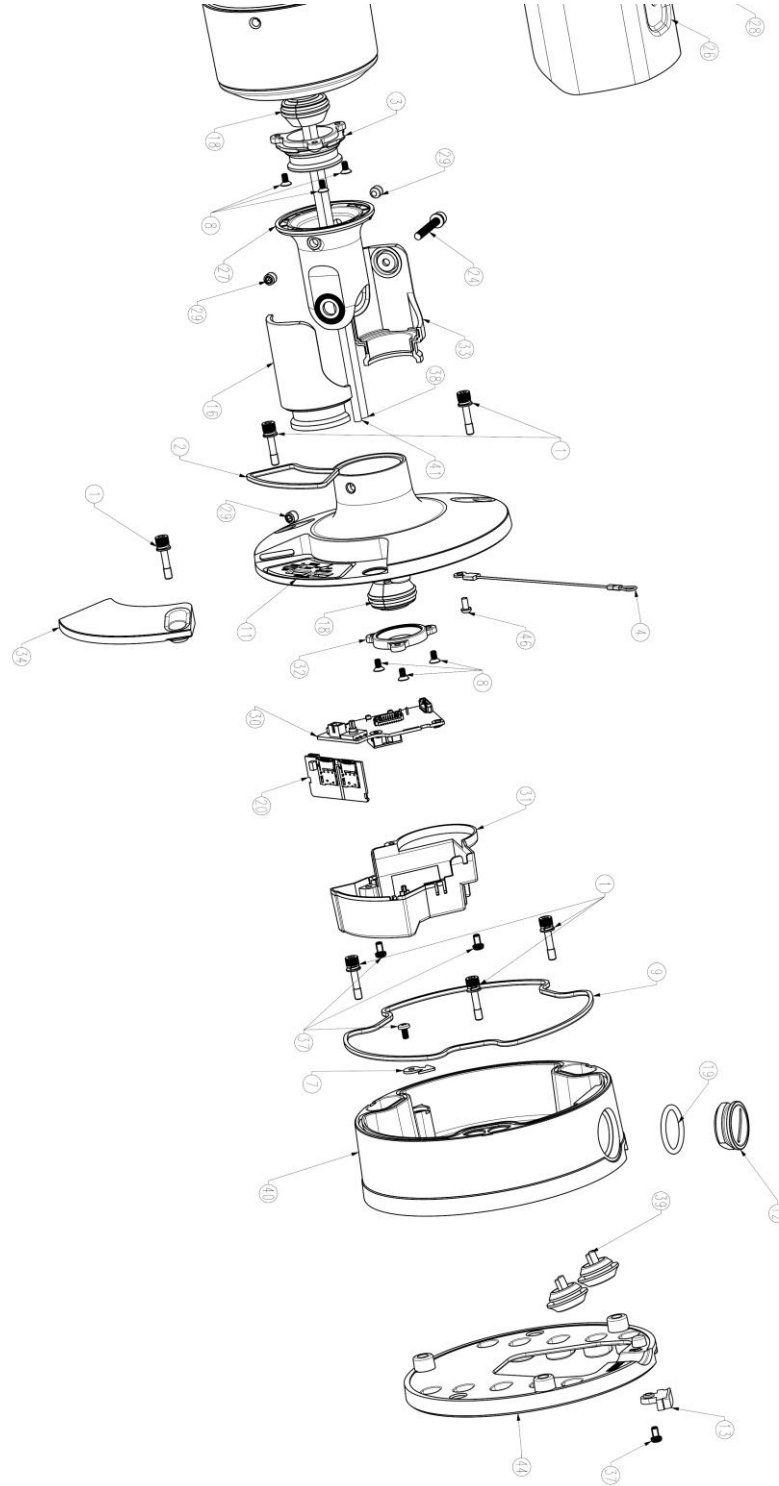
Fax: +82-31-624-9501

Report No.:

CTK-2017-01588

Page(15) / (25) Pages

Attachment 1 – Construction Diagram and installation method





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-2017-01588

Page(16) / (25) Pages

Attachment 1 – Construction Diagram and installation method

NO.	PART NO.	PART NAME	Spec	Q'TY
1	FC18-003309A	SCREW-MACHINE-HSHC;4,0.7,20,DOUBLE SEMS,		6
2	HP07-001179A	GASKET BUTTON_XNO-6080R		1
3	FC29-002456A	GUIDE-PANNING-SNO6084R;ALDC		1
4	RM01-003400A	WIRE,METALIC-SAFETY-SNO-8081R;STS 304		1
5	35886	FAN 30X30X6		1
6	Z6001049001A	SCREW-MACHINE M2.0 x L4		10
7	FC09-006670A	BRACKET-WIRE-SNO-8081R;SUS304,1.2		1
8	Z6003007801A	SCREW-MACHINE M3.0 x L6		6
9	HP07-001178A	GASKET BACK BOX_XNO-6080R		1
10	FC09-007987A	BRACKET PCB_XNO-6080R		1
11	FC29-008673A	CASE TOP BE-2ND_XNO-6080R		1
12	Z7209015401A	3120V-CAP-BOLT		1
13	FC29-008748A	CAP-CABLE HOLE_XNO-6080R		1
14	45014	ASSY PCB POWER_XNO-6080R		1
15	EP07-001191A	SINK HEAT IR_XNO-6080R		1
16	FC39-001270B	BODY-TILT LEFT-SNO6084R;821KA-ZJS-1200		1
17	HP07-001176A	GASKET-WINDOW ORING_XNO-6080R		1
18	HP07-001180A	GASKET CABLE_XNO-6080R		2
19	FC18-001028A	O-RING;#2.8,OD27.5,SILICON,GRAY		1
20	46275	ASSY-PCB-SD-XNO6020R-REV00		1
21	HP07-001177A	GASKET-REAR COVER_XNO-6080R		1
22	FC15-005279A	COVER REAR_XNO-6080R		1
23	HP07-001187	GORE VENT-SCREW IN TYPE		1
24	Z6011000601A	HSH SCREW-DOUBLE SEMS		1
25	EP07-001192A	SINK HEAT-NETWORK_XNO-6080R		1
26	FC28-002444A	SHIELD SUN_XNO-6085R		1
27	FC39-001271A	BODY-PANNING-SNO6084R;821KA-ZJS1200		1
28	FC28-002278A	KNOB-SUNSHIELD-SC02081R		1
29	Z6004041101A	CAM_PAN_SCREW		3
30	46414	ASSY-PCB-INTERFACE-XNO6010R		1
31	FC15-005278A	COVER-IF-PCB-XNO		1
32	FC15-005367A	COVER-CABLE GASKET_XNO-6080R		1
33	FC39-001269B	BODY-TILT RIGHT-SNO6084R;821KA-ZJS-1200		1
34	FC28-002443A	DOOR BE BUTTON_XNO-6080R		1
35	FC28-000761A	PAD THERMAL 30X30, 2.0T		1
36	FC28-000556A	PAD_THERMAL_W30_D45_T2		1
37	Z9642306007	SCREW MACHINE, M3, L6, PH, BLACK		4
38	50160	CABLE-WIRE_XNO-6080R		1
39	MC06-001042A	BUSHING-CABLE SET-PNV-9080R		2
40	FC29-008671A	CASE BOTTOM BE-3RD_XNO-6080R-161116		1
41	50159	CABLE-MCX_XNO-6080R		1
42	AM07-009687A	ASSY FRONT WINDOW_XNO-6120R		1
43	FC29-009436A	CASE BODY_XNO-6085R		1
44	FC05-001256A	BASE WALL MOUNT-3RD_XNO-6080R		1
45	HP07-001249A	GASKET HOOD RUBBER_XNO6120R		1
46	FC29-009435A	HOLDER LENS_XNO-6085R		1
47	48861	ASSY PCB IR_XNO-6012R		1
48	Z6003019801A	SCREW-TAPTYPE M2.0 x L4		4
49	Z6003019601A	SCREW-TAPTYPE		2
50	45581	POWER PCB DX7-TOP_XNO-6080R		1

 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-2017-01588 Page(17) / (25) Pages	
---	---	--	--

Attachment 2 – Parts List

NO.	PART NO.	PART NAME	Spec	Q'TY	MATERIAL
1	FC18-003309A	SCREW-MACHINE-HSHC;4,0,7,20,DOUBLE SEMS,		6	STEEL
2	HP07-001179A	GASKET BUTTON_XNO-6080R		1	SILICON RUBBER
3	FC29-002456A	GUIDE-PANNING-SNO6084R;ALDC		1	ALUMINIUM
4	RM01-003400A	WIRE,METALIC-SAFETY-SNO-8081R;STS 304		1	STAINLESS STEEL
5	35886	FAN 30X30X6		1	-
6	Z6001049001A	SCREW-MACHINE M2.0 x L4		10	STEEL
7	FC09-006670A	BRACKET-WIRE-SNO-8081R;SUS304,1.2		1	STAINLESS STEEL
8	Z6003007801A	SCREW-MACHINE M3.0 x L6		6	STEEL
9	HP07-001178A	GASKET BACK BOX_XNO-6080R		1	SILICON RUBBER
10	FC09-007987A	BRACKET PCB_XNO-6080R		1	ALUMINIUM
11	FC29-008673A	CASE TOP BB-2ND_XNO-6080R		1	ALUMINIUM
12	Z7209015401A	3120V-CAP-BOLT		1	ALUMINIUM
13	FC29-008748A	CAP-CABLE HOLE_XNO-6080R		1	PC (SABIC, 925U)
14	45014	ASSY PCB POWER_XNO-6080R		1	-
15	EP07-001191A	SINK HEAT IR_XNO-6080R		1	ALUMINIUM
16	FC39-001270B	BODY-TILT LEFT-SNO6084R;821KA-ZJS-1200		1	ALUMINIUM
17	HP07-001176A	GASKET-WINDOW ORING_XNO-6080R		1	SILICON RUBBER
18	HP07-001180A	GASKET CABLE_XNO-6080R		2	SILICON RUBBER
19	FC18-001028A	O-RING;Ø2.8,OD27.5,SILICON,GRAY		1	SILICON RUBBER
20	46275	ASSY-PCB-SD-XNO6020R-REV00		1	-
21	HP07-001177A	GASKET-REAR COVER_XNO-6080R		1	SILICON RUBBER
22	FC15-005279A	COVER REAR_XNO-6080R		1	ALUMINIUM
23	HP07-001187	GORE VENT-SCREW IN TYPE		1	-
24	Z6011000601A	HSH SCREW-DOUBLE SEMS		1	STAINLESS STEEL
25	EP07-001192A	SINK HEAT-NETWORK_XNO-6080R		1	ALUMINIUM
26	FC28-002444A	SHIELD SUN_XNO-6085R		1	PC (SABIC, 925U)
27	FC39-001271A	BODY-PANNING-SNO6084R;821KA-ZJS1200		1	ALUMINIUM
28	FC28-002278A	KNOB-SUNSHIELD-SCO2081R		1	ALUMINIUM
29	Z6004041101A	CAM_PAN_SCREW		3	STAINLESS STEEL
30	46414	ASSY-PCB-INTERFACE-XNO6010R		1	-
31	FC15-005278A	COVER-IF-PCB-XNO		1	PC (LOTTE ADM, NH1035)
32	FC15-005367A	COVER-CABLE GASKET_XNO-6080R		1	ALUMINIUM
33	FC39-001269B	BODY-TILT RIGHT-SNO6084R;821KA-ZJS-1200		1	ALUMINIUM
34	FC28-002443A	DOOR BB BUTTON_XNO-6080R		1	ALUMINIUM
35	FC28-000761A	PAD THERMAL 30X30, 2.0T		1	SILICON RUBBER
36	FC28-000556A	PAD_THERMAL_W30_D45_T2		1	SILICON RUBBER
37	Z9642306007	SCREW MACHINE, M3, L6, PH, BLACK		4	STEEL
38	50160	CABLE-WIRE_XNO-6080R		1	-
39	MC06-001042A	BUSHING-CABLE SET-PNV-9080R		2	SILICON RUBBER
40	FC29-008671A	CASE BOTTOM BB-3RD_XNO-6080R-161116		1	ALUMINIUM
41	50159	CABLE-MCX_XNO-6080R		1	-
42	AM07-009687A	ASSY FRONT WINDOW_XNO-6120R		1	-
43	FC29-009436A	CASE BODY_XNO-6085R		1	ALUMINIUM
44	FC05-001256A	BASE WALL MOUNT-3RD_XNO-6080R		1	ALUMINIUM
45	HP07-001249A	GASKET HOOD RUBBER_XNO6120R		1	SILICON RUBBER
46	FC29-009435A	HOLDER LENS_XNO-6085R		1	PC (SAMYANG, 3025G15)
47	48861	ASSY PCB IR_XNO-6012R		1	-
48	Z6003019801A	SCREW-TAPTYPE M2.0 x L4		4	STEEL
49	Z6003019601A	SCREW-TAPTYPE		2	STEEL
50	45581	POWER PCB DXF-TOP_XNO-6080R		1	-



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-2017-01588

Page(18) / (25) Pages

Attachment 2 – Parts List

INFINO

Grade

NH-1035

iq.ul.com

Component - Plastics [\[guide info\]](#)

E115797

Lotte Advanced Materials Co Ltd

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

NH-1035(+)

Polycarbonate (PC), "INFINO", furnished as pellets

	Min Thk	Flame			RTI	RTI	RTI
Color	(mm)	Class	HWI	HAI	Elec	Imp	Str
ALL	1.5	V-0	-	-	80	80	80
	2.0-2.7	V-0, 5VB	-	-	80	80	80

Comparative Tracking Index (CTI): -

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): -

Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -

Volume Resistivity (10⁴ ohm-cm): -

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

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

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: 1998-08-24

Last Revised: 2008-02-15

© 2016 UL LLC



IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10, IEC 60695-11-20	Class (color)	1.5	V-0 (ALL)
			2.0-2.7	V-0, 5VB (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	-	-



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-2017-01588

Page(19) / (25) Pages

Attachment 2 – Parts List

E207780

SABIC INNOVATIVE PLASTICS JAPAN L L C

PACIFIC GRADES - RESIN, 2-2 KINUGAOKA, MOKA-SHI TOCHIGI-KEN 321-4392 JP

925U(f1)(GG), 945U(f1)(GG), 955U(f1)(GG)

Polycarbonate (PC), "Lexan", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
AO	1.5	V-0	3	3	130	115	125
	3.0	V-0	2	2	130	120	130
	6.0	V-0	1	2	130	120	130

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 24

High-Voltage Arc Tracking Rate (HVTR): 3

Dimensional Stability (%): 0.1

Inclined Plane Tracking (IPT): -

Volume Resistivity (10⁹ ohm-cm) : 15

High Volt, Low Current Arc Resis (D495): 7

(GG) - Denotes a global grade formulation previously in File E161759.

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

NOTE - Material designation may be followed by a color nomenclature consisting of either an alpha/numeric or numeric/alpha combination.

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: 2001-04-06

Last Revised: 2007-01-31

© 2013 UL LLC





Component - Plastics

[guide info]

SAMYANG CORPORATION

407 3-Ga Palbok-Dong, Cheonju Cheonbuk 560-200 KR

3025G-(y)

Polycarbonate (PC) "TRIREX", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	1.5	V-0	2	0	130	125	130
	3.0	V-0	2	0	130	125	130
	6.0	V-0	1	0	130	125	130

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 31

High-Voltage Arc Tracking Rate (HVTR): 3

Dimensional Stability (%): 0

Inclined Plane Tracking (IPT): -

Volume Resistivity (10⁹ ohm-cm): 15

High Volt, Low Current Arc Resis (D495): 7

(y) - Represents any number 10-19 incl.

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: 1990-05-22

Last Revised: 2003-10-24

© 2017 UL LLC



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)
			6.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	°C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	°C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	°C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	°C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-



Component - Plastics

[guide info]

E121254

SAMYANG CORPORATION

407 3-Ga Palbok-Dong, Cheonju Cheonbuk 560-200 KR

3025G-(y)

Polycarbonate (PC) "TRIREX", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	1.5	V-0	2	0	130	125	130
	3.0	V-0	2	0	130	125	130
	6.0	V-0	1	0	130	125	130

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 31

High-Voltage Arc Tracking Rate (HVTR): 3

Dimensional Stability (%): 0

Inclined Plane Tracking (IPT): -

Volume Resistivity (10⁹ ohm-cm): 15

High Volt, Low Current Arc Resis (D495): 7

(y) - Represents any number 10-19 incl.

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: 1990-05-22

Last Revised: 2003-10-24

© 2017 UL LLC



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)
			6.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	°C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	°C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	°C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	°C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-





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-2017-01588

Page(20) / (25) Pages

Attachment 2 – Parts List

14-9-3

QMFZ2.E231325 - Plastics - Component



ONLINE CERTIFICATIONS DIRECTORY

QMFZ2.E231325 Plastics - Component

For enhanced search functionality, please visit UL's [IQ™ Family of Databases](#).
Click on a product designation for complete information.

[Page Bottom](#)

Plastics - Component

[See General Information for Plastics - Component](#)

JIANGSU HONGDA NEW MATERIAL CO LTD
MINGZHU SQUARE
YANGZHONG, JIANGSU 212200 CHINA

E231325

									H	D	
		Min.		H	H		RTI		V	4	C
		Thk	Flame	W	A	Elec	Mech		T	9	T
Material Dsg	Color	mm	Class	I	I		Imp	Str	R	5	I
Silicone Molding Resin (SIR), flame retardant, furnished as pellets.											
HD-8750	GY	2.8-3.1	V-0	-	-	150	150	150	-	-	-
Silicone Molding Resin (SIR), furnished as pellets.											
HD-95	NC	0.8	HB	-	-	150	150	150	-	-	-
		3.0	HB	-	-	150	150	150			
Silicone Molding Resin (SIR).											
TMC-8750Aseries	BK, GY	3.0-3.3	V-0	-	-	150	150	150	-	-	-
TMC-8750series	BK, GY	0.8-0.88	V-0	-	-	150	150	150	-	-	-

Marking: Company name and material designation on container, wrapper or finished part.

Last Updated on 2014-04-18

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

[Page Top](#)

© 2014 UL LLC

When the UL Leaf Mark is on the product, or when the word "Environment" is included in the UL Mark, please search the [UL Environment database](#) for additional information regarding this product's certification.

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2014 UL LLC".



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-2017-01588

Page(21) / (25) Pages

Attachment 3 – Photographs

<Photo 1 > Test Unit



<Photo 2 > Test Unit



 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-2017-01588 Page(22) / (25) Pages	
---	--	---	--

Attachment 3 – Photographs

<Photo 3 > Hose down test



<Photo 4 > Test Result



 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-2017-01588 Page(23) / (25) Pages	
---	--	---	--

Attachment 3 – Photographs

<Photo 5 > Test Result



<Photo 6 > Test Result



 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-2017-01588 Page(24) / (25) Pages	
---	--	---	--

Attachment 3 – Photographs

<Photo 7 > Test Result



<Photo 8 > Test Result



Attachment 3 – Photographs

<Photo 9 > Test Result



<Photo 10 > Test Result

