



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-A6246-DescriptionUL
Figure-18-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:	PNB-A9092, PNB-A9082, PNB-A9092MC, PNB-A9082MC
Rating:	12 Vdc, 0.96 A or PoE (53 Vdc), 0.26 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.

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

Prepared By: Sohyun Lee / Project Handler

Reviewed By: Seulki Park / Reviewer

Supporting Documentation

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

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

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

NETWORK CAMERA is designed for indoor use with housing.

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

Model Differences

PNB-A9092 is basic model.

PNB-A9082 is identical to basic model except for image sensor, lens and heatsink.

PNB-A9092MC is identical to basic model except for software.

PNB-A9082MC is identical to basic model except for image sensor, lens, heatsink and software.

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
IP protection class	IPX0
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	1.024

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 following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

4791690487

- Maximum Normal Load: Continuous operation with output loads. (USB port 5 Vdc, 0.5 A, ALARM port 12 Vdc, 0.05 A.)

Additional Standards

The product fulfills the requirements of: N/A

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	"Input Ratings (dc, current)"
(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 12 Vdc, 0.96 A or PoE(53 Vdc), 0.26 A.
(Website) Manual - 2	The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3at 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.
Hard Copy	A. IMPORTANT or ATTENTION or similar wording. B. Please check 'Manuals' from our website, before connecting to the supply. C. Company website URL (https://www.~~) or QR code.
SCC requirement	If the signal words DANGER, WARNING, and CAUTION are included, a French manual is provided.

Special Instructions to UL Representative

N/A

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

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

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Enclosure (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 2.5 mm thickness, See enclosure for dimension.	-	-	
Internal Plastic Part Materials	SAMYANG CORPORATION	3500G-(z)	Min. 1.5 mm thickness, rated Min. V-0, 125 deg. C	QMFZ2	UL (E121254)	
Internal Plastic Part Materials - Alternate	Interchangeable	Interchangeable	Min. 1.5 mm thickness, rated Min. HB	QMFZ2	UL	
Fuse (F301)	LITTELFUSE INC	449*	125 V, 2.5 A	JDYX2	UL (E10480)	
Opto-coupler (LS1)	LITE-ON Technology Corporation	LTV-217 (Type: LTV-217-G)	Isolation Voltage: 3750 Vac, Max. Operation Temperature: 110 deg. C	FPQU2	UL (E113898)	
Opto-coupler (LS1) - Alternate	COSMO ELECTRONICS CORP	KPC357NT	Isolation Voltage: 3750 Vac, Max. Operation Temperature: 115 deg. C	FPQU2	UL (E169586)	
Line filter (L1)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO.,LTD	PCM1206-752S	7.5 mH, 130 deg. C, See enclosure for more detail.	-	-	
Transformer (T1)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO.,LTD	PDT25125SR	41.0 uH, 130 deg. C, See enclosure for more detail.	-	-	

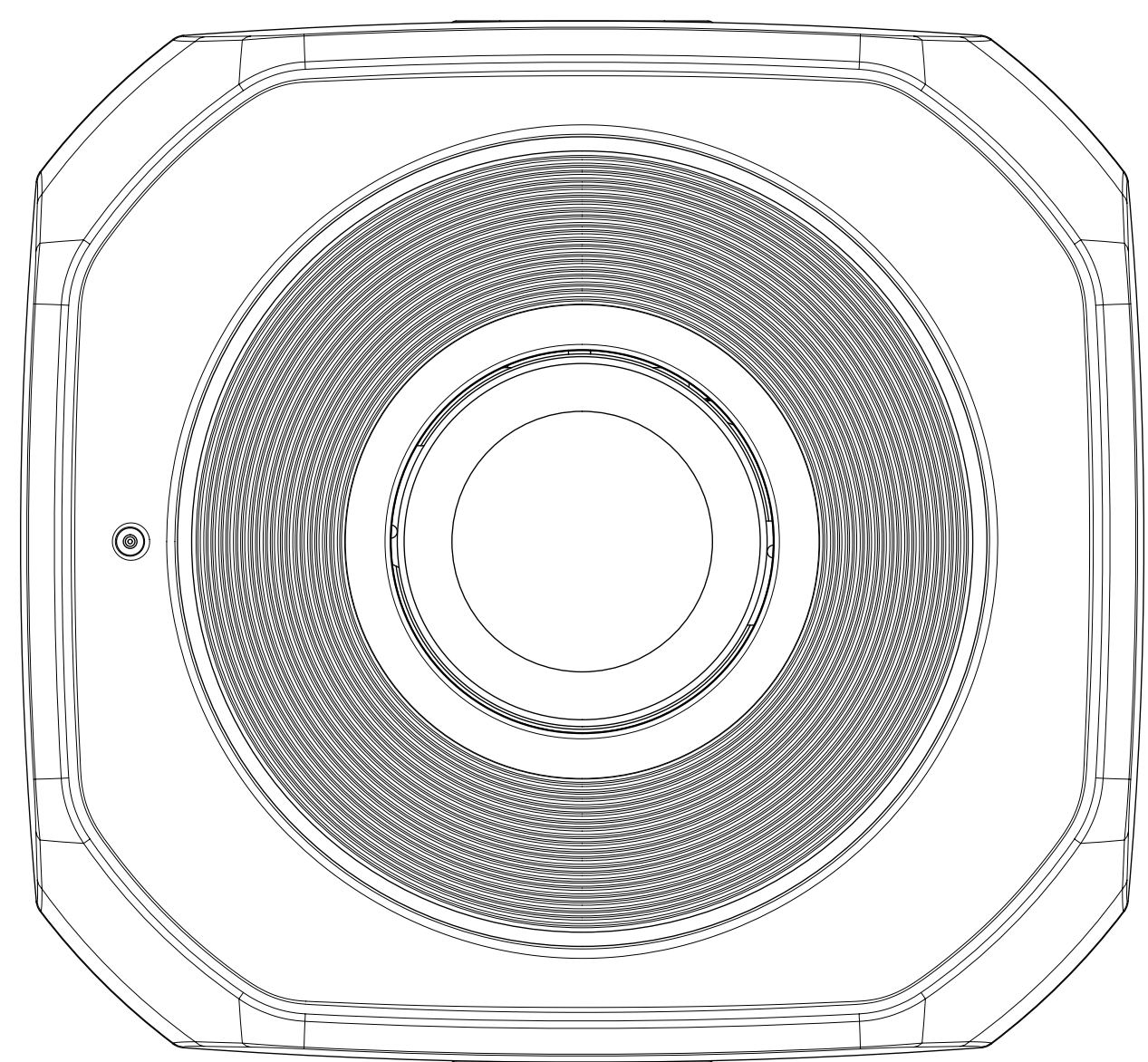
Lens module for PNB-A9092, PNB-A9092MC	Sunny Optics (Zhongshan) Co.,Ltd.	C7256B-400	IR-Cut, ZOOM, AF: 5 V, IRIS: Open 3.5-5 V	-	-	
Lens module for PNB-A9082, PNB-A9082MC	CBC CO.,Ltd	NSF2.3Z5915BHR W-F9A	IRIS, ZOOM, AF: 3-5 V, IRCF: 3-5.5 V	-	-	
Rechargeable battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	MS421R	Lithium, Rechargeable, Max Charging Voltage: 3.4 Vdc, Max Charging current: 300 mA	BBCV2	UL (MH15628)	
Lithium Battery Protection Circuit (BAT1)	Interchangeable	Interchangeable	Diode (D2, 80 V, 250 mA) and Resistor (R194, 3.3 Kohm) in series	-	-	
Thermal pad	KOMOTECH	KGP-1(a)	Min. 1.5 mm thickness, rated V-0, 150 deg. C	QMFZ2	UL (E245303)	
Heatsink For PNB-A9092, PNB-A9092MC	Interchangeable	Interchangeable	Aluminum, Approx. overall size of $\phi 72$ mm, Min. 2.0 mm thickness, See enclosure for more dimension.	-	-	
Heatsink For PNB-A9082, PNB-A9082MC	Interchangeable	Interchangeable	Aluminum, Approx. overall size of $\phi 47.9$ mm, Min. 2.0 mm thickness, See enclosure for more dimension.	-	-	
PWB	HANNSTAR BOARD CORP	MV-4	Min. V-0, 130 deg. C	ZPMV2	UL (E89382)	
PWB - Alternate	Interchangeable	Interchangeable	Min. V-0, 130 deg. C	ZPMV2	UL	
Label	Interchangeable	Interchangeable	Suitable for use on each type of surface to which applied, rated for maximum surface temperature specified,	PGDQ2 or PGJI2	UL	

			or 55 deg. C if not specified.			
--	--	--	--------------------------------	--	--	--

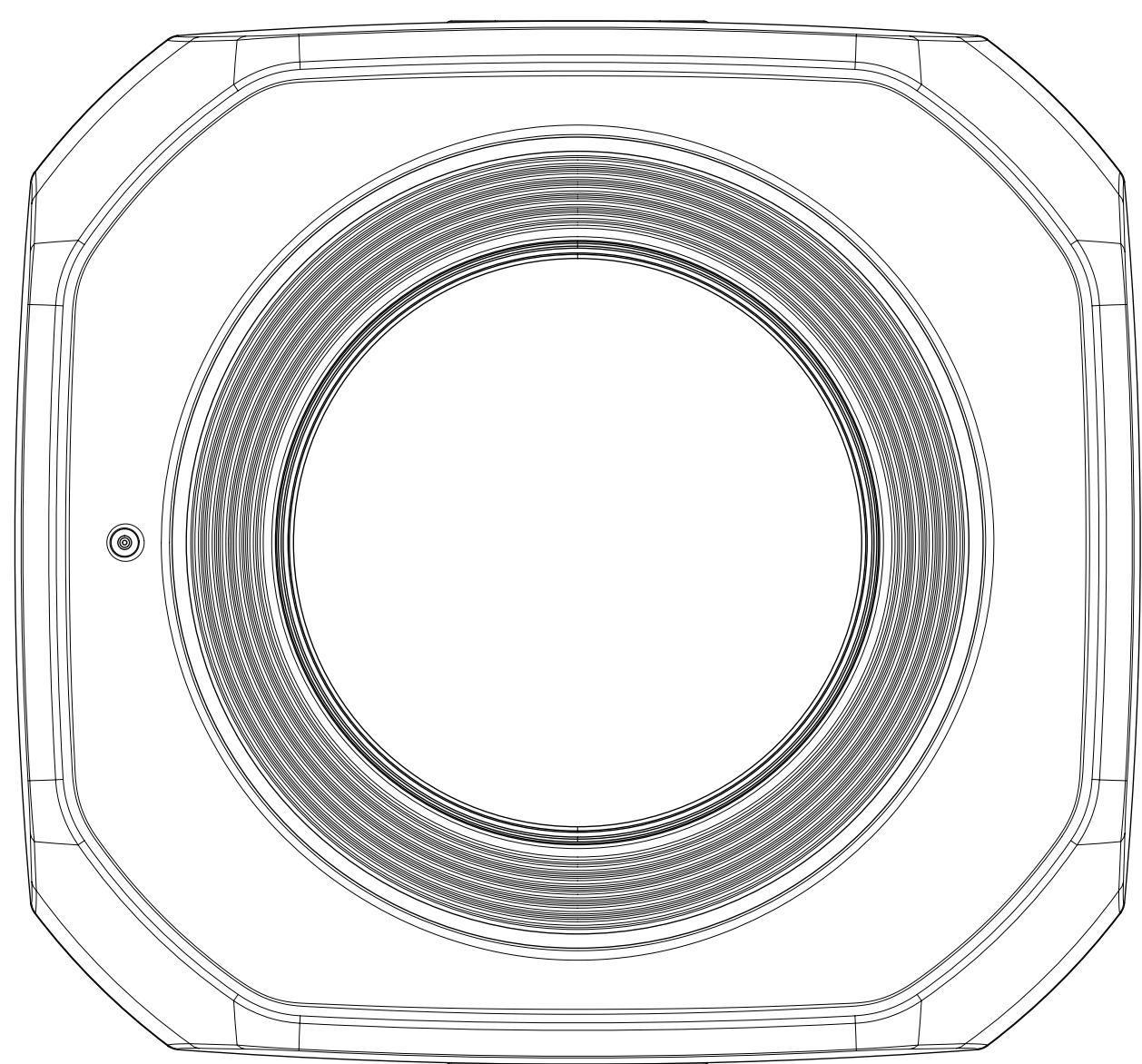
Enclosures

Type	Supplement Id	Description
Photographs	03-01	External view - 1
Photographs	03-02	External view - 2
Photographs	03-03	Lens view
Photographs	03-04	Power board view - 1
Photographs	03-05	Power board view - 2
Photographs	03-06	Network board view - 1
Photographs	03-07	Network board view - 2
Photographs	03-08	Rear board view - 1
Photographs	03-09	Rear board view - 2
Photographs	03-10	Sensor board view - 1
Photographs	03-11	Sensor board view - 2
Diagrams	04-01	Enclosure drawings
Diagrams	04-02	Heatsink drawings (For models, PNB-A9092 and PNB-A9092MC)
Diagrams	04-03	Heatsink drawings (For models, PNB-A9082 and PNB-A9082MC)
Manuals	06-01	Manual
Miscellaneous	07-01	Transformer (T1) specification
Miscellaneous	07-02	Linefilter (L1) specification
Miscellaneous	07-03	Label

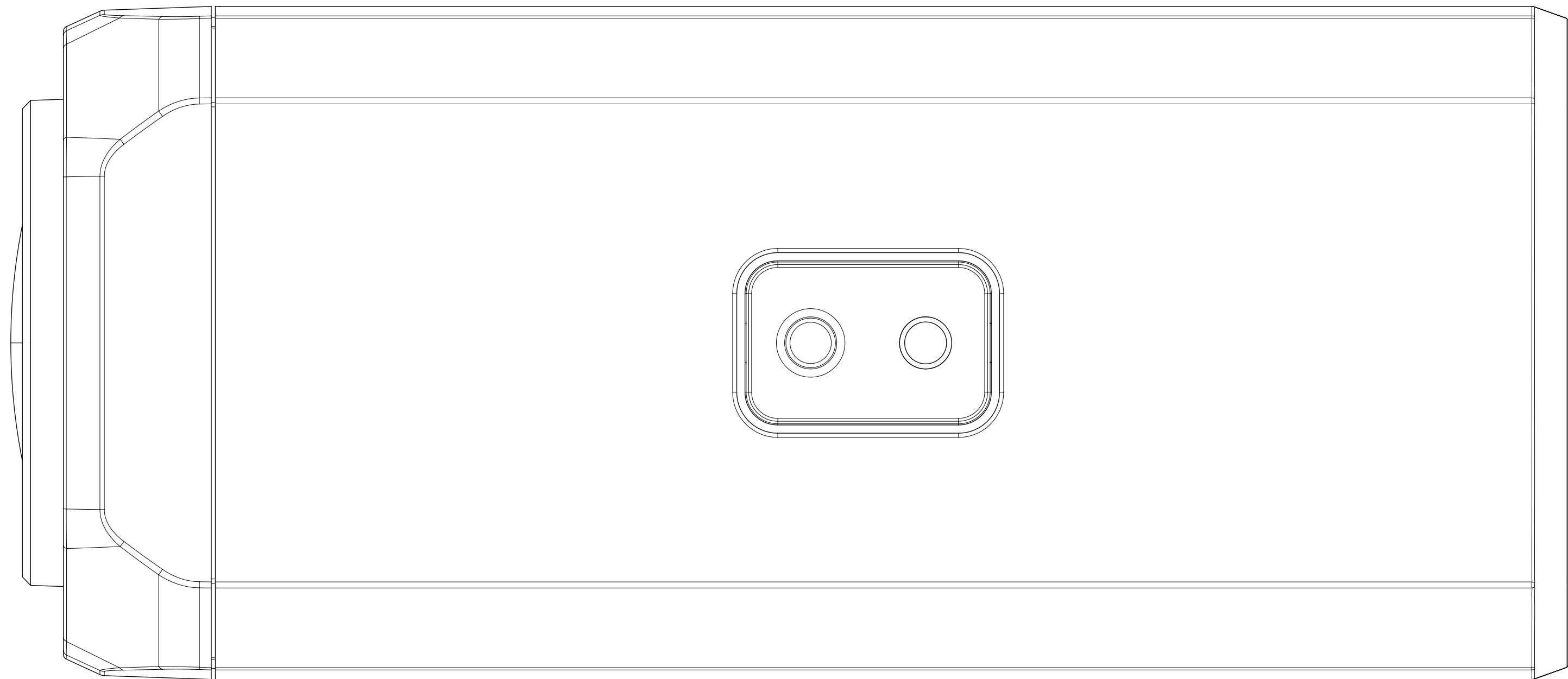
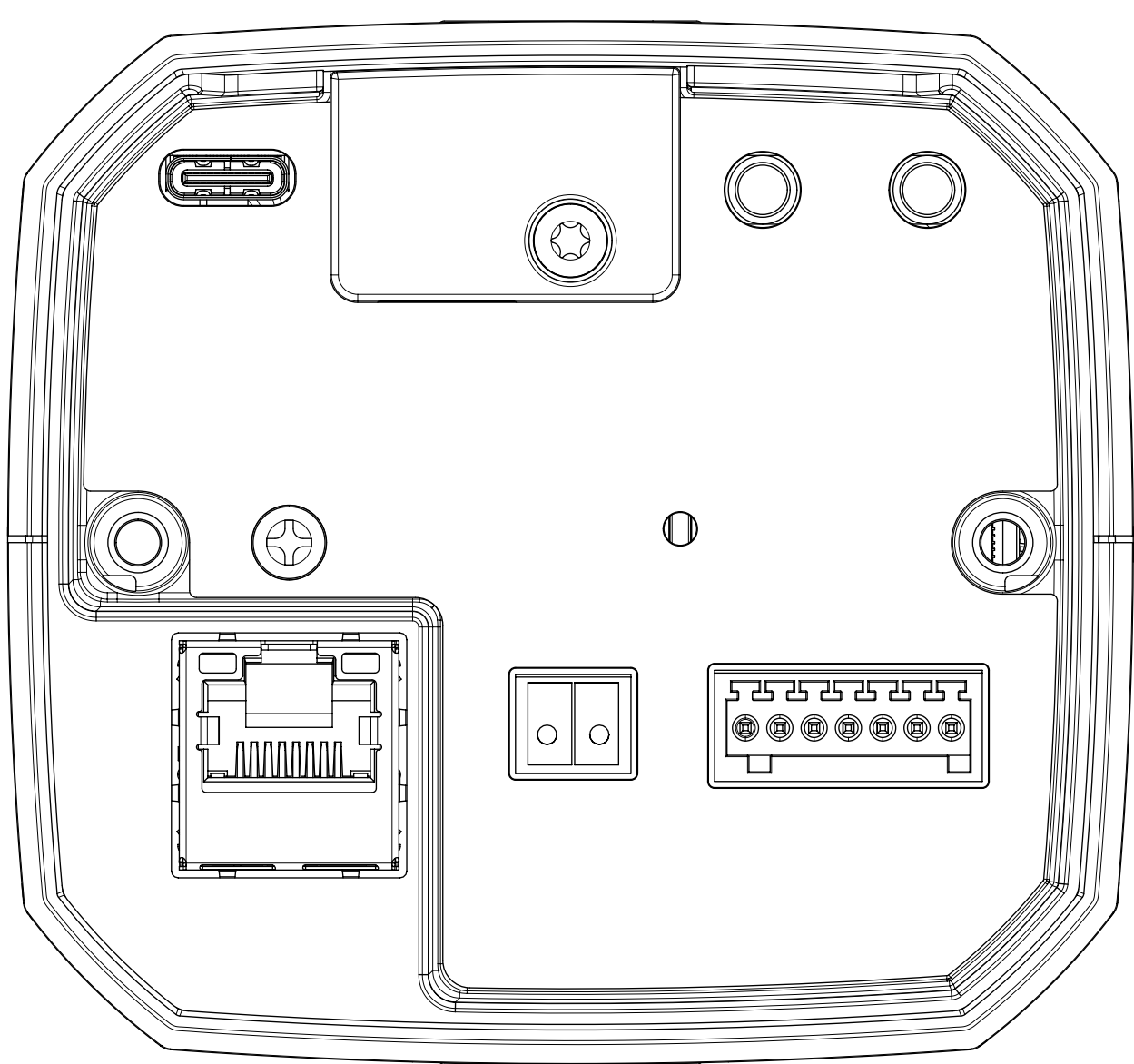
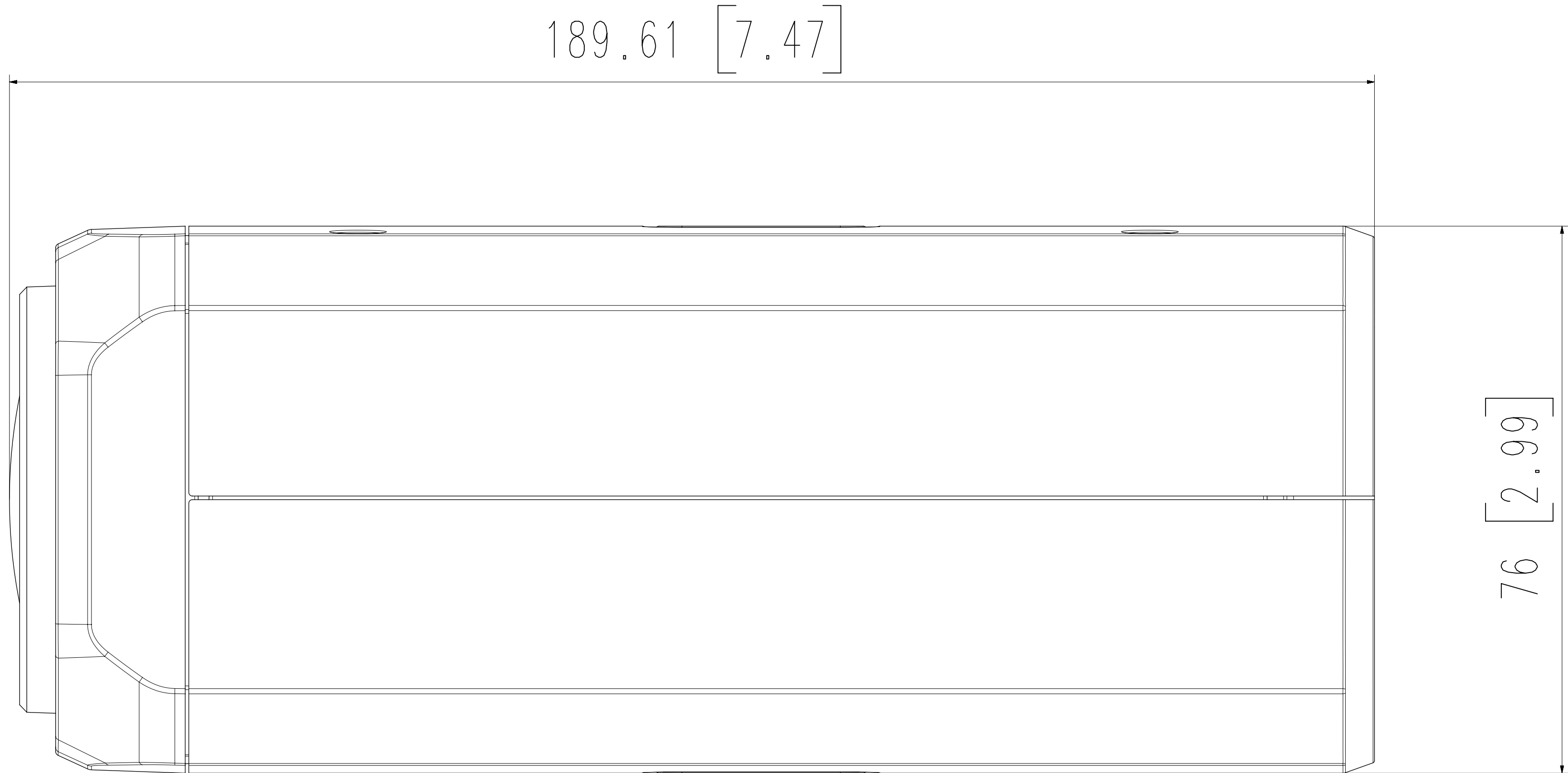
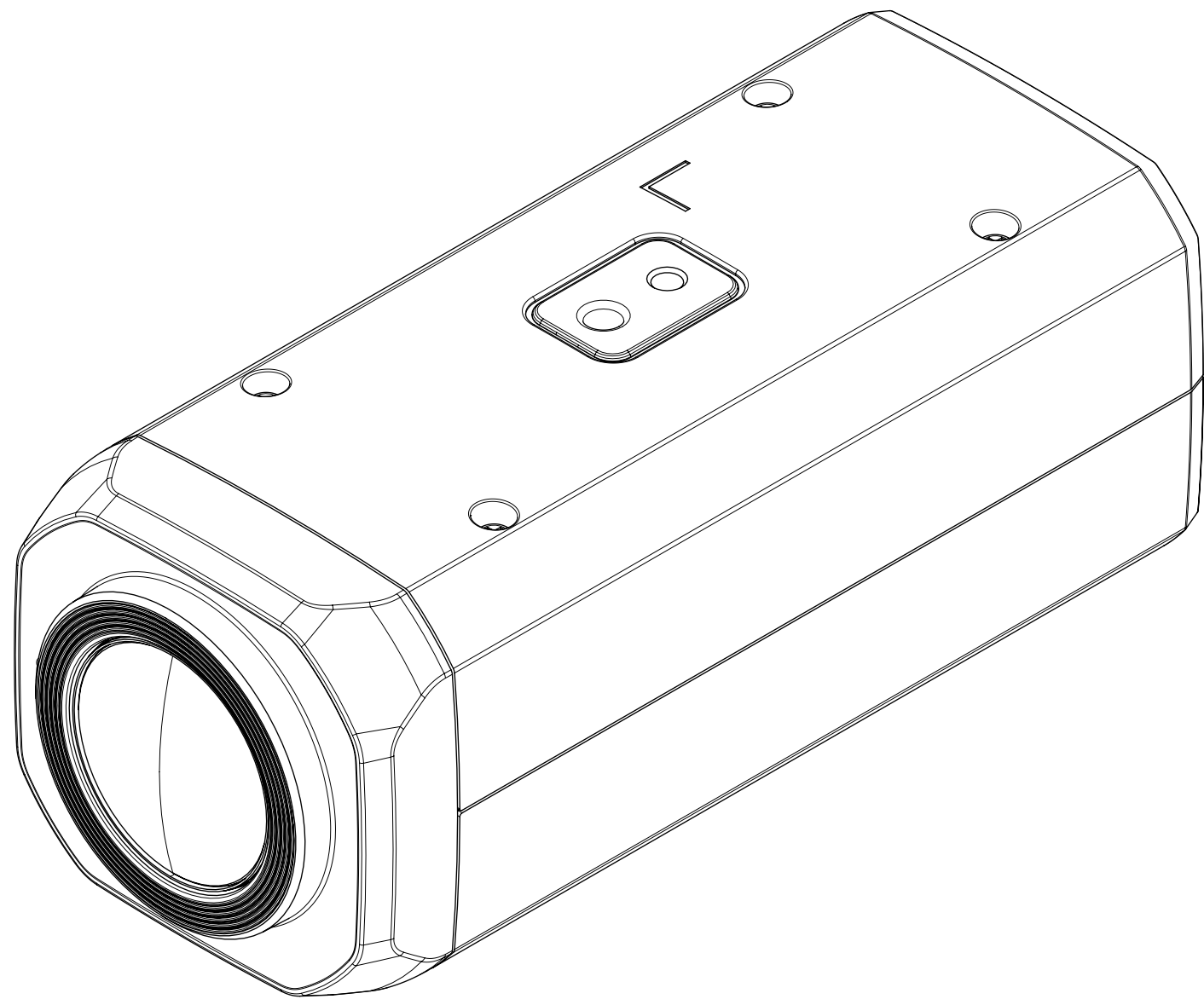
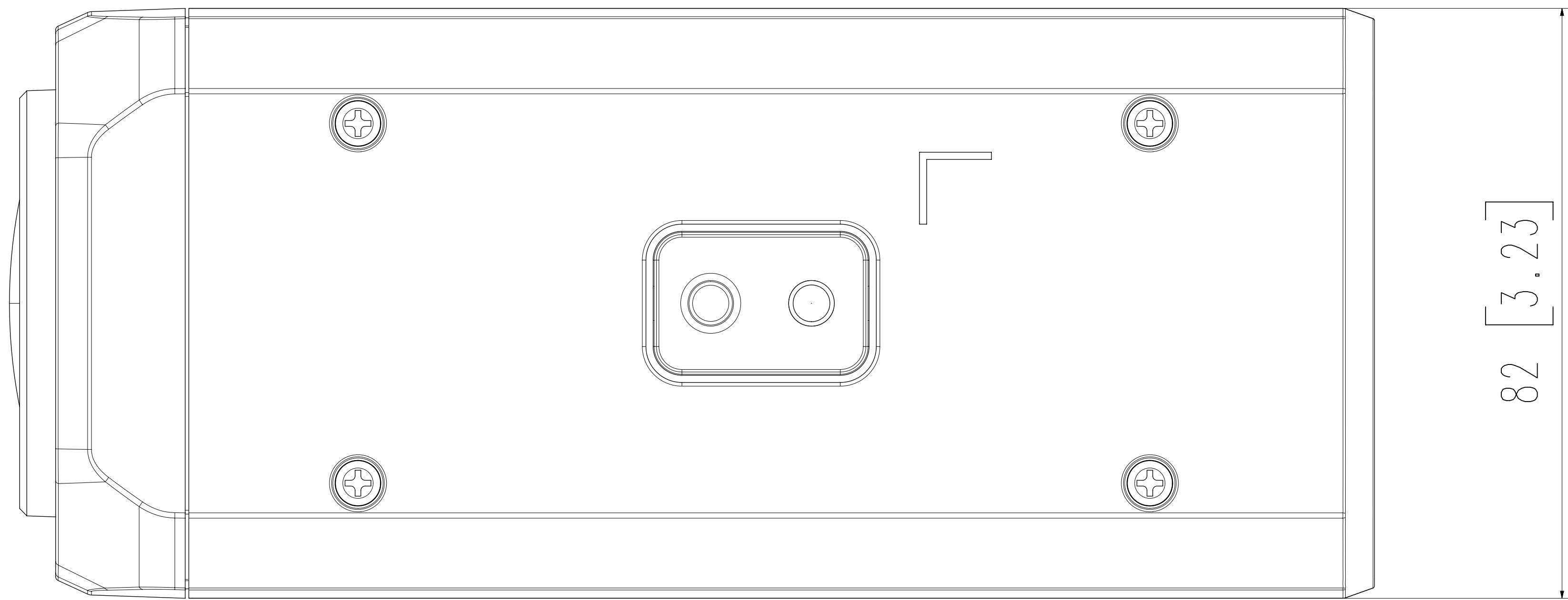
The following Page(s) are related to Diagrams-01. The next supplement, if applicable, will be identified with a new Supplement Page Heading.



PNB-A9082



PNB-A9092

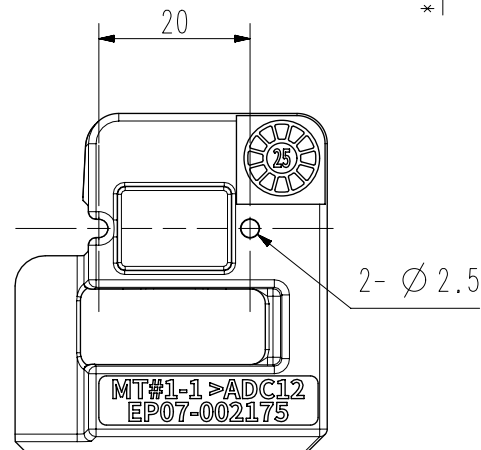
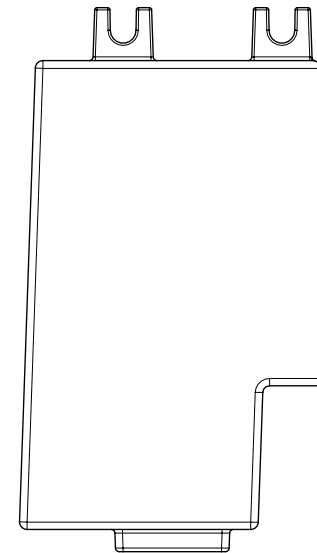
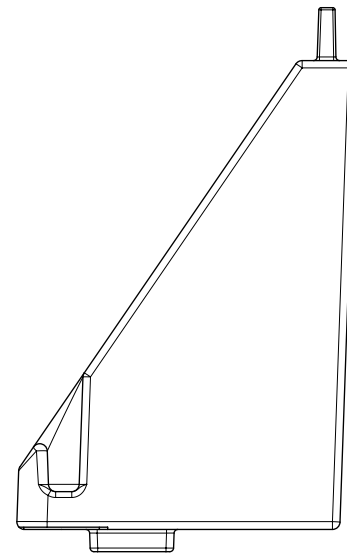
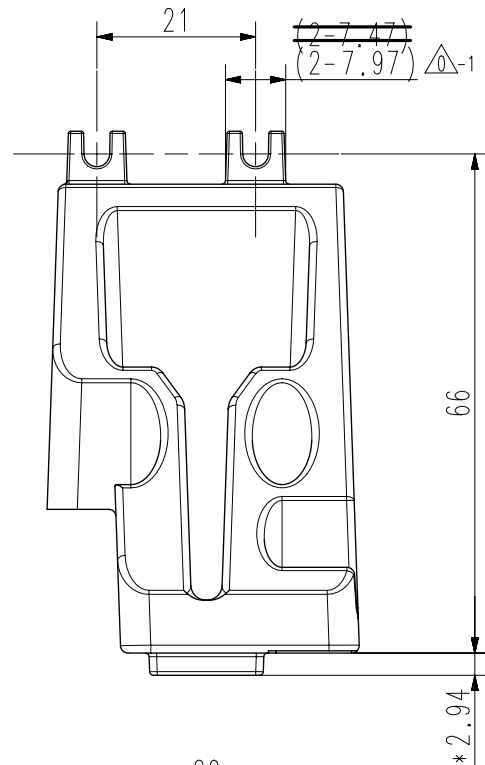
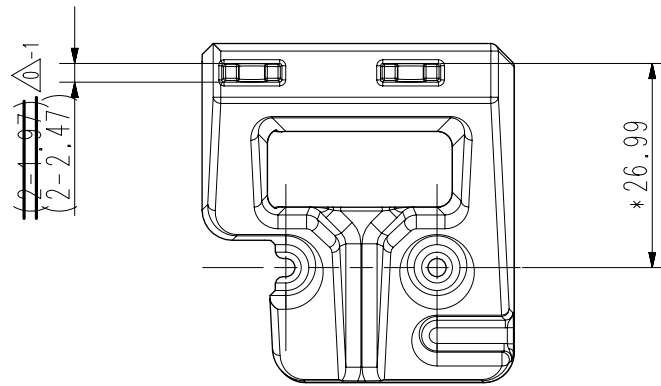
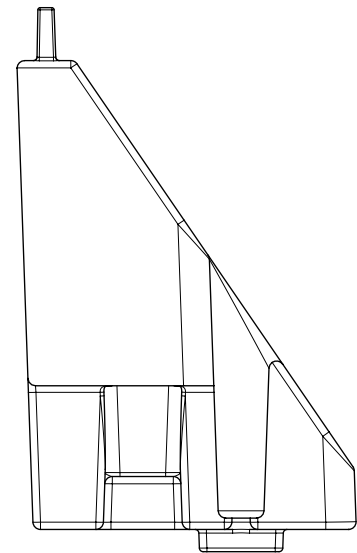


2	PNB-A9082	'25.03.11
1	PNB-A9092	'25.03.11
No.	MODEL NAME	DATE
Unit:mm[inch] SCALE:1/1		Hanwha Vision

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

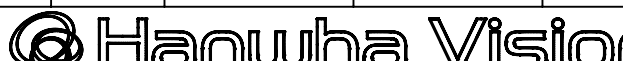
A3

0-1



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

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

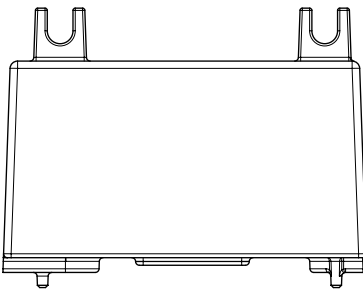
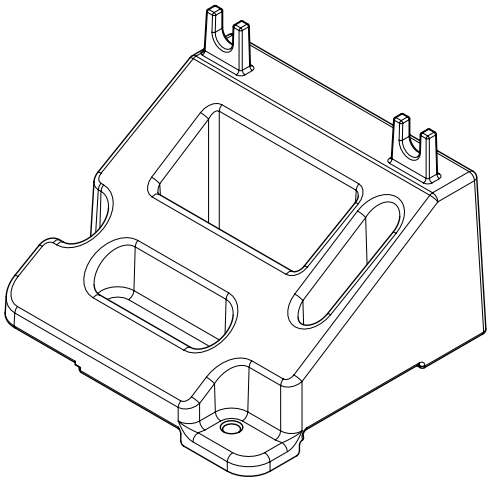
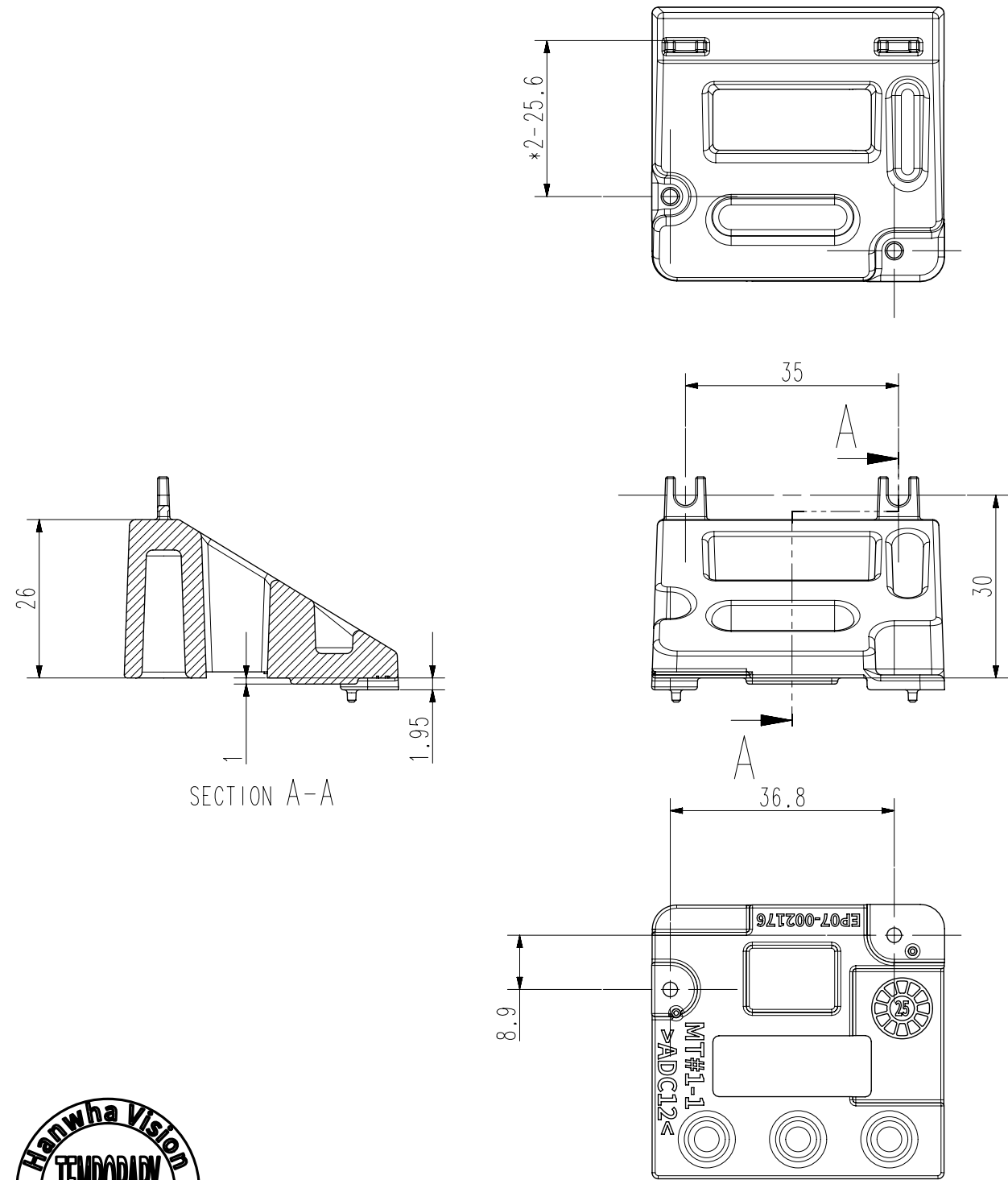
UNIT	mm	DESIGN	CHECK	APPROVAL	PART NAME	SINK,HEAT-SENSOR_PNB-A9092_DC
		I.J.Yoo	J.S.Kim	Y.S.Choi		
SCALE	1 / 1	25.03.12	25.03.12	25.03.12	MODEL NAME	PNB-A9092
					CODE NO.	EP07-002175A

The following Page(s) are related to Diagrams-03. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

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

Coating Specification	NO	PART NAME	CODE NO.	MATERIAL	Q'TY	REMARK
	1	SINK,HEAT-SENSOR_PNB-A9082_DC	EP07-002176A	Check note	1	-

Process	Casting→Cutting→Sanding→ Machining/Tapping→Degrease→Chromate
---------	---



NOTE:Die-Casting

- Material and Basic wall thickness : ADC, t2.0
- Gate, P/L, Ejector Pin location must be handled with HVC designer.
- Ejector pin stain must be less than 0.3 depth (凹), no flash is allowed.
- Undescribed edge round must be less than R0.5, undescribed corners must be less than R0.3.
- No Deformation, Air bubble, Shrinkage is allowed.
- Every Flash on P/L must be less than 0.1.
- Undescribed draft angles must be less than 0.5°.
- * marks (Key dimensions) must be carefully handled.
- Surface cutting level of Gate and Over-Flow must be equivalent with other surface cutting level.
- Part Name, Code Number, Mold Number, Material, Model Name must be carved on the inner side of the part.
- Location and Specs. must be handled with HVC designer.
- External look and printing specification must follow separately distributed Design Specification data.
- Including Surface cutting, Chromate, Sanding, Spray, Silk Print specifications.
- Reliability must satisfy HVC standards.
- Delivery packing specifications must be discussed separately.
- All other issues must be handled with HVC designer.

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



CHANGE	A3	Blank (19.03.01 X.X.X)	UNIT	mm	DESIGN	CHECK	APPROVAL	PART NAME	SINK,HEAT-SENSOR_PNB-A9082_DC
			SCALE	1 / 1	I.J.Yoo	J.S.Kim	Y.S.Choi	MODEL NAME	PNB-A9082
					25.03.12	25.03.12	25.03.12	CODE NO.	EP07-002176A
					Hanwha Vision				

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

NETWORK CAMERA

User Manual

PNB-A9092/PNB-A9082
PNB-A9092MC/PNB-A9082MC



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 12 Vdc, 0.96 A or PoE(53 Vdc), 0.26 A.
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 PNB-A9092/PNB-A9082/PNB-A9092MC/PNB-A9082MC products is -10°C to +55°C(14°F to +131°F).



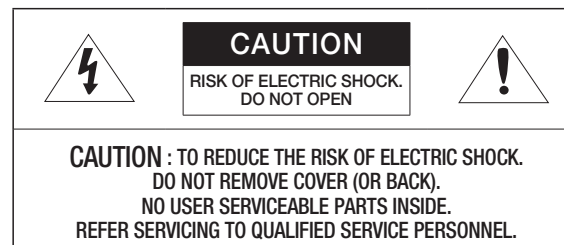
WARNING

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 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.

CAUTION

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

ATTENTION

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

CAUTION

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

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

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

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

Do not arbitrarily loosen or tighten the gore valve.

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

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3at 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

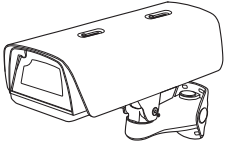
※ Please read this manual for the safety before using of goods and keep it in the safe place.

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.

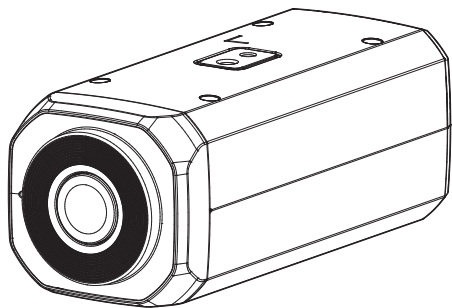
OPTIONAL ACCESSORIES FOR INSTALLATION

You can purchase appropriate optional accessories available.

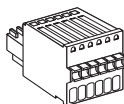
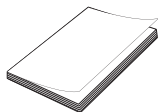
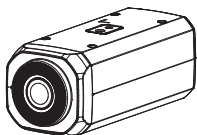
Model name	Housing
PNB-A9092/ PNB-A9082 PNB-A9092MC/ PNB-A9082MC	 SHB-4301HP

WHAT'S INCLUDED

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

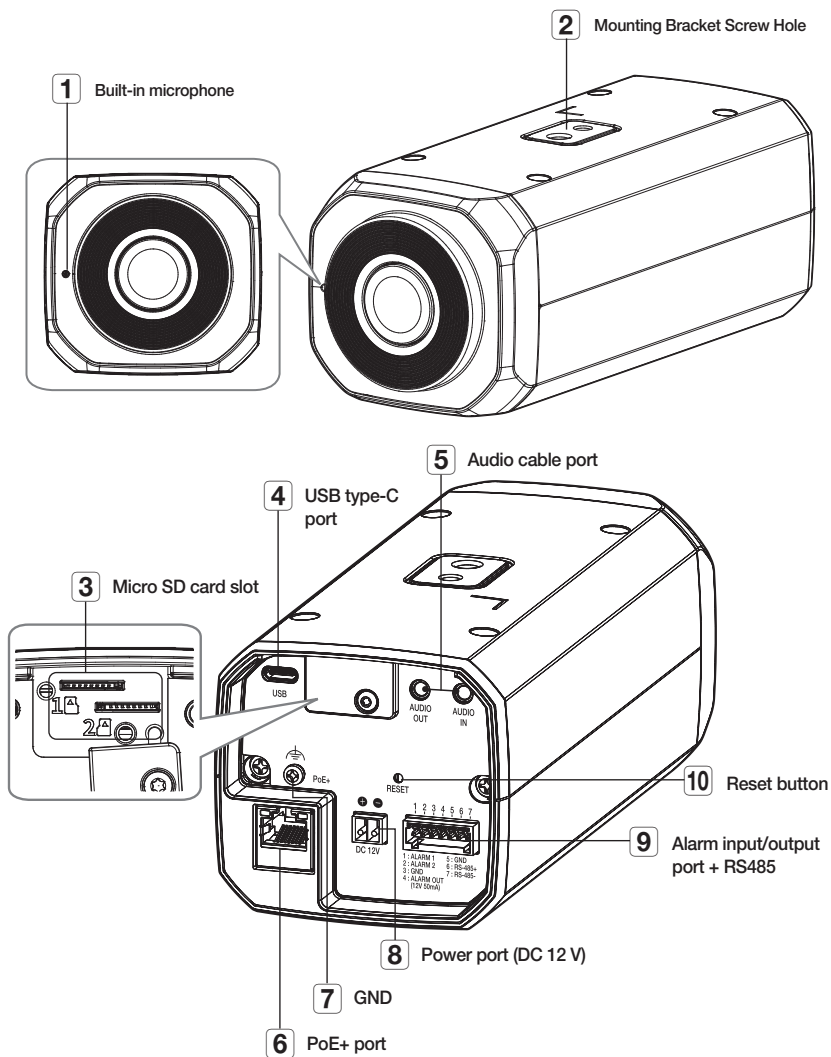


<PNB-A9092/PNB-A9082/PNB-A9092MC/PNB-A9082MC>



■ The shape of the camera lens may differ depending on the model names.

AT A GLANCE



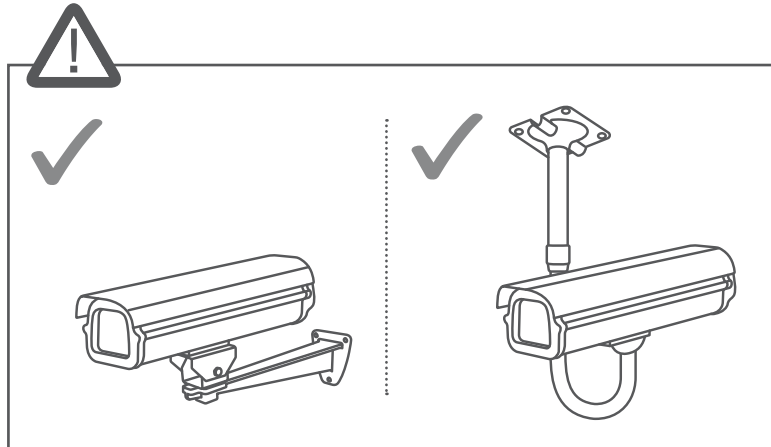
INSTALLATION

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

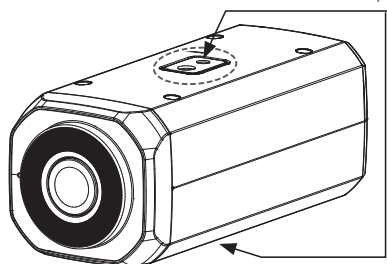
Precautions before installation

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

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



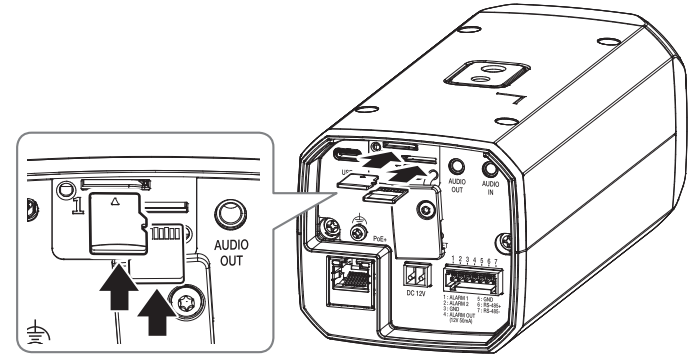
Screw Specification:
1/4" -20X3/8" Screw (x2)



INSERTING/REMOVING A MICRO SD CARD

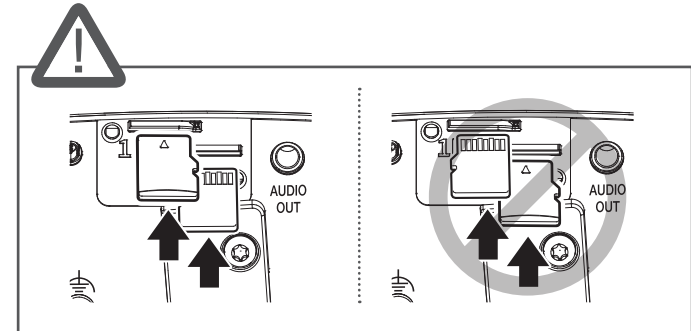
Inserting a Micro SD card

1. Remove the screw from the micro SD card slot cover with a Torx wrench or another tool, and then pull the cover aside.
2. Insert a Micro SD card in the arrow direction shown in the figure.



3. Place the micro SD card slot cover, and then tighten the screw to assemble it.

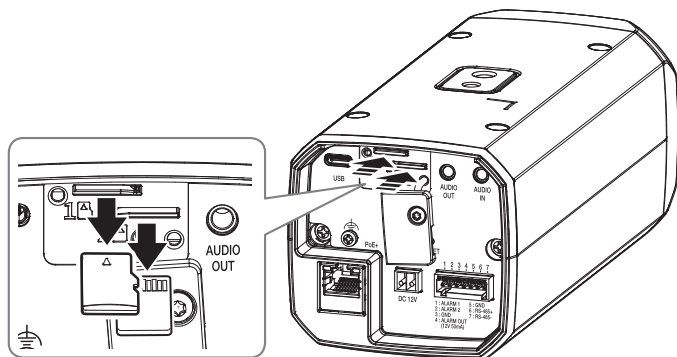
- Do not forcefully insert it in the reverse direction. It might damage your Micro SD card and your product.



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

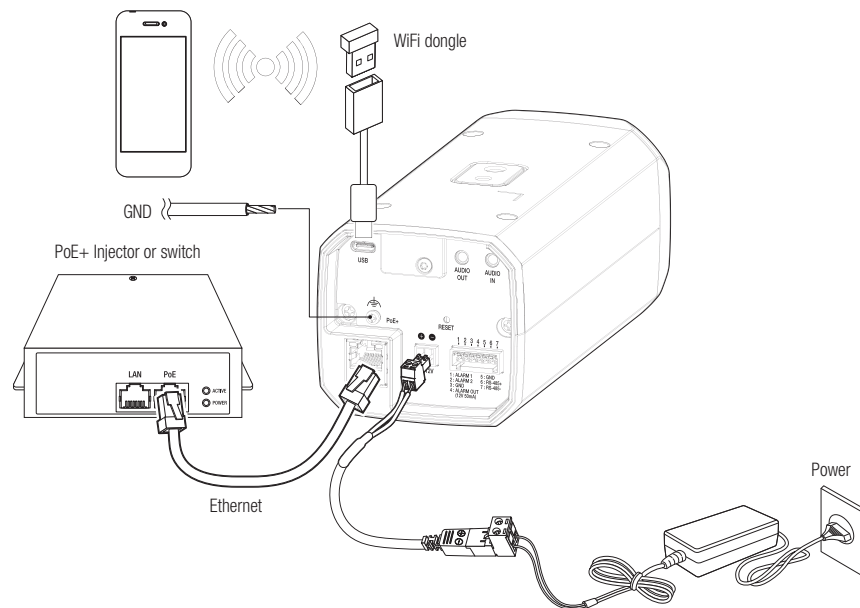
Removing a Micro SD card

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



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

CONNECTING WITH OTHER DEVICE



- The product USB Type-C port is used to communicate with the application installed in the smartphone by connecting the WiFi dongle. The USB Type-C port is intended solely for installation purposes and should not be used during product operation.

Ethernet Connection

Connect the Ethernet cable to the local network or to the Internet.

Powering and networking

Connect the PoE+ device with the PoE+ port of the camera.

- ❗
 - Connect and use a PoE+ enabled router.
 - Use a PoE+ device that complies with the IEEE 802.3at standard.
 - If you connect using an PoE+ enabled router, you don't need a separate power supply cable to power it on.

Network Cable Specification

Item	Contents	Remark
Connector	RJ-45(10/100/1000BASE-T)	
Ethernet	10/100/1000BASE-T	
Cable	Category 6	
Max Distance	100 m	DC Resistance ≤ 0.125 Ω/m
PoE+ Support	IEEE 802.3at	

Power Supply

Use the screwdriver to connect each line (+, -) of the power cable to the corresponding power port of the camera.

- ❗
 - If the power sources for PoE+ and DC 12 V are simultaneously turned on, the device power will be supplied by both of PoE+ and DC 12 V.
 - If you connect using an PoE+ enabled router, you don't need a separate power supply cable to power it on.
 - If you want to connect an external device, you must turn off the external device before proceeding.
 - Connect the set and the adapter power line first, and then connect the power cable to the outlet on the wall.

Power Cable Specification for Each Model

Model	Input power	Wire Type (AWG)	Cable Length (Max.)
PNB-A9092/PNB-A9082/ PNB-A9092MC/PNB-A9082MC	DC 12V	#18	22 m
		#20	13 m

- ❗
 - Be careful not to reverse the polarity when you connect the power cable.

Connecting WiFi

Camera Setup

1. Connect the OTG gender (Type C) and WiFi dongle to the USB Type-C port.

Smartphone Setup

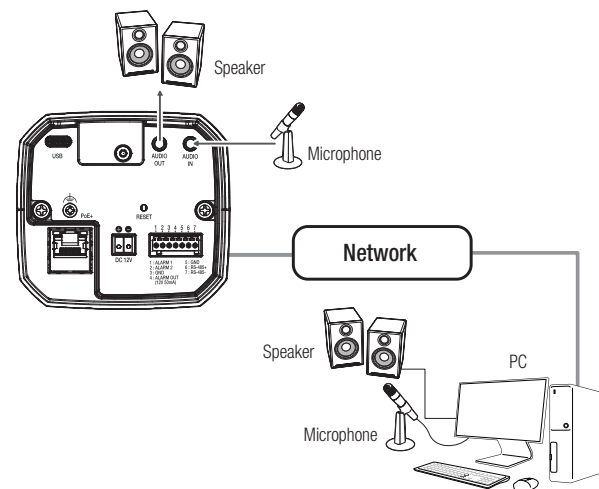
1. Install the Wisenet Installation application.
2. Select the camera SSID after turning on the WiFi.
3. Run the Wisenet Installation application.
4. When you log in to the camera, the video will be connected.
5. You can adjust angle of view while watching the video through smartphone.

Recommended dongle manufacturer

Manufacturer	Model
NETIS	WF2123 n300
EDIMAX	EW-7811Un V2 (New ver.)
IP Time	N100mini
IP Time	N150L
TP-LINK	TL-WN823N V1
TP-LINK	TL-WN725N
ASUS	USB-N13
ASUS	USB-N10 NANO
NETGEAR	WNA3100M
IODATA	WN-G150UMW
IODATA	WN-S150UM
TOTOLINK	N300UM

CONNECTING AUDIO AND ALARM I/O

Connecting to Audio Input/Output



1. Connect the AUDIO IN port of the camera with the microphone or LINE OUT port of the amplifier that the microphone is connected to.



You can use the internal microphone of the camera without an external microphone connection.

2. Connect the AUDIO OUT port of the camera with the speaker or LINE IN port of the amplifier that the speaker is connected to.

3. Check the specifications for audio input.

• Audio Codec

- Audio In : G.711(PCM): 8kHz(64Kbps), G.726(ADPCM): 8kHz(16/24/32/40Kbps), AAC-LC: 16kHz(48Kbps), OPUS: 48kHz(64Kbps)

• Full duplex Audio

• Audio in

- Supported voltage : 2.5 VDC
- Input impedance : 20 kohm

• Audio out

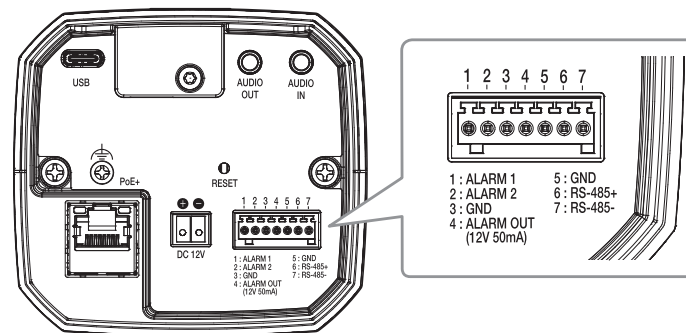
- Output voltage : < 2.74 Vpp
- Load Resistance : > 10 kohm



- In the case you access the web viewer and select an external microphone as the audio input sources in <Video & Audio> - <Audio setup>, the following specifications are recommended:
 - Frequency range: 40-16,000 Hz
 - Impedance: 1,500 Ω
 - Sensitivity: -40 $\pm$ 3 dB (7.1-14.1 mV)
- In any of the following cases, sound classification performance may be degraded or malfunction:
 - If gunshot sounds are heard continuously in a short interval (e.g. machine gun sound) rather than a one-time gunshot sound
 - If the noise is too loud for the noise and the target sound to be distinguished
 - If two or more of different sounds are registered simultaneously
 - If the sound classification is applied while using the noise removal function in a quiet place
 - If the source of clapping sounds or screams is close to the camera (within 1 meter)
 - If a sound that does not belong to any of the sound classification categories (airplanes sound, siren sound, etc.) is loudly heard all of sudden
 - If external microphone does not meet the recommended specifications

Connecting to the I/O port box

Connect the Alarm I/O cable to the corresponding port of the port box.

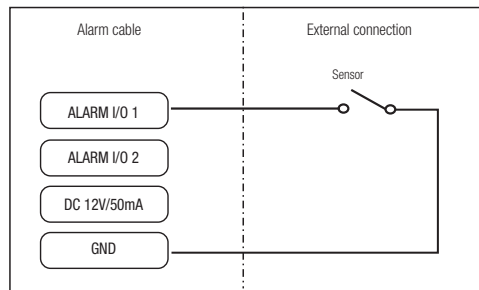


Function	Description
ALARM 1, ALARM 2	These two ports are configurable from the web viewer, as they can be used as Alarm in or Alarm out ※ Alarm I/O changes can be made through the Webviewer setup.
GND	It is a ground terminal.
ALARM OUT	This pin supplies a continuous 12 VDC output with a maximum amperage of 50 mA
RS-485	By connecting an external device to the [RS-485 +, -] port, the external device can be controlled.  The GND connection is recommended for RS-485 communications. If you encounter a communication failure, connect the GND pin as appropriate to correct the GND level between camera and external device.

To connect to an external sensor

To use as an Alarm IN: Connect one of the [ALARM I/O] port and the other terminal to the [GND] port.

Alarm In Wiring Diagram(example)



<If ALARM I/O 1 is set as an input terminal>

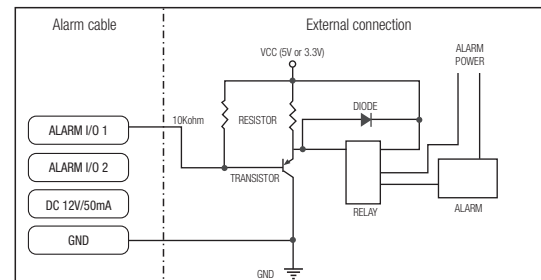
To connect to an alarm output

If devices (e.g., flashing light and siren) that exceed the voltage and current specifications (DC12V / 50mA) are connected by using the open collector method, it may cause damage.

Refer to the alarm out connection diagram below 2 cases.

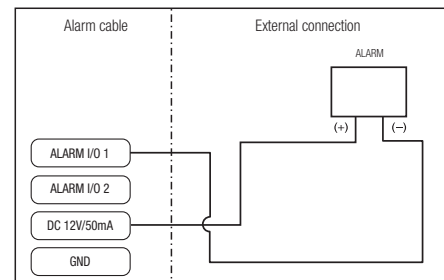
Alarm Out Wiring Diagram(example)

When the warning light/siren exceeds DC 12V/50mA (Connect Relay specifications in accordance with the warning light/siren power specifications.)



<If ALARM I/O 1 is set as an output terminal>

When the warning light/siren does not exceed DC 12V/50mA



<If ALARM I/O 1 is set as an output terminal>

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



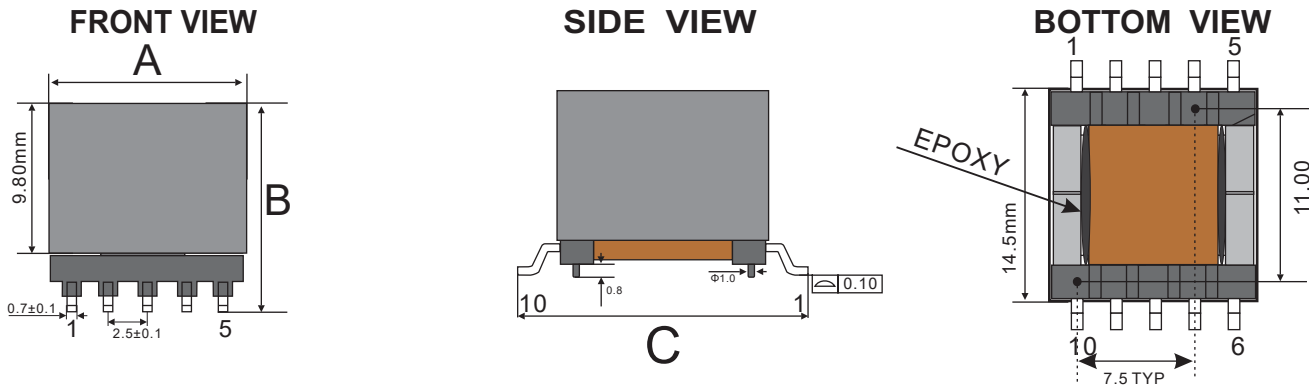
承认书

SPECIFICATION FOR APPROVAL

CUSTOMER	
MODEL NO.	EP23-001075A
PART NAME	POWER TRANSFORMER
PART TYPE	PDT25125SR
REV	X7
SIGNATURE	制图: 施壘某 2020-01-07 Lei Wan 审核: 施壘某 2020-01-07 GX Song 批准: 施壘某 2020-01-07 Jiang Wang
CUSTOMER APPROVAL	廠志恆: SIGNET 嘯ò: SIGNATURE

拐提攪施壘某棐槐壘毒泐涓滌渥
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（P. C: 518108）
ADD: No.1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen,
TEL: +86-755-29810619 29810976 FAX: +86-755-29810159
Http://www.group-tek.com E-mail:sale1@group-tek.com

2. Mechanical Dimensions:

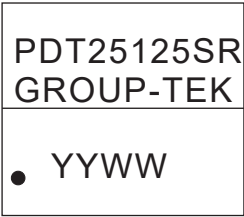


- Note:
- 1.Wrap 2Ts of 7mm kapton tape around the finished part.
 - 2.Fixed the cores with glue,and fixed the case with glue.

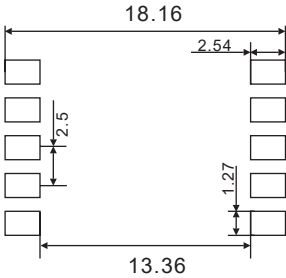
Unit: mm

A MAX	B MAX	C MAX
15.0	14.8	17.8

Laser Marking information



Suggested PCB Paad Layout

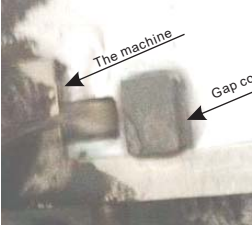


3. Electrical Characteristics :

Specifications: at 25°C.		Operating Temperature -40 to +105°C*	
NO.	ITEM	TEST CONDITION	SPECIFICATION
1	Inductance	(1-3) @100KHz, 1.0V	41.0uH ±10%.
2	Leakage Inductance	(1-3) @100KHz, 1.0V with shorted other pins.	0.67uH Max.
3	DCR	(1-3) @ 25°C	62.0mΩ Max.
4		(9-6) @ 25°C	20.0mΩ Max..
5		(10-7) @ 25°C	23.0mΩ Max.
6		(4-5) @ 25°C	120.0mΩ Max.
7	HI-POT	PRI TO SEC	2250Vac 5mA 3Sec.
8	TURN RATIO	(1-3):(9-6):(10-7)	2.67:1.0:1.0±2%.
9	TURN RATIO	(1-3):(4-5)	2.67:1.0±2%.
10	INSULATION RESISTANCE	PRI--SEC DC500V	100MΩ Min.
11		PRI--CORE DC500V	100MΩ Min.
12		SEC--CORE DC500V	100MΩ Min.

*Remark:Product surface temperature:-40 to +125°C,at 25°C.

4.Overhauling List.

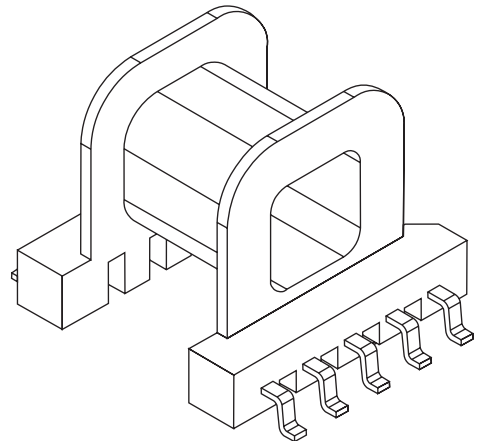
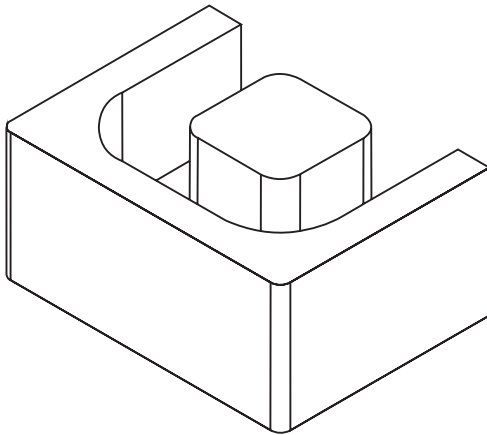
NO.	ITEM	SPECIFICATION
1	Tape turns	2T
2	Winding turns	P1-1:16T S1-1:6T P1-2:16T S1-2:6T P2:6T
3	Pins order/Pin connection .	1T
4	Marking Information	PDT25125SR GROUP-TEK ● DATE CODE
5	Gap the center leg	  
6	Solder Temperature	420±20°C 

5.Winding Information:

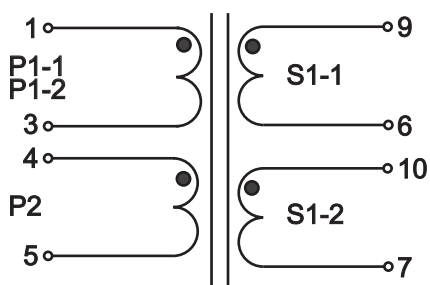
WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
P1-1	1--3	4*0.21mm 2UEW	16	1T w8.0mm (kapton tape)	N/A	N/A	1
S1-1	9--6	4*0.27mm 2UEW (Red)	6	1T w8.0mm (kapton tape)	N/A	N/A	1
P1-2	1--3	2*0.21mm 2UEW (Natural)	16	1T w8.0mm (kapton tape)	N/A	N/A	1
S1-2	10--7	4*0.27mm 2UEW	6	1T w8.0mm (kapton tape)	N/A	N/A	1
P2	4--5	3*0.17mm 2UEW	6	2T w8.0mm (kapton tape)	N/A	N/A	1

NOTE :

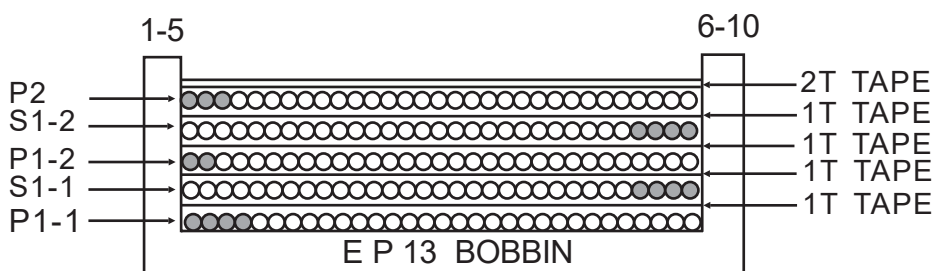
1. -Place the bobbin pin 1 left side of operator.



6.Schematic:



7.Winding construction



● :Start terminal

8.Material List:

NO.	ITEM.	MATERIALS	SUPPLIERS/MANUFACTURERS	UL FILE NO.
1	BOBBIN	PHENOLIC T375J UL RATING: 94V-0	CHANG CHUN PLASTICS CO LTD.	QMFZ2.E59481
2	CORE	TP2A	TTS Technology Co.,Ltd.	N/A
3	WIRE	POLYURETHANE ENAMELED TYPE NO: 2UEW THERMAL RATING:180°C	ZHUHAI SUNTEK WIRE CO LTD	OBMW2.E234867
4	TAPE	ADHESIVE POLYESTER TAPE TYPE NO.:CT*(c)(g) THERMAL RATING:130°C yellow tape: for inner coils	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 city eatto electronic material Co.,Ltd	E218090
7	CASE	PHENOLIC T375J UL RATING: 94V-0	CHANG CHUN PLASTICS CO LTD.	QMFZ2.E59481

9.PACKING INFORMATION:

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

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



SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER			
客户料号 MODEL NO			
产品名称 PART NAME	COMMON MODE CHOKE		
产品型号 PART TYPE	PCM1206-752S		
版本 REV	X0		
签名 SIGNATURE	制作: PREPARED BY 联泰兴 2024-11-04 JLYe	审核: CHECKED BY 联泰兴 2024-11-04 weifeng. Luo	批准 APPROVED BY 联泰兴 2024-11-04 Jiang. Wang
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

二. ELECTRICAL CHARACTERISTICS:

PART NUMBER	INDUCTANCE @10KHz/0.3V (1-2)=(4-3) mH+50%-30%	Turn Ratio@ (1-2):(4-3)	Rated Current IRMSΔT≤40°C Typ	RDC(Ω) (1-4)=(2-3)Max	HI-POT pri-sec V 1mA/ 2Sec
PCM1206-752S	7.5mH	1:1±2%	1.0A	250mΩ	1500V/AC

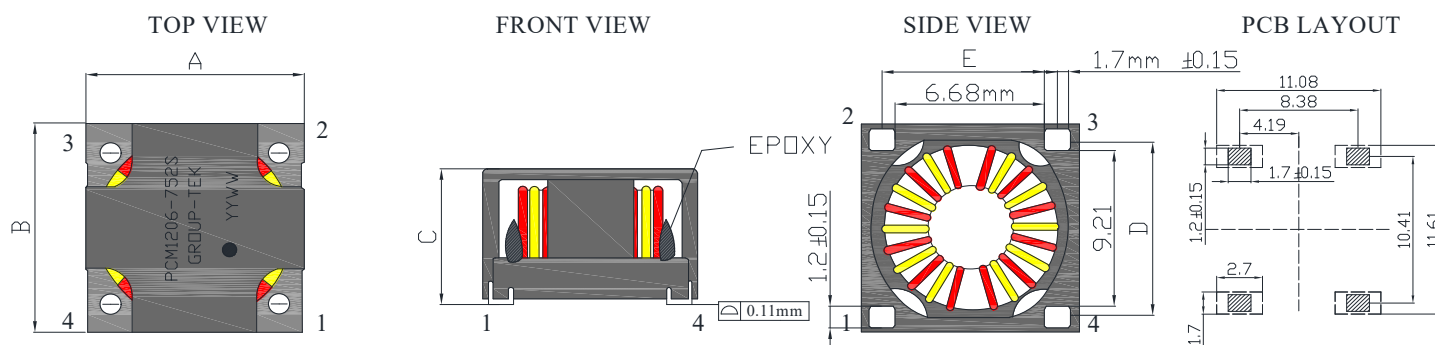
Operating temperature -40℃~+125℃

CH3302 or HP4284....., RDC test equipments CH502.....

*. Inductance & Q value test condition Frequency 10KHz and 0.3Vrms at 25℃;

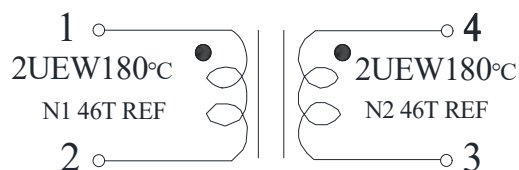
*. Storage temperature -25℃~+125℃, Humidity 20% to 70%RH.

三. EXTERNAL DIMENSIONS: UNIT: mm



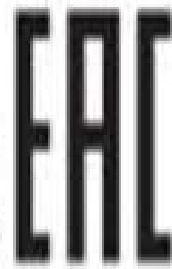
Item	A	B	C	D	E
mm	12.6 ± 0.5	12.8 ± 0.5	6.0 ± 0.5	10.41 ± 0.5	8.38 ± 0.5

四: CIRCUIT



五. MATERIAL LIST:

NO	ITEM	MATERIAL	SUPPLIER OF THE MATERIAL	UL CARD
1	CORE	Mn-Zn T9*5*3 10K	HUIZHOU KELI MAGNETICS CO.,LTD	N/A
2	CASE	21-0911HN	DONGGUAN FENGQIANG ELECTRONICS CO.,LTD	N/A
3	WIRE	2UEW180°C, 0.2mm R, N	.Shing Shun Magnet wire (hui zhou)co,Ltd	E255839
4	SOLDER	SN99.3%/CU0.7%	Gaoxin stannum industry co,ltd	N/A
5	Varnish	E-57	Shen zhen Eastlight chemi cals., Ltd.	N/A

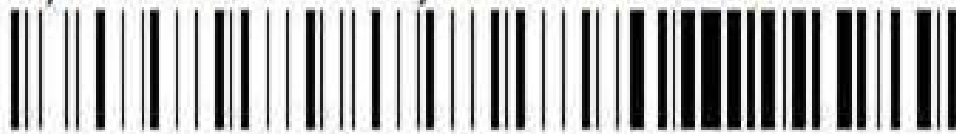


NETWORK CAMERA,PNB-A9092

DC 12V  0.96A /

PoE(53V ) 0.26A

M/C: PNB-A9092/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





