Thank you for giving UL the opportunity to partner with you.
Please note, Follow-Up Procedure Revisions or Report Revisions do not include Authorization Pages, Indices, Section General, and/or Appendices unless revisions were required or requested.

Should you have any questions, after reviewing the material, or need to report any inaccuracies, please reach out to your UL representative or find UL contact details for your local Customer Service Department at https://www.ul.com/about/locations.

Please find attached the related material on Project

For your convenience, the below describes the related updates:

E158873-A6289-DescriptionUL
Figure-13-Total

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Times change, Trust Remains™

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, 2021-10-22 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	NETWORK CAMERA
Model:	XNV-A9016R, XNV-A8016R, XNV-A6016R
Rating:	PoE (48 Vdc), 0.21 A (For model XNV-A9016R) PoE (48 Vdc), 0.17 A (For model XNV-A8016R) PoE (48 Vdc), 0.14 A (For model XNV-A6016R)
Applicant Name and Address:	HANWHA VISION CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI GYEONGGI-DO 13488 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

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Prepared By: Lawrence Lee / Project Handler Reviewed By: SeungTae Kim / Reviewer

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Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.

ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.

iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

NETWORK CAMERA is designed for indoor or outdoor use, wall or ceiling use with mounting brackets.

It is commercial equipment supplied by UL listed PoE (Power over Ethernet) input and installed by service personnel.

Model Differences

XNV- A9016R is basic model.

XNV-A8016R, XNV-A6016R are identical to basic model except model designation, rating and lens module.

Test Item Particulars

Product group .....:	end product
Classification of use by .....:	Ordinary person
Supply Connection .....:	not mains connected: ES1
Supply tolerance .....:	None
Supply connection – type .....:	Not directly connected to the mains
Considered current rating of protective device ....:	N/A
Equipment mobility .....:	wall/ceiling-mounted
Over voltage category (OVC) .....:	OVC I
Class of equipment .....:	Class III
Special installation location .....:	N/A
Pollution degree (PD) .....:	PD 2
Manufacturer's specified Tma (°C) .....:	50 (Minimum - 40 deg. C) for XNV-A9016R, 55 (Minimum - 40 deg. C) for XNV-A8016R, XNV-A6016R
IP protection class .....:	IP 66
Power systems .....:	not AC mains
Altitude during operation (m) .....:	2000 m or less
Altitude of test laboratory (m) .....:	2000 m or less
Mass of equipment (kg) .....:	Max. 0.56

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 50 (Minimum - 40 deg. C) for XNV-A9016R,, 55 (Minimum - 40 deg. C) for XNV-A8016R, XNV-A6016R
- The product is intended for use on the following power systems : No direct connection
- Considered current rating of protective device as part of the building installation (A) : N/A
- Mains supply tolerance (%) or absolute mains supply : No direct connection
- The Risk Group of a lamp or lamp system (including LEDs) is : Exempt
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

4792037824
- Maximum Normal Load: Continuous operation. (Operate the camera through networked equipment with IR LED ON). (Optional features: operate the camera through networked equipment with IR LED off, heater on)

Additional Standards

The product fulfills the requirements of: N/A

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, current)
Equipment for use in location where children are not likely to be present	"This equipment is not suitable for use in locations where children are likely to be present" (Instruction) or equivalent
Hard Copy	A. IMPORTANT or ATTENTION or similar wording B. Please check 'Manuals' from out website, before connecting to the supply. C. Company website URL (https://www.~~) or QR cord.
(Website) Manual - 1	This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from below. PoE (48 Vdc), 0.21 A (For model XNV-A9016R) PoE (48 Vdc), 0.17 A (For model XNV-A8016R) PoE (48 Vdc), 0.14 A (For model XNV-A6016R)
(Website) Manual - 2	The wired LAN hub providing power over the Ethernet (PoE) in accordance with 802.3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL 60950-1 or PS2 as defined in UL 62368-1.

SCC requirement	If the signal words DANGER, WARNING, and CAUTION are included, a French manual is provided.

Special Instructions to UL Representative

N/A

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	**Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.**					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
N/A	N/A	N/A	N/A	N/A	N/A	N/A
BD1.2	**Earthing Continuity Test Exemptions – This test is not required for the following models:**					
	All model					
BD1.3	**Electric Strength Test Exemptions – This test is not required for the following models:**					
	All model					
BD1.4	**Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.**					
	All model					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
N/A	N/A	N/A	N/A	N/A	N/A

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Enclosure - Lens cover (Plastic)	MITSUBISHI ENGINEERING-PLASTICS CORP	S-2000V+(f1)	Min. 1.5 mm thickness, rated Min. V-2, 115 deg. C	QMFZ2	UL (E41179)	
Enclosure – IR LED cover (Plastic)	LOTTE CHEMICAL CORPORATION	QC-1220UR(f1)	Min. 1.6 mm thickness, rated Min. V-2, 125 deg. C	QMFZ2	UL (E115797)	
Enclosure - Bottom cover (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 2.0 mm thickness, See enclosure for dimension.	-	Tested in equipment	
Internal plastic part (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(+)(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Internal plastic part (Plastic) - Alternate	Interchangeable	Interchangeable	Min. 1.5 mm thickness, rated Min. HB	QMFZ2	UL	
Lens modulefor XNV-A9016R	Sunny Optics (zhongshan)Co.Ltd.	C7340AD-2D8	3.0 V – 6.0 V	-	Tested in equipment	
Lens modulefor XNV-A8016R	Sunny Optics (zhongshan)Co.Ltd.	C7340AC-2D9	3.0 V – 6.0 V	-	Tested in equipment	
Lens modulefor XNV-A6016R	Sunny Optics (zhongshan)Co.Ltd.	C7340AA-2D9	3.0 V – 6.0 V	-	Tested in equipment	
Heater resistor (9 EA, R5, R6, R8, R10, R12, R16, R18, R20, R22)	Interchangeable	Interchangeable	Total 0.68 W	-	Tested in equipment	
Fuse (F1) for heater board	LITTELFUSE INC	046701.5NRHF	Rated 32 V, 1.5 A	XGPU2	UL (E183209)	
Transformer (T1)	SAMWHA TECOM Co.,Ltd.	STEFD15F-5R0101	100 uH, 130 deg. C, See enclosure for more detail.	-	Tested in equipment	

Opto-coupler (LS201)	XSEMITRON TECHNOLOGY (HONGKONG) LIMITED	XSC3H7(M)(G)(x)-(U)(N)(Y) (Type: XSC3H7C)	Isolation Voltage: 3750. Max. Operation Temperature: 110 deg. C	FPQU2	UL (E551213)	
Opto-coupler (LS201) - Alternate	LITE-ON Technology Corporation	LTV-217 (Type: LTV-217-C-G)	Isolation Voltage: 3750. Max. Operation Temperature: 110 deg. C	FPQU2	UL (E113898)	
Lithium Battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Lithium, Rechargeable, Max Charging Voltage, 3.4 V dc, Max Charging current: 300 mA	BBCV2	UL (MH15628)	
Lithium Battery Protection circuit	Interchangeable	Interchangeable	Diode (D26, 80 V, 250 mA) and Resistor (R176, 3.3 kohm) in series	-	Tested in equipment	
USB-C type port overcurrent protection IC (U26)	Texas Instruments Incorporated	TPD3S014TDBVR	Rated 4.5-5.5 Vdc, 0.5 A, Current limit: 1.01 A	QVGS2	UL (E169910)	
Thermal pad	KOMOTECH	KGP-1(a)	Min. 2.0 mm thickness, rated V-0, 150 deg. C	QMFZ2	UL (E245303)	
Thermal pad - Alternate	Interchangeable	Interchangeable	Min. 2.0 mm thickness, rated V-0, 150 deg. C	QMFZ2	UL	
PWB	HANNSTAR BOARD CORP	MV-4	Min. V-0, 130 deg. C	ZPMV2	UL (E89382)	
PWB - Alternate	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2	UL	
Gasket – Between top cover and bottom cover	Y&K	O-VMQ-30-BK	Gasket Test was conducted under E158873-A6034.	-	Tested in equipment	
Gasket – Cable set	Y&K	C-VMQ-40-GR	Gasket Test was conducted under E158873-A6034.	-	Tested in equipment	
Gasket – Between lens cover and top cover	NAMYANG VINA	O-VMQ-50-BK	Gasket Test was conducted under E158873-A6034.	-	Tested in equipment	

Gasket – Between Top cover and IR LED cover	Y&K	O-VMQ-30-GR	Gasket Test was conducted under E158873-A6034.	-	Tested in equipment	
Outdoor Label for XNV-A9016R	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for minimum and maximum surface temperature specified, or Min. - 40 deg. C to Max. 50 deg. C if not specified.	PGDQ2 or PGJI2	UL	
Outdoor Label for XNV-A8016R, XNV-A6016R	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for minimum and maximum surface temperature specified, or Min. - 40 deg. C to Max. 55 deg. C if not specified.	PGDQ2 or PGJI2	UL	
IR LED (LD1, LD2)	CYBRIGHT	XB-IR3838EU-I	Vf = 2.3 Vdc (max), If = 1 000 mA (Max)	-	Tested in equipment	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	External View - 1
Photographs	03-02	External View - 2
Photographs	03-04	Internal View
Photographs	03-05	Lens Module
Photographs	03-06	Sensor Board
Photographs	03-07	Network Board - Top
Photographs	03-08	Network Board - Bottom
Photographs	03-09	LED Board
Photographs	03-10	Heater Board
Manuals	06-01	Manual
Miscellaneous	07-01	Transformer (T1) Specification
Miscellaneous	07-02	Enclosure Diagram
Miscellaneous	07-03	Label

The following Page(s) are related to Manuals-01. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
   (Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lighting storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from PoE(48Vdc), 0.21A (XNV-A9016R)
16. This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from PoE(48Vdc), 0.17A (XNV-A8016R)
17. This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from PoE(48Vdc), 0.14A (XNV-A6016R)
18. This product is intended to be supplied by isolation power.
19. If you use excessive force when installing the product, the camera may be damaged and malfunction.
    If you forcibly install the product using non-compliant tools, the product may be damaged.
20. Do not install the product in a place where chemical substances or oil mist exists or may be generated. As edible oils such as soybean oil may damage or warp the product, do not install the product in the kitchen or near the kitchen table.
    This may cause damage to the product.
21. When installing the product, be careful not to allow the surface of the product to be stained with chemical substance.
    Some chemical solvents such as cleaner or adhesives may cause serious damage to the product's surface.
22. If you install/disassemble the product in a manner that has not been recommended, the production functions/ performance may not be guaranteed.
    Install the product by referring to "Installation & connection" in the user manual.
23. Installing or using the product in water can cause serious damage to the product.
24. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.
25. The operating temperature for the XNV-A9016R products is -40°C to +50°C(-40°F to +122°F).
26. The operating temperature for the XNV-A8016R/XNV-A6016R products is -40°C to +55°C(-40°F to +131°F).

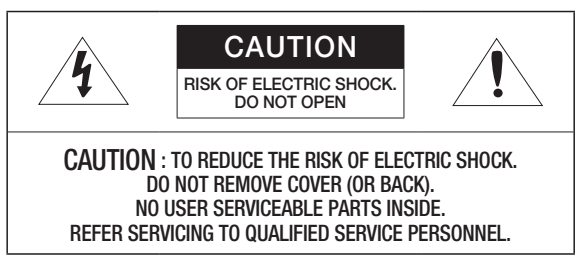
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENNINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

The battery cannot be replaced.

Prohibition of battery abuse

- Do not install and use the wrong type of battery.
- Do not leave the battery in a mechanically crush or cut it because it can explode.
- Do not leave the battery in a high temperature environment.
- Do not leave the battery in a low-pressure environment.

Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

ATTENTION

IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT.
METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS.

CAUTION

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please use the input power with just one camera and other devices must not be connected.

The USB-C port on the product is intended for initial setup only and should not be used for any other purpose.

When a new product box is opened (or during the initial use of the product), moisture might build up on the glass of the camera. The built-up moisture disappears naturally within a few hours after powered on.

This equipment is not suitable for use in locations where children are likely to be present.

The ITE is to be connected only to PoE networks without routing to the outside plant.

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1 or PS2 as defined in UL62368-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.

Please read the following recommended safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Please wear protective gloves when installing/removing the camera.
  The high temperature of the product surface may cause a burn.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction

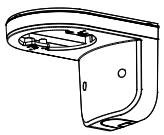
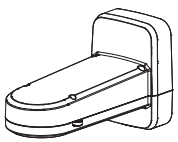
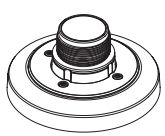
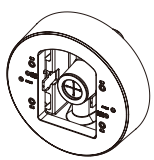
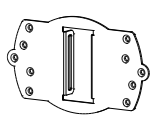
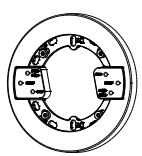
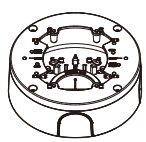
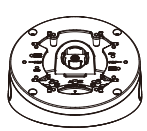
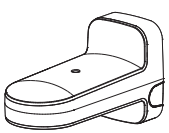
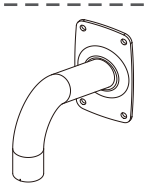
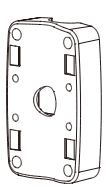
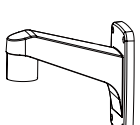
※ Please read this manual for the safety before using of goods and keep it in the safe place.

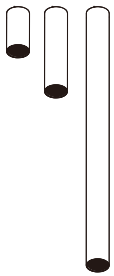
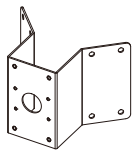
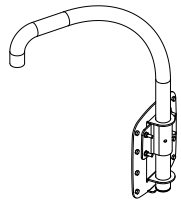
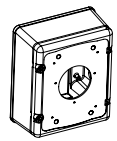
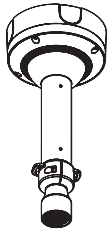
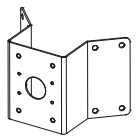
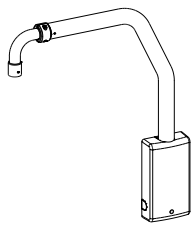
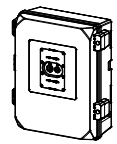
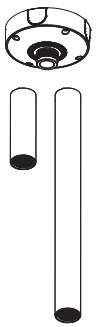
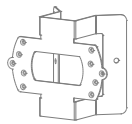
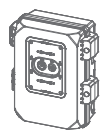
We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

In particular installation environments, there might be interference in radio communications. When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna.

OPTIONAL ACCESSORIES FOR INSTALLATION

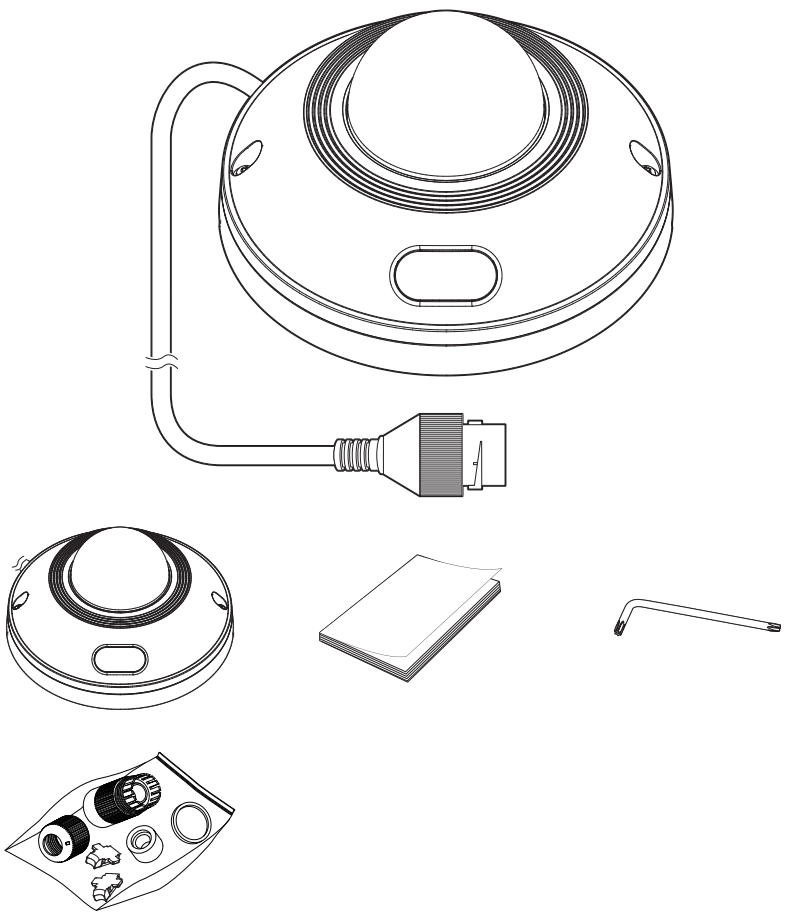
You can purchase appropriate optional accessories available.

Wall Mount and Pole Mount		Hanging Mount	Pole Mount (Direct Assembly)	Gang Plate	Back Box and Tilt Mount
 SBP-125WMW1 (Indoor Wall&Pole Mount)	 SBP-400WMW (Wall&Pole Mount) *SBD-110GP1 required for installation	 SBP-120HMW	 SBD-140PMW * SBD-110GP1 required for installation  SBD-140PMB (Light version)	 SBD-110GP1	 SBV-140BW (Back Box)  SBV-140TMW (Tilt Mount)
 SBP-250WMW (Wall&Pole Mount) *SBD-110GP1 required for installation					
 SBP-300WMW (Wall Mount) * SBP-300PMW2 required for pole installation	 SBP-300PMW2 (Pole Mount)				
 SBP-300WMW1 (Wall Mount) * SBP-300PMW2 required for pole installation					

Ceiling Mount			Corner Mount	Parapet Mount	Cabinet
Assembly	Individual Parts				
 SBP-300CMTW (Telescopic)	 SBP-180CMB	 SBP-150CMP SBP-300CMP SBP-900CMP	 SBP-300KMW1	 SBP-300LMW	 SBP-300NBW
 SBP-300CMTS (Ball Head)	 SBP-180CMS (Ball Head)	 SBP-C15H	 SBP-156KMW	 SBP-156LMW1 (Telescopic)	 SBP-150NBW
 SBP-300CMW1 SBP-900CMW	 SBP-140CMB	SBP-C15P	 SBD-140KMB (Light version)		 SBP-050NBW
 SBP-150CMI SBP-300CMI					

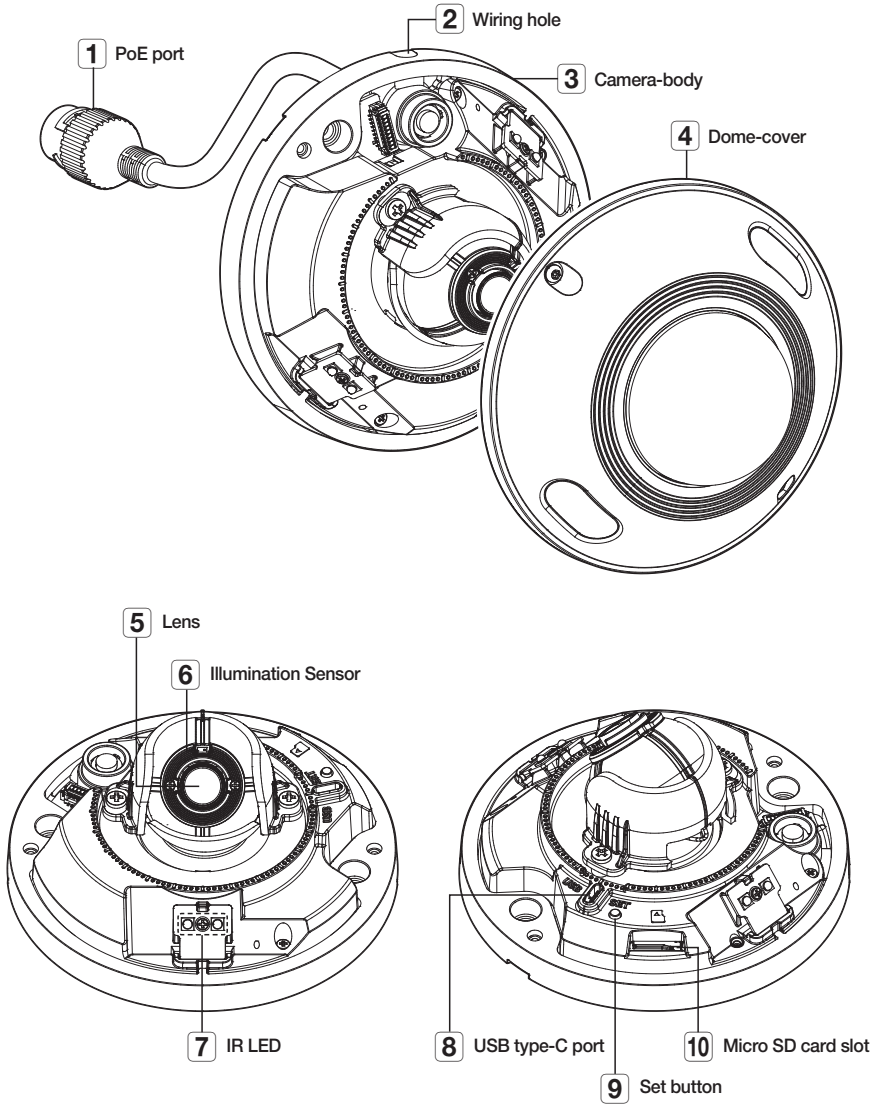
WHAT'S INCLUDED

Accessories may vary by country or region.



- The shape of the camera lens may differ by the model number.
- Use installation screws of at least M4, L30 for the installation of this product.

AT A GLANCE



INSTALLATION

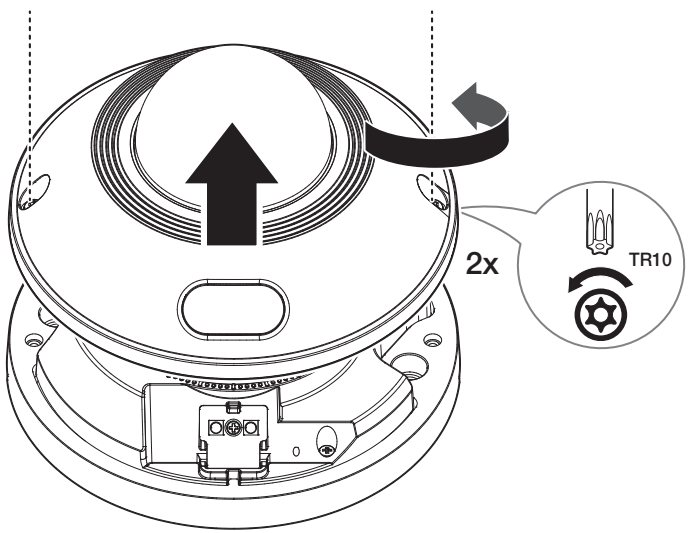
Precautions before installation

Ensure you read out the following instructions before installing the camera:

- Select an installation site that can hold at least 5 times the camera's weight.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.
- If the product is installed with excessive force, it may cause damage to the camera due to malfunction. Forcing assembly using non-compliant tools may damage the product.

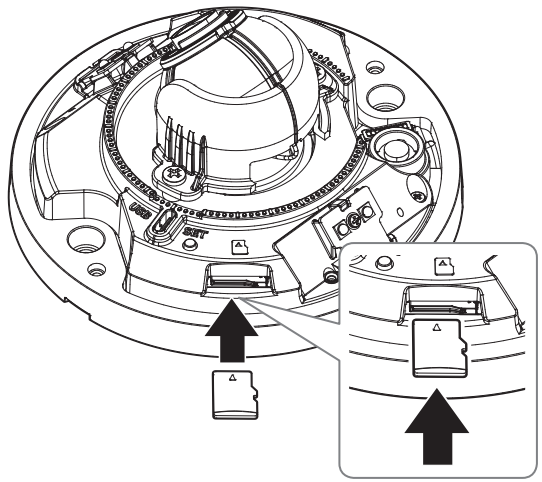
Removal

1. Using the provided Torx L wrench, turn the 2 screws counterclockwise to release the dome cover.
   - It is not required to completely remove screws from the cover.



Inserting a Micro SD card

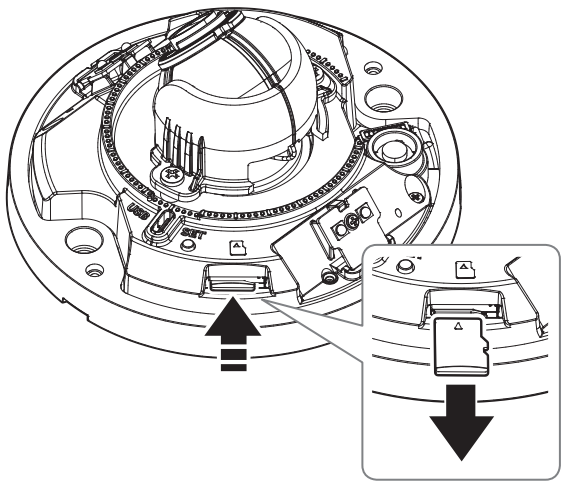
Slide the Micro SD card into the Micro SD card slot on the camera module in the direction of the arrow.



- Before installing the camera, the Micro SD card should be inserted while the power source and the body are separated.
- Do not forcefully insert it in the reverse direction. It might damage your Micro SD card and your product.
- When it rains or the humidity is high, insertion or ejection of a Micro SD card is not recommended.
- When installing/removing the Micro SD card, make sure you put the product body on a flat ground before working on it in order to prevent accidents due to loss or drop of any parts.

Removing a Micro SD card

Gently press down on the exposed end of the Micro SD card as shown in the diagram to eject the Micro SD card from the slot.

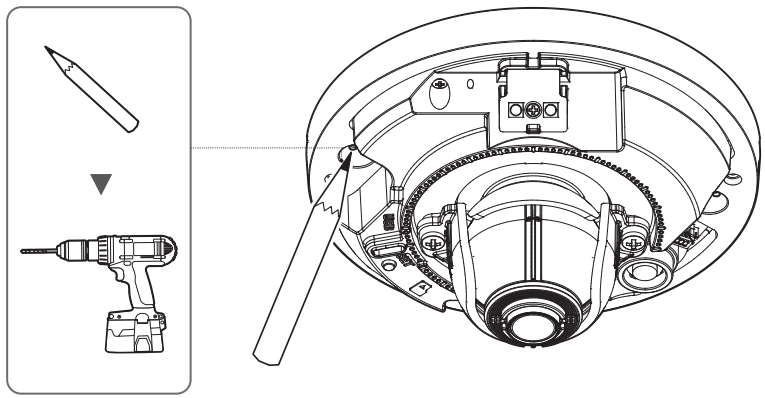


- Before removing the Micro SD card, in <**Setup ( )**>-<**Event**>-<**Storage**>, set the device to <**Off**> and press the [**Apply**] button and turn the camera off.
- If you turn off the camera or remove the Micro SD card that contains data from the product, the data may be lost or damaged.

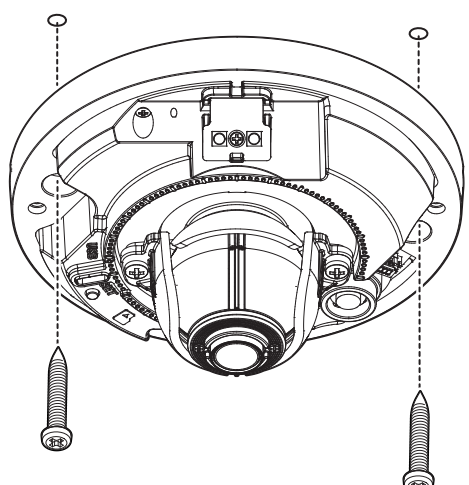
Installation

[Directly installing on wall/ceiling]

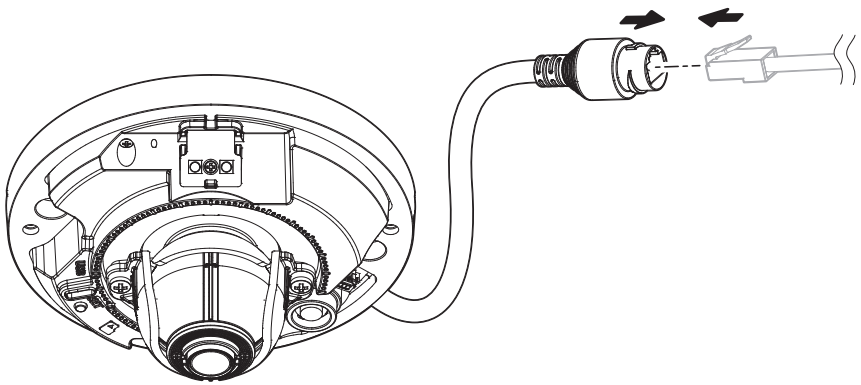
1. Place the camera body on the desired location considering the direction to be monitored, mark the locations for the screw holes, and then drill the holes.



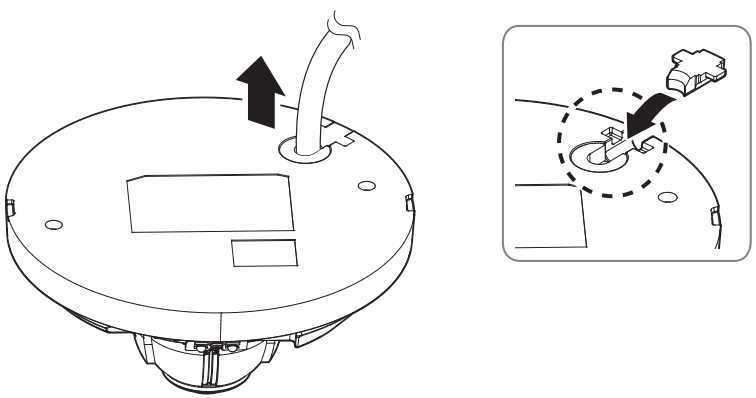
2. Fix the camera body using appropriate screws.



3. Connect the network cable to the PoE port of the camera.



▪ 천장으로 케이블 연결시 카메라 본체 밑면의 악세서리 고무 마개를 조립하세요.

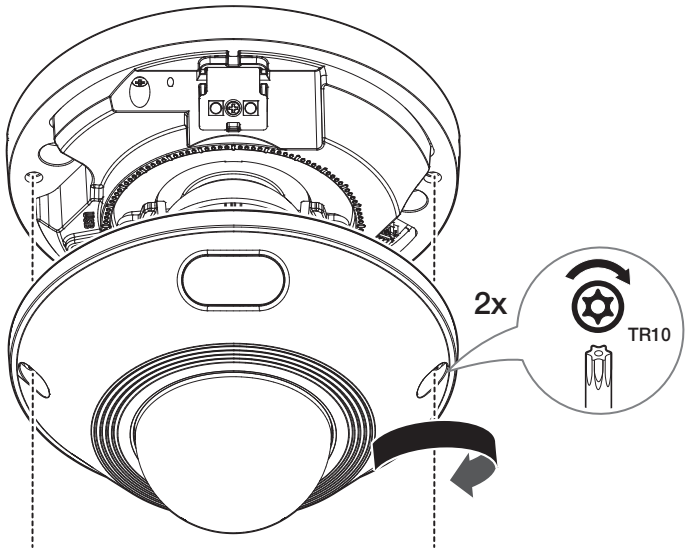


4. Adjust the lens to the desired direction with reference to "**Adjusting the monitoring direction for the camera**" section. (page 13)
   - If you tilt the lens, you may need to adjust the lens as this may block the screen.
   - Connect a monitoring device to the USB type-C port and then monitor and adjust it. (page 15)

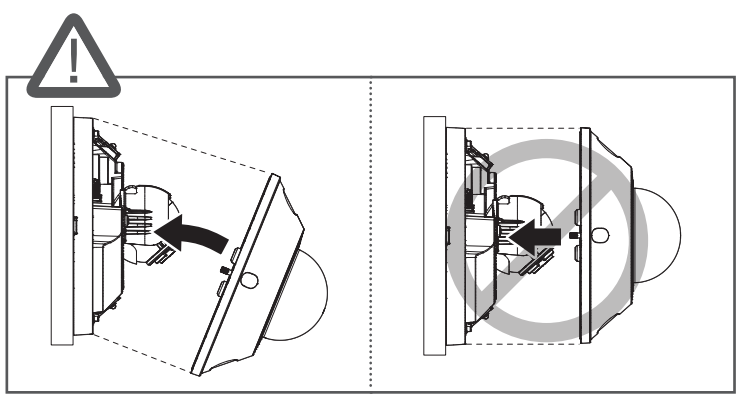
Assembling the dome cover

1. Assemble the dome cover.

▪ Make sure to firmly tighten the fastening screws so that there is no water damage issue.

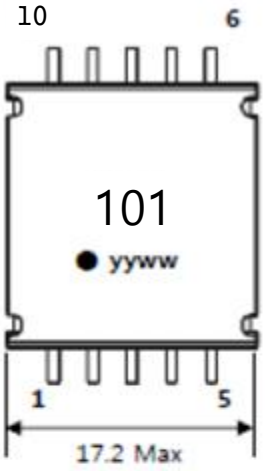


▪ Be careful not to alter the monitoring direction of your camera.



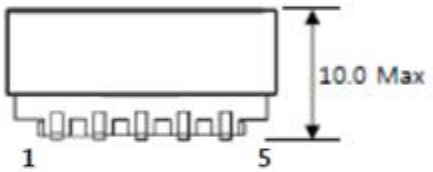
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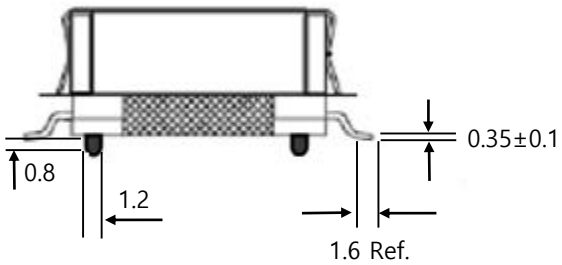
1. Dimension. [mm]

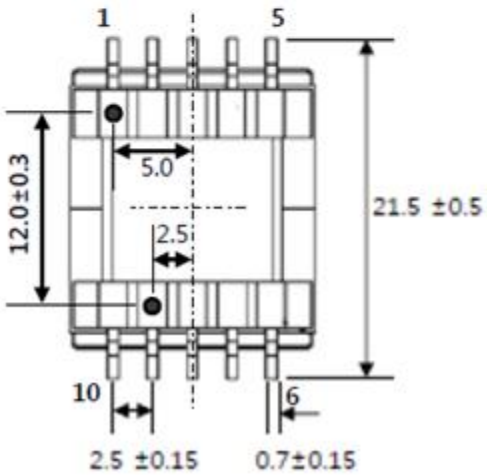


MARKING SPEC.	
YEAR	WEEK
2010Y→10 2011Y→11 2012Y→12 2013Y→13 . .	1W →01 2W →02 3W →03 . . .

EX) 101
19 15
PRODUCT WEEK
PRODUCT YEAR



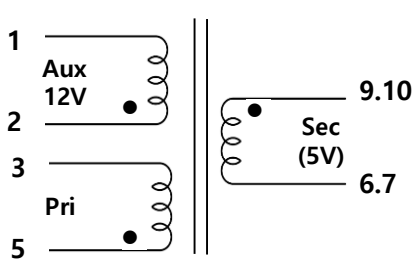




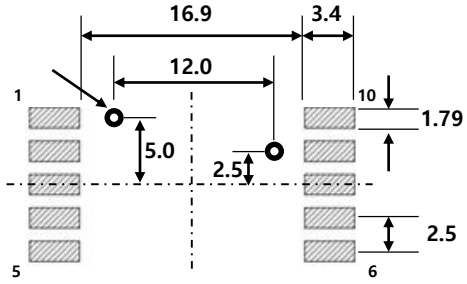
※ The pin length not Including Solder Ball

Des. by	Che. by	Ins. by	App. by	Scale	Unit	Customer	HANWHA VISION
H.S Shin	Y.S Kim	J.H Lee	S.H Lee	N/A	mm	Item	POE TRANSFORMER
				THIRD ANGLE PROJECT		Part No.	STEFD15F-5R0101
R & D Center						STDN	-

2-1 Winding Schematic.



● Mark is winding start.



Recommended
Land pattern

2-2 Winding Specification.

W	TERMINAL		WIRE	Ts	WINDING METHOD	INSULATION TAPE		
	S	F				MATERIAL	T/W	Ts
W1	5	3	1UEW 0.23Φ	30	Solenoid	P.E	0.025t/9.0mm (Yellow)	1
W2	9.10	6.7	1UEW 0.23Φx6	5	Solenoid	P.E	0.025t/9.0mm (Yellow)	2
W3	5	3	1UEW 0.23Φ	30	Solenoid	P.E	0.025t/9.0mm (Yellow)	1
W4	2	1	1UEW 0.15Φ	10	Space	P.E	0.025t/9.0mm (Yellow)	2

Des. by	Che. by	Ins. by	App. by	Scale	Unit	Customer	HANWHA VISION
H.S Shin	Y.S Kim	J.H Lee	S.H Lee	N/A	mm	Item	POE TRANSFORMER
				THIRD ANGLE PROJECT		Part No.	STEFD15F-5R0101
R & D Center						STDN	-

3. Electrical Characteristics

No.	Item	Terminal	Spec	Remarks
1	Inductance	5 – 3	100 uH±15%	HP-4263A, 4284A, LCR meter or eqv. at 100KHz, 1.0Vrms.
2	Leakage Inductance	5 – 3 (Secondary all short)	2.0 uH Max. (@Idc=0A)	
3	D.C Resistance	5 – 3 9.10 – 6.7	191 mΩ Max. 12.87 mΩ Max.	HIOKI3220, mΩ HI tester or eqv.
4	Hi-pot Test (C.C=10mA)	Pri. – Sec. Pri,Sec – Core	AC 1.5Kv(rms) for 2 Sec.	TOS-8750, Withstanding Voltage
5	Turns ratios	Pri : Sec : Aux	1 : 0.167 : 0.333	

1. Test conditions of Electrical characteristics : 23℃ ambient.
2. Operating temperature range -40℃ to +125℃ (Including self-temperature rise)
3. Storage temperature range -40℃ to +125℃

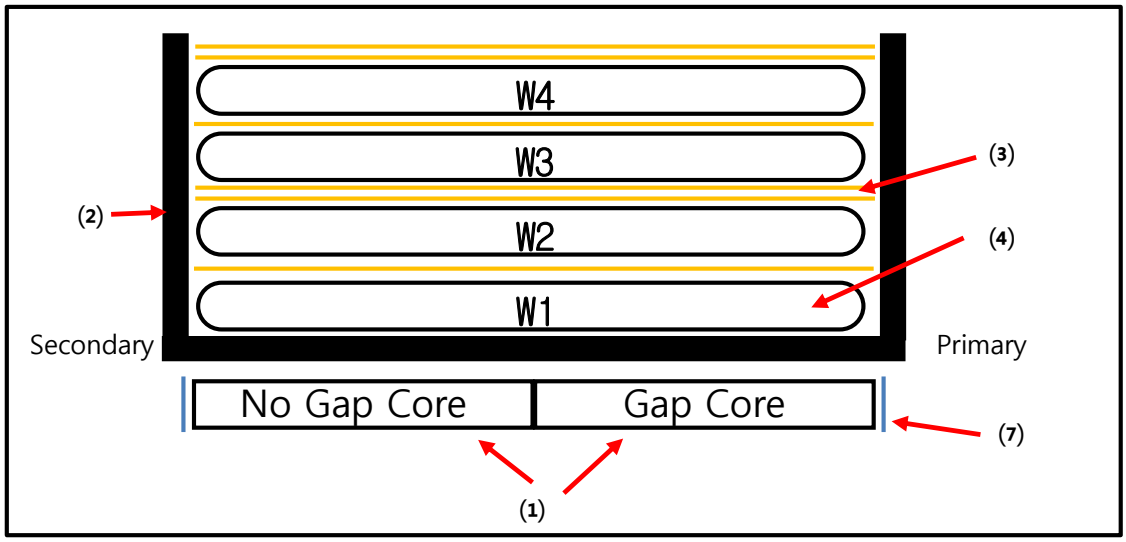
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H.S Shin	Y.S Kim	J.H Lee	S.H Lee	N/A	mm	Item	POE TRANSFORMER
				THIRD ANGLE PROJECT		Part No.	STEFD15F-5R0101
R & D Center						STDN	-

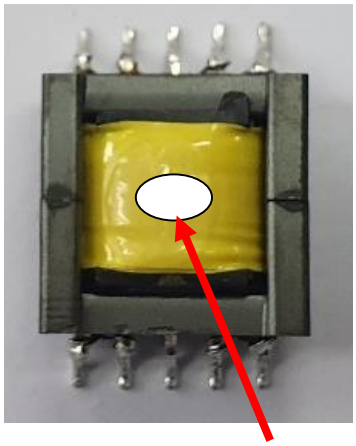
6. Material List

No.	Parts Name	Material	Type	Manufacturer	UL Yellow Card
1	Core	Ferrite, Mn-Zn	EFD15	AnHui Hualin Magnetic Samwha Electronics Ruyuan Dongyangguang	-
2	Bobbin	Phenolic	EFD15 SMD 10P	Sumitomo Bakelite Hexion Gmbh Chang Chun Plastics	E41429 E61040 E59481
3	Tape	Polyester	DTS-204 , 631S 0.025t/9.0mm(Yellow)	Duck Sung Hitech Teraoka Seisakusho	E105147 E56086
4	Wire	Copper	1UEW 0.15Ø, 0.23Ø	PT Ewindo	E228267 E210918
5	Adhesive	Epoxy	SK-1000 SK-031F	SE KYE Chemical	-
6	Solder	Solder BAR	LF-120	PT.Supra sukses trinusa	-
7	Clip	SUS301	EFD15	Posco Mingschin	-

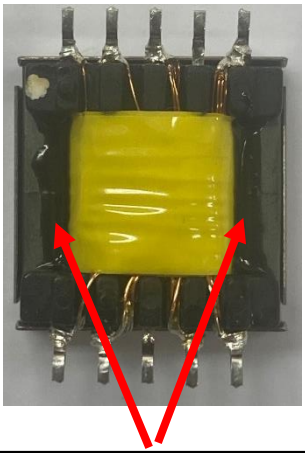
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H.S Shin	Y.S Kim	J.H Lee	S.H Lee	N/A	mm	Item	POE TRANSFORMER
				THIRD ANGLE PROJECT		Part No.	STEFD15F-5R0101
R & D Center						STDN	-

7. Internal Construction







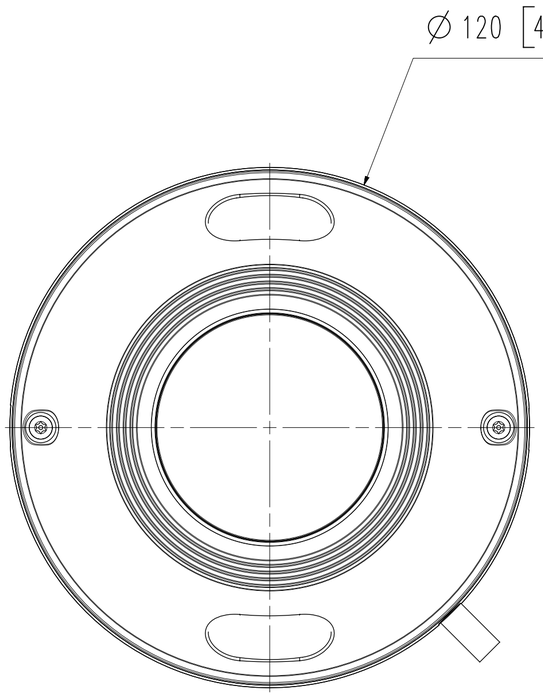


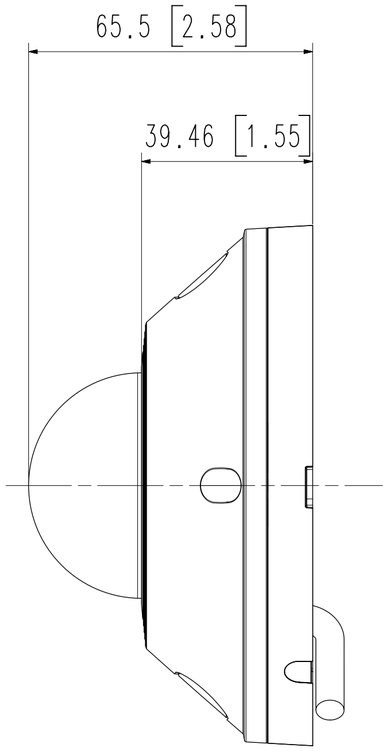
* Clip : SK-1000

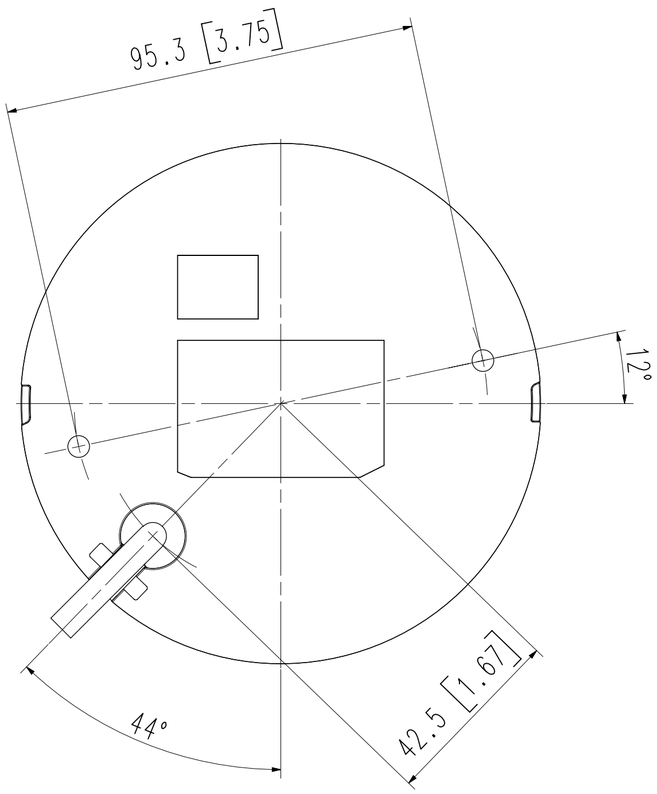
* Core + Bobbin : SK-031F

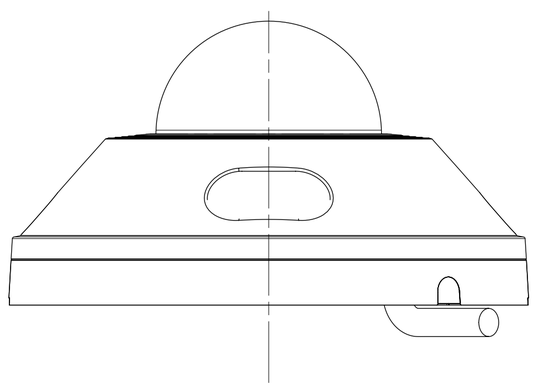
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H.S Shin	Y.S Kim	J.H Lee	S.H Lee	N/A	mm	Item	POE TRANSFORMER
				THIRD ANGLE PROJECT		Part No.	STEFD15F-5R0101
R & D Center						STDN	-

The following Page(s) are related to Miscellaneous-02. The next supplement, if applicable, will be identified with a new Supplement Page Heading.









3	XNV-A9016R	'25.11.26
2	XNV-A8016R	'25.11.26
1	XNV-A6016R	'25.11.26
No.	MODEL NAME	DATE

Unit:mm[inch] SCALE:1/1 Hanwha Vision

A2

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NETWORK CAMERA,XNV-A9016R

PoE (48V ⎓) 0.21A

M/C: XNV-A9016R/KEX Fac.ID:D

DATE 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

Photographs-01 Page-1



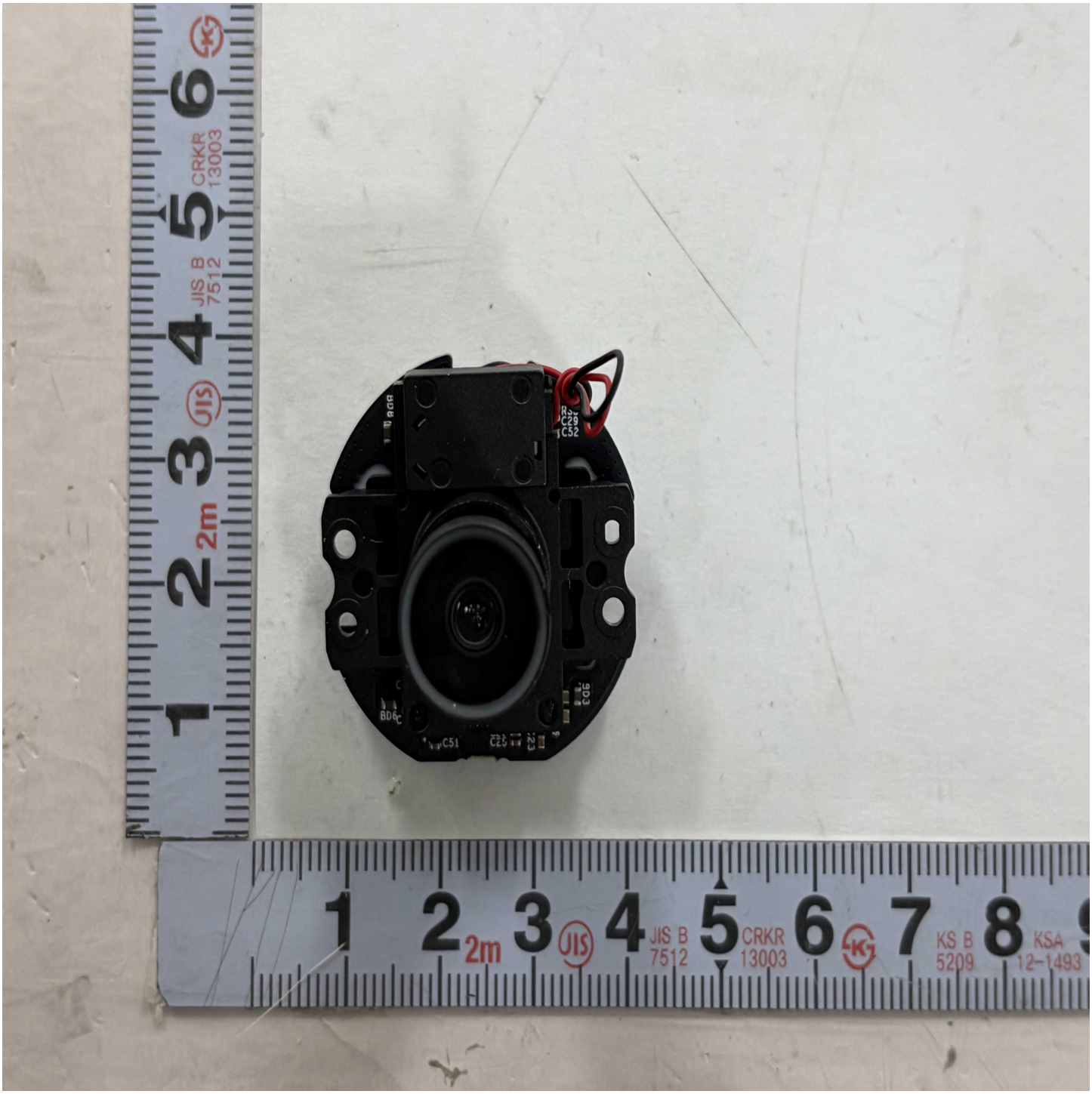
Photographs-02 Page-1



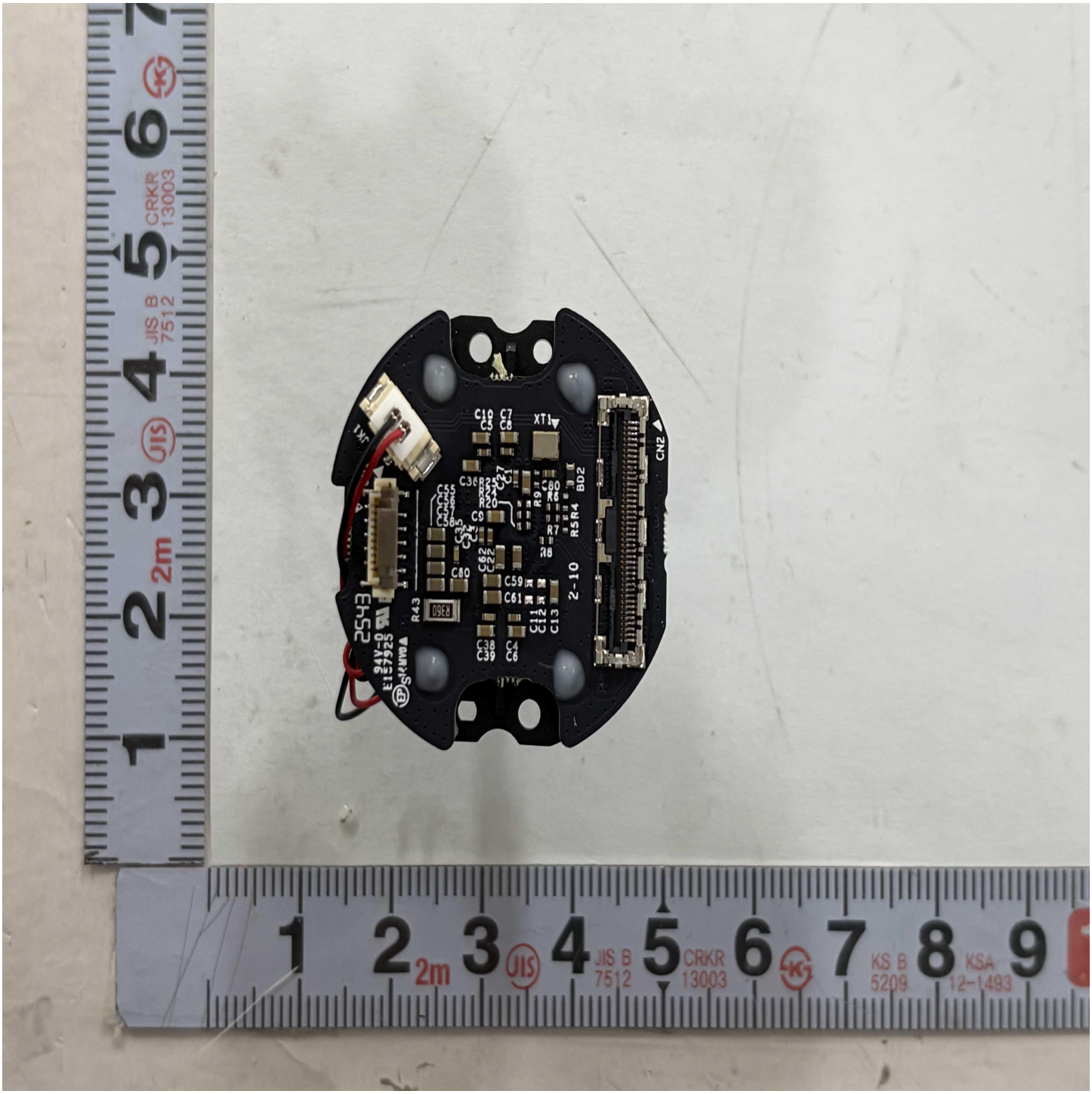
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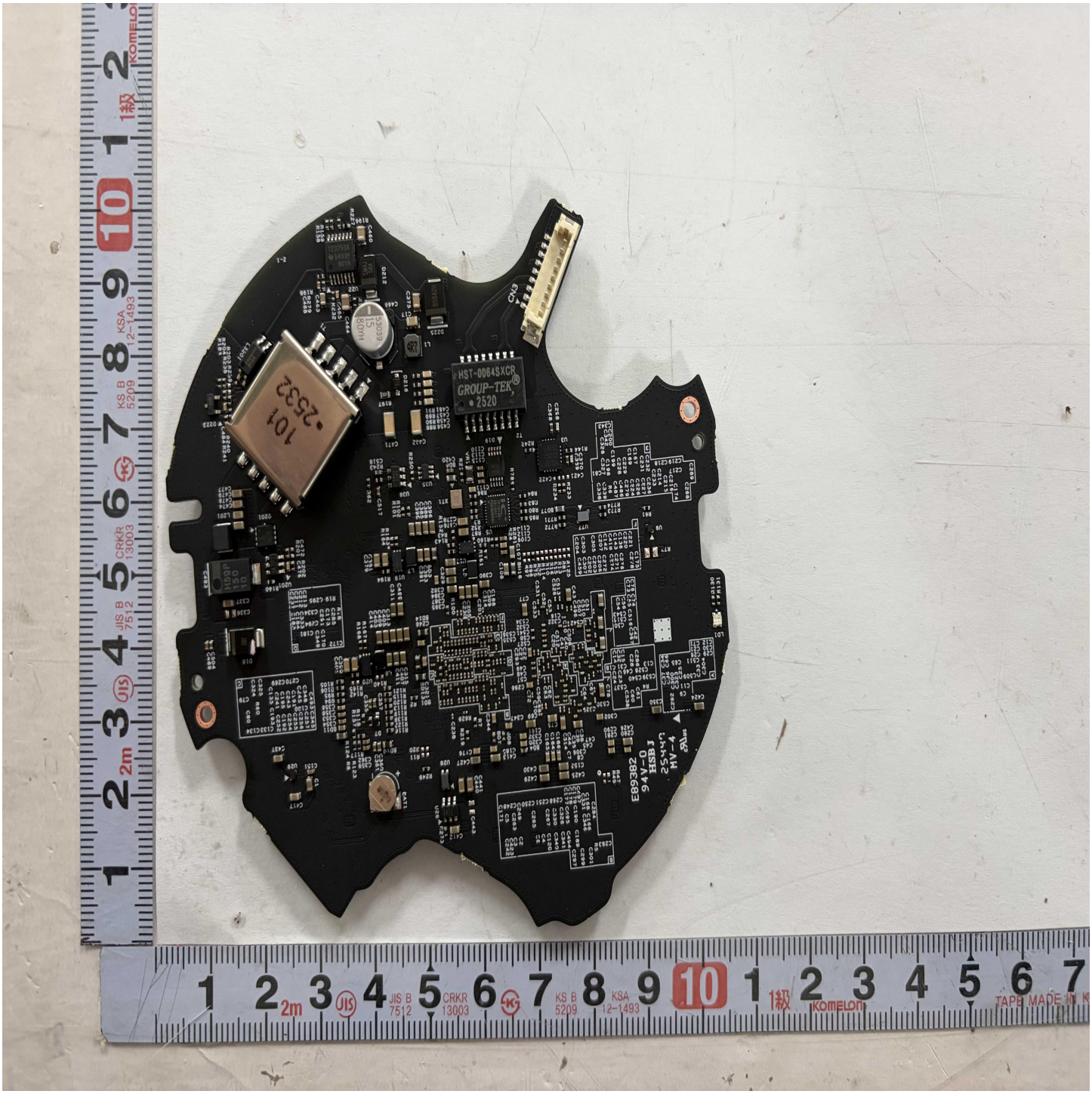
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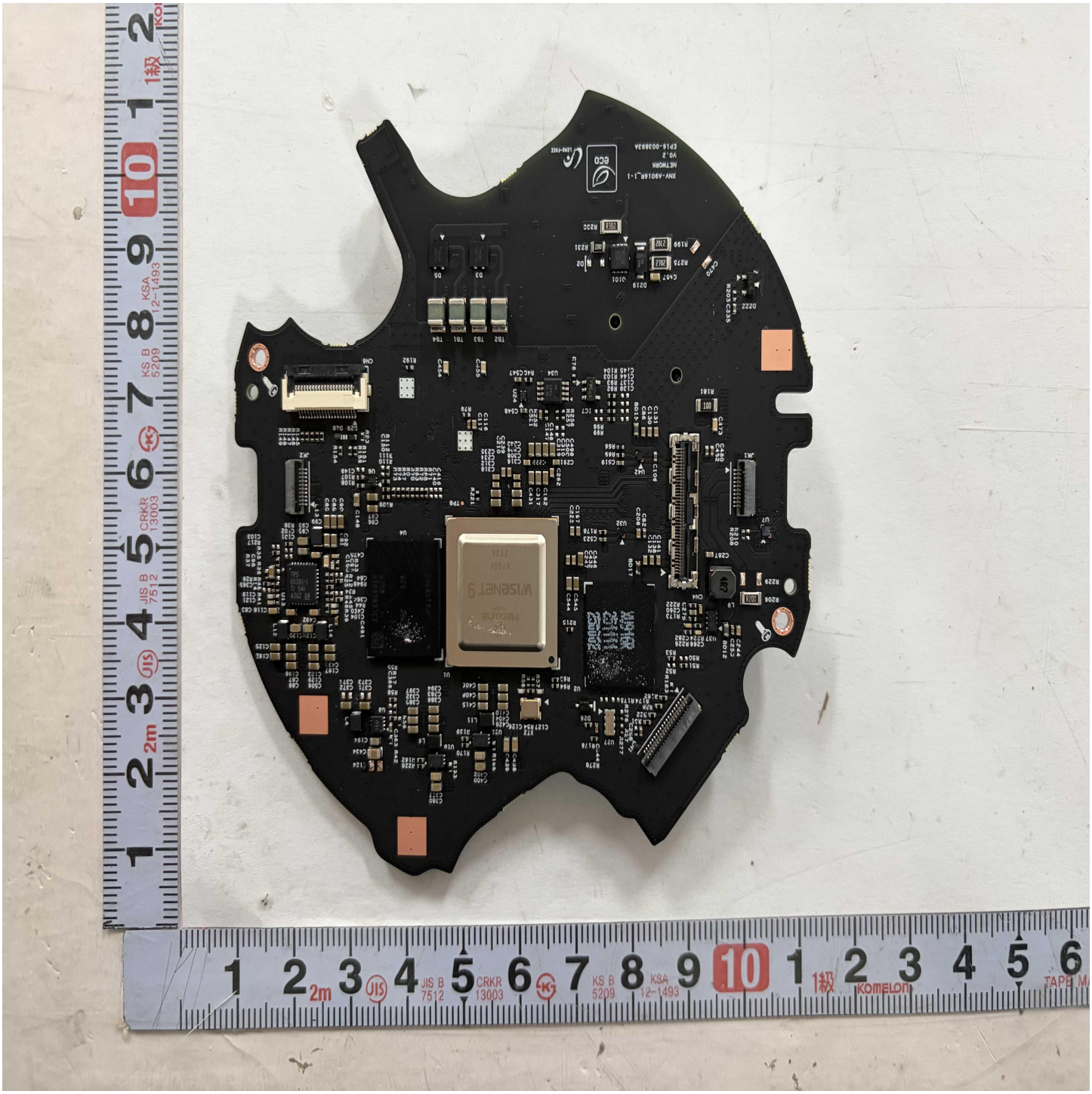
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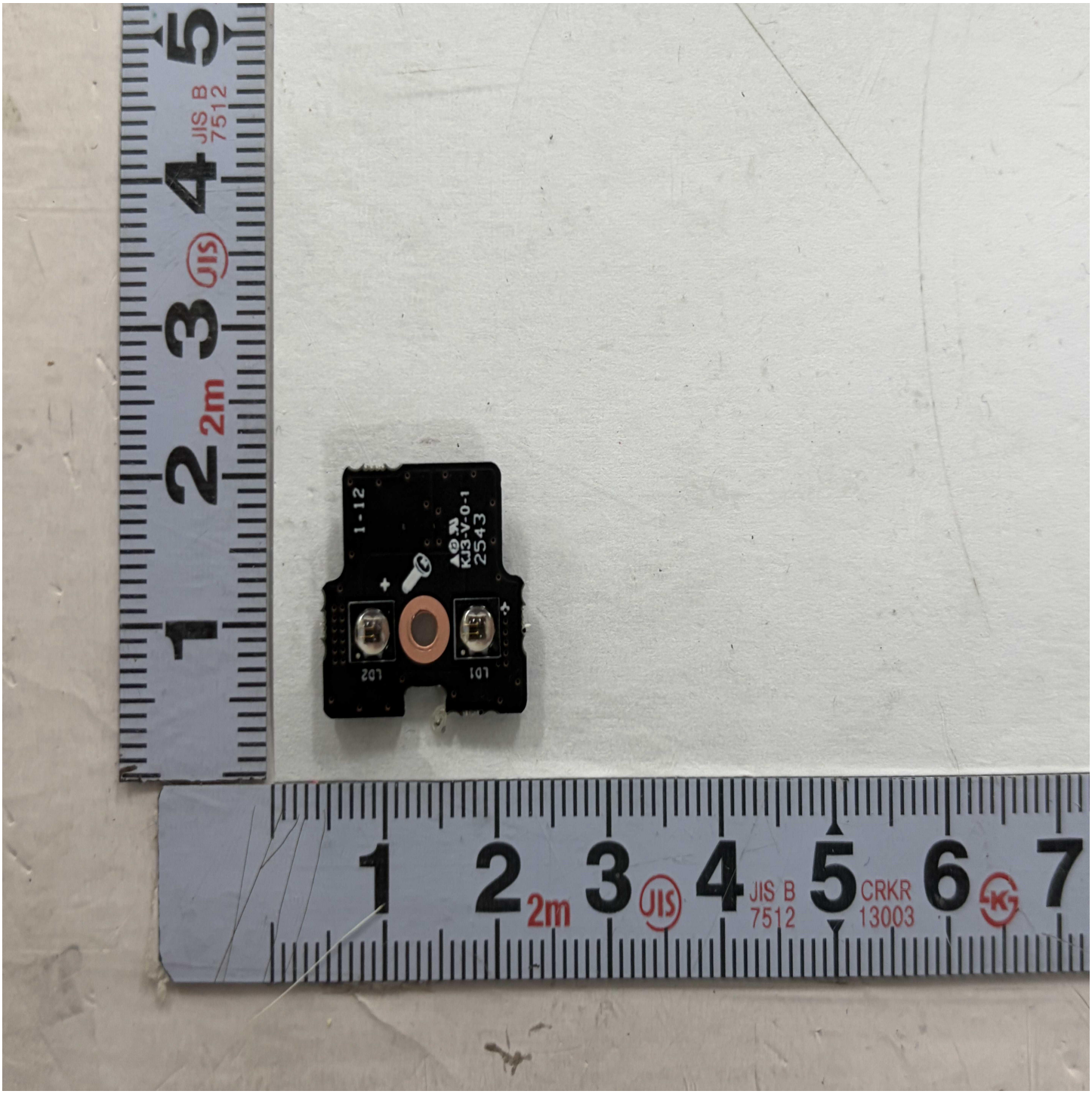
Photographs-07 Page-1



Photographs-08 Page-1



Photographs-09 Page-1



Photographs-10 Page-1

