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-A6242-DescriptionUL
Figure-14-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:	XND-A9084RV, XND-A8084RV, XND-A6084RV
Rating:	PoE (48 Vdc), 0.23 A (For model, XND-A9084RV) PoE (48 Vdc), 0.2 A (For model, XND-A8084RV) PoE (48 Vdc), 0.21 A (for model XND-A6084RV)
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: SungIl 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 outdoor or indoor use, wall or ceiling use with mounting brackets.

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

Model Differences

XND-A9084RV is basic model.

XND-A8084RV and XND-A6084RV are identical to basic model except for ratings and lens module.

Test Item Particulars

Product group	end product
Classification of use by	Instructed person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	mating connector
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
IP protection class	IPX0
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)	1.02

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 50 °C

- 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
- The product was investigated to the following additional standard : IEC 62471:2006, IEC 60529:1989+A1:1999+A2:2013

Additional Information

4791663672
- Maximum Normal Load: Continuous operation (Operate the camera through networked equipment with IR LED ON)

4791730661
No test was considered necessary in order to below revision.
- Correction of IR LED / Manufacturer from Cybright IR LED Technologies Inc to Cybright IR LED Technology Co.,Ltd in CCL.

4791930095
- Maximum Normal Load: Continuous operation (Operate the camera through networked equipment with a half of IR LED on)
- Add model name and rating; XND-A6084RV, PoE (48 Vdc), 0.21 A
- Add CCL Lens module (IRIS) and (ZOOM/FOCUS Motor) for XND-A6084RV
- Replace manual.

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 Company’s name, Trade Name, File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, current)
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 PoE (48Vdc), 0.23A. (XND-A9084RV). 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), 0.2A. (XND-A8084RV). 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. (XND-A6084RV).
(Website) Manual - 2	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 UL 60950-1 or PS2 as defined in UL 62368-1.
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 models					
BD1.3	**Electric Strength Test Exemptions – This test is not required for the following models:**					
	All models					
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 models					

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-3000(&6)(f1)	Polycarbonate (PC), Min. 1.8 mm thickness, rated Min. V-2, 115 deg. C	QMFZ2	UL (E41179)	
Enclosure - Side cover (Plastic)	LOTTE CHEMICAL CORPORATION	GC-1025F	Min. 2.0 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (115797)	
Enclosure - Bottom (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.2 mm thickness, See enclosure for dimension.	-	Tested in equipment	
Mounting Bracket (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.0 mm thickness, See enclosure for dimension.	-	Tested in equipment	
Internal Plastic Part Materials	LOTTE CHEMICAL CORPORATION	GC-1025F	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (115797)	
Internal Plastic Part Materials - Alternate	Interchangeable	Interchangeable	Min. 1.5 mm thickness, rated Min. HB	QMFZ2	UL	
Opto-coupler (LS1)	LITE-ON TECHNOLOGY CORP	LTV-217 (Type: LTV-217-G)	Isolation Voltage: 3750. Max. Operation Temperature: 110 deg. C	FPQU2	UL (E113898)	
Opto-coupler (LS1) - Alternate	COSMO ELECTRONICS CORP	KPC357NT	Isolation Voltage: 3750. Max. Operation Temperature: 115 deg. C	FPQU2	UL (E169586)	
Transformer (T1)	SHENZHEN GROUP-TEK ELECTRONICS	PDT25289SR	77uH, 130 deg. C, See enclosure for more detail.	-	Tested in equipment	

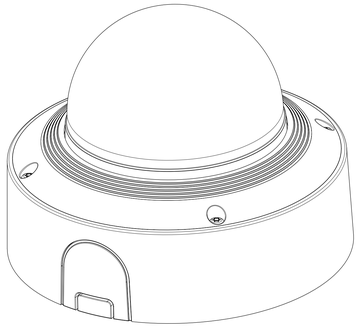
	TECHNOLOGY CO., LTD					
IR LED (LD4, LD5) (total 2 ea)	LITE-ON TECHNOLOGY CORPORATION	LTE-R38386L-YE5-SS	Vf = 2.5 Vdc (max),If = 1 000 mA Max	-	Tested in equipment	
IR LED (LD3, LD6) (total 2 ea)	Cybright IR LED Technology Co.,Ltd	XB-IR3838EU-I	Vf = 2.3 Vdc (max),If = 1 000 mA Max	-	Tested in equipment	
IR LED (LD1, LD2, LD7, LD8) (total 4 ea)	Cybright IR LED Technology Co.,Ltd	XB-IR3838S2-D30	Vf = 2.3 Vdc (max),If = 1 500 mA Max	-	Tested in equipment	
Heater resistor (R1, R3 to R18, R20 to R23) (Total 21 EA)	Interchangeable	Interchangeable	2.2 ohm (11 ea, 0.047 W/each), 1ohm (10 ea, 0.021W/each), 0.73 W Total	-	Tested in equipment	
Lens module for XND-A9084RV	DONGGUAN YUTONG OPTICAL TECHNOLOGY CO LTD	YTW30033A01DB.IR-PIRIS-JZ-8MP+H151+IR1021	4.2 - 5.0 Vdc	-	Tested in equipment	
Lens module for XND-A8084RV	DONGGUAN YUTONG OPTICAL TECHNOLOGY CO LTD	YT0W2Z53DB.IR-PIRIS-JZ-5MP+H82+IR1021	4.2 - 5.0 Vdc	-	Tested in equipment	
Lens module (IRIS) for XND-A6084RV	New Asia Optical Industry Co.,Ltd	N71DNDB-FP5	4.0 V ± 10 %	-	Tested in equipment	
Lens module (ZOOM/FOCUS Motor) for XND-A6084RV	Tokyo Micro Inc.	8S-501L99	5.0 V±0.5V	-	Tested in equipment	
Rechargeable battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Lithium, Rechargeable, Max Charging Voltage: 3.1 Vdc, Max Charging current: 300 mA	BBCV2	UL (MH15628)	

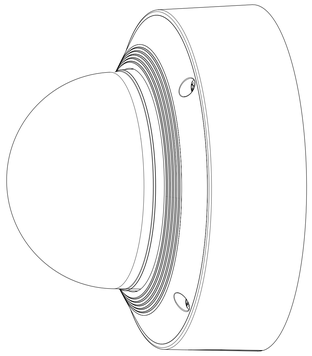
Lithium Battery Protection Circuit (BAT1)	Interchangeable	Interchangeable	Diode (D26, 80 V, 250 mA) and Resistor (R176, 3.3 Kohm) in series	-	Tested in equipment	
Thermal pad	KOMOTECH	KGP-1(a)	Min. 2.0 mm thickness, rated V-0, 150 deg. C	QMFZ2	UL (E245303)	
Heatsink	Interchangeable	Interchangeable	Aluminum (Silver) Approx. overall size of ϕ72.9 mm, Min. 21.6 mm thickness, See enclosure for more dimension	-	Tested in equipment	
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	
Label	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for maximum surface temperature specified, or 50 deg. C if not specified.	PGDQ2 or PGJI2	UL	

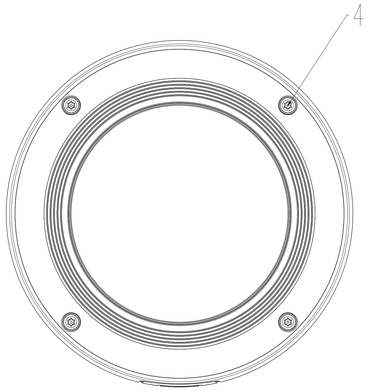
Enclosures

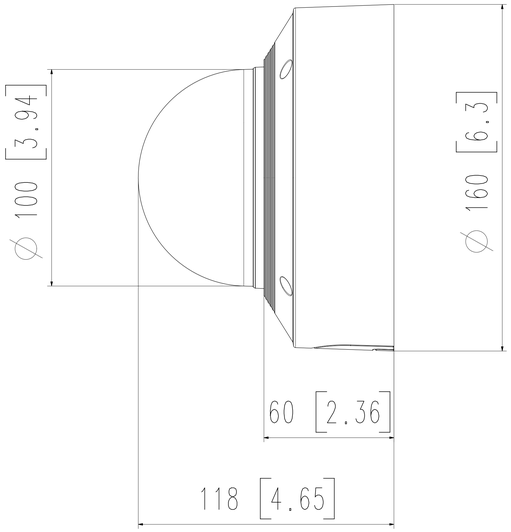
Type	Supplement Id	Description
Photographs	03-01	External View - 1
Photographs	03-02	External View - 2
Photographs	03-04	Internal View
Photographs	03-05	Lens Board
Photographs	03-06	Network Board - Top
Photographs	03-07	Network Board - Bottom
Photographs	03-08	LED board - 1
Photographs	03-09	LED board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

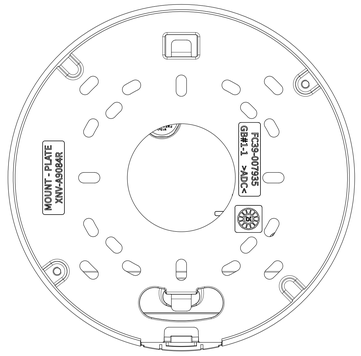
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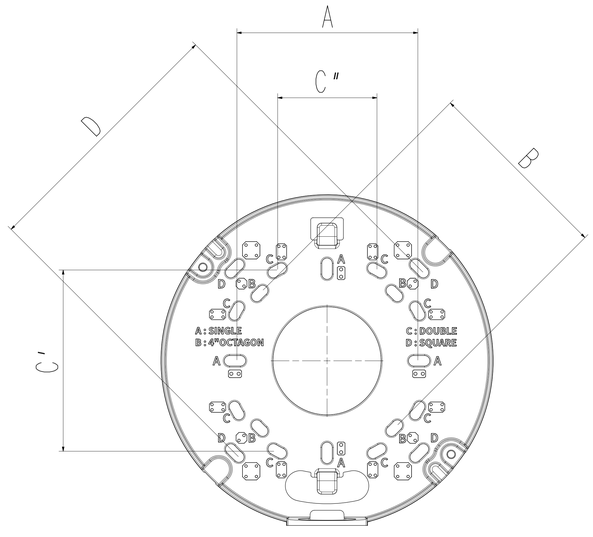


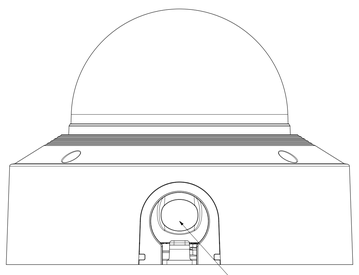






STANDARD GANG		
A	SINGLE	83.5 [3.29]
B	4"OCTAGON	88.0 [3.46]
C	DOUBLE	83.5 [3.29] X 46.0 [1.81]
D	SQUARE	120.4 [4.74]





4	MODEL3	XND-A8084RV
3	MODEL2	XND-A9084RV
2	MODEL1	XNV-A8084R
1	BASIC MODEL	'25.02.05
No.	MODEL NAME	XNV-A9084R
Unit:mm[inch]	SCALE:1/1	Hanwha Vision

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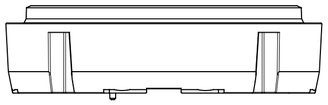
A0

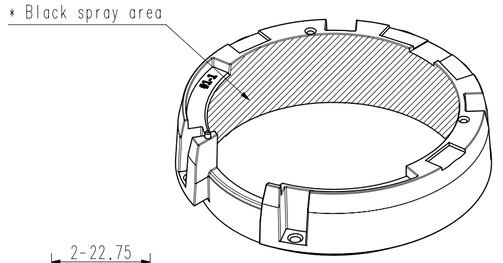
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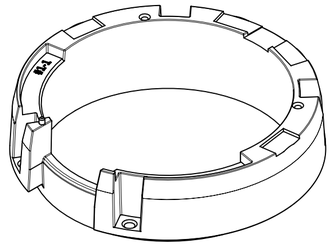
This parts should not contain any substances which are specified in AH60-0033K

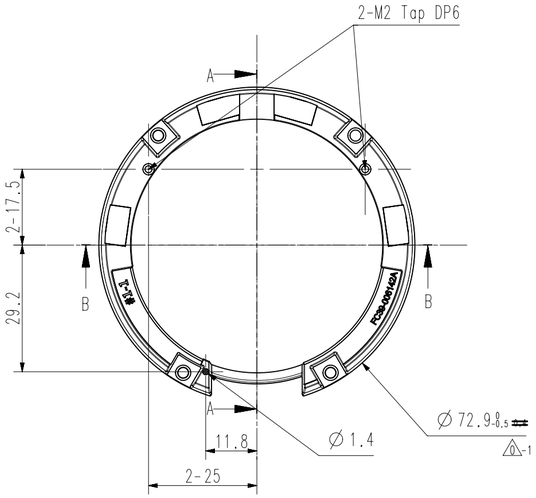
Hanwha Techwin Security Solution
APPROVAL
20.02.07

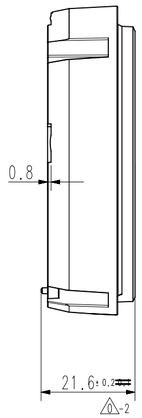
NO	PART NAME	CODE NO.	MATERIAL	Q'TY	REMARK
1	FRAME-IR	FC39-006142A	ADC12	1	-
△-1 2	FRAME-IR	FC39-006142B	ADC12	1	-

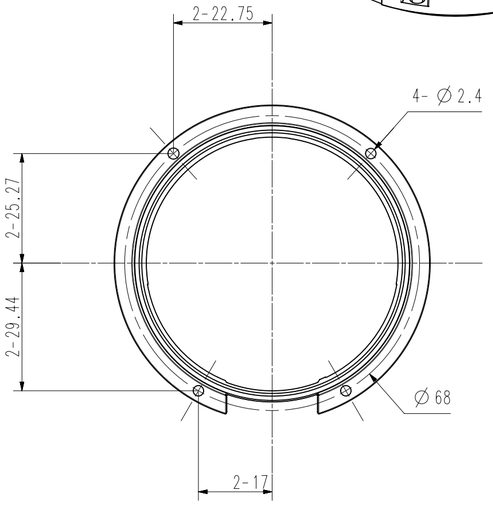


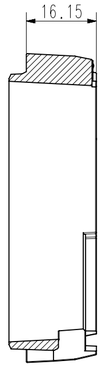




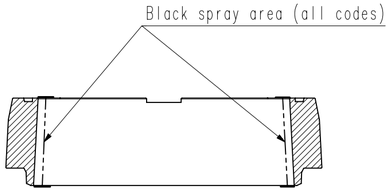




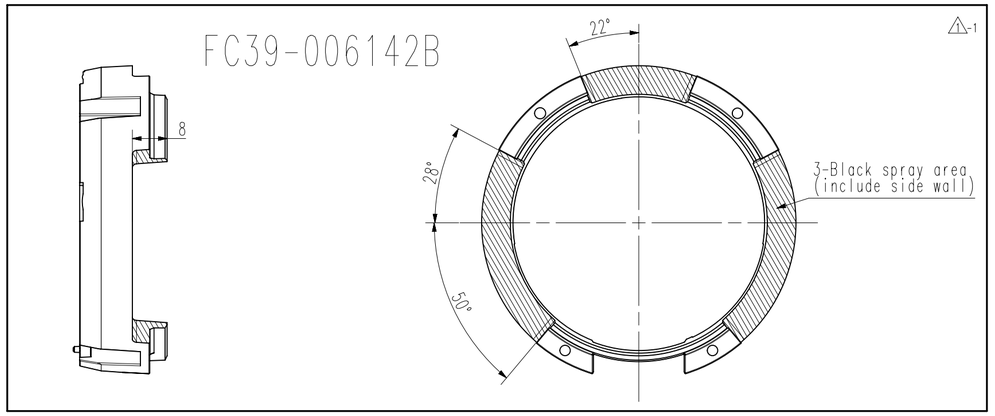




SECTION A-A



SECTION B-B



NOTE:Die-Casting

1. Material : ADC12
2. Gate, P/L, Ejector Pin location must be handled with STW designer.
3. Ejector pin stain must be less than 0.3 depth (□), no flash is allowed.
4. Undescribed edge round must be less than R0.5, undescribed corners must be less than R0.3.
5. No Deformation, Air bubble, Shrinkage is allowed.
6. Every Flash on P/L must be less than 0.1.
7. Undescribed draft angles must be less than 0.5□ .
8. * marks (Key dimensions) must be carefully handled.
9. Surface cutting level of Gate and Over-Flow must be equivalent with other surface cutting level.
10. Part Name, Code Number, Mold Number, Material, Model Name must be carved on the inner side of the part
 - Location and Specs. must be handled with STW designer.
11. External look and printing specification must follow separately distributed Design Specification data.
 - Including Surface cutting, Chromate, Sanding, Spray, Silk Print specifications
12. Delivery packing specifications must be discussed separately.
13. All other issues must be handled with STW designer.

STANDARD TOLERANCE

DIV	Lvl 1	Lvl 2	Lvl 3	Lvl 4	Lvl 5
0-16	±0.05	±0.1	±0.1	±0.2	±0.3
16-63	±0.05	±0.1	±0.2	±0.3	±0.4
63-250	±0.1	±0.2	±0.3	±0.4	±0.4
250-1000	±0.2	±0.3	±0.4	±0.5	±0.6

Coating Specification

CODE No.		A
Color	Standard	D20192403178
	Code	HTW-ML-2
	Name	Metal Liquid Black
Printing	Color	-
Process	Casting→Cutting→Sanding→Machining/Tapping→Degrease →Chromate/Anodizing→Painting	

A2

CHANGE

△1-2 Modify tolerance matching to part 20.05.12 I.J.Yoo

△-1 Add B code for XNV-9083R 21.08.23 I.J.Yoo

UNIT	mm	DESIGN	CHECK	APPROVAL	PART NAME	FRAME-IR
SCALE	1/1	I.J.Yoo	Y.S.Choi	J.Y.Kim	MODEL NAME	XNV-9082R
		20.01.13	20.01.13	20.01.13	CODE NO.	FC39-006142A

Hanwha Techwin

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), 0.23A. (XND-A9084RV/XNV-A9084R/XNO-A9084R)
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), 0.2A. (XND-A8084RV/XNV-A8084R/XNO-A8084R)
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), 0.21A. (XND-A6084RV/XNV-A6084R/XNO-A6084R)
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. This device has been verified using STP cable. The use of appropriate GND grounding and STP cable is recommended to effectively protect your product and property from transient voltage, thunderstroke, communication interruption.
26. The operating temperature for the XND-A9084RV/XND-A8084RV/XND-A6084RV products is -10°C to +50°C(14°F to +122°F).
27. The operating temperature for the XNV-A9084R/XNV-A8084R/XNV-A6084R products is -40°C to +50°C(-40°F to +122°F).
28. The operating temperature for the XNO-A9084R/XNO-A8084R/XNO-A6084R products is -40°C to +60°C (-40°F to +140°F).

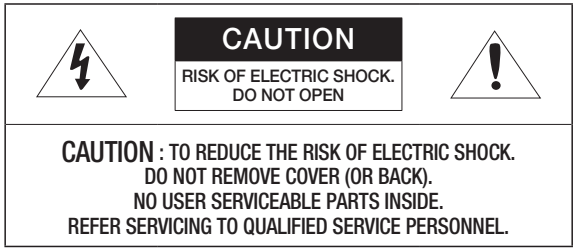
WARNING

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.

Do not arbitrarily loosen or tighten the gore valve.

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

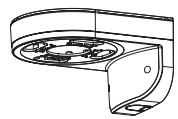
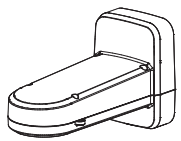
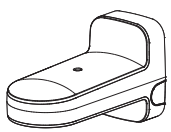
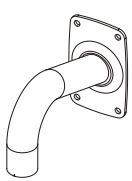
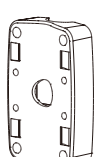
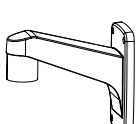
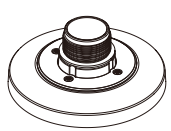
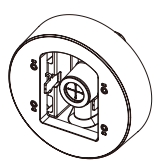
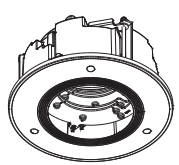
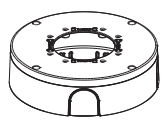
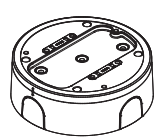
※ Please read this manual for the safety before using of goods and keep it in the safe place.

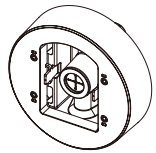
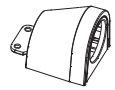
We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

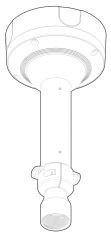
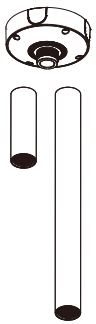
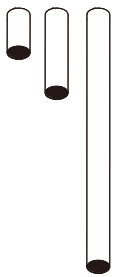
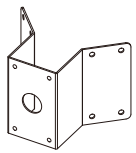
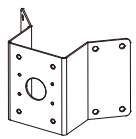
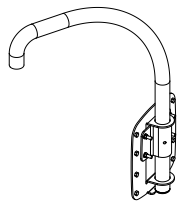
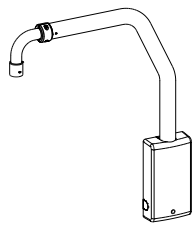
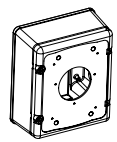
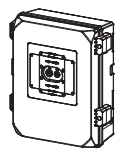
In particular installation environments, there might be interference in radio communications. When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna.

OPTIONAL ACCESSORIES FOR INSTALLATION

You can purchase appropriate optional accessories available.

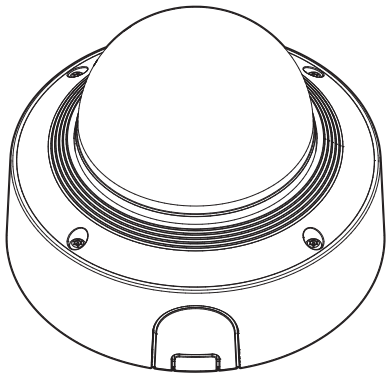
Model name	Wall Mount and Pole Mount	Hanging Mount	Pole Mount (Direct Assembly)	Housing	Back Box and Tilt Mount	Conduit Adaptor
XND-A9084RV/ XND-A8084RV/ XND-A6084RV/ XNV-A9084R/ XNV-A8084R/ XNV-A6084R	 SBP-160WMW1 (Indoor Wall&Pole Mount)  SBP-400WMW (Wall&Pole Mount)  SBP-250WMW (Wall&Pole Mount)  SBP-300WMW (Wall Mount) * SBP-300PMW2 required for pole installation  SBP-300PMW2 (Pole Mount)  SBP-300WMW1 (Wall Mount) * SBP-300PMW2 required for pole installation	 SBP-160HMW1	 SBD-180PMW	 SHD-1600FPW	 SBV-180BW (Back Box)  SBV-180WW (Waterproof Back Box)  SBP-160TMW1 (Tilt Mount)	-

Model name	Wall Mount and Pole Mount		Hanging Mount	Pole Mount (Direct Assembly)	Housing	Back Box and Tilt Mount	Conduit Adaptor
XNO-A9084R/ XNO-A8084R/ XNO-A6084R	-	-	-	 SBD-180PMW	-	-	 SBP-060BA

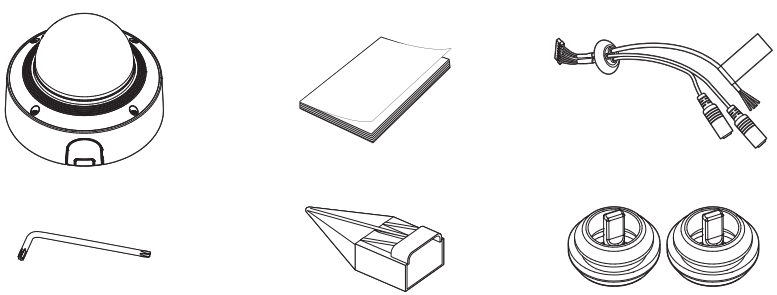
Model name	Ceiling Mount		Corner Mount	Parapet Mount	Cabinet
	Assembly	Individual Parts			
XND-A9084RV/ XND-A8084RV/ XND-A6084RV/ XNV-A9084R/ XNV-A8084R/ XNV-A6084R	 SBP-300CMTW (Telescopic)  SBP-300CMTS (Ball Head)  SBP-300CMW1 SBP-900CMW  SBP-150CMI SBP-300CMI	 SBP-180CMB  SBP-180CMS (Ball Head)  SBP-140CMB  SBP-150CMP SBP-300CMP SBP-900CMP  SBP-C15P  SBP-C15H	 SBP-300KMW1  SBP-156KMW	 SBP-300LMW  SBP-156LMW1	 SBP-300NBW  SBP-150NBW
XNO-A9084R/ XNO-A8084R/ XNO-A6084R	-	-		-	

WHAT'S INCLUDED

As for each sales country, accessories are not the same.

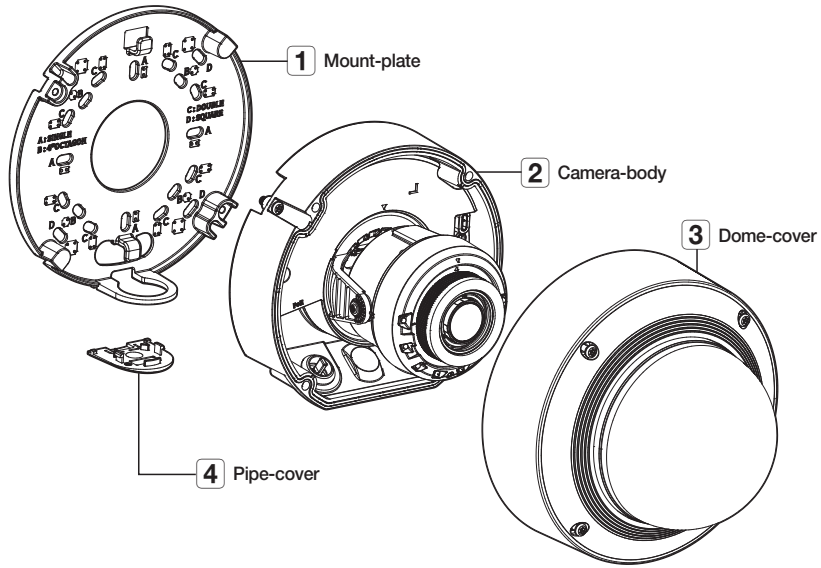


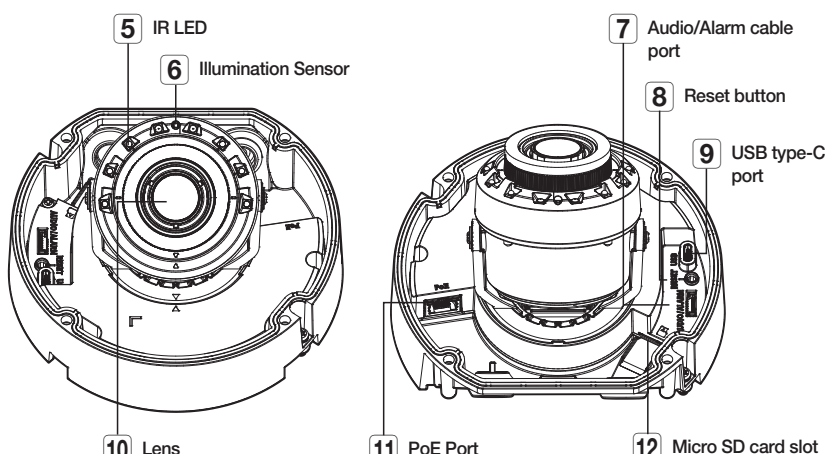
<XND-A9084RV/XND-A8084RV/XND-A6084RV/XNV-A9084R/XNV-A8084R/XNV-A6084R>



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

AT A GLANCE





INSTALLATION

- The camera jack connected to the external cable is not waterproof. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

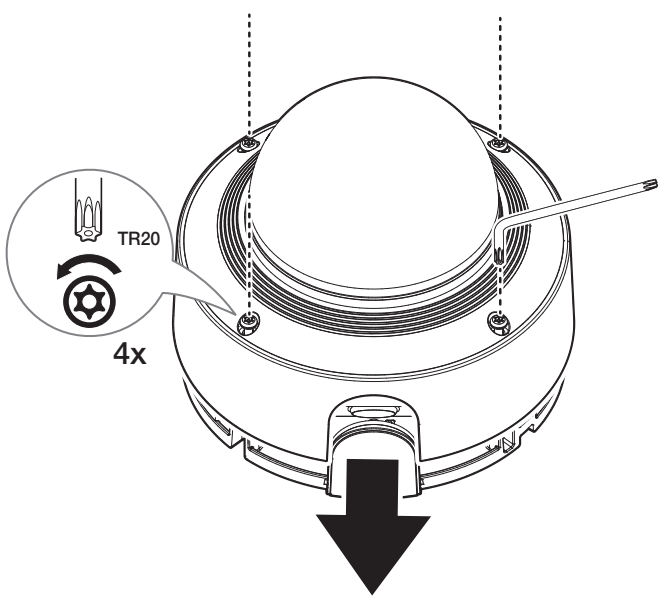
Precautions before installation

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

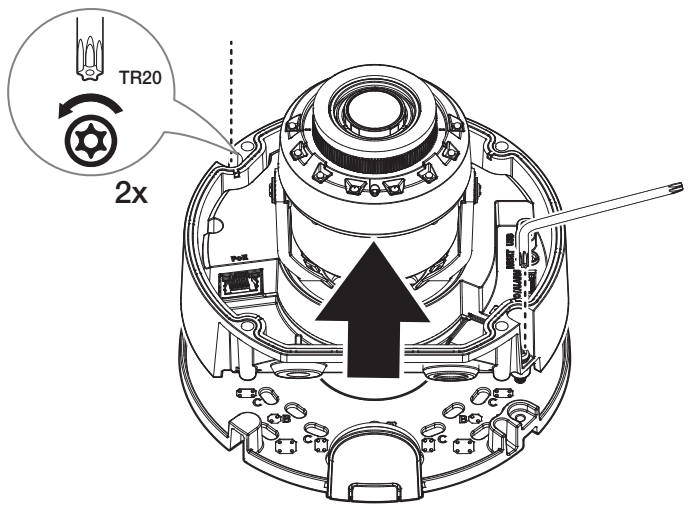
- Select an installation site that can hold at least 5 times the camera's weight.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site.
  And put aside personal belongings from the site, just in case.
- If the 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. Use the provided Torx L wrench to turn the screws on the dome cover counterclockwise to release the dome cover.
   - Note that it is not necessary to loosen the screws completely.



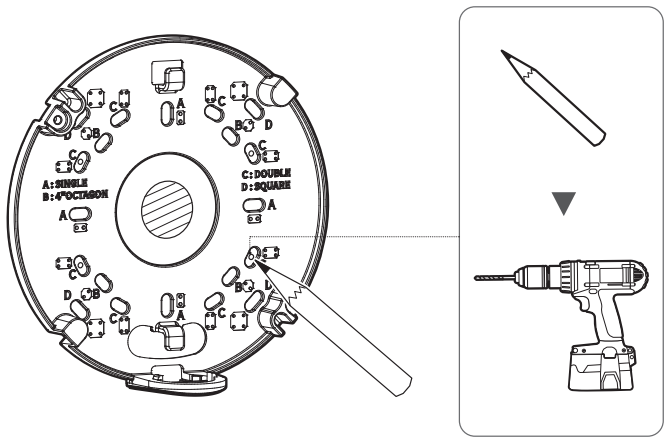
2. Use the provided Torx L wrench to turn the mount plate screws counterclockwise to release the camera body.
   - Note that it is not necessary to loosen the screws completely.



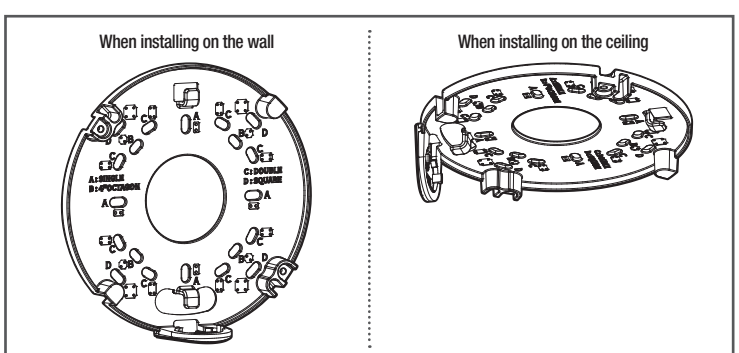
Installation (mount plate)

[Directly installing on wall/ceiling]

1-1. Place the mount plate on the desired location considering the direction to be monitored, mark the locations for the screw holes and cable holes, and then drill the holes.

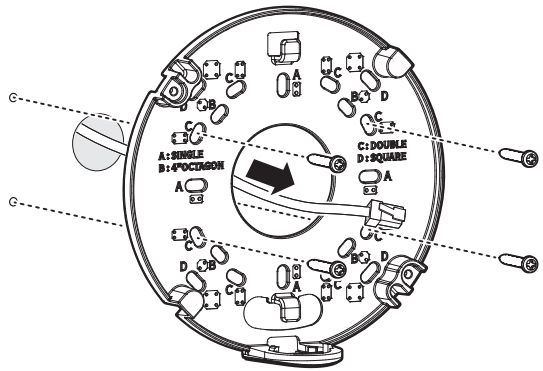


▪ When installing on the wall or the ceiling, check the direction of the mount plate.

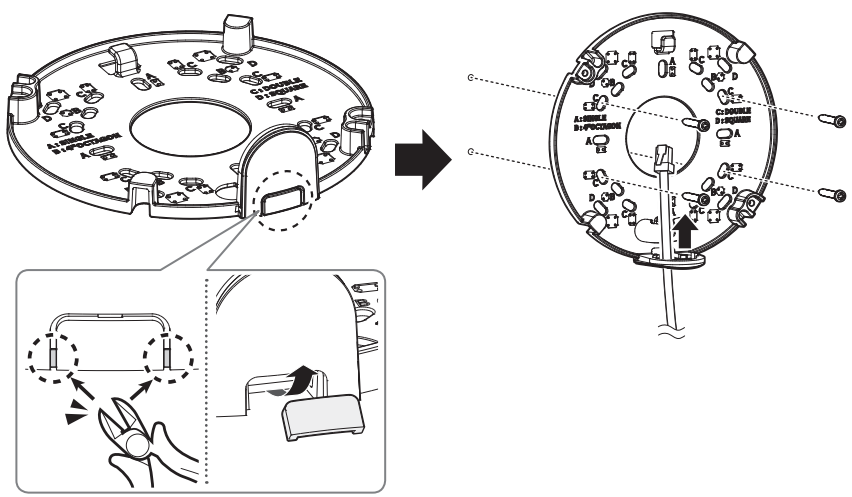


1-2. Fix the mount plate using appropriate screws.

1-3. Take out the necessary cables from among the network and audio/alarm cables through the hole of the mount plate.

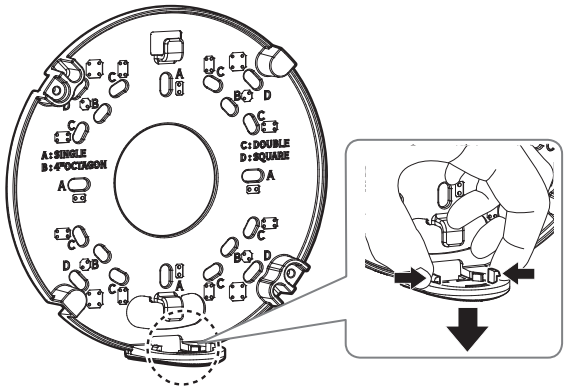


▪ When connecting the cable through the side, remove the wiring hole cover first before doing so.



[Installing using pipe]

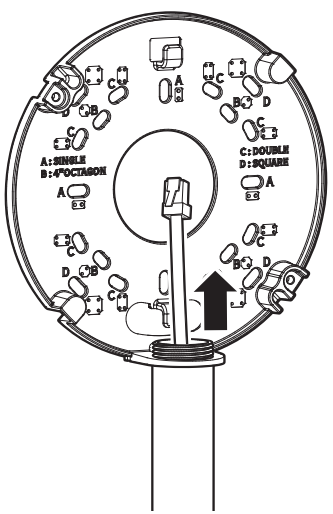
2-1. Separate the pipe cover of the mount plate by pressing its sides.



2-2. Place the pipe on the mount plate.

2-3. Fix the mount plate using appropriate screws.

2-4. Take out the necessary cables from among the network and audio/alarm cables through the pipe.

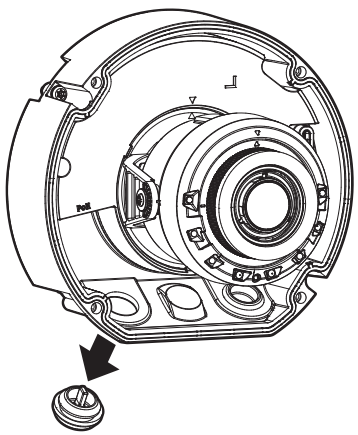


Installation (camera body)

- Use a cable bushing compliant with the network cable to be connected.
  - Camera main: use a cable with the diameter of Ø5 to 6.5
- You can only use a network cable with a diameter of Ø6.5 or less.

[Installing the network cable] (XNV-A9084R/XNV-A8084R/XNV-A6084R : IP66/IP67)

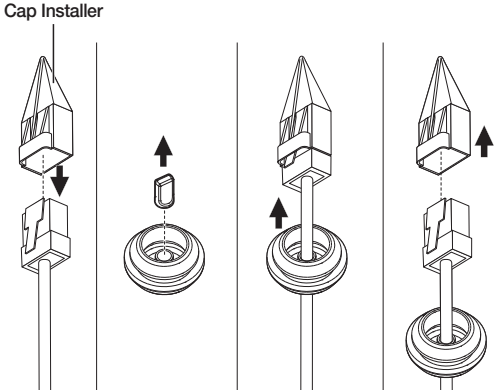
1. Remove the cable bushing next to the PoE port from the camera body.



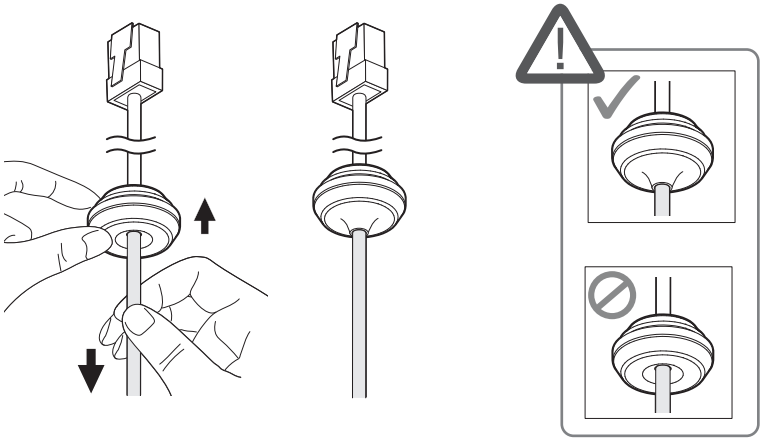
2. Remove the protruding part of the 1-hole cable bushing that was removed from the camera body.

3. Use the cap installer to pass through the RJ45 cable.

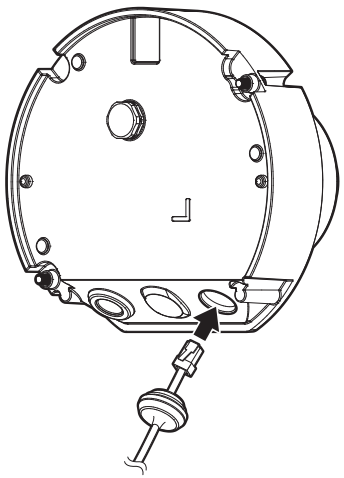
Cap Installer



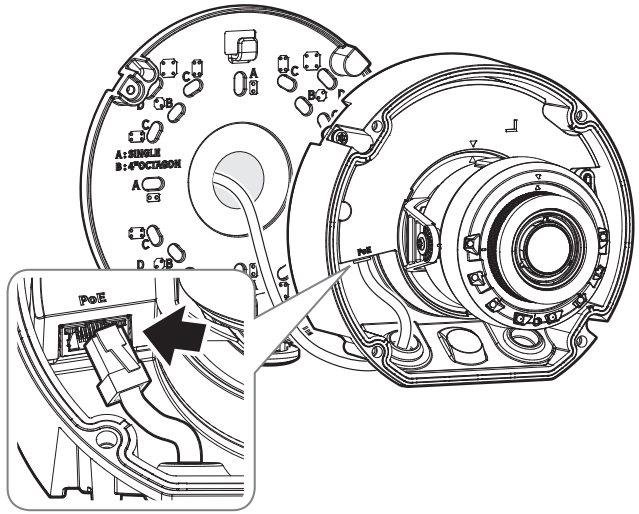
4. For waterproof protection, pull down the cable below the cable bushing as shown in the figure below.



5. Insert the cable bushing of the network cable into the camera body.

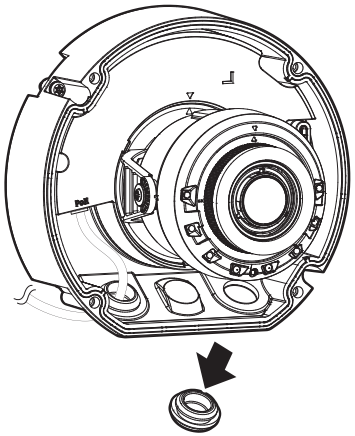


6. Connect the network cable connector to the PoE port of the camera body.

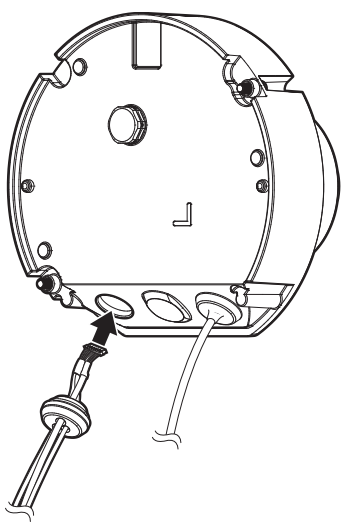


[Installing audio/alarm cables]

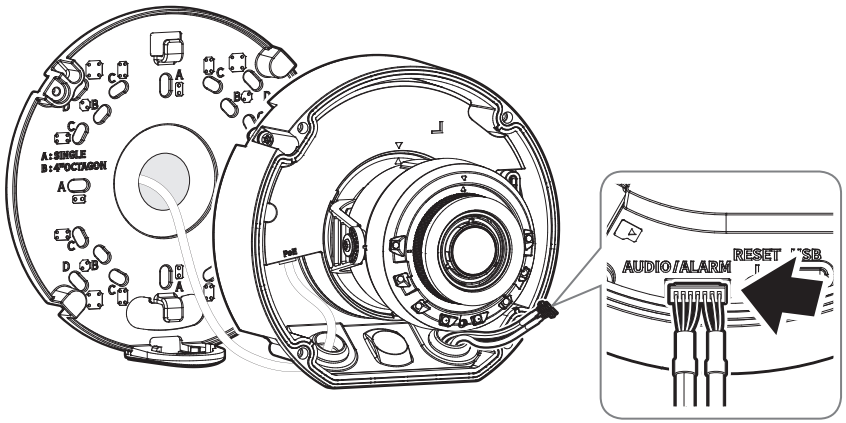
1. Remove the cable bushing next to the audio/alarm cable port from the camera body.



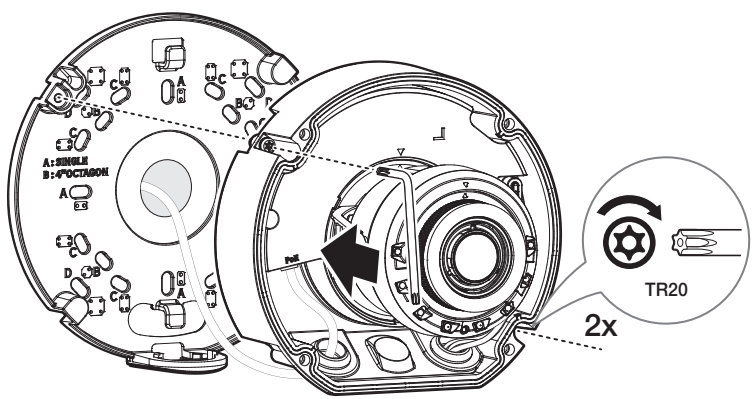
2. Mount the cable bushing of the provided audio/alarm cables to the camera body.



3. Connect the audio/alarm cable connector to the audio/alarm cable port of the camera body.



4. Join the camera body with the mount plate.



5. Adjust the lens to the desired direction with reference to "**Adjusting the monitoring direction for the camera**" section. (page 18)

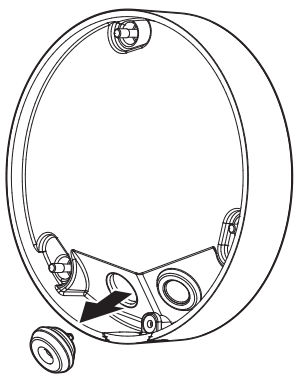
- If you tilt the lens, you may need to adjust the lens as this may block the screen.
- Connect a monitoring device to the USB port and then monitor and adjust it. (page 31)

Installation (Bottom cover)

- Use a cable bushing compliant with the network cable to be connected.
  - Camera main: use a cable with the diameter of Ø5 to 6.5
- You can only use a network cable with a diameter of Ø6.5 or less.

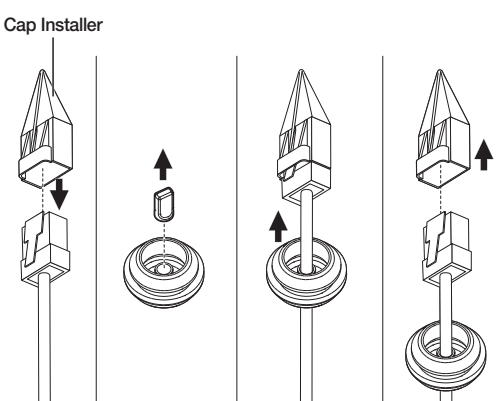
[Installing the network cable](XNO-A9084R/XNO-A8084R/XNO-A6084R: IP66/IP67)

1. As shown in the figure below, remove the cable bushing from the bottom cover.

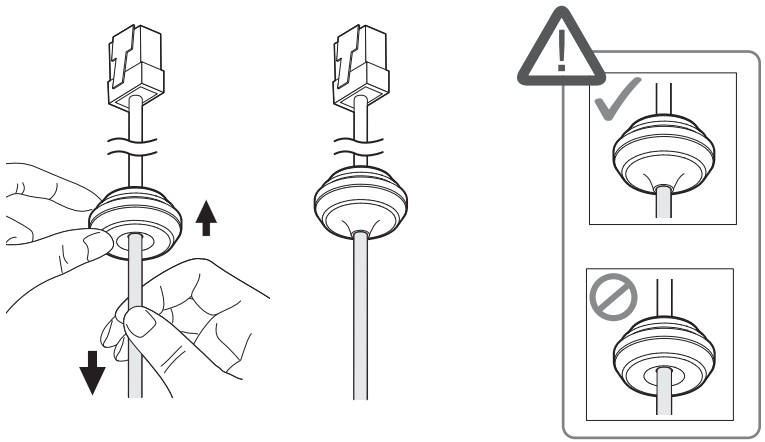


2. Remove the protruding part of the 1-hole cable bushing that was removed from the Bottom cover.

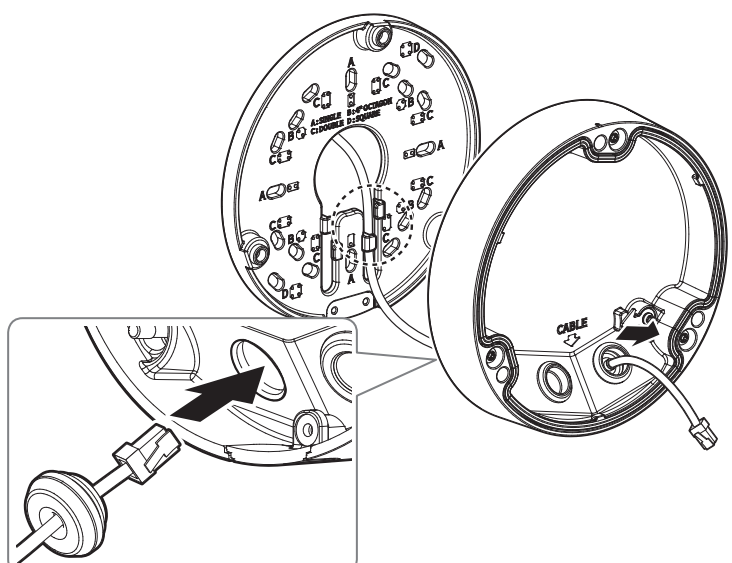
3. Use the cap installer to pass through the RJ45 cable.



4. For waterproof protection, pull down the cable below the cable bushing as shown in the figure below.



5. Insert the cable bushing of the network cable into the bottom cover.



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

GROUP-TEK®

承 认 书

RoHS

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	
客户料号 MODEL NO	
产品名称 PART NAME	POWER TRANSFORMER
产品型号 PART TYPE	PDT25289SR
版 本 REV	A
签 名 SIGNATURE	制作：联泰兴 2024-9-18 JLYe PREPARED BY 审核：联泰兴 2024-9-18 jinliang.zhang CHECKED BY 批准 联泰兴 2024-9-18 weifeng.Luo APPROVED BY
客户承认 CUSTOMER APPROVAL	承认印: SIGNET 签 名: SIGNATURE

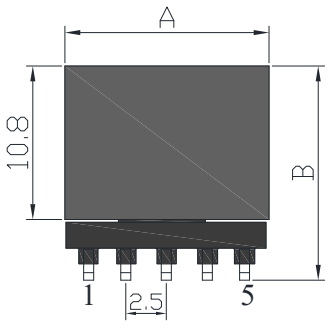
深 圳 市 联 泰 兴 电 子 科 技 有 限 公 司
SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO.，LTD
地 址 ：深圳市宝安区石岩街道应人石工业区伟泰路 1 栋 2-5 楼
ADD: Floor 2-5, No.1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen,China
TEL：+86-755-29810619 29810976 FAX：+86-755-29810159
Http://www.group-tek.com **E-mail:sale1@group-tek.com**

1. Revision History:

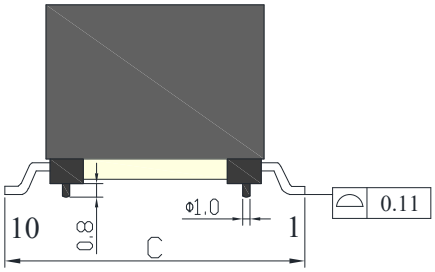
Revision	Revision Descriptions	Prepared by	Checked by	Approved by	Issued date
X0	Quotation Release	Ye JL	Zhangjinliang	Luo wei feng	2024/9/8
A	Increase leakage to 1.5uH MAX	Ye JL	Zhangjinliang	Luo wei feng	2024/9/18

2. EXTERNAL DIMENSIONS: UNIT: mm

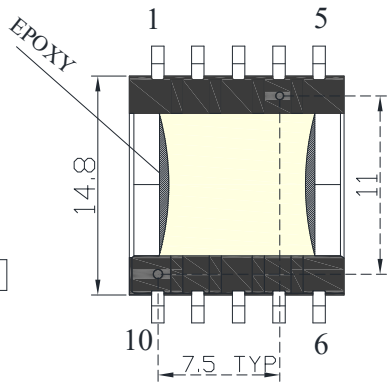
FRONT VIEW



SIDE VIEW



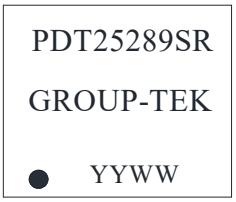
BOTTOM VIEW



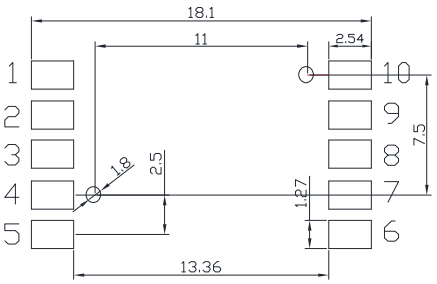
Unit: mm Tolerances:

A Max	B Max	C Max
15.0	14.0	17.8

Marking information



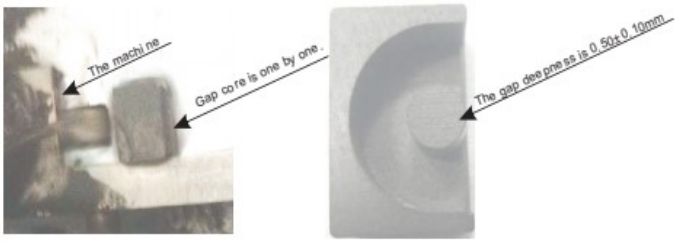
Suggested PCB Pad Lad Layout



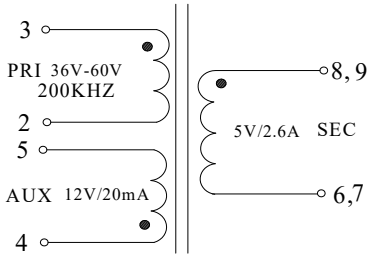
3. Electrical Characteristics :

Specifications: at 25 degree C. Operating Temperature -40 to +125°C			
NO	ITEM	TEST CONDITION	SPECIFICATION
1	Inductance	((3-2)) @25℃ 100KHZ/1V	77uH±15%
		(4-5) @25℃ 100KHZ/1V	19uH±20%
		(8,9-6,7)@25℃ 100KHZ/1V	4uH±20%
2	Leakage Inductance	(3-2)@25℃200KHZ/0.1V shorted other pins	1.5uH MAX
3	DCR	(3-2)@25℃	180mΩ MAX.
4		(8,9-6,7)@25℃	15mΩ MAX.
5		(4-5)@25℃	280mΩ MAX.
7	TURNS RATIO	PRI（3-2）: SEC（8,9-6,7）: AUX（4-5）	22：5：11±2%
8	HI-POT:	PRI TO SEC	1500V/AC/1mA 2Sec

4. Overhauling List.

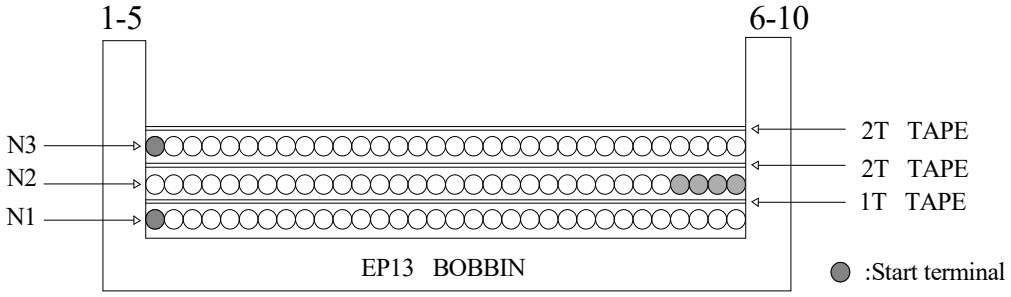
NO.	ITEM	SPECIFICATION
1	Tape turns	2T
2	Margin tape thickness	0.10mm
3	Winding turns	N1:22T N2:5T N3:11T
4	Pins order/Pin connection	1T
5	Marking Information	Marking information PDT25239SR GROUP-TEK ● YYWW
6	Gap the center leg	
7	Solder Temperature	

5. Schematic:



NOTE: PIN8,9&6,7 must shorted on PCB

6. winding detail:



7. Winding Information:

WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
1	3--2	0.28mm2UEW	22TS	1T w8.0mm	N/A	N/A	1,2
2	8--6	4*0.3mm2UEW	5TS	2T w8.0mm	N/A	N/A	1,2
3	9--7						
4	4--5	0.28mm 2UEW	11TS	2T w8.0mm	N/A	N/A	1,2

NOTE :

1.Place the bobbin pin 1 left side of operator.

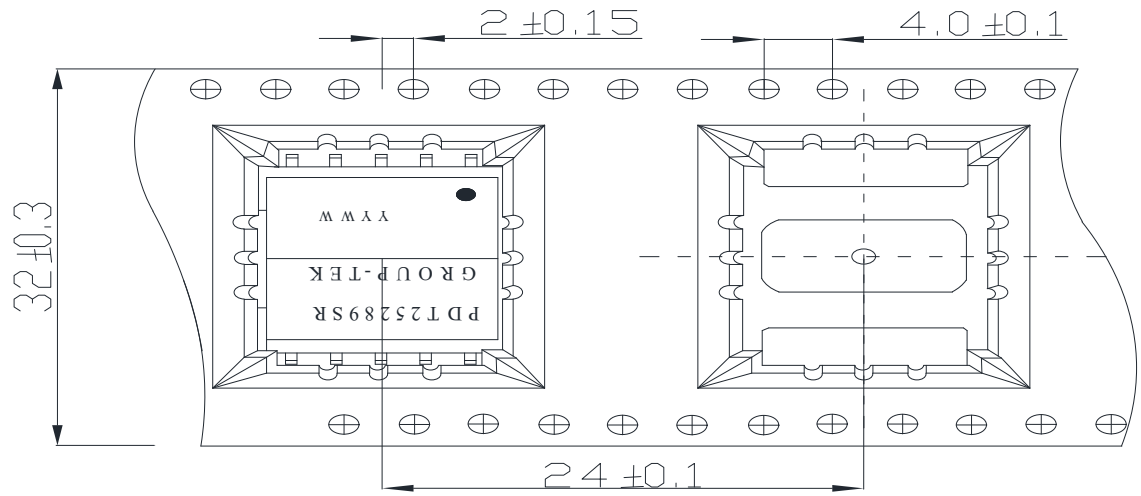
2.Clockwise and spaced winding

8. Material List:

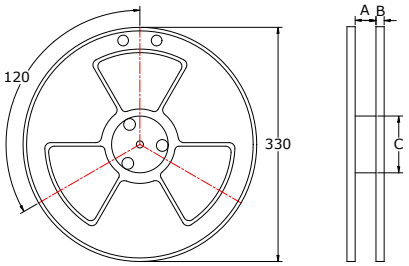
NO	ITEM	MATERIALS	SUPPLIERS/MANUFAXTURES	S UL FILE NO.
1	BOBBIN	PHENOLIC PM9630 UL RATING: 94V-0	Sumitomo Bakelite CO.,LTD.	IEC 60695
2	CORE	E P13 TP44/PG242	Dongguan zhuoci Electronics CO.,LTD	N/A
3	WIRE	POLYURETHANE ENAMELED TYPE NO: 2UEW THERMAL RATING:180°C	Shing Shun Magnet wire(HuiZhou) Co.,Ltd	E255839
4	TAPE	ADHESIVE POLYESTER TAPE TYPE NO.:W 001 THERMAL RATING:130°C	Dongguan Jintai pro pucd Co.,Ltd	E165111
5	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
6	Glue	E-500TX	Dong Guan city eatto electronic material Co.,Ltd	E218090
7	INK	VIC-120	Shenzhenhuarui samwo group co.,Ltd	N/A

9. DIMENSION FOR CARRIER TAPE & REEL.

(UNIT 单位: mm)



Packaging -Cover tape



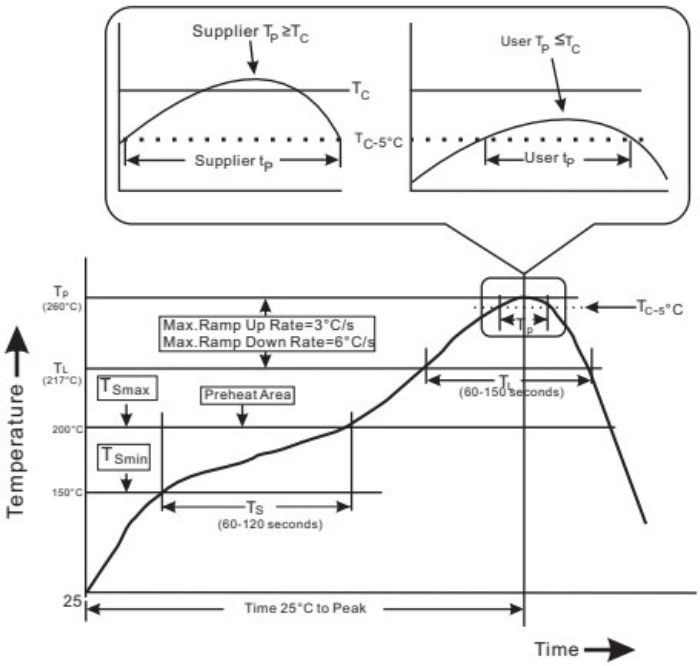
SPEC	8	12	16	24	32	44	56	72
DIM A±0.1	8.5	12.5	16.5	24.5	32.5	44.5	56.5	72.5
DIM B±0.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
DIM C±0.1	100	100	100	100	100	100	100	100

PACKING QUANTITY:

DESCRIPTION	QTY
PIECES PER REEL	150
PIECES PER POCKET	1
PIECES PER BOX	450
REEL PER BOX	3
GROSS WEIGHT PER BOX(KG)	TBD
NET WEIGHT PER BOX(KG)	TBD

Note:
1: All temperatures refer to the center of the package, measured on the package body surface that is facing up during assembly reflow (e.g., live-bug). Ifparts are reflowed in other than the normal live-bug assembly reflow orientation (i.e., dead-bug), Tp shall be within ± 2 ° C of the live-bug Tp and still to accurately measure actual peak package body temperaturesrefer to JEP140 for recommended thermocouple use.meet the Tc requirements, otherwise, the profile shall be adjusted to achieve the latter.
2: Reflow profiles in this document are for classification/preconditioning and are not meant to specify board assembly profiles. Actual board assembly profiles should be developed based on specific process needs and board designs and should not exceed the parameters in Table 5-2.For example, if Tc is 260 ° C and time tp is 30 seconds, this means the following for the supplier and the user. For a supplier: The peak temperature must be at least 260 ° C. The time above 255 ° C must be at least 30 seconds.For a user: The peak temperature must not exceed 260 ° C. The time above 255 ° C must not exceed 30 seconds.
3: All components in the test load shall meet the classification profile requirements.
4: SMD packages classified to a given moisture sensitivity level by using Procedures or Criteria defined within any previous version of J-STD-020,JESD22-A112 (rescinded), IPC-SM-786 (rescinded) do not need to be reclassified to the current revision unless a change in classification level or a higher peak classification temperature is desired.
2. Reliability Test Criteria.
2.1 Operating temperature range: -40 to 125℃
2.2 Terminal strength: Pull test withstand 9.8N 60+/-0.5S no looseness or movement.
2.3 Solderbility: Dipped in 245℃+/-5℃ molten solder for 3+/-0.5 seconds,95% min shall besmooth any and bright
2.4 Resistance to soldering heat : Convection reflow condition setting: peak temperature at 260 +0/-5 above 217 for 60-150 seconds, ramp-up rate 2-3 /s. Ramp-down rate 6 /s Max. No mechanical problem found. No electrical failure found per our specification.
2.5 Vibration: 1.5mm amplitude total excursion 10-55-10 Hz traversed in 1minute, x.y.z, axis for 2 hours. Shall not be any abnormality.
2.6 Random drop (Packing condition): Height 60cm, 3 times on the wood floorboard ,shall not be any abnormality.
2.7 Damp Heat: 60+/-2 , 93+/-3% RH 96 hours.
2.8 Change of temperature: exposed 5 cycle; each consisting of 30 minutes at -20+/-2 2-3 minutes at 20+/-2 ,30 minutes at 85+/-2 , 2-3 minutes at 20+/-2 .
Remarks:
After reliability test per item 7,8,9,10 in prior to the test as specified, the transformer / coil would be exposed to the room temperature for 1-2 hours,the component meets all requirements according to this specification.

1.Recommended Lead Free IR Reflow Curve



Item	Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
1	Preheat/Soak Temperature Min (Tsmin) Temperature Max (Tsmax) Time (ts) from (Tsmin to Tsmax)	100 °C 150 °C 60-120 seconds	150 °C 200 °C 60-120 seconds
2	Ramp-up rate (TL to Tp)	3 °C/second max.	3 °C/second max.
3	Liquidous temperature (TL) Time (tL) maintained above TL	183 °C 60-150 seconds	217 °C 60-150 seconds
4	Peak package body temperature (Tp)	For users Tp must not exceed the Classification temp in Table 4-1(IPC/JEDEC J-STD-020D.1). For suppliers Tp must equal or exceed the Classification temp in Table 4-1(IPC/JEDEC J-STD-020D.1).	For users Tp must not exceed the Classification temp in Table 4-2(IPC/JEDEC J-STD-020D.1). For suppliers Tp must equal or exceed the Classification temp in Table 4-2(IPC/JEDEC J-STD-020D.1).
5	Time (tp)* within 5 °C of the specified classification temperature (Tc), seeFigure 5-1 (IPC/JEDEC J-STD-020D.1).	20* seconds	30* seconds
6	Ramp-down rate (Tp to TL)	6 °C/second max.	6 °C/second max.
7	Time 25 °C to peak temperature	6 minutes max.	8 minutes max.
* Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.			


ITE
US LISTED
9T96 E158873
UK
CA
10
NETWORK CAMERA,XND-A9084RV
PoE (48V ⎓) 0.23A
M/C: XND-A9084RV/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

Photographs-01 Page-1



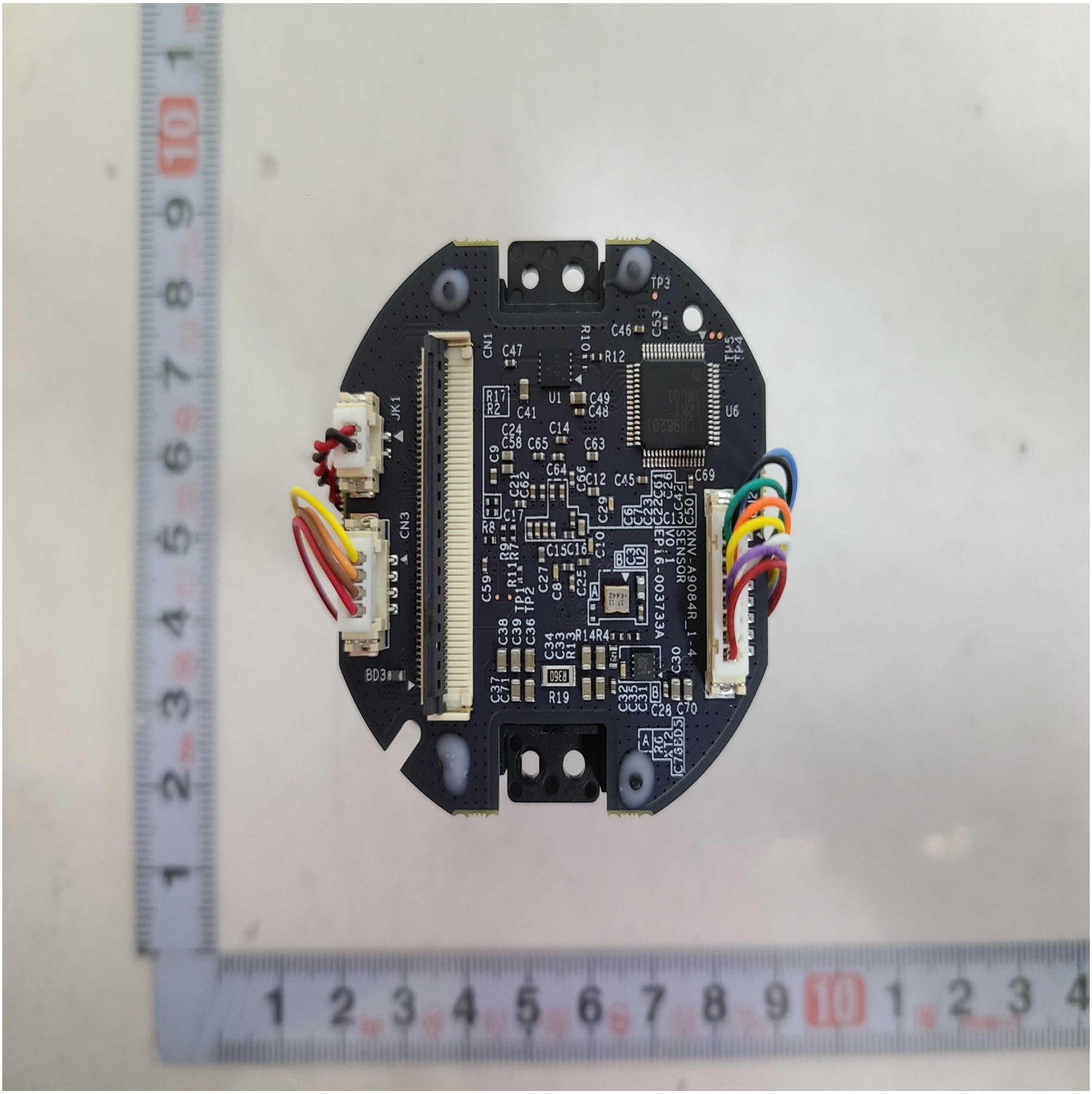
Photographs-02 Page-1



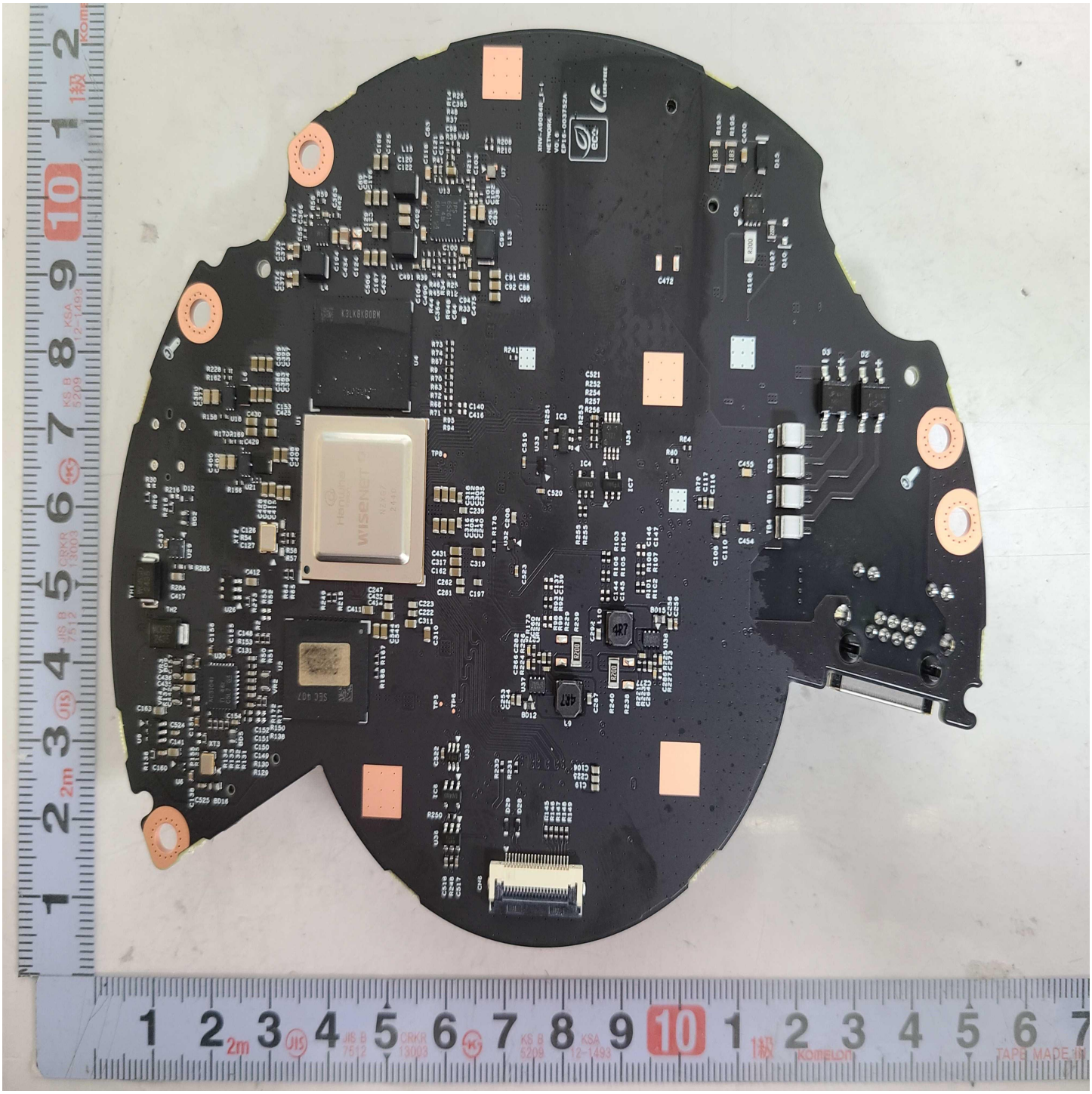
Photographs-04 Page-1



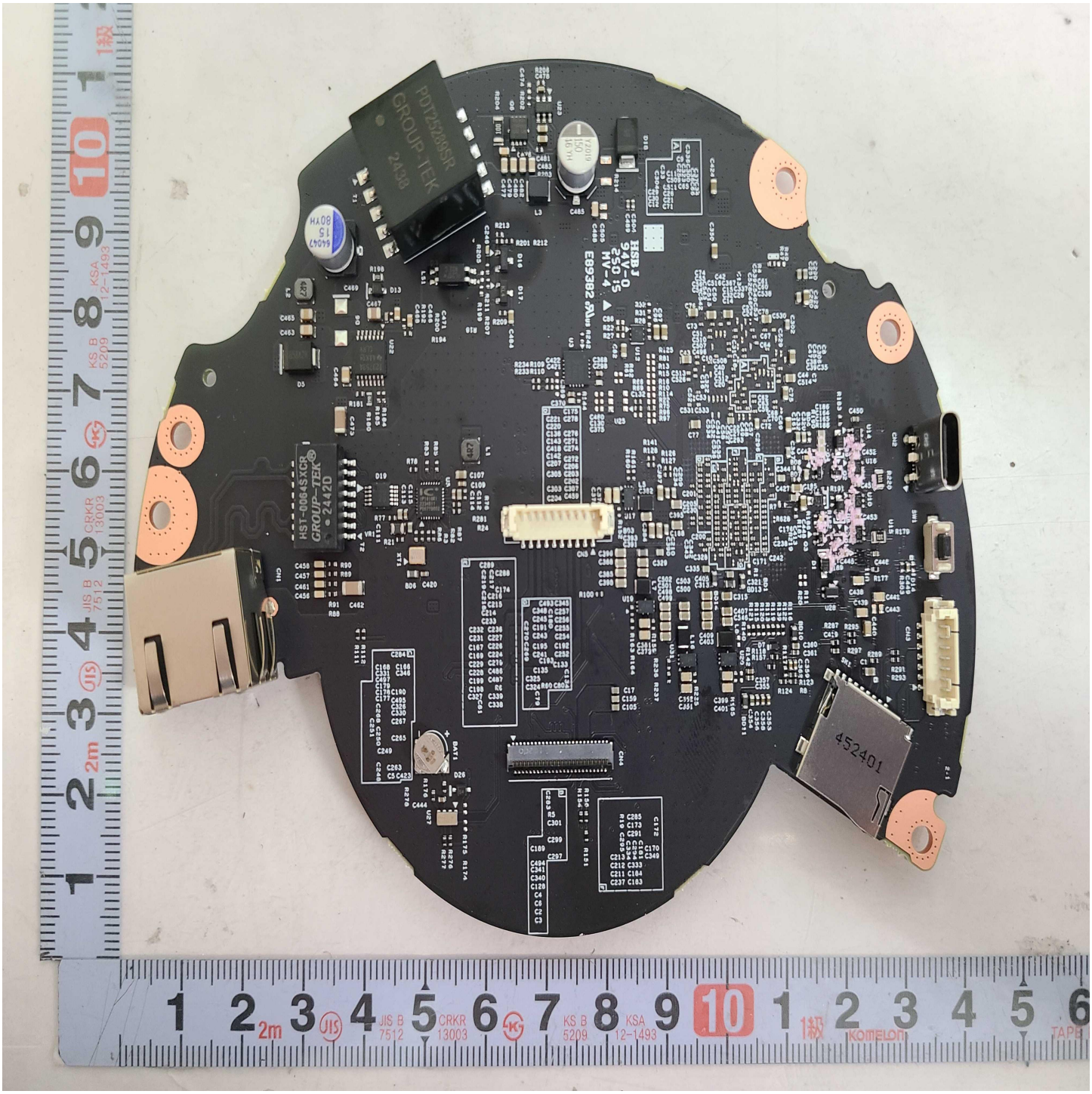
Photographs-05 Page-1



Photographs-06 Page-1



Photographs-07 Page-1



Photographs-08 Page-1



Photographs-09 Page-1



Photographs-10 Page-1

