The table below describes the files that were selected to be included as part of this package.

Supplements, such as Figures and Illustrations, will appear as X number of Figures, X number of Illustrations, etc., rather than naming each one.

E158873-A6224-DescriptionUL
Figure-12-Total

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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:	QNO-C8023R, QNO-C8013R
Rating:	PoE (48 Vdc), 0.17 A
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: SeulKi Park / 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

QNO-C8023R is basic model.

QNO-C8013R is identical to basic model except model designation and lens specification.

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	PoE (Power over Ethernet)
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	Outdoor location
Pollution degree (PD)	PD 2
Manufacturer’s specified Tma (°C)	55 Outdoor: minimum -30
IP protection class	--
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)	0.96

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

- 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/enclosure was evaluated for use in an ambient range of : -30 °C to 55 °C

Additional Information

4791405506
- Maximum Normal Load: Continuous operation (Operate the camera through networked equipment with IR LED on.)

Additional Standards

The product fulfills the requirements of: IEC 62471:2006

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", IP66
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 (48 Vdc), 0.17 A.
(Website) Manual - 2	The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3.af 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 model					
BD1.3	**Electric Strength Test Exemptions – This test is not required for the following models:**					
	All model					
BD1.4	**Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.**					
	All model					

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

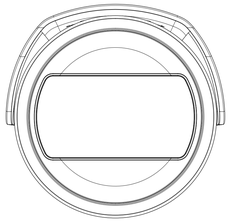
4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Enclosure - Top Lens Cover Window (Plastic)	TEIJIN POLYCARBONATE CHINA LTD	L-1250U(#)(f1)	Min. 1.5 mm thickness, rated Min. HB, 115 deg. C	QMFZ2	UL (E245526)	
Enclosure - Top LED Cover_Black (Plastic) (Part 1)	LOTTE CHEMICAL CORPORATION	UH-1068(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure - Top LED Cover_Black (Part 2)	SABIC INNOVATIVE PLASTICS US L L C	EXL1434T (GG)(f1)(N1)(BK47)	Min. 2.0 mm thickness, rated Min. HB, 120 deg. C	QMFZ2	UL (E121562)	
Enclosure - Top case cover (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 0.9 mm thickness	-	-	
Enclosure - Side case cover (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.0 mm thickness	-	-	
Enclosure - Bottom case cover (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.5 mm thickness	-	-	
Internal Metal	Interchangeable	Interchangeable	Aluminum, Min. 2.0 mm thickness.	-	-	
Internal Plastic Part Materials	LOTTE CHEMICAL CORPORATION	HN-1068(f1)	Min. 2.0 mm thickness, rated Min. V-0, 130 deg. C.	QMFZ2	UL (E115797)	
Opto-coupler (LS201)	LITE-ON TECHNOLOGY CORP	LTV-356T-BN (LTV-356T(%)(c))	Isolation Voltage: 3750. Max. Operation Temperature: 110 deg. C	FPQU2	UL (E113898)	
Opto-coupler (LS201) -Alternate	COSMO ELECTRONICS CORP	KPC357NT	Isolation Voltage: 3750. Max. Operation Temperature: 115 deg. C	FPQU2	UL (E169586)	
Transformer (T1)	SHENZHEN GROUP-TEK ELECTRONICS	PDT25239SR	130 deg. C See enclosure for more detail.	-	-	

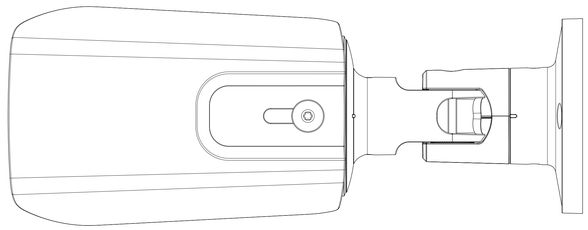
	TECHNOLOGY CO. , LTD					
Lens module for QNO-C8023R	Sunny Optics (zhongshan)Co.Ltd.	C7339E-232	Rated 3.0 – 6.0 Vdc	-	-	
Lens module for QNO-C8013R	Sunny Optics (zhongshan)Co.Ltd.	C7340E-232	Rated 3.0 – 6.0 Vdc	-	-	
Rechargeable battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Lithium, Rechargeable, Max Charging Voltage, 3.4 V dc, Max Charging current: 300 mA	BBCV2	UL (MH15628)	
Lithium Battery Protection Circuit (BAT1)	Interchangeable	Interchangeable	Diode (D1, 85 V, 300 mA) and Resistor (R55, 3.3 Kohm) in series	-	-	
Thermal pad	ATEKS	ATP-20	Min.6.0mm thickness, rated V-0, 105 deg. C	QMFZ2	UL (E513170)	
PWB	HANNSTAR BOARD CORP	MV-4	Min. V-0, 130 deg. C	ZPMV2	UL (E89382)	
PWB - Alternate	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2	UL	
Gasket	Namyang Vina	O-VMQ-60-BK	Gasket Test was conducted under E158873-A6034	-	-	
Outdoor Label	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for maximum and minimum surface temperature specified, or Min. 55 deg. C to Max -30 deg. C if not specified.	PGDQ2 or PGJI2	UL	
IR LED (LD1, LD2)	Cybright IR LED Technology Co.,Ltd	XB-IR3838EU-I	VF= 1.7-2.3 Vdc, IF=1 000 mA Max	-	-	
IR LED (LD3, LD4)	OSRAM Opto Semiconductors. GmbH	SFH 4718A	VF= 1.75-2.05 Vdc, IF=1 000 mA Max	-	-	

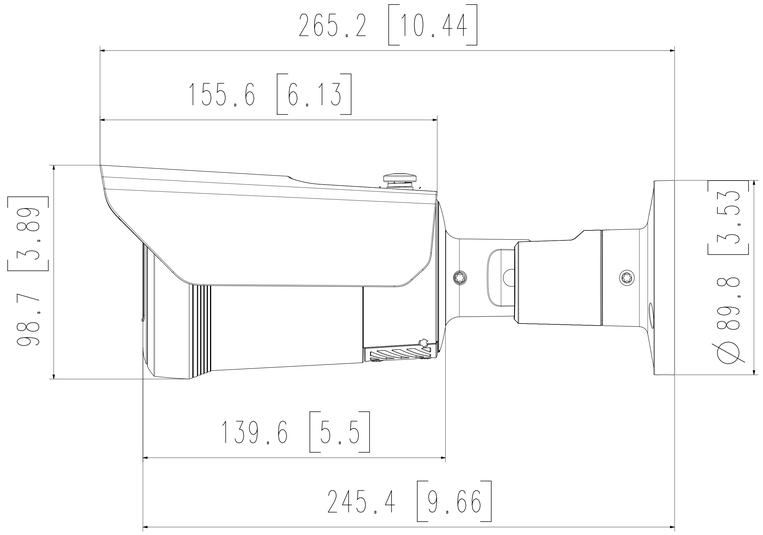
Enclosures

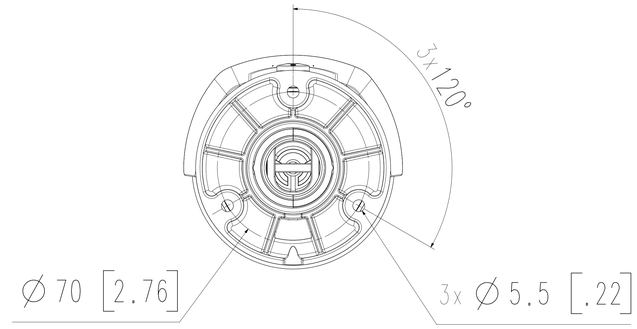
Type	Supplement Id	Description
Photographs	03-01	External View
Photographs	03-02	Internal View
Photographs	03-04	Lens Module
Photographs	03-05	LED Board
Photographs	03-06	Network Board - Top
Photographs	03-07	Network Board - Bottom
Photographs	03-08	Power Board - Top
Photographs	03-09	Power Board - Bottom
Diagrams	04-01	Diagrams
Manuals	06-01	Manual
Miscellaneous	07-01	Transformer (T1) Specification
Miscellaneous	07-02	Label

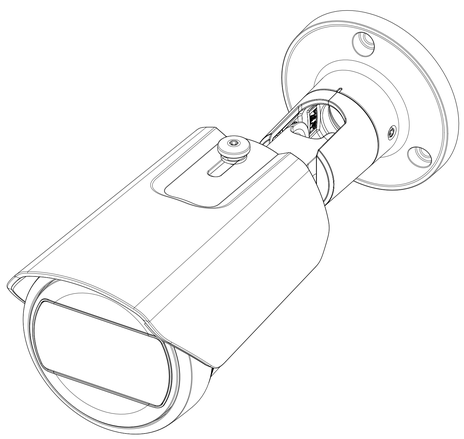
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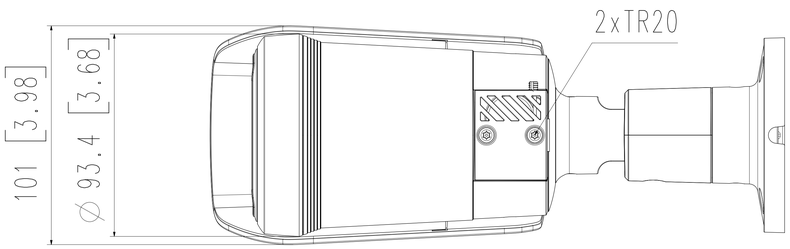












No.	MODEL NAME	DATE
4	QNO-C8013R/C8023R	'24.07.18
3	QNO-C6083R	'24.02.07
2	QNO-C8083R	'23.04.13
1	QNO-C9083R	'23.04.13

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

A0

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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), 0.17A.
16. This product is intended to be supplied by isolation power.
17. 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.
18. 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.
19. 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.
20. 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.
21. Installing or using the product in water can cause serious damage to the product.
22. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.
23. The operating temperature for the QND-C8013R/QND-C8023R products is -10°C to +45°C(14°F to +113°F).
24. The operating temperature for the QNV-C8013R/QNV-C8023R/QNO-C8013R/QNO-C8023R products is -30°C to +55°C(-22°F to +131°F).

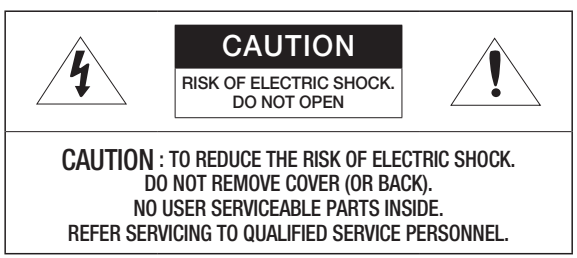
WARNING

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

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

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

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



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



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

Class I construction

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

Battery

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

The battery cannot be replaced.

Prohibition of battery abuse

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

Disconnection Device

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

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

CAUTION

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

ATTENTION

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

CAUTION

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

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

The Micro USB port of the product is provided for easier installation, and is not recommended for monitoring purposes.

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

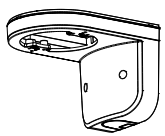
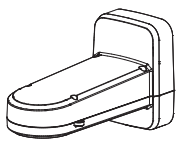
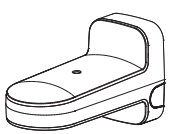
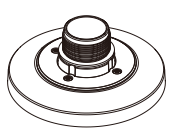
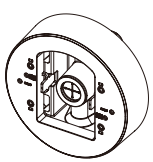
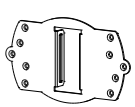
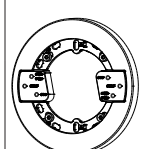
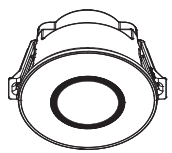
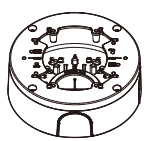
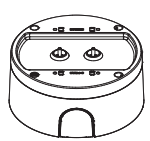
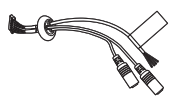
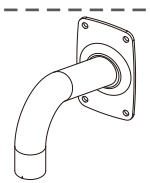
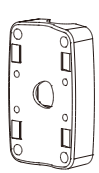
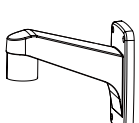
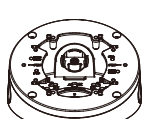
※ Please read this manual for the safety before using of goods and keep it in the safe place.

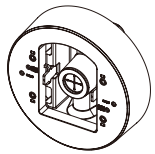
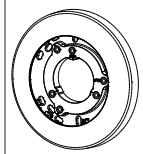
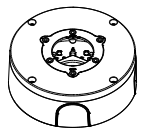
We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

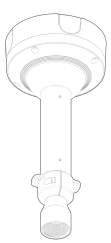
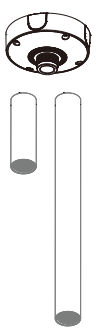
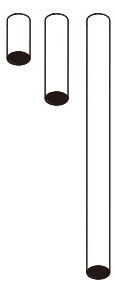
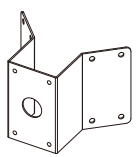
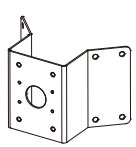
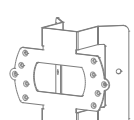
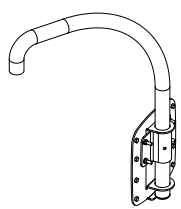
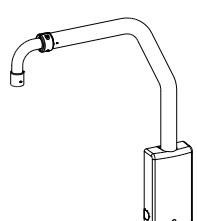
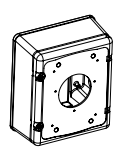
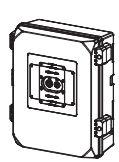
In particular installation environments, there might be interference in radio communications. When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna.

OPTIONAL ACCESSORIES FOR INSTALLATION

You can purchase appropriate optional accessories available.

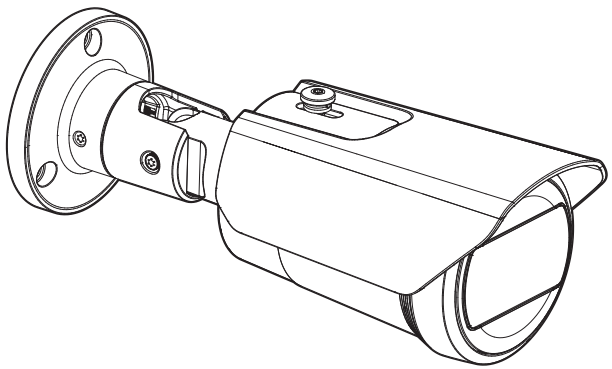
Model name	Wall Mount and Pole Mount	Hanging Mount	Pole Mount (Direct Assembly)	Gang Plate	Housing	Back Box and Tilt Mount	Audio/alarm cable
QNV-C8013R/ QNV-C8023R	 SBP-125WMW1 (Indoor Wall&Pole Mount)  SBP-400WMW (Wall&Pole Mount) *SBD-110GP1 required for installation  SBP-250WMW (Wall&Pole Mount) *SBD-110GP1 required for installation	 SBP-120HMW	 SBD-140PMW  SBD-140PMB (Light version)	 SBD-110GP1	 SHD-1200FW	 SBV-140BW (Back Box)  SBV-140WW (Waterproof Back Box)	 SPP-C7400 (Audio/alarm cable)
QND-C8013R/ QND-C8023R	 SBP-300WMW (Wall Mount) * SBP-300PMW2 required for pole installation  SBP-300PMW2 (Pole Mount)  SBP-300WMW1 (Wall Mount) * SBP-300PMW2 required for pole installation				 SHD-1101FW	 SBV-140TMW (Tilt Mount)	 SPP-C7200 (Alarm cable)

Model name	Wall Mount and Pole Mount		Hanging Mount	Pole Mount (Direct Assembly)	Gang Plate	Housing	Back Box and Tilt Mount	Audio/alarm cable
QNO-C8013R/ QNO-C8023R	-	-	-	 SBD-140PMW *SBO-090GP required for installation	 SBO-090GP	-	 SBO-140BW	-

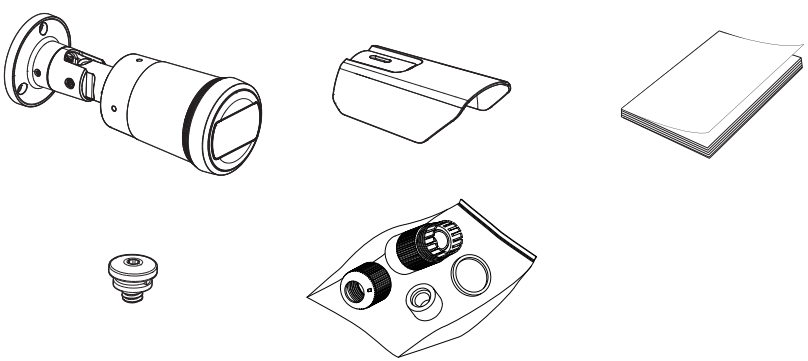
Model name	Ceiling Mount			Corner Mount	Parapet Mount	Cabinet
	Assembly		Individual Parts			
QNV-C8013R/ QNV-C8023R/ QND-C8013R/ QND-C8023R	 SBP-300CMTW (Telescopic)  SBP-300CMTS (Ball Head)  SBP-300CMW1 SBP-900CMW  SBP-150CMI SBP-300CMI		 SBP-180CMB  SBP-180CMS (Ball Head)  SBP-140CMB  SBP-150CMP SBP-300CMP SBP-900CMP  SBP-C15P  SBP-C15H	 SBP-300KMW1  SBP-156KMW  SBD-140KMB (Light version) *SBO-090GP is required when installing the QNO product.	 SBP-300LMW  SBP-156LMW1	 SBP-300NBW *Only the QND and QNV products can be installed.  SBP-150NBW
QNO-C8013R/ QNO-C8023R	-		-		-	

WHAT'S INCLUDED

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

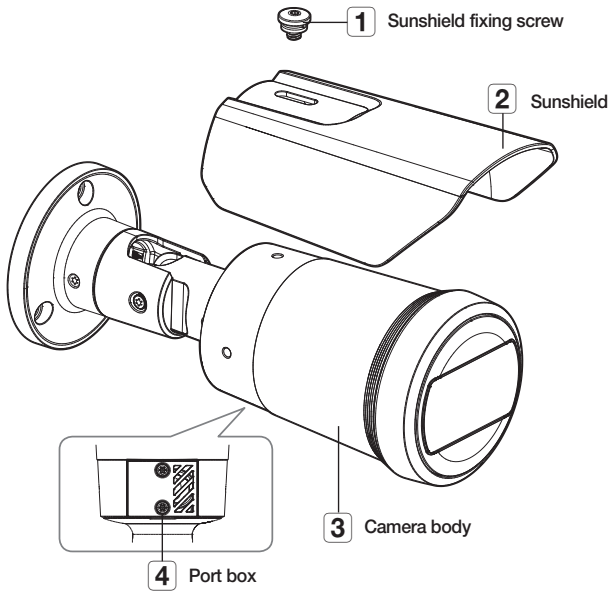


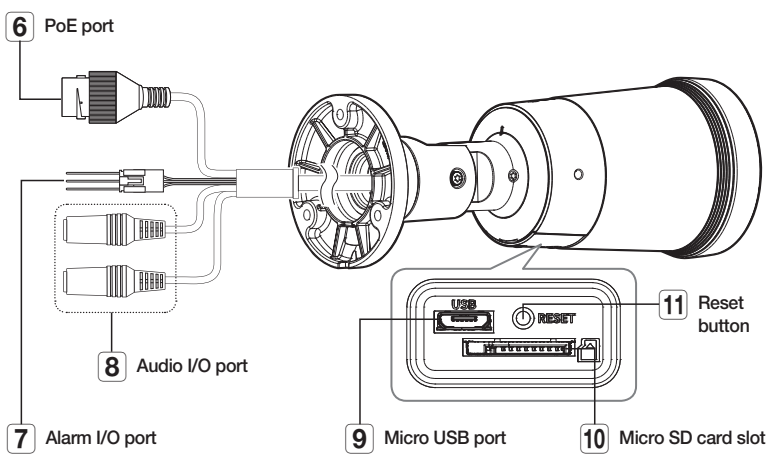
<QNO-C8013R/QNO-C8023R>



Use installation screws of at least M4, L30 for the installation of this product.

AT A GLANCE





Wipe out a dirty surface of the lens softly with a lens tissue or cloth to which you have applied ethanol.

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.

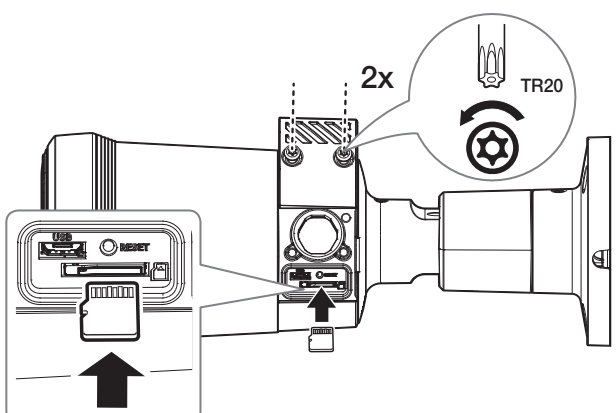
Precautions before installation

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.
- Do not use the sunshield hole for any purpose other than for connecting the sunshield.

Inserting a Micro SD card

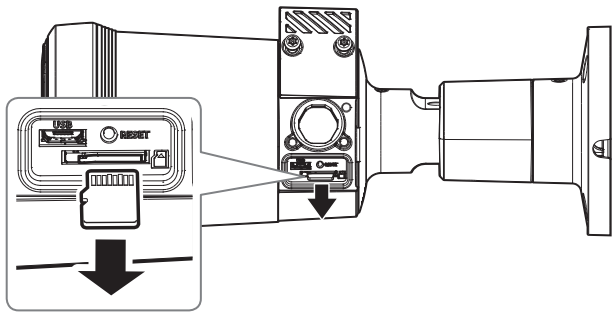
1. Turn the screws of the port box cover of the camera body counterclockwise to remove the cover.
2. Insert the micro SD card into the micro SD card slot in the direction of the arrows as shown in the picture.



- Before installing the camera, the Micro SD card should be inserted while the power source and the body are separated.
- Do not forcefully insert it in the reverse direction. It might damage your Micro SD card and your product.
- When it rains or the humidity is high, insertion or ejection of a Micro SD card is not recommended.
- When installing/removing the Micro SD card, make sure you put the product body on a flat ground before working on it in order to prevent accidents due to loss or drop of any parts.
- Disassembly of the product cover should be finished within 5 minutes, or there will be the risk of internal dew condensation.

Removing a Micro SD card

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

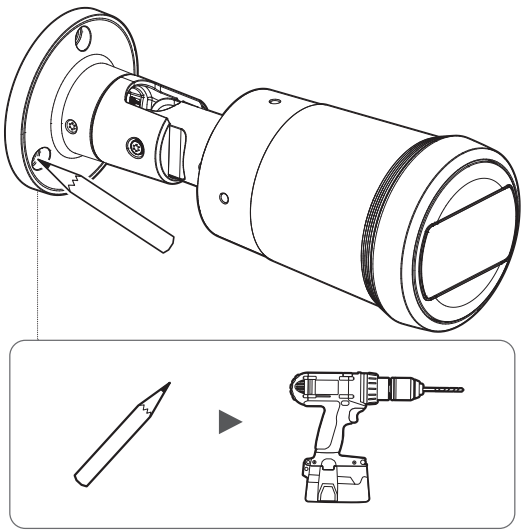


- Before removing the Micro SD card, in <**Setup ( )**>-<**Event**>-<**Storage**>, set the device to <**Off**> and press the [**Apply**] button and turn the camera off.
- If you turn off the camera or remove the Micro SD card that contains data from the product, the data may be lost or damaged.
- When removing the port box cover, be careful not to lose the rubber gasket of the cover.

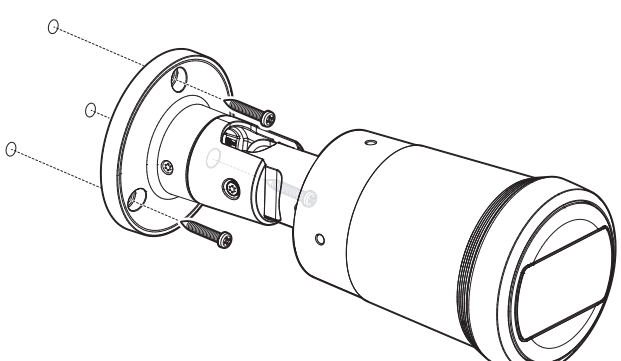
Installation

[Directly installing on wall/ceiling]

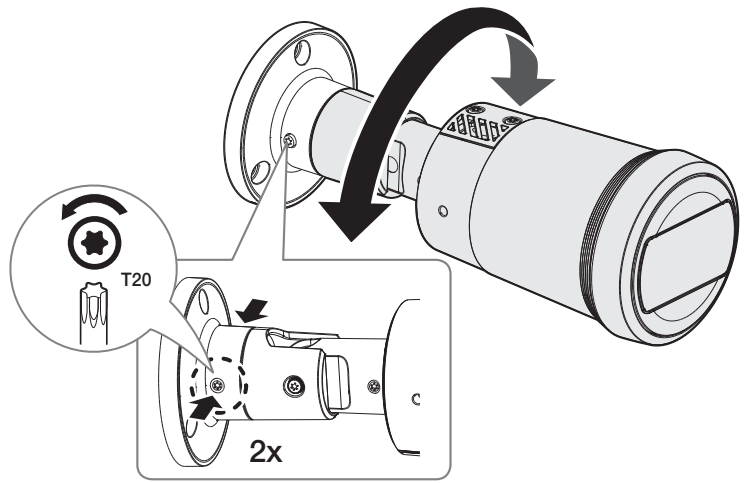
1. Place the camera on the desired location considering the direction to be monitored, mark the locations for the screw holes and cable holes, and then drill the holes.



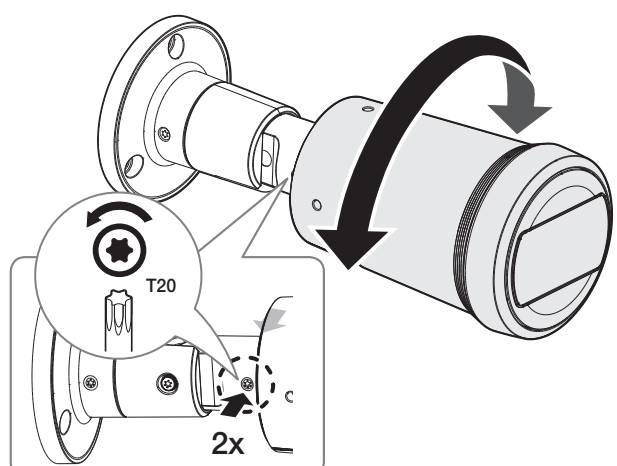
2. Connect the necessary cables from among the network, audio, and alarm cables to the ports of the camera.
3. Fix the Mount plate using appropriate screws.
   - It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.



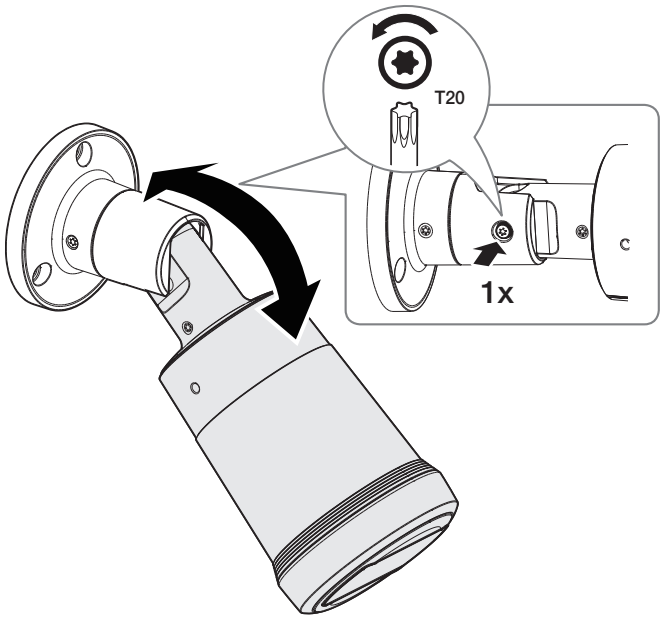
4. Loosen the fixing screws of each control part to adjust the monitoring direction of the camera.
   - Note that it is not necessary to loosen the screws completely.
   - Connect a monitoring device to the USB port and then monitor and adjust it.



<Pan>



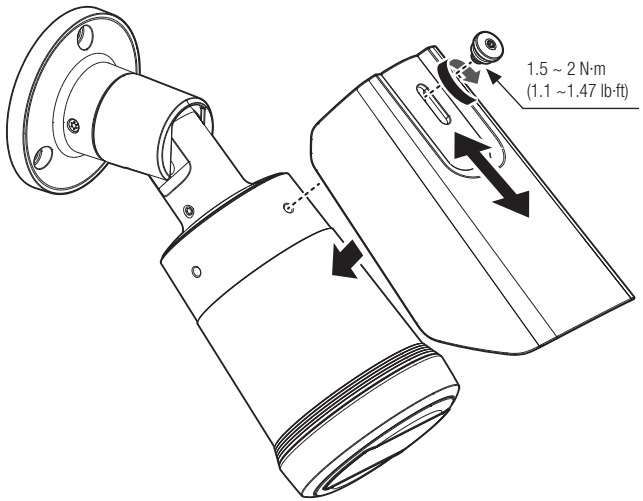
<Lens Rotation>



<Tilt>

- When adjusting the camera monitoring direction, loosen the corresponding fixing screws, adjust the camera, and then tighten the screws. Forcibly adjusting the camera while the screws are fastened may cause scratches and malfunction.

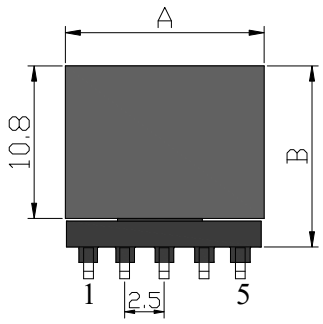
5. Assemble the sunshield on the camera body with the provided sunshield fixing screws.



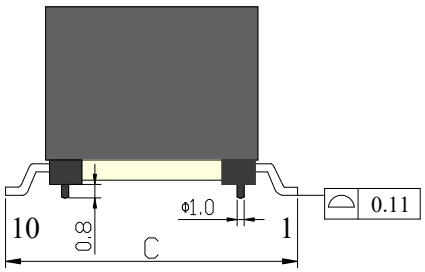
The following Page(s) are related to Miscellaneous-01. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

2. EXTERNAL DIMENSIONS: UNIT: mm

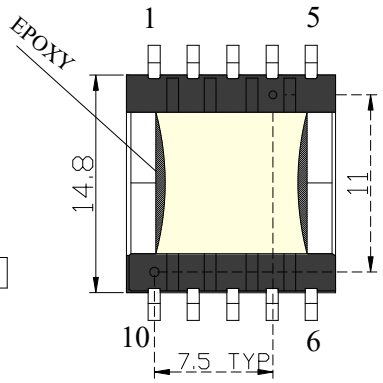
FRONT VIEW



TOP VIEW



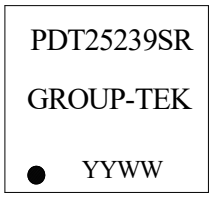
SIDE VIEW



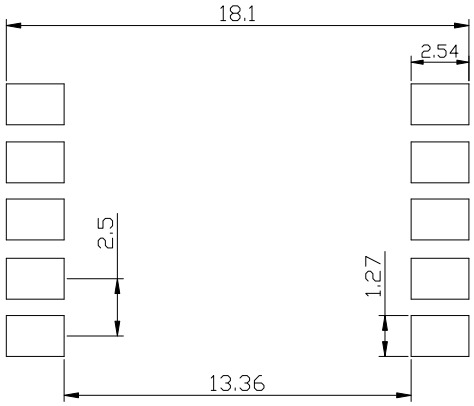
Unit: mm Tolerances:

A Max	B Max	C Max
15.0	14.0	17.8

Marking information



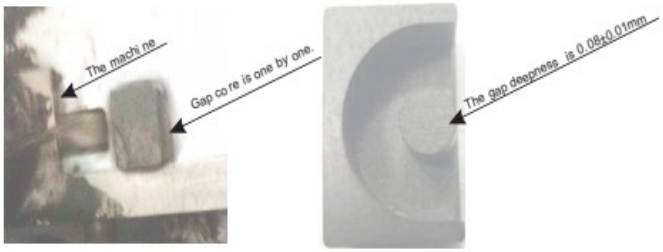
Suggested PCB Pad Lad Layout



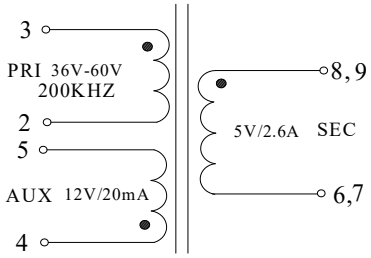
3. Electrical Characteristics :

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	29uH±20%
		(8,9-6,7) @25℃ 100KHZ/1V	5.7uH±20%
2	Leakage Inductance	(3-2) @25℃200KHZ/0.1V shorted other pins	1.0uH 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）	22：6：13±2%
8	HI-POT:	PRI TO SEC	1500V/AC/1mA 2Sec

4. Overhauling List

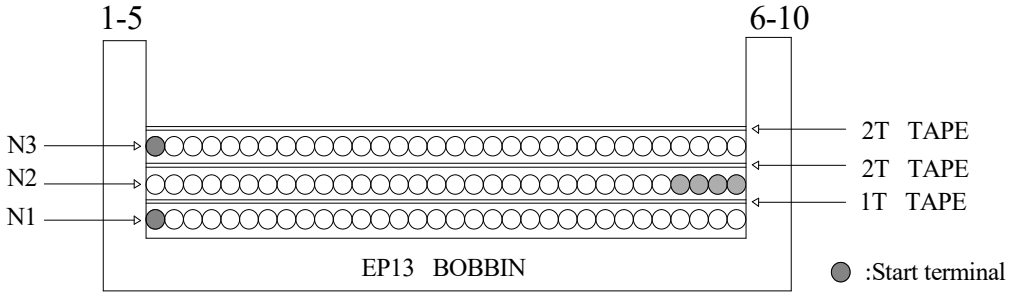
NO	ITEM	SPECIFICATION
1	Tape turns	2T
2	Margin tape thickness	0.10mm
3	Winding turns	N1:22T N2:6T N3:13T
4	Pins order/ Pin connection	1T
5	Marking Information	Marking information PDT25239SR GROUP-TEK ● YYWW
6	Gap the center leg	
7	Solder Temperature	

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	6TS	2T w8.0mm	N/A	N/A	1,2
3	9--7						
4	4--5	0.28mm 2UEW	13TS	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/MANUFACTURERS	UL FILE NO.
1	BOBBIN	PHENOLIC T375J UL RATING: 94V-0	Chang Chun Plastics Co.,Ltd	E59481
2	CORE	E P13 TP44/PG242	High-tech Electronics Co.,Ltd /FENGHU	N/A
3	WIRE	POLYURETHANE ENAMELED TYPE NO: 2UEW THERMAL RATING:180°	Shing Shun Magnet wire(HuiZhou) Co.,Ltd	E255839
4	TAPE	ADHESIVE POLYESTER TAPE 1350FY-1(b)	Dongguan Jintai pro pucd Co.,Ltd	E17385
5	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
6	Glue	E-500(XX)	Dong Guan city eatto electronic material Co.,Ltd	E218090
7	INK	VIC-120	Shenzhenhuarui samwo group co.,Ltd	N/A


ITE
US LISTED
9T96 E158873
UK
CA
10
NETWORK CAMERA,QNO-C8023R
PoE(48V ⎓) 0.17A
M/C: QNO-C8023R/KEX Fac.ID:D
DATE S/N: Serial No.
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA VISION CO.,LTD.
MADE IN KOREA
Rainproof/ Étanche
IP66

Photographs-01 Page-1



Photographs-02 Page-1



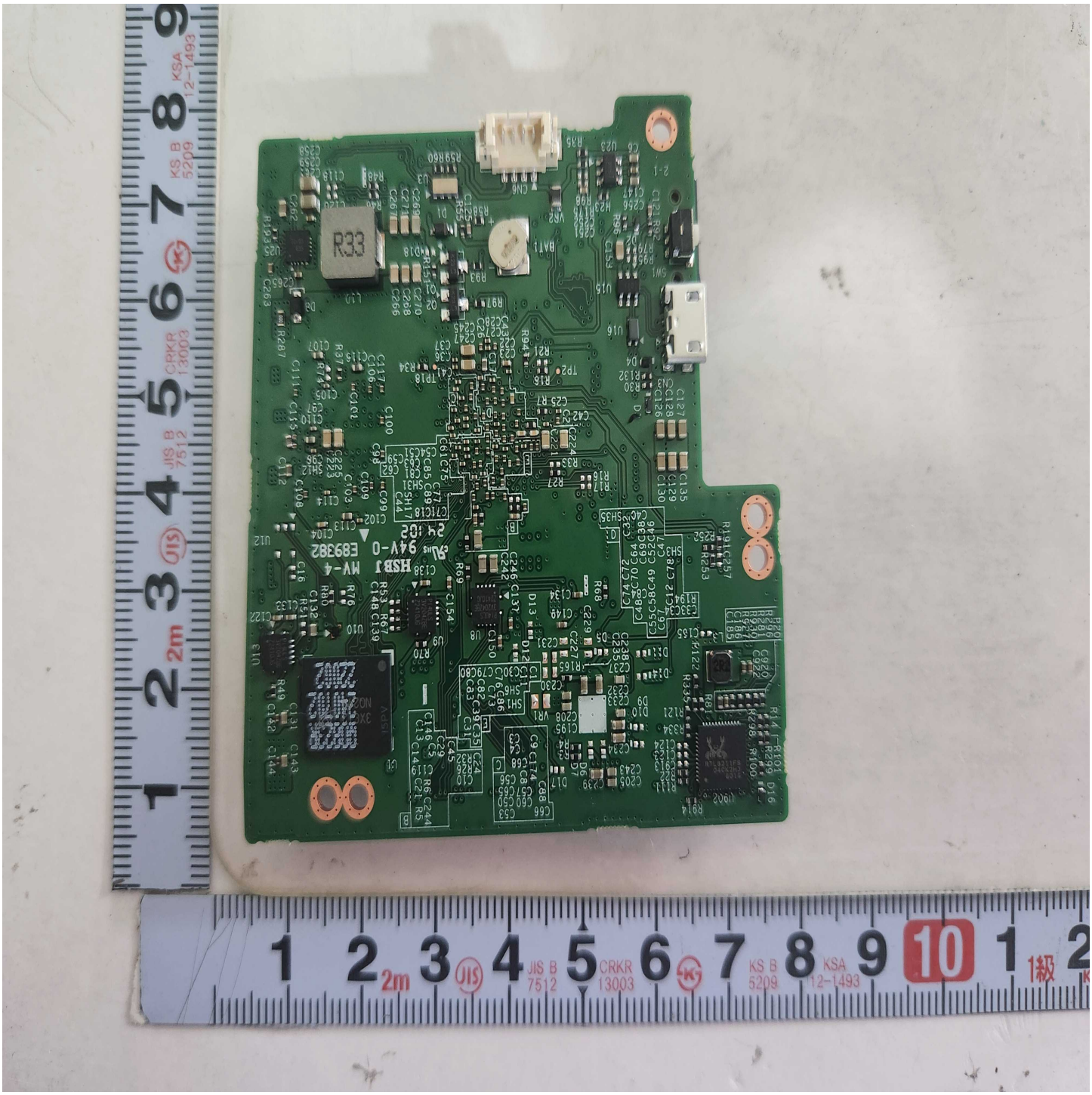
Photographs-04 Page-1



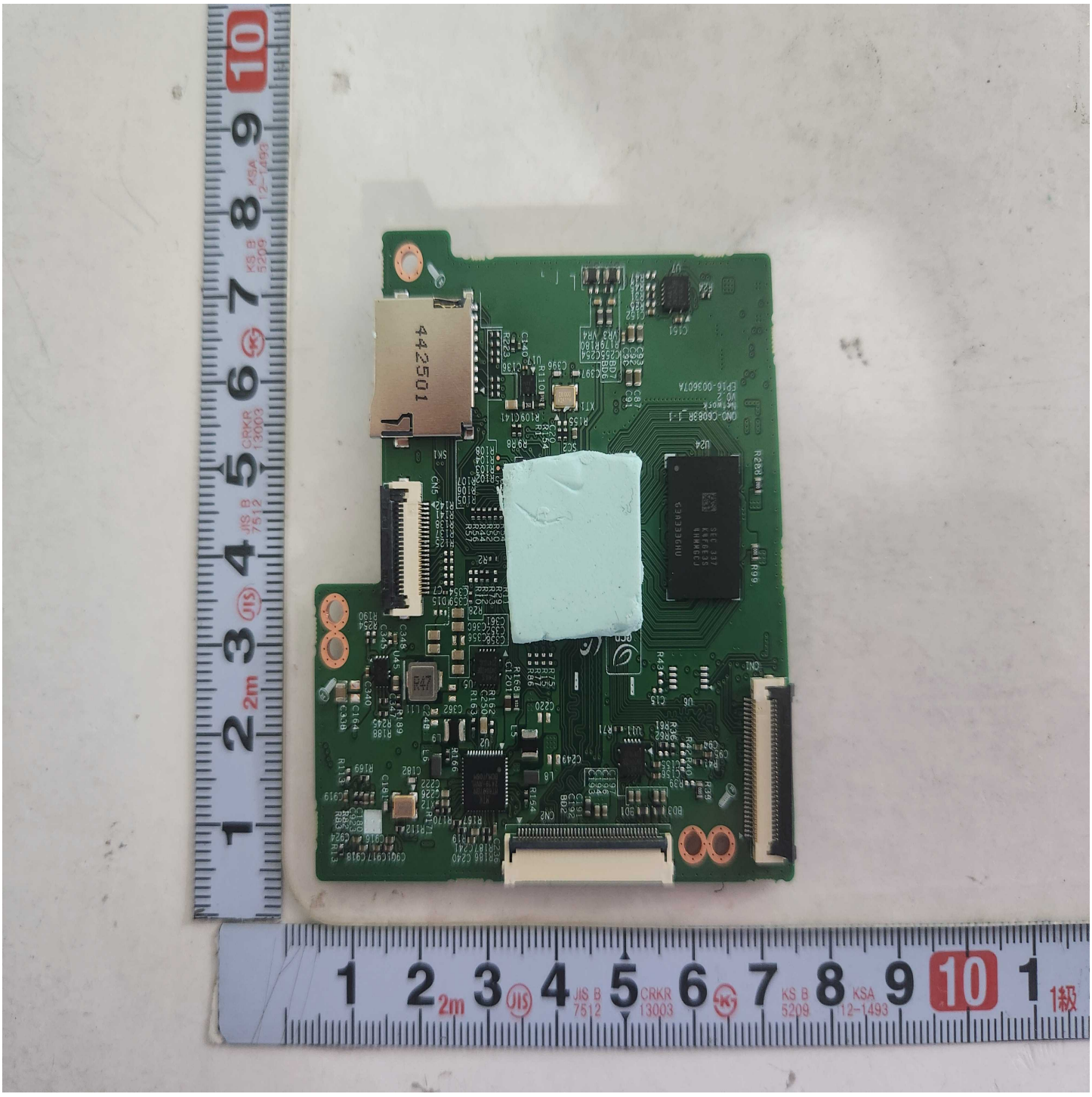
Photographs-05 Page-1



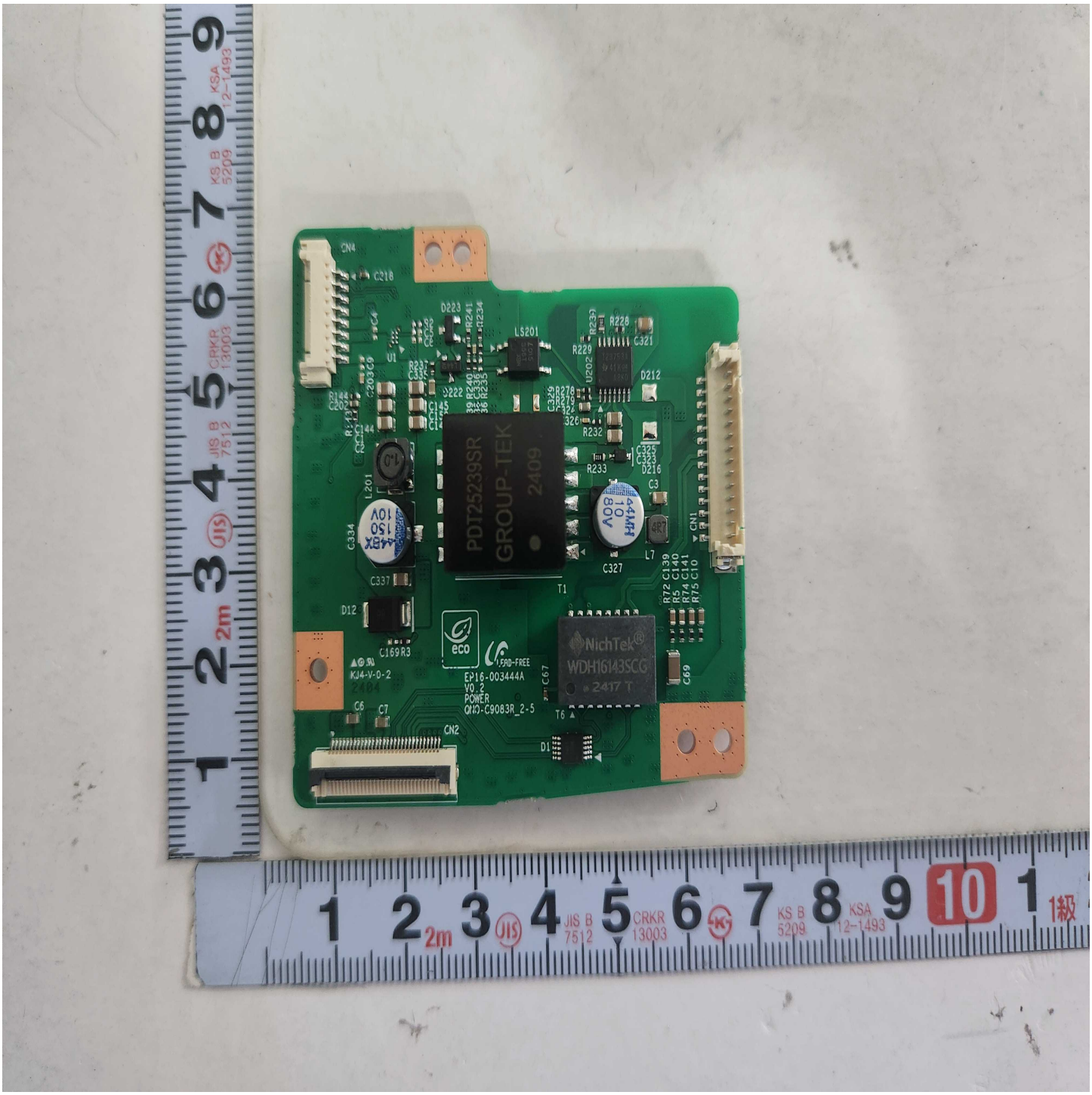
Photographs-06 Page-1



Photographs-07 Page-1



Photographs-08 Page-1



Photographs-09 Page-1

