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-A6314-DescriptionUL
Figure-19-Total

This material is provided on behalf of UL LLC (UL) or any authorized licensee of UL.

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:	PNM-A32084RQZ, PNM-A20084RQZ, PNM-A24084RTZ, PNM-A15084RTZ
Rating:	PoE (55 Vdc), 0.67 A (for model PNM-A32084RQZ) PoE (55 Vdc), 0.7 A (for model PNM-A20084RQZ) PoE (55 Vdc), 0.53 A (for model PNM-A24084RQZ) PoE (55 Vdc), 0.56 A (for model PNM-A15084RQZ)
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.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Seohwan Kim / Project Handler Reviewed By: SeungTae Kim / Reviewer

Copyright © 2019

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

Model Differences

PNM-A32084RQZ is basic model (Rating current 0.67 A, 8M resolution with consist 4 image sensor)

PNM-A20084RQZ is identical to basic model except model designation, rating current(0.7 A) and resolution(5M) .

PNM-A24084RTZ is identical to basic model except model designation, rating current(0.53 A) and image sensor(3ea).

PNM-A15084RTZ is identical to basic model except model designation, rating current(0.56 A), resolution(5M) and image sensor(3ea).

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 .....:	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) .....:	55 Outdoor: minimum -40
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).....:	3.81 Kg (for model PNM-A32084RQZ) 3.62 Kg (for model PNM-A20084RQZ) 3.48 Kg (for model PNM-A24084RQZ) 3.48 Kg (for model PNM-A15084RQZ)

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 55 °C (Min -40 °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 outdoor equipment was evaluated for use in an ambient range of: -40 °C to 55 °C

Additional Information

4792363529
- Maximum Normal Load: Continuous operation. (Operate the camera through networked equipment, recording through SD memory cards with IR LED 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)
Outdoor enclosure type	"Rainproof", "Étanche", IP66
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 PoE(55Vdc), 0.70A. (PNM-A20084RQZ) 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(55Vdc), 0.67A. (PNM-A32084RQZ) 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(55Vdc), 0.56A. (PNM-A15084RTZ) 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(55Vdc), 0.53A. (PNM-A24084RTZ)
(Website) Manual - 2	The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3bt 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.
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 are not required to be tested					
BD1.3	**Electric Strength Test Exemptions – This test is not required for the following models:**					
	All models are not required to be tested					
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 are not required to be tested					

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
Dome cover top Enclosure (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 2.0 mm thickness, rated Min V-0, RTI min. 130 deg. C.	QMFZ2	UL (E115797)	
Dome cover Enclosure (bubble Plastic)	MITSUBISHI ENGINEERING-PLASTICS CORP	S-2000V+(f1)	Min. 3.0 mm thickness, rated Min. V-2, RTI min. 115 deg. C.	QMFZ2	UL(E41179)	
Dome cover side black Enclosure (Plastic)	SABIC INNOVATIVE PLASTICS US L L C	EXL9330(GG)(X)(f1)(B1)(IP)	Min. 1.6 mm thickness, rated Min. V-0, RTI min. 110 deg. C.	QMFZ2	UL(E121562)	
Dome cover side black(glossy) Enclosure (Plastic)	Covestro Deutschland AG [PC Resins]	MAKROLON 2407 + (f1)	Min. 2.5 mm thickness, rated Min. V-2, RTI min. 115 deg. C.	QMFZ2	UL(E41613)	
Top Enclosure (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 1.5 mm thickness, rated Min V-0, RTI min. 130 deg. C.	QMFZ2	UL (E115797)	
Bottom side cover (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 2.0 mm thickness, rated Min V-0, RTI min. 130 deg. C.	QMFZ2	UL (E115797)	
Bottom side button (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 1.8 mm thickness, rated Min V-0, RTI min. 130 deg. C.	QMFZ2	UL (E115797)	
Mounting Hole Cover(Plastic) - Optional	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 2.0 mm thickness, rated Min V-0, RTI min. 130 deg. C.	QMFZ2	UL (E115797)	
Bottom Enclosure (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.5 mm thickness, See enclosures for dimension.	-	Tested in equipment	
Mounting bracket (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.5 mm thickness, See enclosures for dimension.	-	Tested in equipment	

Internal plastic parts 1	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 1.0 mm thickness, rated Min V-0, RTI min. 130 deg. C.	QMFZ2	UL (E115797)	
Internal plastic parts 1- Alternate	Interchangeable	Interchangeable	Min. 1.0 mm thickness, rated Min HB	QMFZ2	UL	
Internal plastic parts 2	LG Chem LTD	LUPOY GP2100	Min. 1.5 mm thickness, rated Min HB, RTI min. 80 deg. C.	QMFZ2	UL (E67171)	
Internal plastic parts 2- Alternate	Interchangeable	Interchangeable	Min. 1.5 mm thickness, rated Min HB	QMFZ2	UL	
Thermal pad(4ea)	KOMOTECH	KGP-1(a)	Min. 0.2 mm thickness, rated V-0, 150 deg. C	QMFZ2	UL (E245303)	
Thermal pad (2ea)	ATEX CO LTD	ATP-20	Min. 0.2 mm thickness, rated V-0, 105 deg. C	QMFZ2	UL (E513170)	
Gasket - Between Cover top Plastic Side and Cover Bottom Metal side	Y&K	O-VMQ-30-BK	Gasket Test was conducted under E158873-A6034	-	Tested in equipment	
Gasket - Cable bushing 1	NAMYANG VINA	C-VMQ-40-GR	Gasket Test was conducted under E158873-A6034	-	Tested in equipment	
Gasket - Cable bushing 2	NAMYANG VINA	C-VMQ-60-GR	Gasket Test was conducted under E158873-A6034	-	Tested in equipment	
Lens module (For model PNM-A32084RQZ) (4ea)	DongGuan YuTong Optical Technology Co ., Ltd.	YT0W8Z05FB.ICR-8MP	Zoom/Focus : 5.0 V ±0.5 V DC, 167 mA IR-Cut : 3.5~6.0 V DC	-	Tested in equipment	
Lens module (For model PNM-A24084RTZ) (3ea)	DongGuan YuTong Optical Technology Co ., Ltd.	YT0W8Z05FB.ICR-8MP	Zoom/Focus : 5.0 V ±0.5 V DC, 167 mA IR-Cut : 3.5~6.0 V DC	-	Tested in equipment	
Lens module	DongGuan YuTong Optical Technology Co ., Ltd.	YT0W8Z05FB.ICR-5MP	Zoom/Focus : 5.0 V ±0.5 V DC, 167 mA	-	Tested in equipment	

(For model PNM-A20084RQZ) (4ea)			IR-Cut : 3.5~6.0 V DC			
Lens module (For model PNM-A15084RTZ) (3ea)	DongGuan YuTong Optical Technology Co ., Ltd.	YT0W8Z05FB.ICR-5MP	Zoom/Focus : 5.0 V ±0.5 V DC, 167 mA IR-Cut : 3.5~6.0 V DC	-	Tested in equipment	
Transformer (T2)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO.，LTD	PDT25268SR	100 uH, See enclosure for more detail.	-	Tested in equipment	
Line Filter (T1)	TNC CO.,LTD	CV320070SB	7.0 mH, 105 deg. C, See enclosure for more detail.	-	Tested in equipment	
Opto-coupler (LS1)	LITE-ON Technology Corporation	LTV-217 (Type: LTV-217-C-G)	Isolation Voltage: 3750 Vac, Max. operation temperature: 110 deg. C	FPQU2	UL (E113898)	
IR LED (LD1 to LD3 – 12 EA) (For model PNM-A32084RQZ, PNM-A20084RQZ)	Brightek OPTOELECTRONIC CO., LTD	SD3838F85CQ02	Vf = Max. 1.9 V, If = Max. 1.0 A	-	IEC 62471	
IR LED (LD1 to LD3 – 9EA) (For model PNM-A24084RTZ, PNM-A15084RTZ)	Brightek OPTOELECTRONIC CO., LTD	SD3838F85CQ02	Vf = Max. 1.9 V, If = Max. 1.0 A	-	IEC 62471	
Rechargeable battery (BAT2)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	MS421R	Lithium, Rechargeable, Max Charging Voltage, 3.4 V dc, Max Charging current: 300 mA	-	UL (MH15628)	
Lithium battery protection circuits	Interchangeable	Interchangeable	Diode (D20, 80 V, 150 mA) and Resistor (R517, 3.3Kohm) in series	-	Tested in equipment	

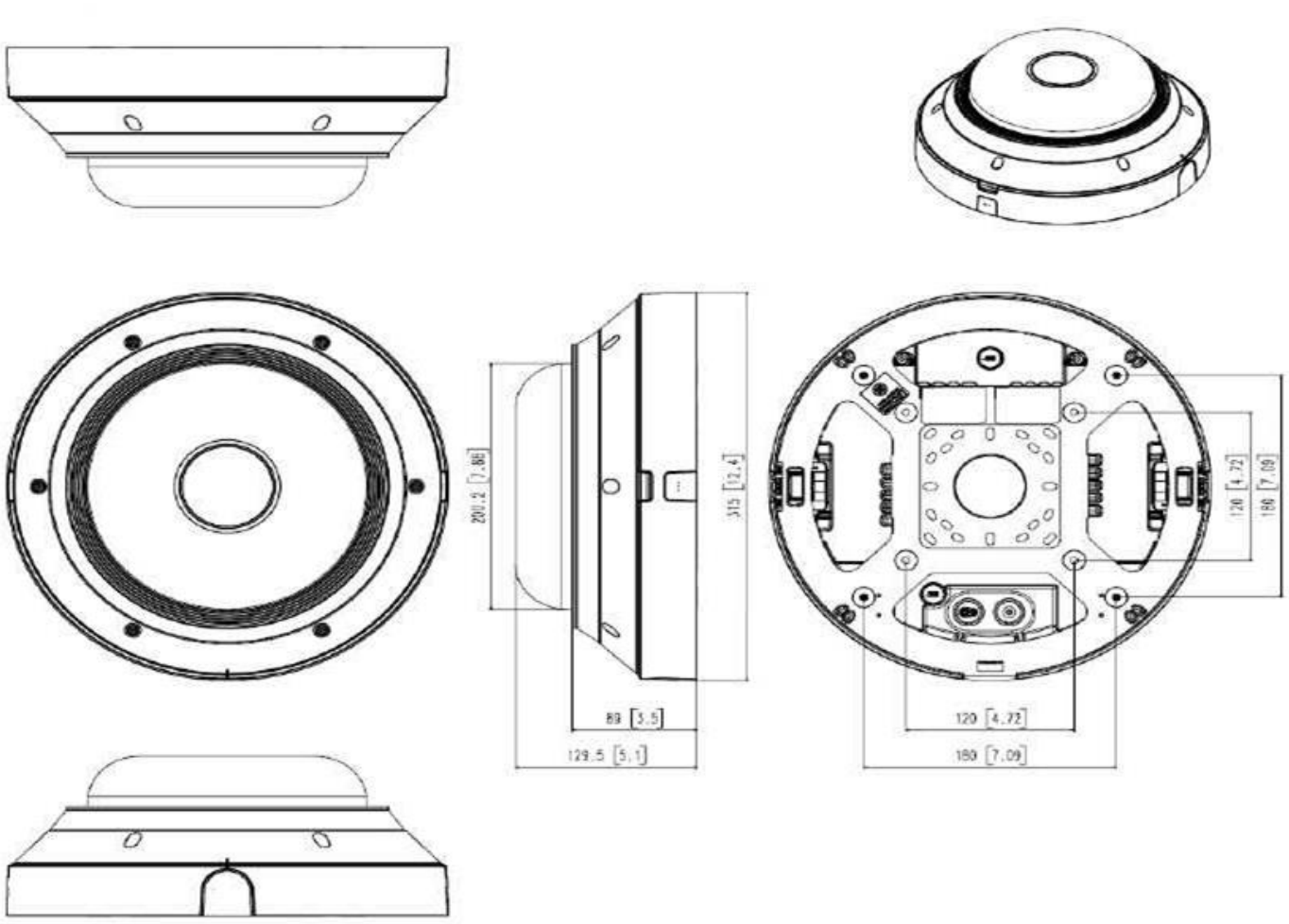
Image Sensor (For model PNM-A32084RQZ) (4ea)	SONY	IMX778-AQR1-C	Analog 3.0V(Max) 73mA(Max) Interface 1.9V(Max) 3mA(Max) Digital 1.2V(Max) 123mA(Max)	-	Tested in equipment	
Image Sensor (For model PNM-A24084RTZ) (3ea)	SONY	IMX778-AQR1-C	Analog 3.0V(Max) 73mA(Max) Interface 1.9V(Max) 3mA(Max) Digital 1.2V(Max) 123mA(Max)	-	Tested in equipment	
Image Sensor (For model PNM-A20084RQZ) (4ea)	SONY	IMX675-AAQR-C	Analog 3.4V(Max) 58mA(Max) Interface 1.9V(Max) 4mA(Max) Digital 1.2V(Max) 115mA(Max)	-	Tested in equipment	
Image Sensor (For model PNM-A15084RTZ) (3ea)	SONY	IMX675-AAQR-C	Analog 3.4V(Max) 58mA(Max) Interface 1.9V(Max) 4mA(Max) Digital 1.2V(Max) 115mA(Max)	-	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	
Outdoor Label	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	PGDQ2 or PGJI2 and PGAA	UL	

			Max. 55 deg. C if not specified.			

Enclosures

Type	Supplement Id	Description
Photographs	03-09	External View - 1
Photographs	03-02	External View - 2
Photographs	03-04	Internal View - 1
Photographs	03-05	Internal View - 2
Photographs	03-06	Interface board top
Photographs	03-07	Interface board bottom
Photographs	03-08	CDS board top
Photographs	03-09	CDS board bottom
Photographs	03-10	IR LED board top
Photographs	03-11	IR LED board bottom
Photographs	03-12	Lens module
Photographs	03-13	Main board top
Photographs	03-14	Main board bottom
Photographs	03-15	SD board top
Photographs	03-16	SD board bottom
Photographs	03-17	Sensor board
Diagrams	04-01	Enclosure Diagram
Manuals	06-01	Manual
Miscellaneous	07-01	Transformer (T1) Specification
Miscellaneous	07-02	Label

Diagrams-01 Page-1



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

Hanwha Vision

NETWORK CAMERA

User Manual

PNM-A32084RQZ/PNM-A20084RQZ
PNM-A24084RTZ/PNM-A15084RTZ

CE

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(55V), 0.70A. (PNM-A20084RQZ)
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(55V), 0.67A. (PNM-A32084RQZ)
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(55V), 0.56A. (PNM-A15084RTZ)
18. 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(55V), 0.53A. (PNM-A24084RTZ)
19. This product is intended to be supplied by isolation power.
20. 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.
21. 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.
22. 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.
23. 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.
24. Installing or using the product in water can cause serious damage to the product.
25. Screen distortion could occur outside of the subject distance.
26. While encoding, a real time fps fluctuation of ±1fps could occur.
27. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.

28. 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.

29. The operating temperature of the product is -40°C~+55°C(-40°F~+131°F).

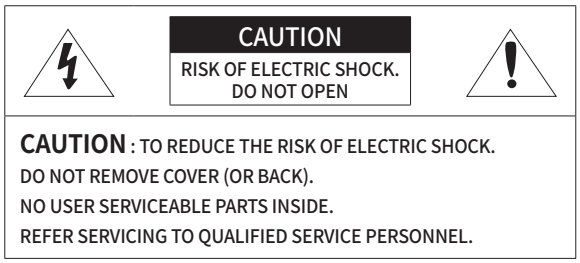
WARNING

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 OPENINGS 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.

overview

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.

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.

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.

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 802.3bt 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.
- Do not adjust or move the lens directly with your hands. Doing so could damage the lens or degrade its performance.
- The life expectancy of driving the lens motor is 200 rotations.
- To move the location of your camera, privacy masking needs to be reset.

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

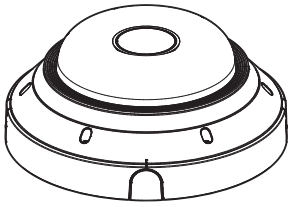
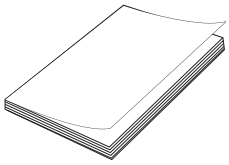
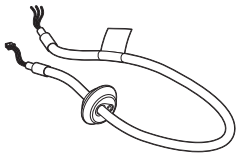
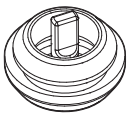
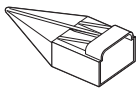
※ Please read this manual for the safety before using of goods and keep it in the safe place.

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

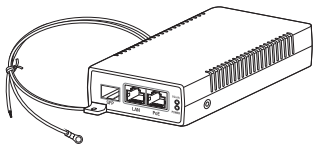
In particular installation environments, there might be interference in radio communications. When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna.

WHAT'S INCLUDED

Please check if your camera and accessories are all included in the product package.
(As for each sales country, accessories are not the same.)

Appearance	Item Name	Quantity	Description
	Camera	1	
	Quick Guide (Optional)	1	
	Alarm cable	1	Used when connecting to an alarm
	Cable bushing	1	Extra cable bushing for network cable installation.
	Cap Installer	1	Used to connect the RJ45 cable.
	Torx L wrench	1	Used to assemble/disassemble the dome cover and camera body

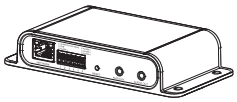
Option (not included)



SPO-6011

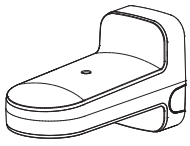
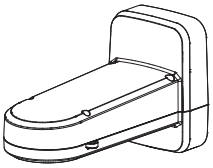
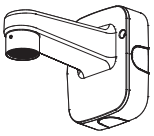
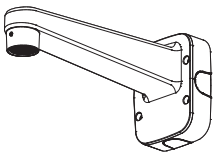
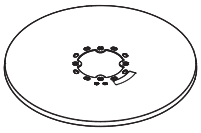
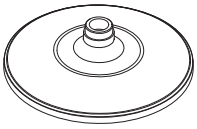
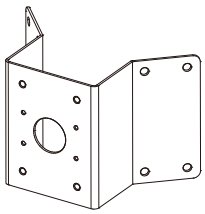
- The number or shape of camera lenses may vary depending on the model name.
- Use installation screws of at least M4, L30 for the installation of this product.

NETWORK I/O BOX - SEPARATELY SOLD PRODUCT

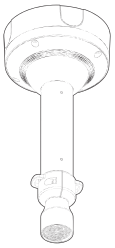
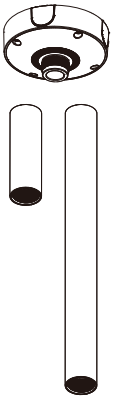
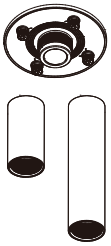
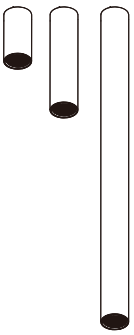
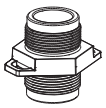
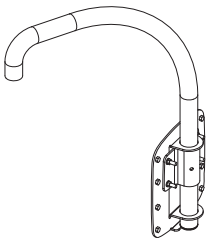
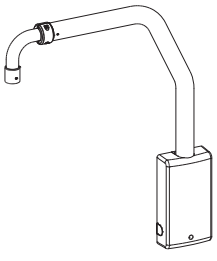
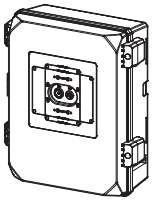
Appearance	Item Name	Description	Model Name
	Network I/O box	External connection device for camera's alarm and audio I/O	SPM-4210

OPTIONAL ACCESSORIES FOR INSTALLATION

You can purchase appropriate optional accessories available.

Model name	PNM-A32084RQZ/PNM-A20084RQZ/PNM-A24084RTZ/PNM-A15084RTZ
Wall Mount and Pole Mount	 SBP-250WMW (Wall&Pole Mount)  SBP-400WMW (Wall&Pole Mount)  SBP-200WMW (Wall&Pole Mount)  SBP-350WMW (Wall&Pole Mount)
Mounting Hole Cover	 SBP-315C
Hanging Mount	 SBP-315HMW
Corner Mount	 SBP-156KMW

overview

Model name		PNM-A32084RQZ/PNM-A20084RQZ/PNM-A24084RTZ/PNM-A15084RTZ
Ceiling Mount	Assembly	 SBP-300CMTW (Telescopic)  SBP-300CMTS (Ball Head)  SBP-300CMW1 SBP-900CMW  SBP-150CMI SBP-300CMI
	Individual Parts	 SBP-180CMB  SBP-180CMS (Ball Head)  SBP-140CMB  SBP-150CMP SBP-300CMP SBP-900CMP  SBP-C15P  SBP-C15H
Parapet Mount		 SBP-300LMW  SBP-156LMW1
Cabinet		 SBP-150NBW

installation & connection

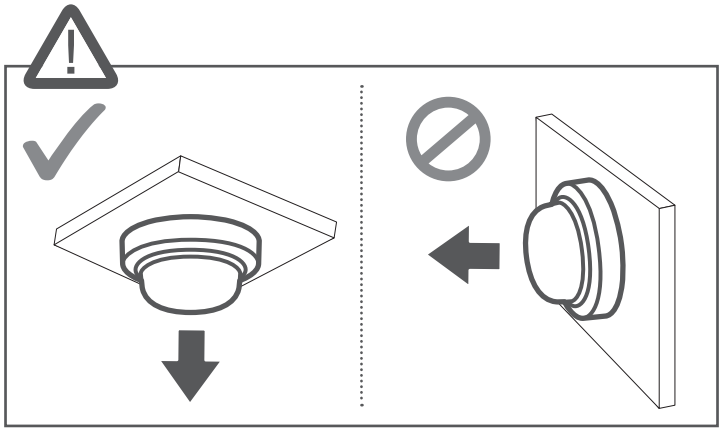
INSTALLATION

- 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

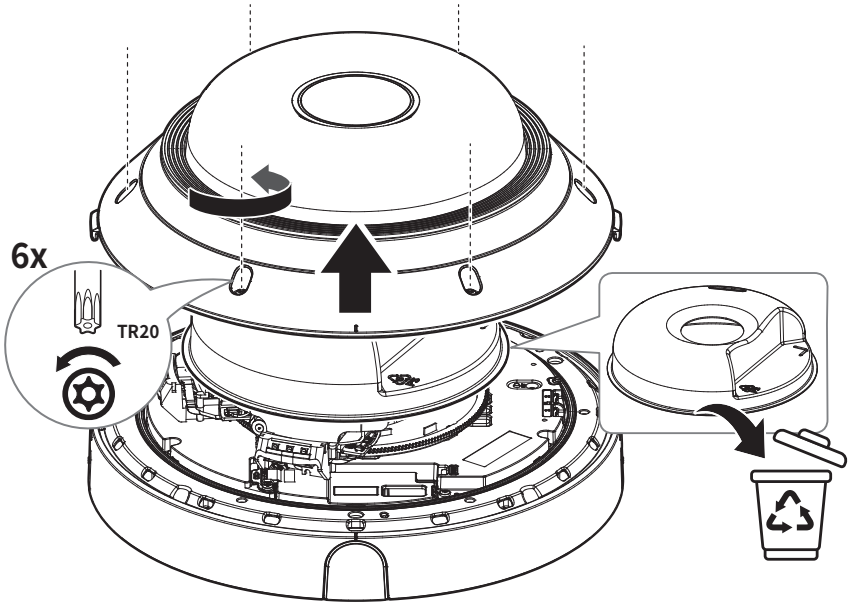
Ensure you read out the following instructions before installing the camera:

- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- 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.

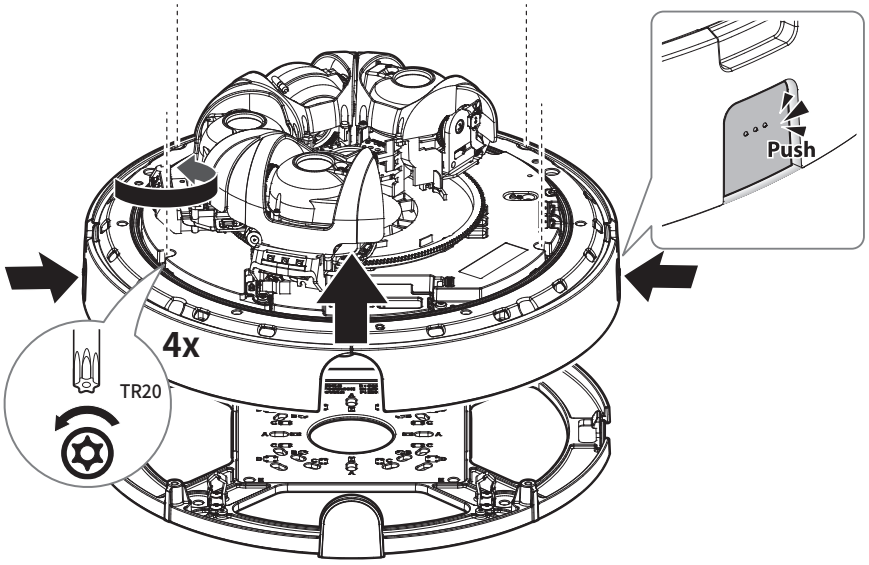


Disassembling

1. Remove the dome cover by turning the dome cover's fastening bolt counterclockwise.
   - Note that it is not necessary to loosen the screws completely.
   - Be sure to remove the lens protection case before installation.



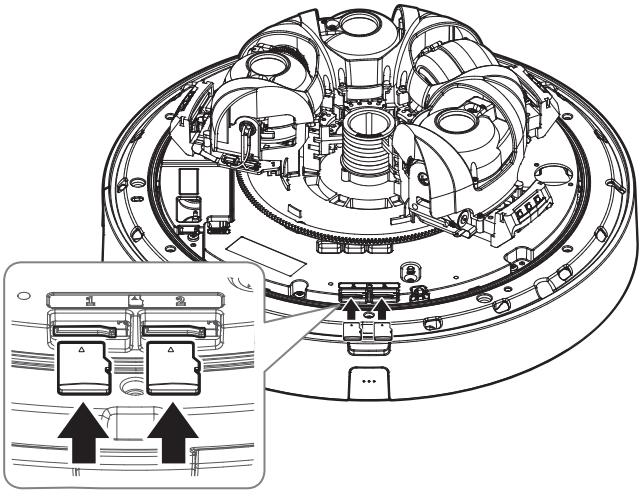
2. After loosening the fastening screws on the camera body, remove the mount plate after pressing the buttons on both sides as shown in the figure.



Inserting a Micro SD card

1. Remove the dome cover of the camera.

2. Insert a Micro SD card in the arrow direction shown in the figure.



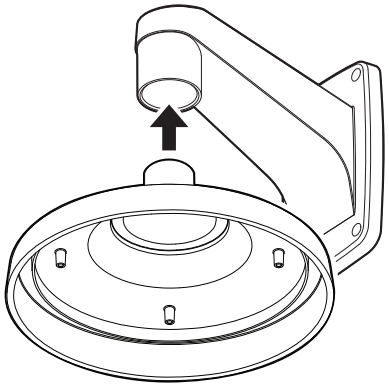
- Before installing the camera, the Micro SD card should be inserted while the power source and the body are separated.
- Do not forcefully insert it in the reverse direction. It might damage your Micro SD card and your product.
- When it rains or the humidity is high, insertion or ejection of a Micro SD card is not recommended.
- Disassembly of the product cover should be finished within 5 minutes, or there will be the risk of internal dew condensation.
- 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.
- If your camera's IR LED blocks the Micro SD slot, move the lens not to block the slot.

[Installation using the mount]

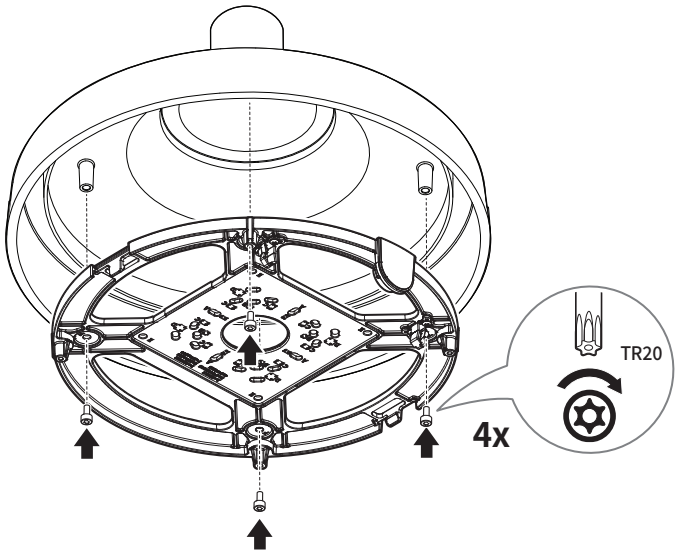
Choose and purchase a necessary one of the following options (unbundled) that is suitable to the installation site or for your convenience.

3-1. Attach the hanging mount to the wall mount.

- Both the hanging mount and wall mount are sold separately.



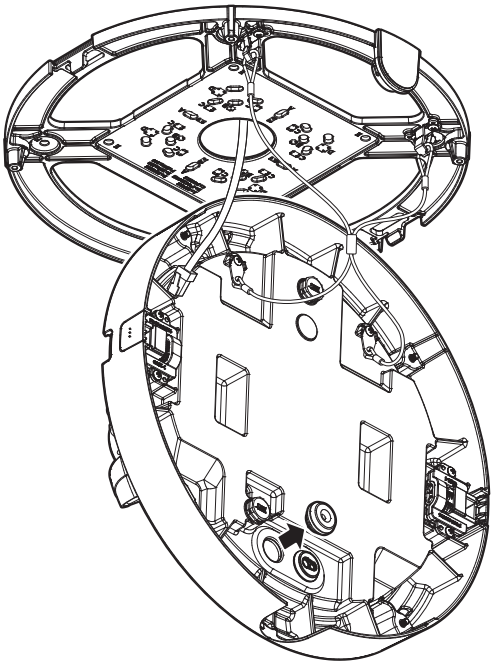
3-2. Attach the mounting plate to the hanging mount using the appropriate screws.



[Installing the network cable] (IP66)

- 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.

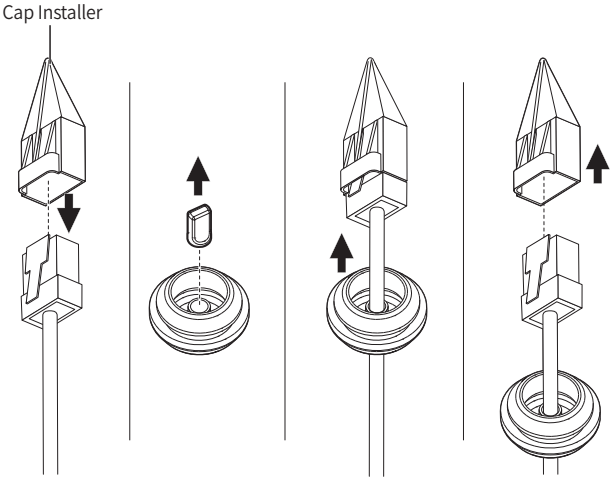
3. As shown in the figure below, remove the cable bushing from the camera body.



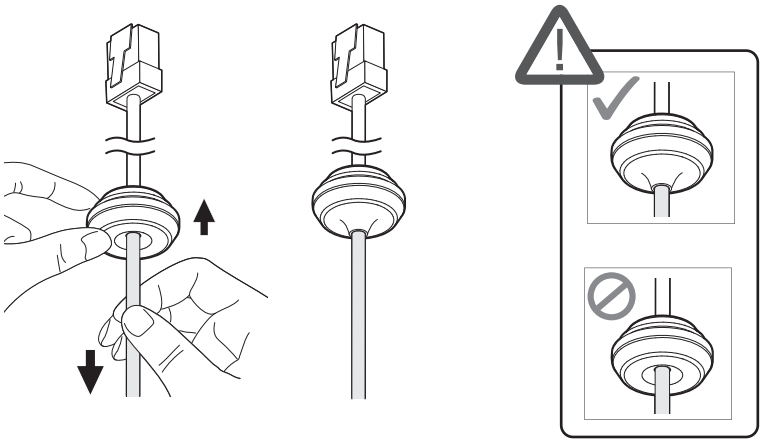
4. Remove the protruding part of the 1-hole cable bushing that was removed from the camera body.

5. Use the cap installer to route the network cable through the cable bushing.

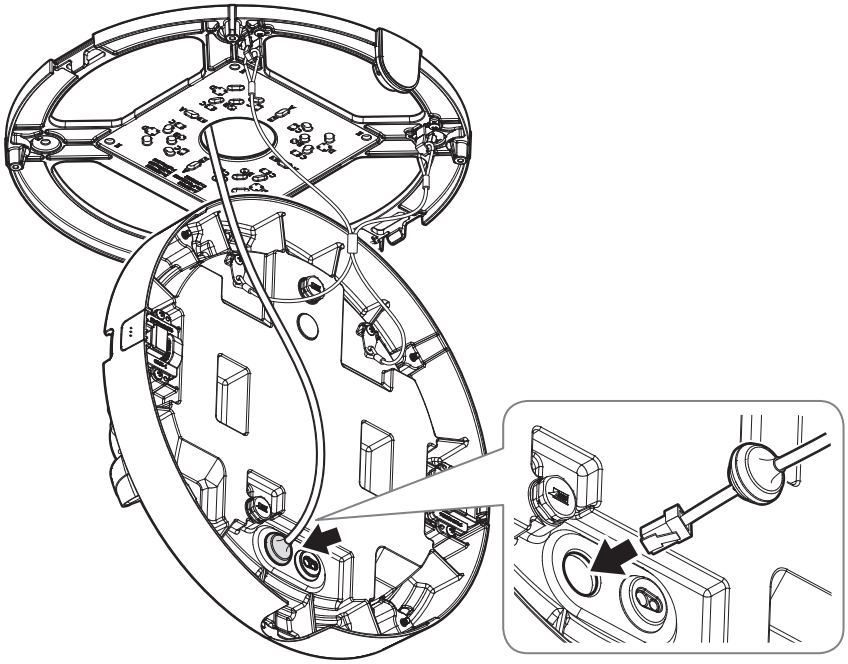
Cap Installer



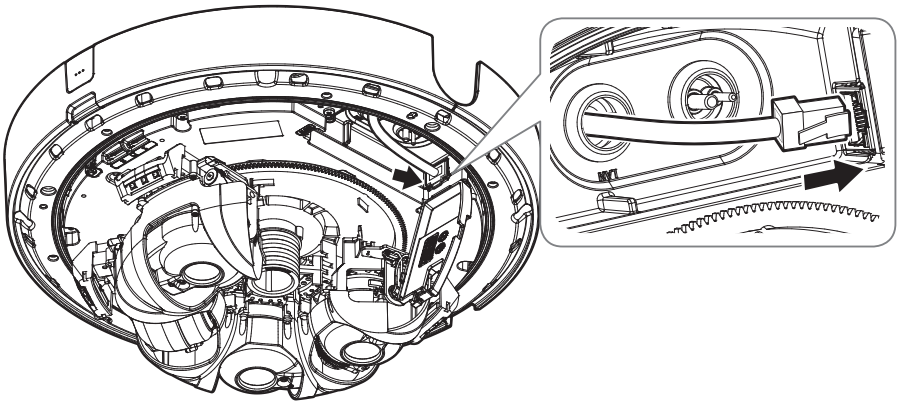
6. For waterproof protection, pull down the cable below the cable bushing as shown in the figure below.



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

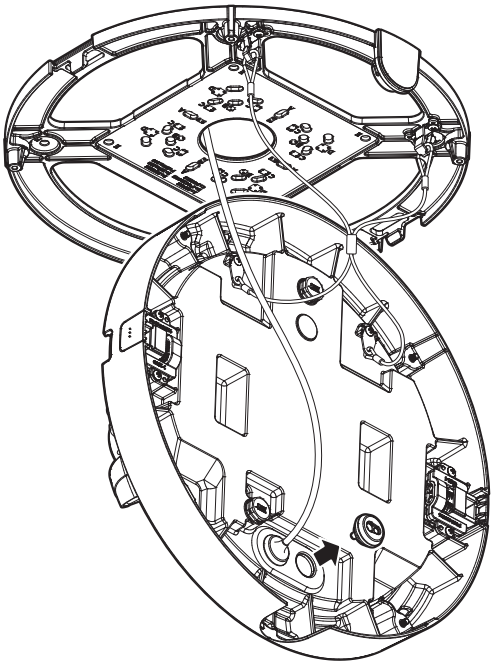


8. Connect the connector of the network cable to the camera's PoE+/PoE++ port.

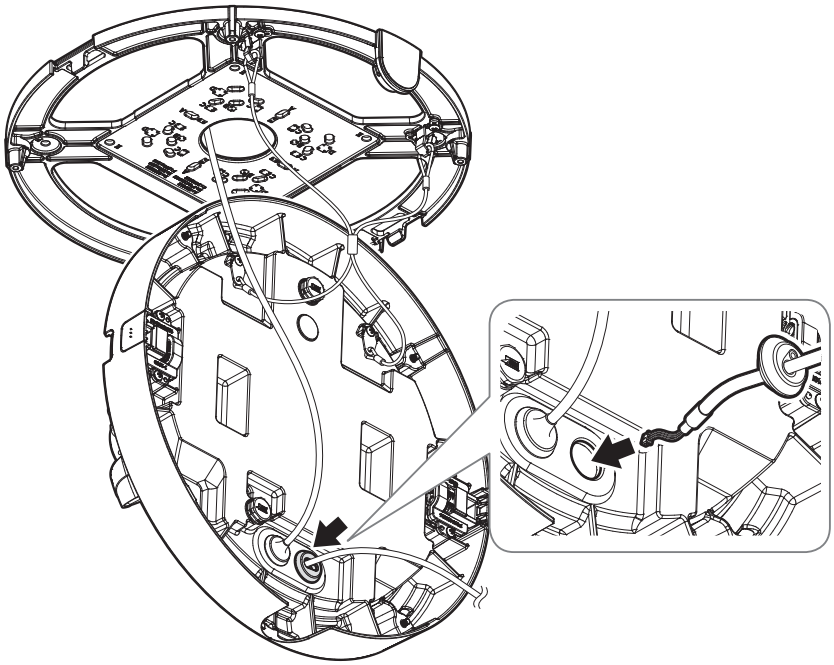


[Installing alarm cables]

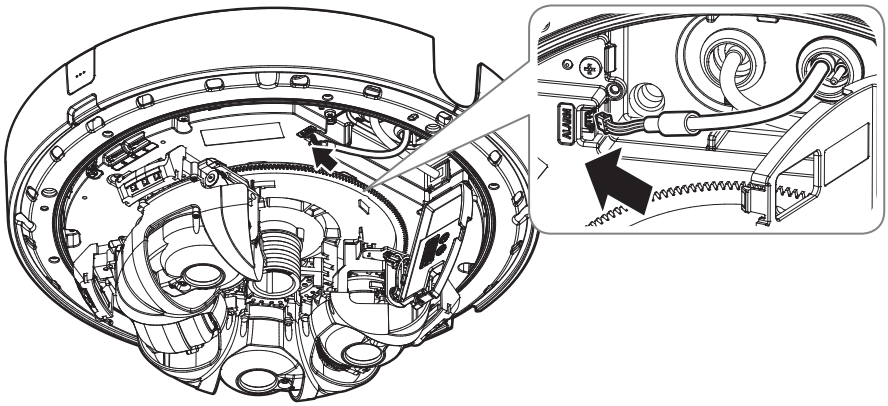
9. As shown in the figure below, remove the cable bushing from the camera body.



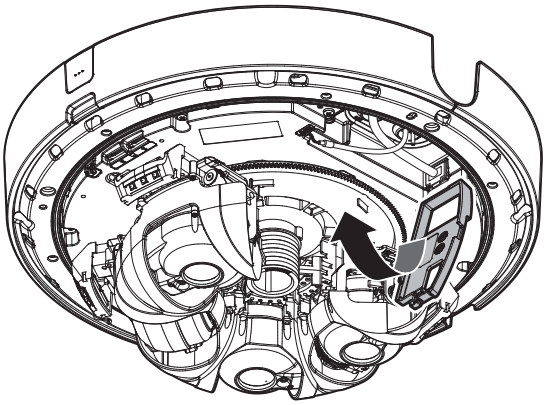
10. Insert the provided bushing of the alarm cable into the camera body.



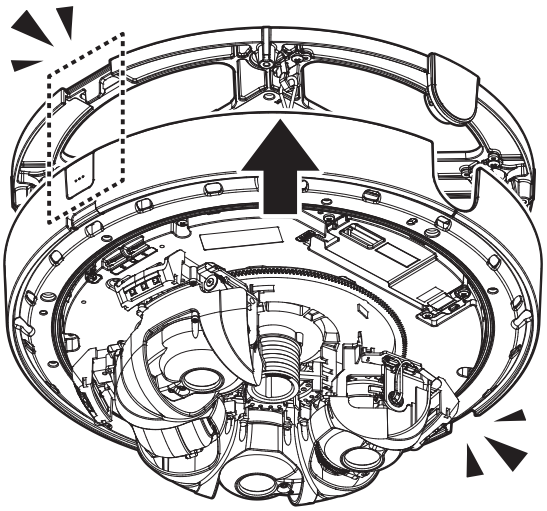
11. Connect the connector of the alarm cable to its connection port.



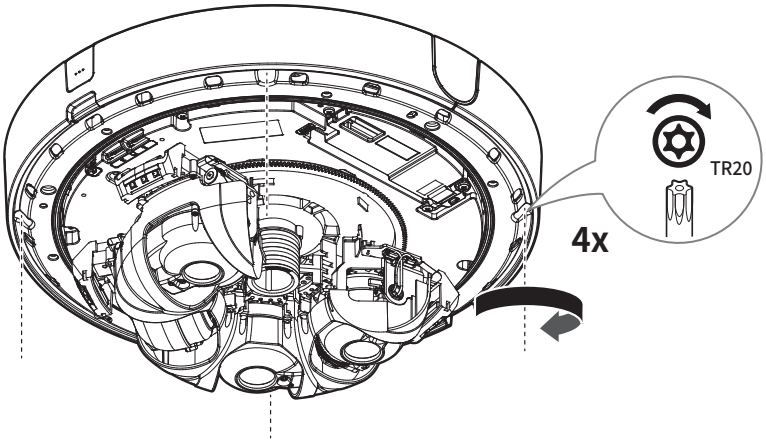
12. Connect the cables to the ports inside the camera, and then close the cable cover until a click sound is heard.



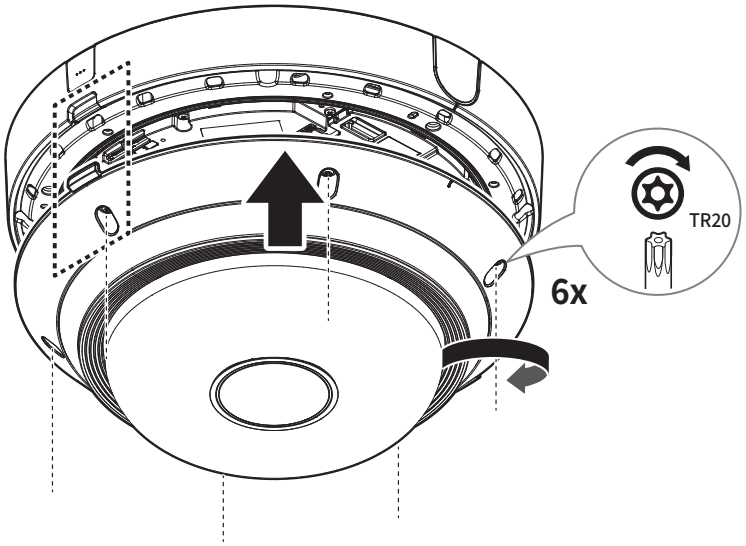
13. Lift up the camera body and push the mounting clips until they click into place.



14. Fix the camera body by tightening the fastening screws on the camera body.

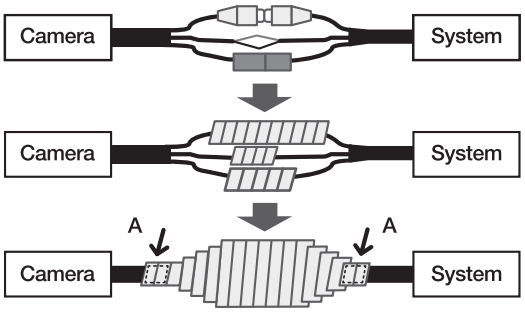


15. Adjust the lens to the desired direction by referring to "**Adjusting the monitoring direction for the camera**".
    - If you tilt the lens, you may need to adjust the lens as this may block the screen.
16. Assemble the dome cover.
    - Assemble the camera and the dome cover by aligning the direction guide on them.
    - Make sure to firmly tighten the fastening screws so that there is no water damage issue.



Outdoor installation

When you install it outside of the building, please waterproof it with waterproof butyl rubber tape (can be purchased in stores) so that water does not leak from the gap of the cable connected to the outside.



1. Connect network and alarm cables, etc.
2. Wrap the black cable jacket (Area A) and the cable connection area with waterproof (butyl rubber) tape so that more than half of the butyl rubber tape is overlapped.

- If the cable jacket is not waterproofed properly, then it can directly cause leakage. Make sure to protect the cable with a dense layer of taping.
- Waterproof butyl tape is made of butyl rubber that can be stretched to twice its normal length.

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

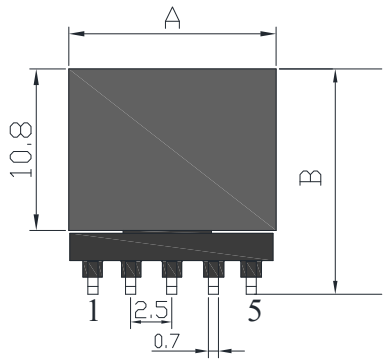
SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	
客户料号 MODEL NO	EP23-001107A
产品名称 PART NAME	**POWER TRANSFORMER**
产品型号 PART TYPE	PDT25268SR
版 本 REV	A
签 名 SIGNATURE	制作：联泰兴 2024-7-17 JLYe PREPARED BY 审核：联泰兴 2024-7-17 weifeng.Luo CHECKED BY 批准 联泰兴 2024-7-17 Jiang.Wang APPROVED BY
客户承认 CUSTOMER APPROVAL	承认印: SIGNET 签 名: SIGNATURE

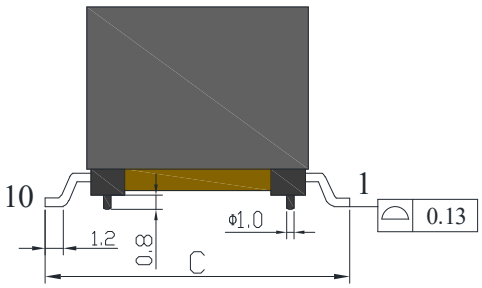
深 圳 市 联 泰 兴 电 子 科 技 有 限 公 司
SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO.，LTD
地 址 ：深圳市宝安区石岩街道应人石工业区伟泰路 1 栋 2-5 楼
ADD: Floor 2-5, No.1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen,China
TEL：+86-755-29810619 29810976 FAX：+86-755-29810159
Http://www.group-tek.com **E-mail:sale1@group-tek.com**

2. EXTERNAL DIMENSIONS: UNIT: mm

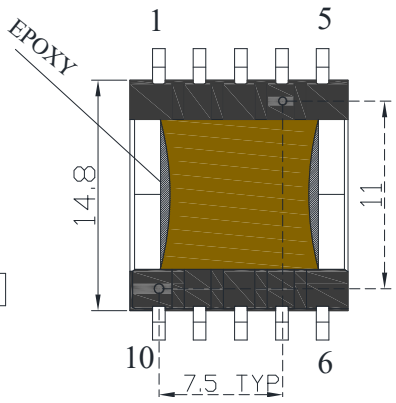
FRONT VIEW



SIDE VIEW



BOTTOM VIEW



Note:

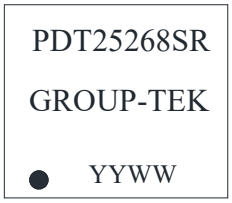
1.Wrap 2Ts of 7mm kapton tape around the finished part.

2.Fixed the cores with glue,and fixed the case with glue.

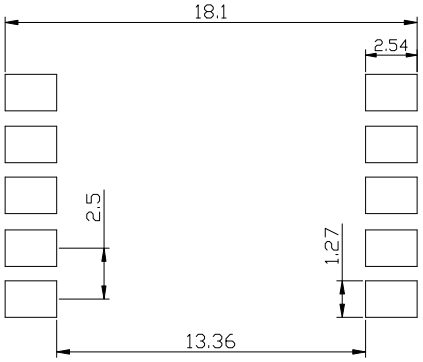
Unit: mm Tolerances:

A Max	B Max	C Max
15.2	14.0	17.8

Marking information



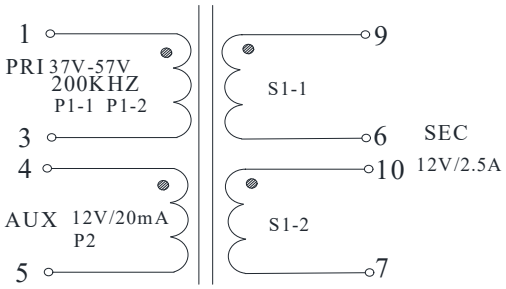
Suggested PCB Pad Lad Layout



3. Electrical Characteristics :

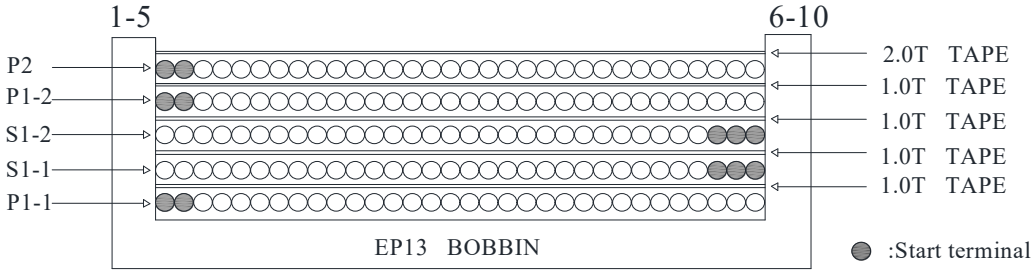
Specifications: at 25 degree C. Operating Temperature -40 to +125°C			
NO	ITEM	TEST CONDITION	SPECIFICATION
1	Inductance	((1-3)) @25℃ 100KHZ/1.0V	100uH±15%
2	Leakage Inductance	(1-3)@25℃100KHZ/1.0V shorted other pins	0.4uH MAX
3	DCR	(1-3)@25℃	40mΩ MAX.
4		(9-6)@25℃	32mΩ MAX.
5		(10-7)@25℃	36mΩ MAX.
		(4-5)@25℃	150mΩ MAX.
6	TURNS RATIO	（1-3）:（9-6）:（10-7）:（4-5）20KHZ/1.0V	1.71：1：1±3%
7	HI-POT:	PRI TO SEC	1500V/AC/5mA 3Sec
8	INSULATION RESISTANCE	PRI-SEC DC500V	100MΩ Min
		PRI-CORE DC500V	100MΩ Min
		SEC-CORE DC500V	100MΩ Min

5. Schematic:



NOTE: PIN9,10&6,7 must shorted on PCB

6. winding detail:

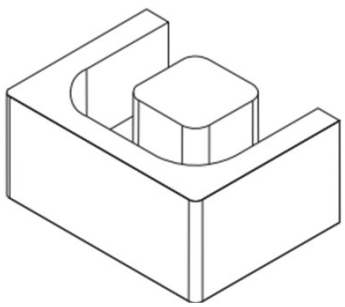


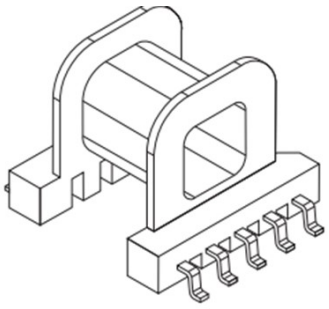
7. Winding Information:

WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
P1-1	1--3	2*0.27mm 2UEW	12TS	1T w8.0mm	N/A	N/A	1
S1-1	9--6	3*0.28mm 2UEW	7TS	1T w8.0mm	N/A	N/A	1
S1-2	10--7	3*0.28mm 2UEW	7TS	1T w8.0mm	N/A	N/A	1
P1-2	1--3	2*0.27mm 2UEW	12TS	1T w8.0mm	N/A	N/A	1
P2	4--5	2*0.17mm 2UEW	7TS	2T w8.0mm	N/A	N/A	1

NOTE :

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





8. Material List：

NO	ITEM	MATERIALS	SUPPLIERS/MANUFACTURERS	UL FILE NO.
1	BOBBIN	PHENOLIC PM9630 UL RATING: 94V-0	Sumitomo Bakelite CO.,LTD.	E41429
2	CORE	E P13 PC95/TP2A	High-tech Electronics Co.,Ltd/FENGHU	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	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE Co.,Ltd	E165111
5	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
6	Glue	E-500(XX)	Dong Guan EATTO Electronic Material Co.,Ltd	E218090
7	CASE	PHENOLIC T375J UL RATING: 94V-0 THERMAL RATING:150°C	CHANG CHUN PLASTIC CO LTD.	QMFZ2.E59481

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.

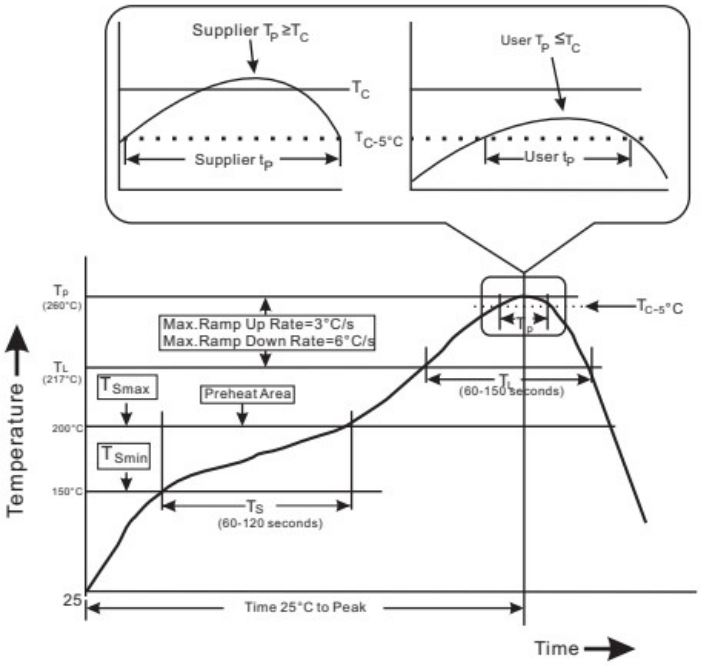
2. Reliability Test Criteria.

2.1 Operating temperature range: 0℃ to 70℃
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.			

Non-Use Certificate of Conformity

1. Basic Information

Company Name	Group-Tek	**Part Name**	PDT25268SR	**Approval**	
Company Code		**Part No.**		**Name**	
Person in charge	Jiang Wang	**Submission Date**	2024-10-17	**Signature**	联泰兴 2024-10-17 Jiang Wang
Contact	0755-29810619 turn 812				
Address	1 Block,Weitai Rd.,Yingrenshi Industry Park, Shiyan,Baoan,Shenzhen,China				

2. Contained Material

Division	Material(Substance)	Whether Y or N	
		Y(Material Name, ppm)	N
Class 1	Cadmium		N
	Lead	15ppm	Y
	Mercury		N
	Hexavalent chrome		N
	PBB(polybromobiphenyl)		N
	PBDE(polybrominated diphenyl ethers)		N
	Biz(2-ethylhexyl)Phthalate (DEHP)		N
	Butyl Benzyl Phthalate (BBP)		N
	Dibutyl Phthalate (DBP)		N
	Diisobutyl Phthalate (DIBP)		N
Class 2	PCBs, PCTs, PCNs		N
	Asbestos compounds		N
	Formaldehyde		N
	Shot-chain chlorinated paraffin		N
	Organotin compounds		N
	PFOS(Perflurooctane Sulfonates)		N
	Nickel compounds		N
	DMF(Dimethylfumarate)		N
	Arsenic compounds		N
	Azo compounds		N
	PFOA(Pentadecafluorooctanoic acid)		N
	PAHs(Polycyclic Aromatic Hydrocarbons)		N
	Bisphenol A		N
	HBCDD(Hexabromocyclododecane)		N
Class 3	TBBP-A		N
	Brominated / Chlorinated flame retardant		N
	PVC (Poly vinyl chloride)		N
	Phthalate (except 4 substance of RoHS)		N
	Antimony compounds		N
	Beryllium compounds		N
	Cobalt dichloride		N
	SVHC(Substance of very high concern)		N

We are hereby certificate conforming to Hanwha Vision standard for control of substances with environmental impacts for supplied products, parts, materials, packages and so on.

(We are confirmed by referring "Attachment.Regualtion_Material".)

UL Document

1. Bobbin (E41429)

2. Wire (E255839)

3. Tape (E165111)

4. Glue (E218090)

5. Case (E59481)

Model PM-9630

File Number: E41429

Yellow Card™

c UL us
ALSO CERTIFIED TO IEC REQUIREMENTS

COMPANY

SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME
SHINAGAWA-KU, Tokyo 140-0002 Japan

MODEL INFO

PM-9630
Phenolic (PF) "SUMIKON", furnished as pellets, granular material

FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		ANSI/UL 94
0.16 mm, Color: BK	V-0	
0.32 mm, Color: BK	V-0	
0.51 mm, Color: BK	V-0	
1.5 mm, Color: BK	V-0	
3.0 mm, Color: BK	V-0	

ISO/IEC FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		IEC 60695-11-10
0.16 mm, Color: BK	V-0	
0.32 mm, Color: BK	V-0	
0.51 mm, Color: BK	V-0	
1.5 mm, Color: BK	V-0	
3.0 mm, Color: BK	V-0	
Glow Wire Ignition Temperature (GWIT)		IEC 60695-2-13
0.51 mm	850 °C	

1.5 mm	930	°C	
3.0 mm	960	°C	
Glow Wire Flammability Index (GWFI)			IEC 60695-2-12
0.51 mm	960	°C	
1.5 mm	960	°C	
3.0 mm	960	°C	

ELECTRICAL PROPERTIES	VALUE		TEST METHOD
Hot-wire Ignition (HWI)			UL 746A
0.16 mm	PLC 4		
0.32 mm	PLC 3		
0.51 mm	PLC 0		
1.5 mm	PLC 0		
3.0 mm	PLC 0		
High Amp Arc Ignition (HAI)			UL 746A
0.16 mm	PLC 0		
0.32 mm	PLC 0		
0.51 mm	PLC 0		
1.5 mm	PLC 1		
3.0 mm	PLC 1		
Comparative Tracking Index (CTI)	PLC 3		UL 746A
Dielectric Strength	24	kV/mm	ASTM D149
High Voltage Arc Tracking Rate (HVTR)	PLC 0		
Volume Resistivity	1.0E+12	ohms·cm	ASTM D257/IEC 60093
High Voltage, Low Current Arc Resistance	PLC 4		

THERMAL PROPERTIES	VALUE		TEST METHOD
Relative Thermal Index - Electrical Strength			UL 746B
0.16 mm	150	°C	
0.32 mm	150	°C	

0.51 mm	170 °C	
1.5 mm	180 °C	
3.0 mm	180 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
0.16 mm	150 °C	
0.32 mm	150 °C	
0.51 mm	155 °C	
1.5 mm	160 °C	
3.0 mm	170 °C	
Relative Thermal Index - Mechanical Strength		UL 746B
0.16 mm	150 °C	
0.32 mm	150 °C	
0.51 mm	160 °C	
1.5 mm	170 °C	
3.0 mm	180 °C	

Report Date: 1997-11-05
Revision Date: 2022-02-10

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

UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2024 UL LLC."

Magnet Wire E255839

Guide Information

SHING SHUN MAGNET WIRE (HUIZHOU) CO LTD

Building A7, No.19 JinZhong Road,, Huinan High-Tech Ind Zone, Huiao Highway, Huihzou Guangdong 516025 CN

UEW, QA-

Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat
UEW, QA-	MW 82-C	180	Polyurethane	-	-
	MW 79-C	155[#]	Polyurethane	-	-
	MW 75-C	130[#]	Polyurethane	-	-

* - May be prefixed or suffixed by 0,1, 2, or 3 to indicate coating thickness.

[#] - The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end-product testing. Further consideration is necessary prior to its use in testing.

Report Date: 2006-03-31

Last Revised: 2020-12-09

© 2022 UL Solutions

Insulating Tape E165111

Guide Information

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD

SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

CT* (c)(g)

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Yellow	130	A;B;C;J	0\0	I\I	Adhesive\Film

(c) - Comparative Tracking Index (CTI) performance indicates material Group I, PLC=0, CTI equal to or greater than 600 v.

(g) - The CTI test was conducted per IEC 60112, 4th Edition 2003 and the assigned level is based on the testing of both film and adhesive sides.

* - May be followed by suffixes

+ - See the Guide Information for alphabetical end-use Functional Use codes.

Report Date: 1994-12-13

Last Revised: 2024-03-27

© 2024 UL Solutions

E-500 (XX) - Plastics - Component

Plastics - Component
File Number: E218090

Yellow Card®

COMPANY

DONGGUAN EATTO ELECTRONIC MATERIAL CO LTD
GUANWAN INDUSTRIAL
XINWAN
HUMEN TOWN
DONGGUAN, GUANGDONG 523938 China

MODEL INFO

E-500 (XX)

Epoxy Molding Resin (EP - Molding), furnished as paste
(XX) – Denotes two letters, AA - ZZ, representing a customer code of Dongguan Eatto.

FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability (3.0 mm, Color: ALL)	V-0	ANSI/UL 94

ISO/IEC FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability (3.0 mm, Color: ALL)	V-0	IEC 60695-11-10

THERMAL PROPERTIES	VALUE	TEST METHOD
Relative Thermal Index - Electrical Strength (3.0 mm)	130 °C	UL 746B
Relative Thermal Index - Mechanical Impact (3.0 mm)	130 °C	UL 746B
Relative Thermal Index - Mechanical Strength (3.0 mm)	130 °C	UL 746B

Report Date: 2010-01-13
Revision Date: 2017-08-10

T375J(G5)(G6) - Plastics - Component

Plastics - Component
File Number: E59481

Yellow Card®

COMPANY

CHANG CHUN PLASTICS CO LTD
No 8 Huaxi Rd
Daliao District
Kaohsiung City, 83164 Taiwan

MODEL INFO

LONGLITE: T375J(G5)(G6)
Phenolic Molding Compound (PMC), furnished as granular material
(G6) – The GWFI rating observed from representative thickness & color including: Thickness at 0.45mm is 960C (BK); Thickness at 0.75mm is 960C (BK); Thickness at 3.0mm is 960C (BK).
(G5) – The GWIT rating observed from representative thickness & color including: Thickness at 0.45mm is 900C (BK); Thickness at 0.75mm is 960C (BK); Thickness at 3.0mm is 960C (BK).

FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		ANSI/UL 94
0.45 mm, Color: BK, BN	V-0	
0.75 mm, Color: BK, BN	V-0	
1.5 mm, Color: BK, BN	V-0	
3.0 mm, Color: BK, BN	V-0	

ISO/IEC FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		IEC 60695-11-10
0.45 mm, Color: BK, BN	V-0	
0.75 mm, Color: BK, BN	V-0	
1.5 mm, Color: BK, BN	V-0	
3.0 mm, Color: BK, BN	V-0	

ELECTRICAL PROPERTIES	VALUE	TEST METHOD
Hot-wire Ignition (HWI)		UL 746A
0.45 mm	PLC 1	
0.75 mm	PLC 1	
1.5 mm	PLC 0	
3.0 mm	PLC 0	
High Amp Arc Ignition (HAI)		UL 746A
0.45 mm	PLC 0	
0.75 mm	PLC 0	
1.5 mm	PLC 0	
3.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 3	UL 746A
High Voltage Arc Tracking Rate (HVTR)	PLC 4	
High Voltage, Low Current Arc Resistance	PLC 5	

THERMAL PROPERTIES	VALUE	TEST METHOD
Relative Thermal Index - Electrical Strength		UL 746B
0.45 mm	150 °C	
0.75 mm	150 °C	
1.5 mm	150 °C	
3.0 mm	150 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
0.45 mm	150 °C	
0.75 mm	150 °C	
1.5 mm	150 °C	
3.0 mm	150 °C	
Relative Thermal Index - Mechanical Strength		UL 746B
0.45 mm	150 °C	
0.75 mm	150 °C	
1.5 mm	150 °C	

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








NETWORK CAMERA,PNM-A15084RTZ
PoE(55V ⎓) 0.56A

M/C: PNM-A15084RTZ/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











NETWORK CAMERA,PNM-A20084RQZ
PoE(55V ⎓) 0.7A

M/C: PNM-A20084RQZ/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











NETWORK CAMERA,PNM-A24084RTZ
PoE(55V ⎓) 0.53A

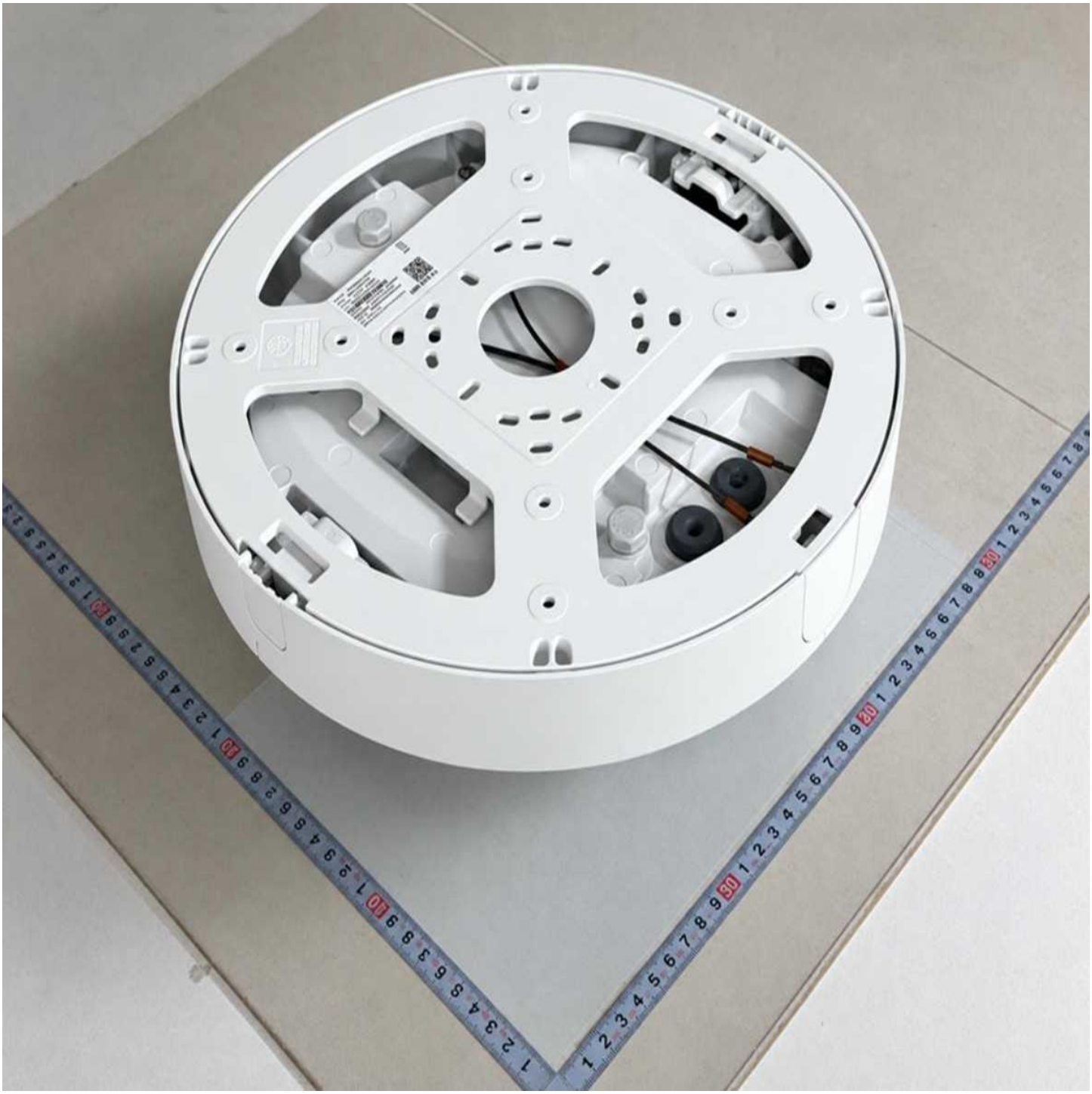
M/C: PNM-A24084RTZ/KEX Fac.ID:D

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


ITE
US LISTED
9T96 E158873
UK
CA
10
NETWORK CAMERA,PNM-A32084RQZ
PoE(55V ⎓) 0.67A
M/C: PNM-A32084RQZ/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

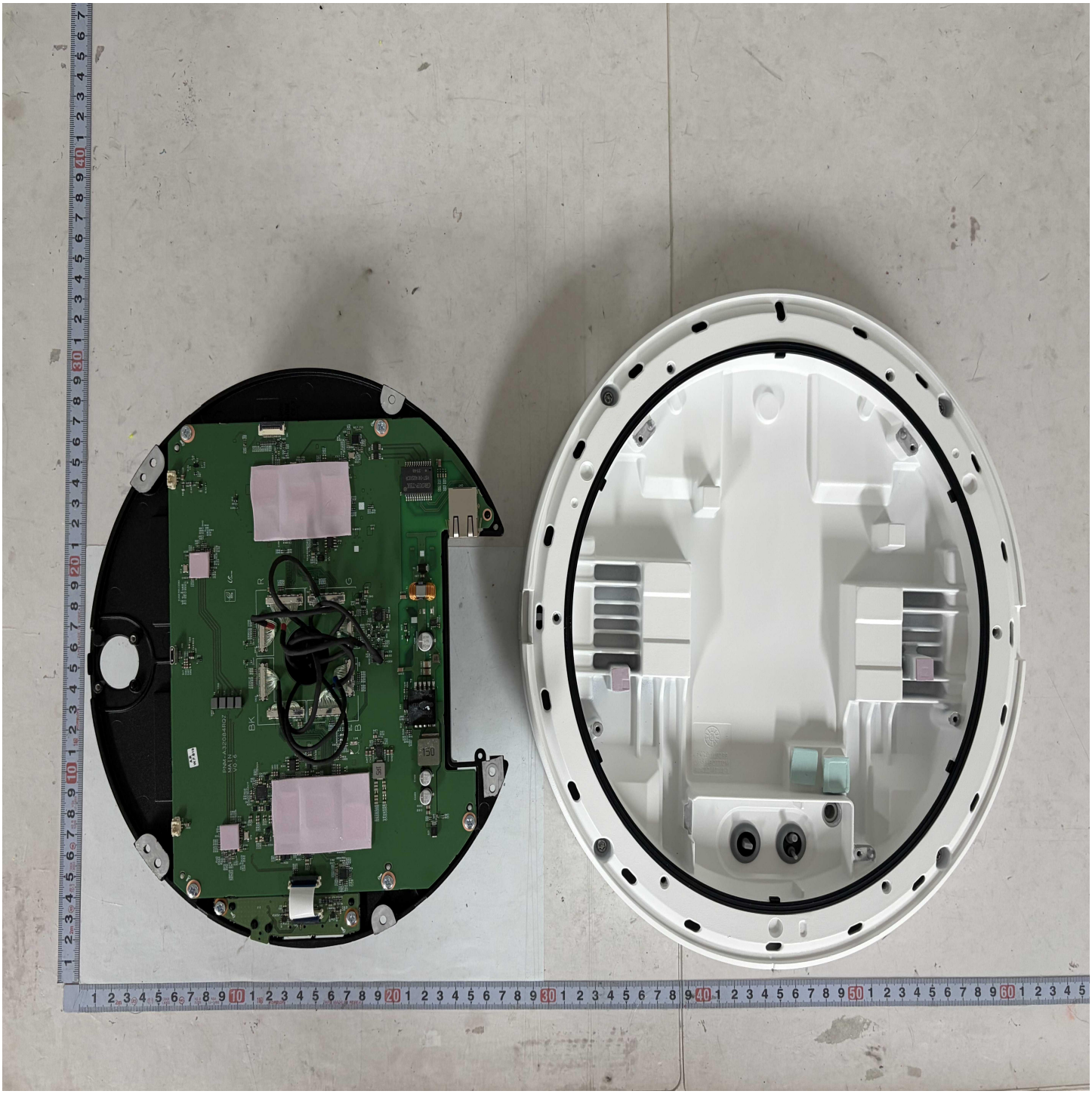
Photographs-02 Page-1



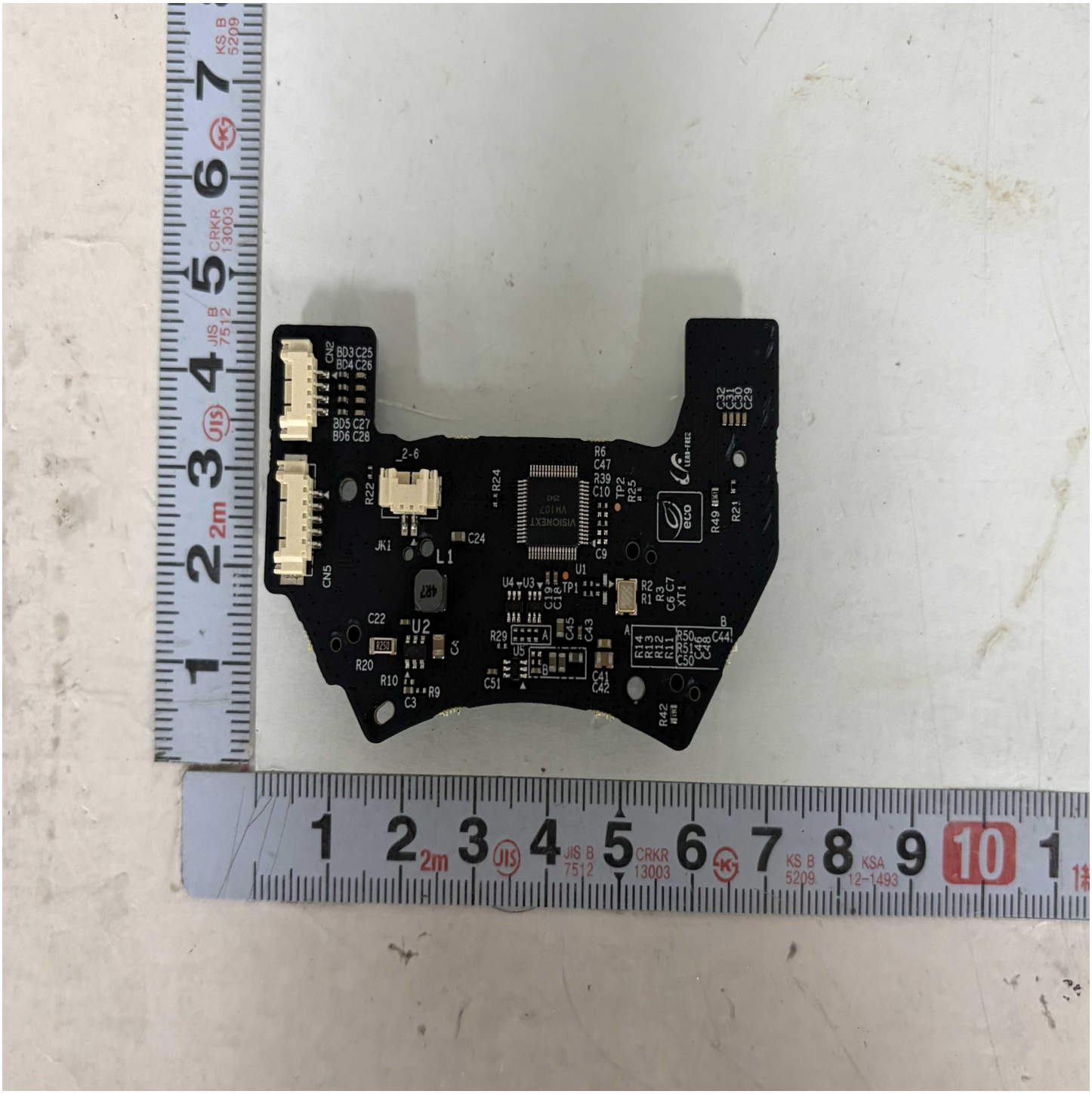
Photographs-04 Page-1



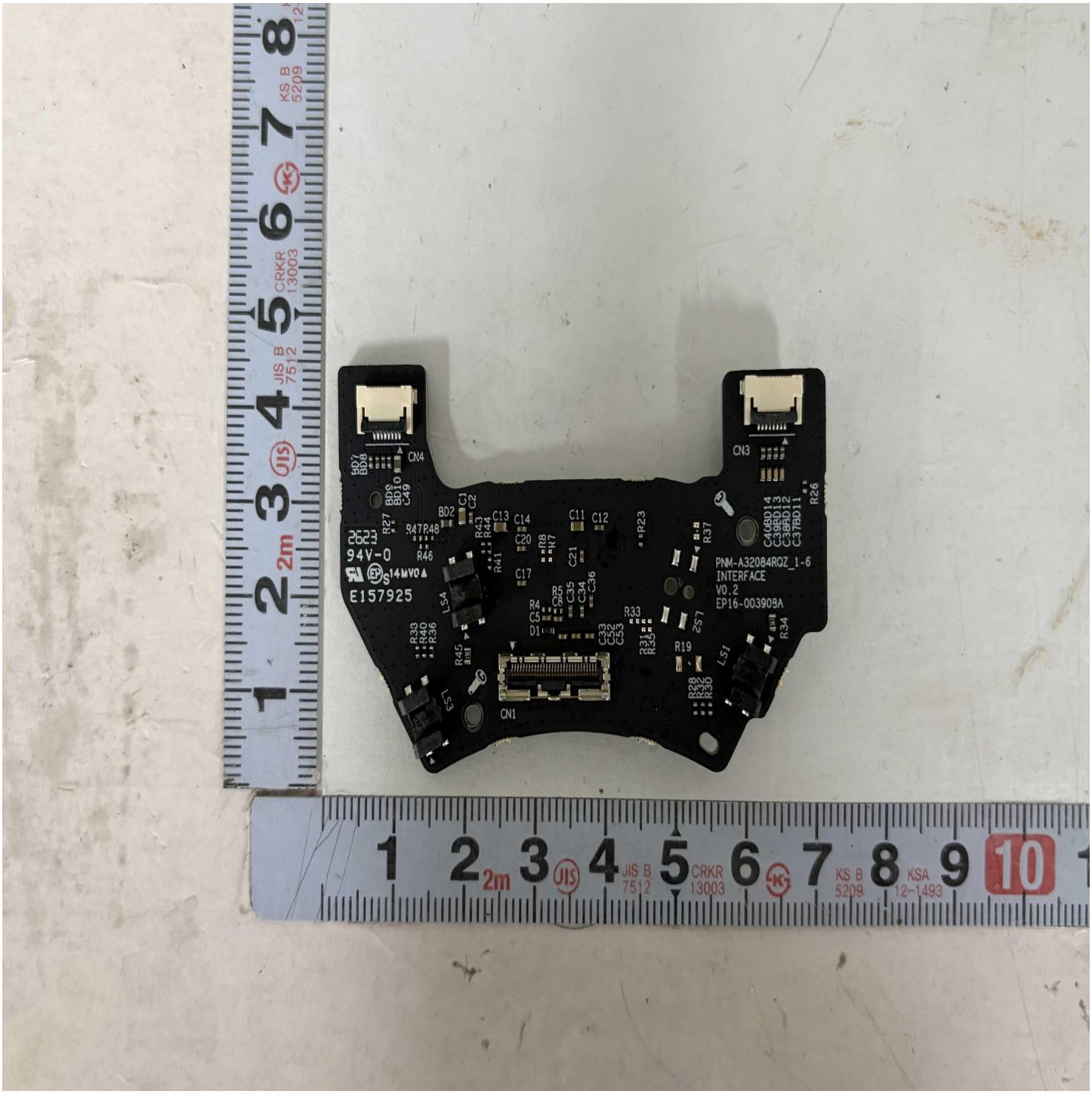
Photographs-05 Page-1



Photographs-06 Page-1



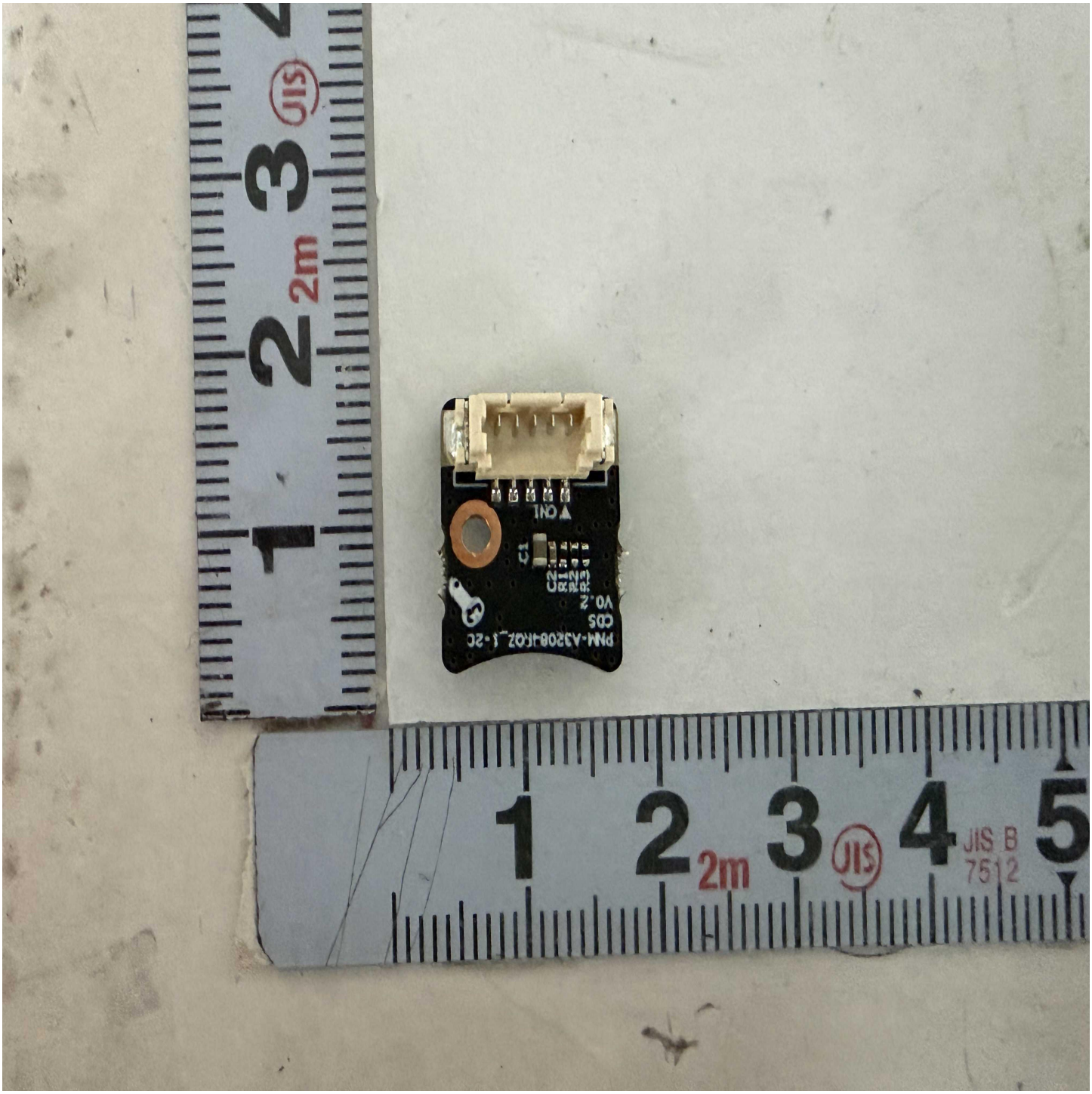
Photographs-07 Page-1



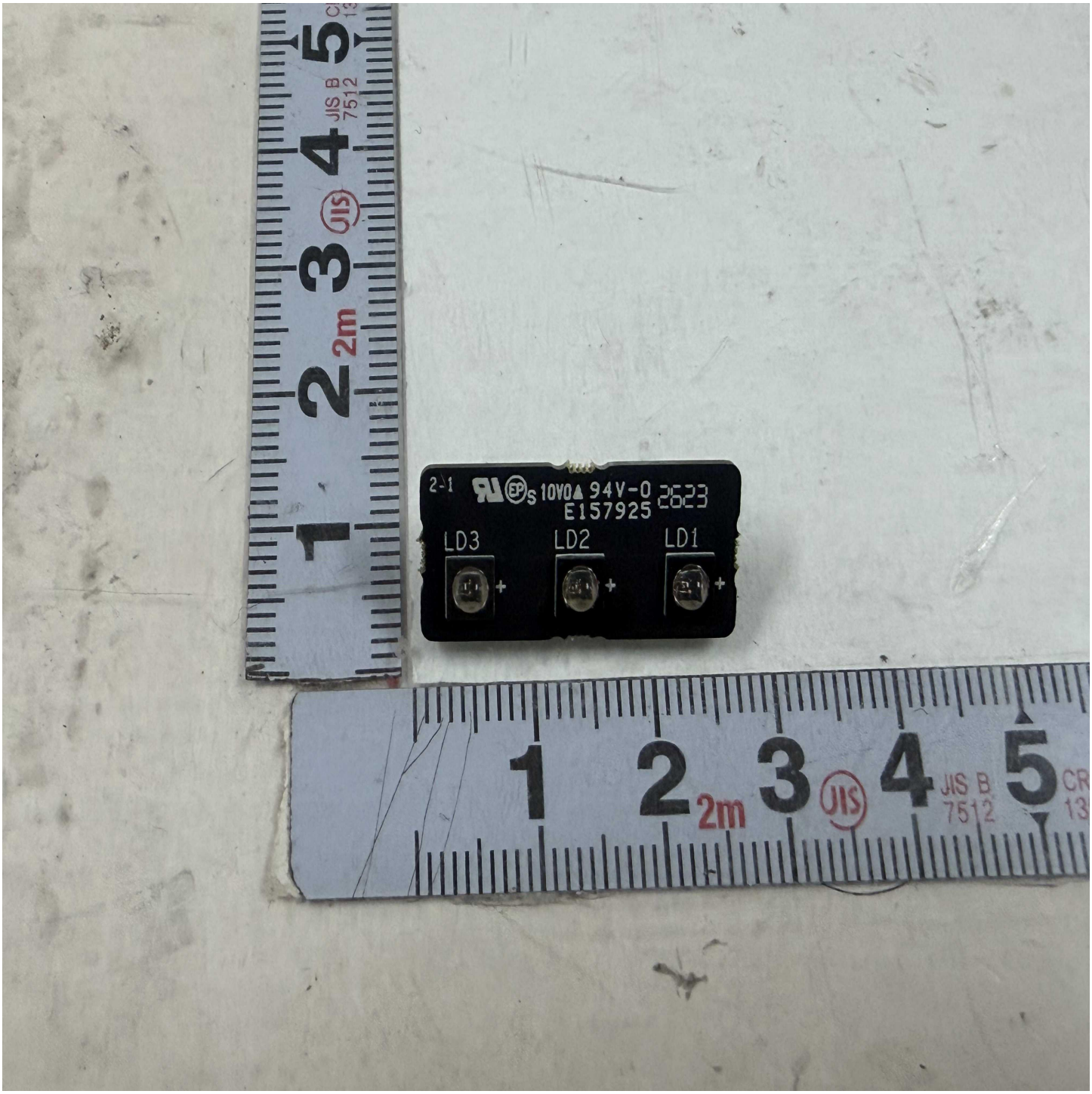
Photographs-08 Page-1



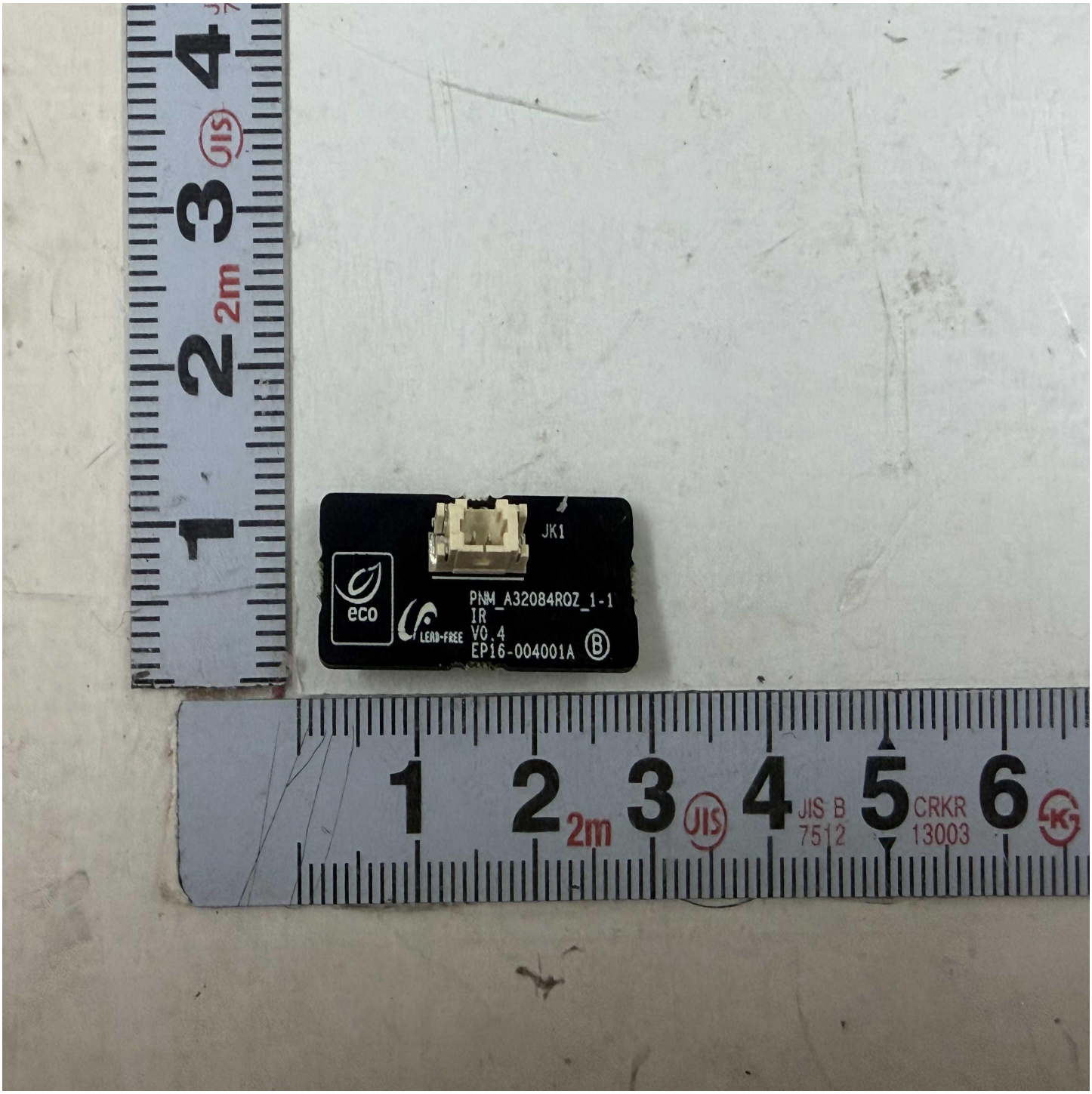
Photographs-09 Page-1



Photographs-10 Page-1



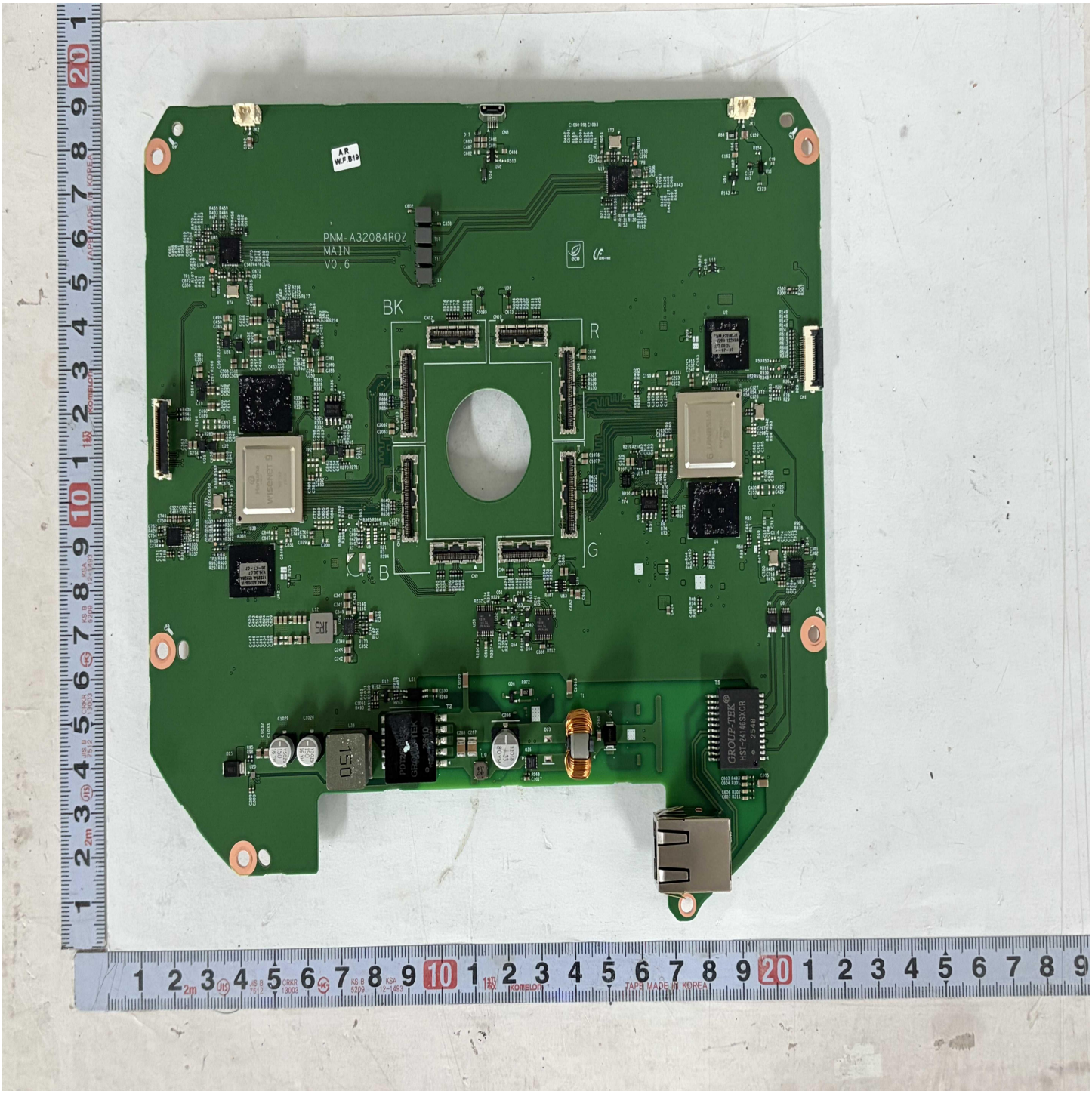
Photographs-11 Page-1



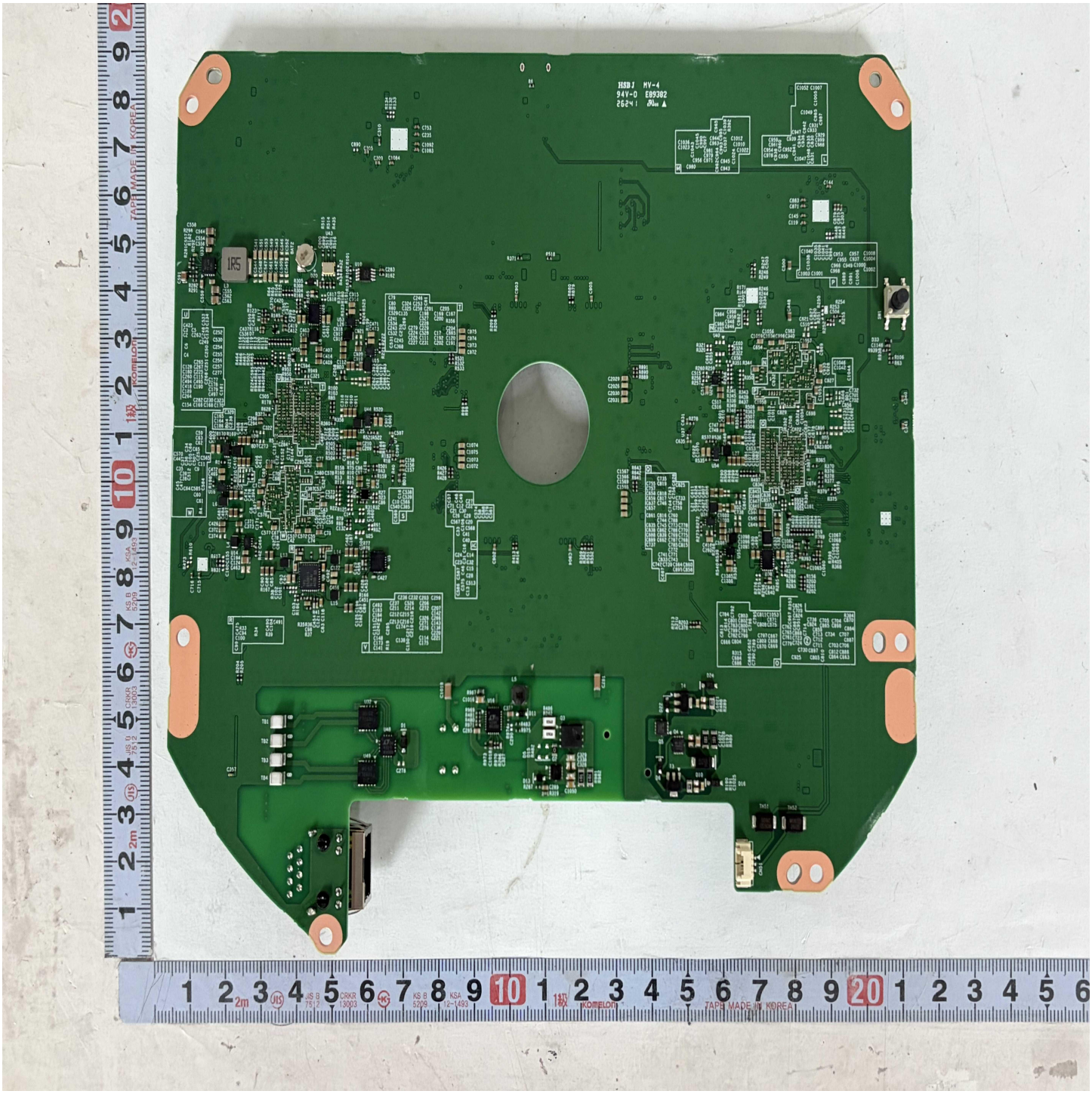
Photographs-12 Page-1



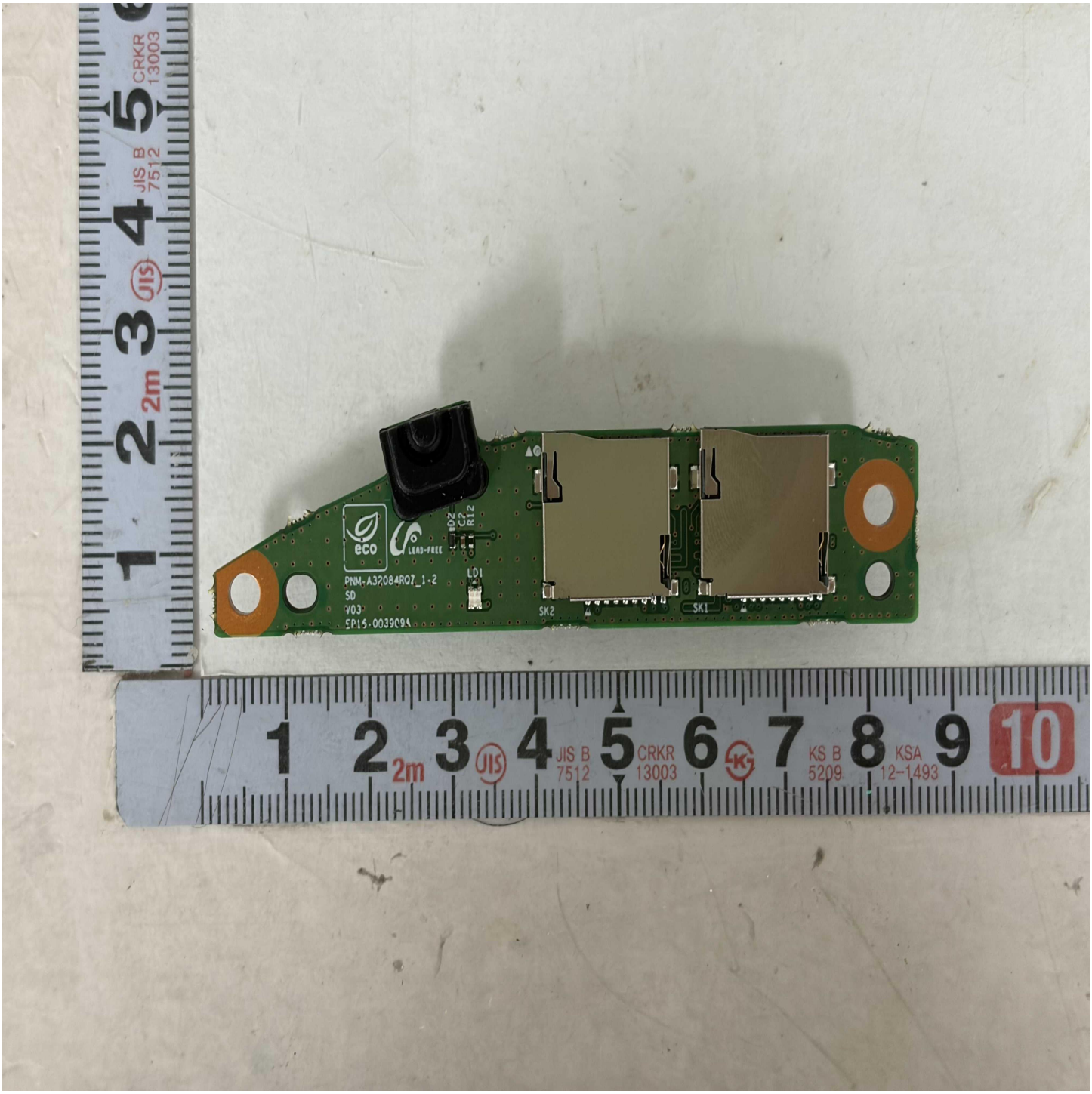
Photographs-13 Page-1



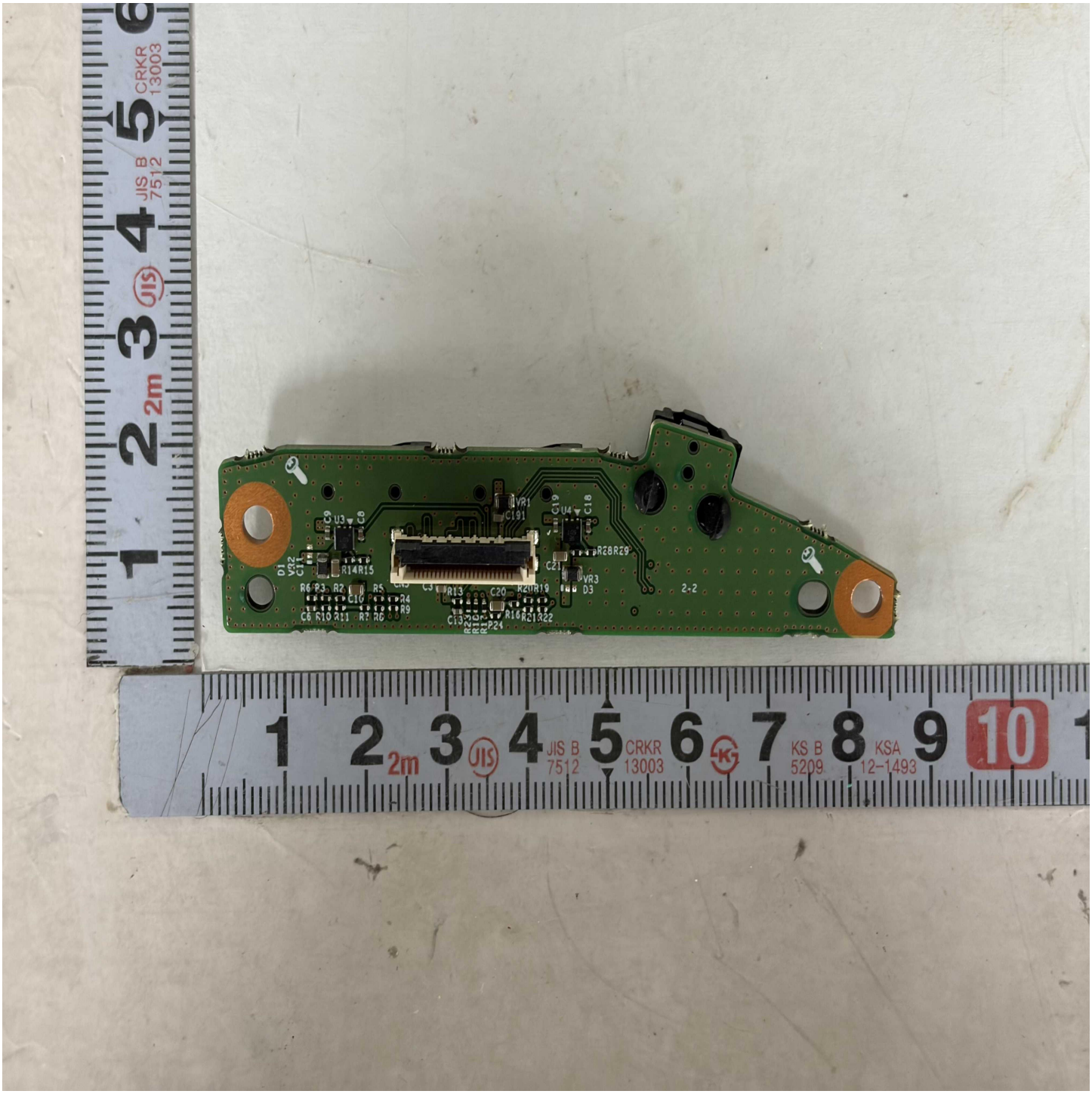
Photographs-14 Page-1



Photographs-15 Page-1



Photographs-16 Page-1



Photographs-17 Page-1

