



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-A6213-DescriptionUL
Figure-23-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:	PNM-C32084RQZ
Rating:	PoE (55 Vdc), 1.29 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: SeoHwan Kim / Project Handler Reviewed By: Byeonguk Lee / 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 outdoor use and 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

N/A

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 -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)	6.2

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 : -40 °C to 55 °C

Additional Information

4791284683

- Maximum Normal Load: Continuous operation (Operate the camera through networked equipment 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", IP66
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.
(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 (55 Vdc), 1.29 A.
(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 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 –Case top (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(+)(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure –Case top dome cover (Plastic)	MITSUBISHI ENGINEERING- PLASTICS CORP	S-2000V+(f1)	Min. 1.5 mm thickness, rated Min. V-2, 115 deg. C	QMFZ2	UL (E41179)	
Enclosure –IR LED cover (Plastic)	LOTTE CHEMICAL CORPORATION	QC-1220UR(f1)	Min. 1.5 mm thickness, rated Min. V-2, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure – Bottom Opening cover (Plastic)	LOTTE CHEMICAL CORPORATION	HN-1068(+)(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Enclosure –Between case top dome cover and IR LED cover (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 2.5 mm thickness.	-	-	
Enclosure –Top (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 2.5 mm thickness.	-	-	
Enclosure –Bottom (Metal)	Interchangeable	Interchangeable	Aluminum, Min. 2.5 mm thickness.	-	-	
Internal Metal	Interchangeable	Interchangeable	Aluminum, Min. 2.0 mm thickness.	-	-	
Internal Plastic	LOTTE CHEMICAL CORPORATION	HN-1068(+)(f1)	Min. 1.5 mm thickness, rated Min. V-0, 130 deg. C	QMFZ2	UL (E115797)	
Opto-coupler (PC1, PC2)	LITE-ON TECHNOLOGY CORP	LTV-817	Isolation Voltage: 5300. Max. Operation Temperature: 100 deg. C	FPQU2	UL (E113898)	

Opto-coupler (PC1, PC2) (Alternate)	LITE-ON TECHNOLOGY CORP	2561D	Isolation Voltage: 5000. Max. Operation Temperature: 100 deg. C	FPQU2	UL (E113898)	
Transformer (T1)	DONG IN SYSTEM CO TLD	UPDH110-T1	130 deg. C See enclosure for more detail.	-	-	
Transformer (T1) (Alternate)	DONG HEUNG ELECTRONICS CO TLD	UPDH110-T1	130 deg. C See enclosure for more detail.	-	-	
Transformer (L32)	DONG IN SYSTEM CO TLD	UPDH110-L32	130 deg. C See enclosure for more detail.	-	-	
Transformer (L32) (Alternate)	DONG HEUNG ELECTRONICS CO TLD	UPDH110-L32	130 deg. C See enclosure for more detail.	-	-	
Transformer (CT1)	DONG IN SYSTEM CO TLD	SNP-6320RH-CT1	130 deg. C See enclosure for more detail.	-	-	
Transformer (CT1) (Alternate)	DONG HEUNG ELECTRONICS CO TLD	SNP-6320RH-CT1	130 deg. C See enclosure for more detail.	-	-	
Line filter (NL1)	TNC CO.,LTD	CV36045USA2	450 uH, 105 deg. C, See enclosure for more detail.	-	-	
Line filter (LF1)	TNC CO.,LTD	CH935230S (LLF-104)	23.0 mH, 120 deg. C, See enclosure for more detail.	-	-	
Heat sink (HS1, HS2)	Interchangeable	Interchangeable	Aluminum, Approx. Overall size of 50 by 19 by 10mm, Min. 0.2 mm thickness	-	-	
Lens module	DongGuan YuTong Optical Technology CO.,Ltd	YTW30033A01DB. IR-PIRIS-JZ-8MP+H231+IR0507	Rated 4.2 -5 Vdc	-	-	

Rechargeable battery (BAT1, BAT41)	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, 80 V, 500 mA) and Resistor (R10, 3.3 Kohm) in series	-	-	
Lithium Battery Protection Circuit (BAT41)	Interchangeable	Interchangeable	Diode (D41, 80 V, 500 mA) and Resistor (R48, 3.3 Kohm) in series	-	-	
DC Fan (4ea)	SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO LTD	EF50101BX-C0(Y)	Rated voltage: DC 12 V, Rated current: 160 mA, speed: 6000±10 %RPM, $(N/15000+K/2400 = 0.4201 < 1, N= 6000, K= 48.2747)$	GPWV2	UL (E77551)	
Gasket – PoE cover	Namyang Vina	C-VMQ-40-GR	Gasket Test was conducted under E158873-A6034	-	-	
Gasket	Namyang Vina	O-VMQ-30-BK	Gasket Test was conducted under E158873-A6034	-	-	
Thermal pad	KOMOTECH	KGP-1(a)	Min.2.0mm thickness, rated V-0, 150 deg. C	QMFZ2	UL(E245303)	
Thermal pad	ATEKS	ATP-20	Min.2.0mm thickness, rated V-0, 105 deg. C	QMFZ2	UL(E513170)	
PWB	EXPRESS ELECTRONICS LTD	14MV0	Min. V-0, 130 deg. c	ZPMV2	UL (E157925)	
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 maximum and minimum surface	PGDQ2 or PGJI2	UL	

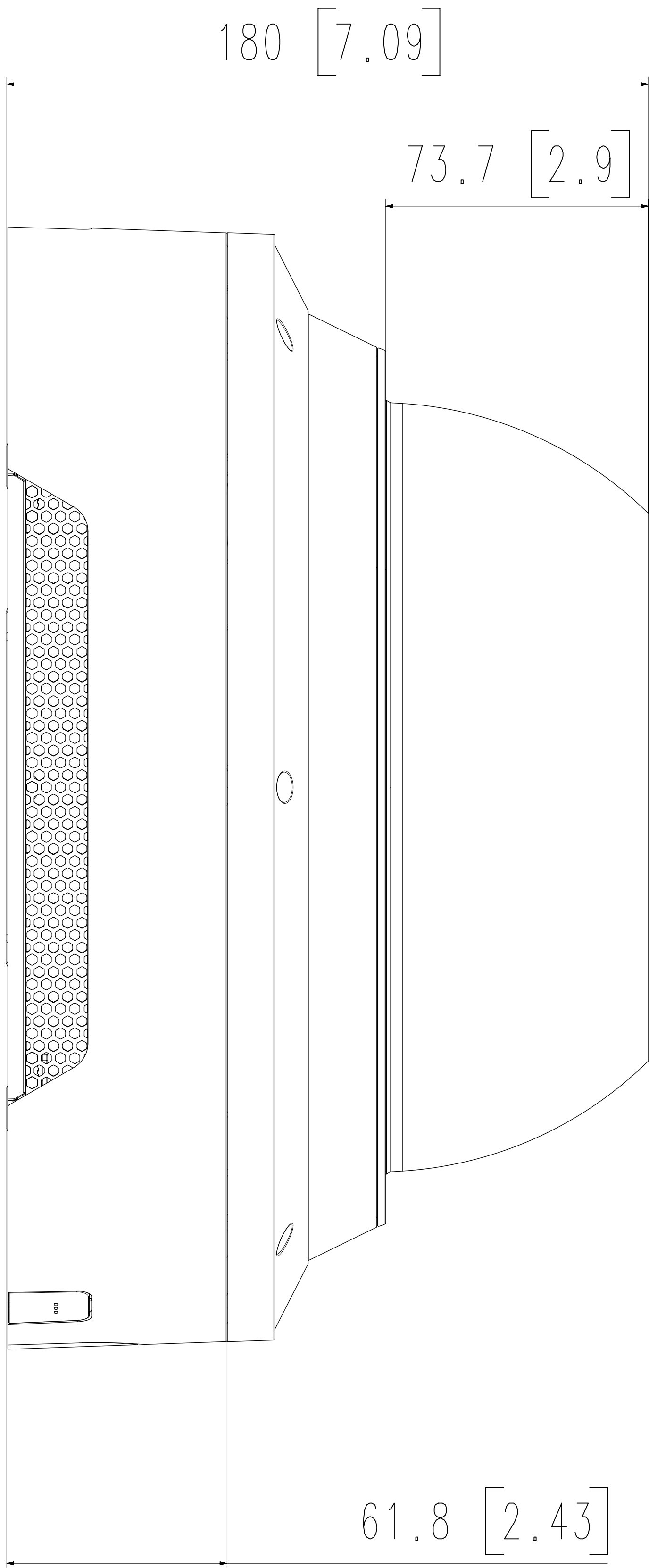
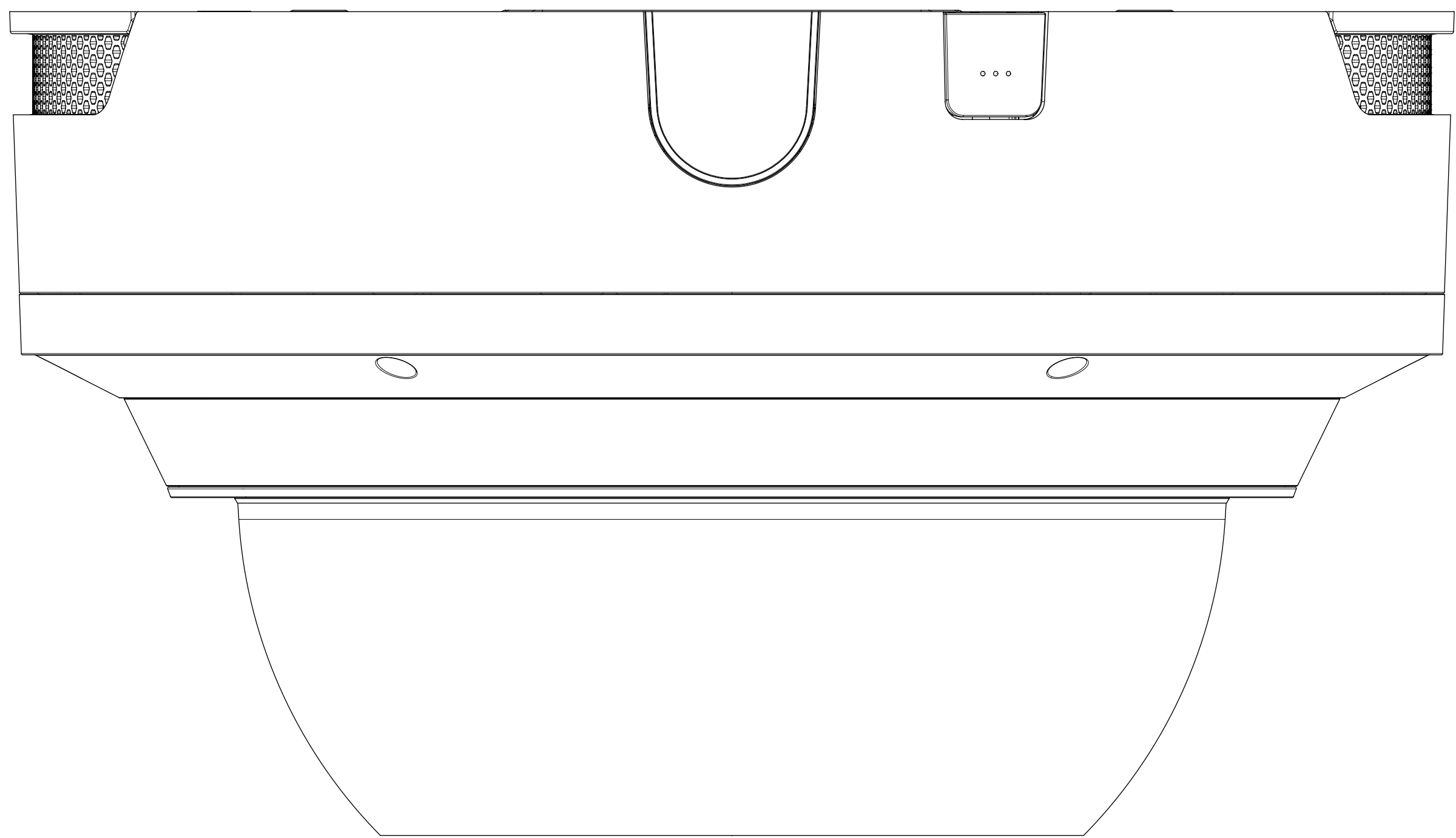
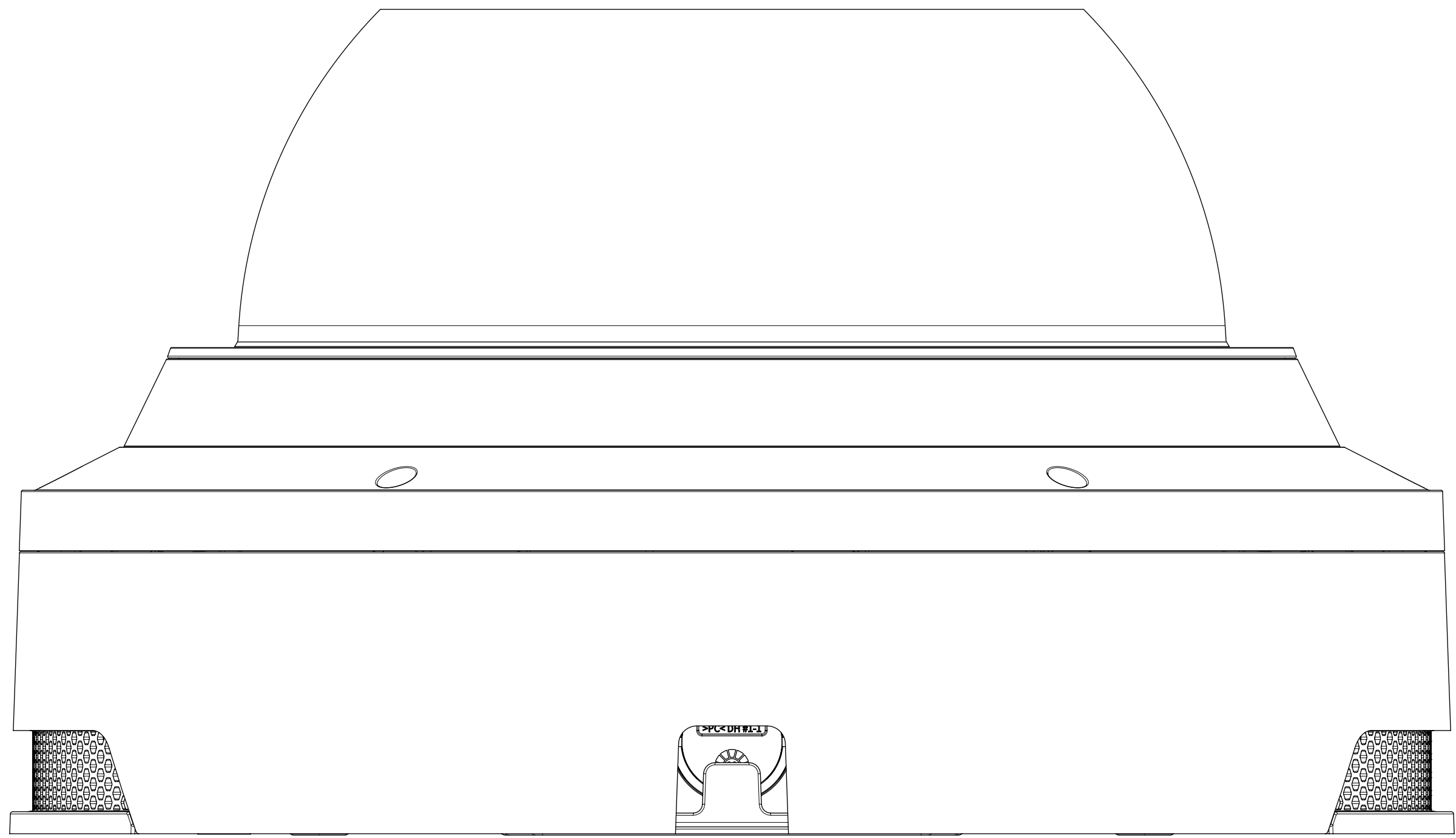
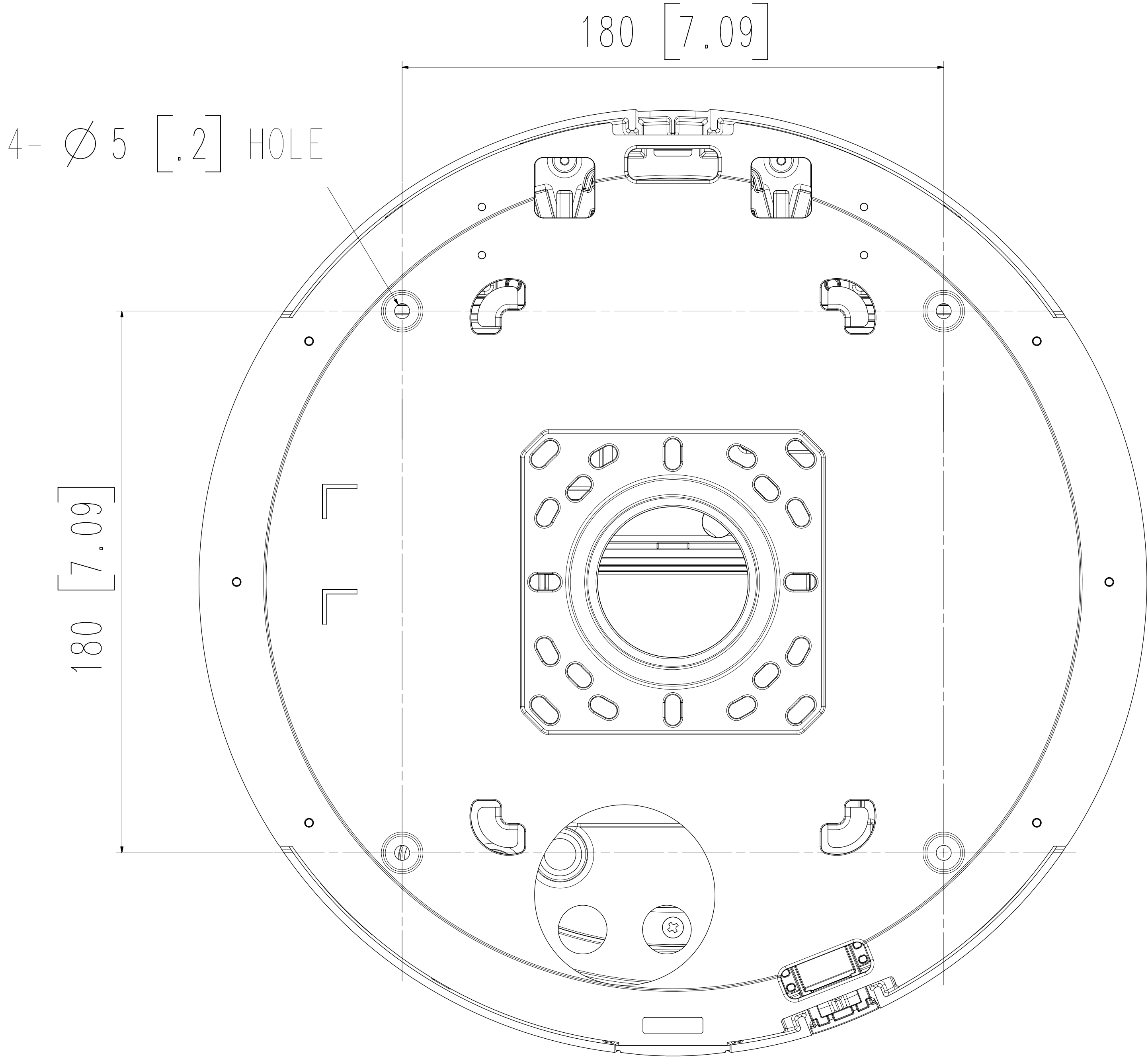
			temperature specified, or Min. 55 deg. C to Max -40 deg. C if not specified.			
LED ch1 (LD1 – LD4) LED ch2 (LD1 – LD4) LED ch3 (LD1 – LD4) LED ch4 (LD1 – LD4) Total (16 ea)	Cybright IR LED Technology Co.,Ltd	XB-IR3838EU-I	VF = Max. 2.3 V, IF= Max. 1 A	-	-	

Enclosures

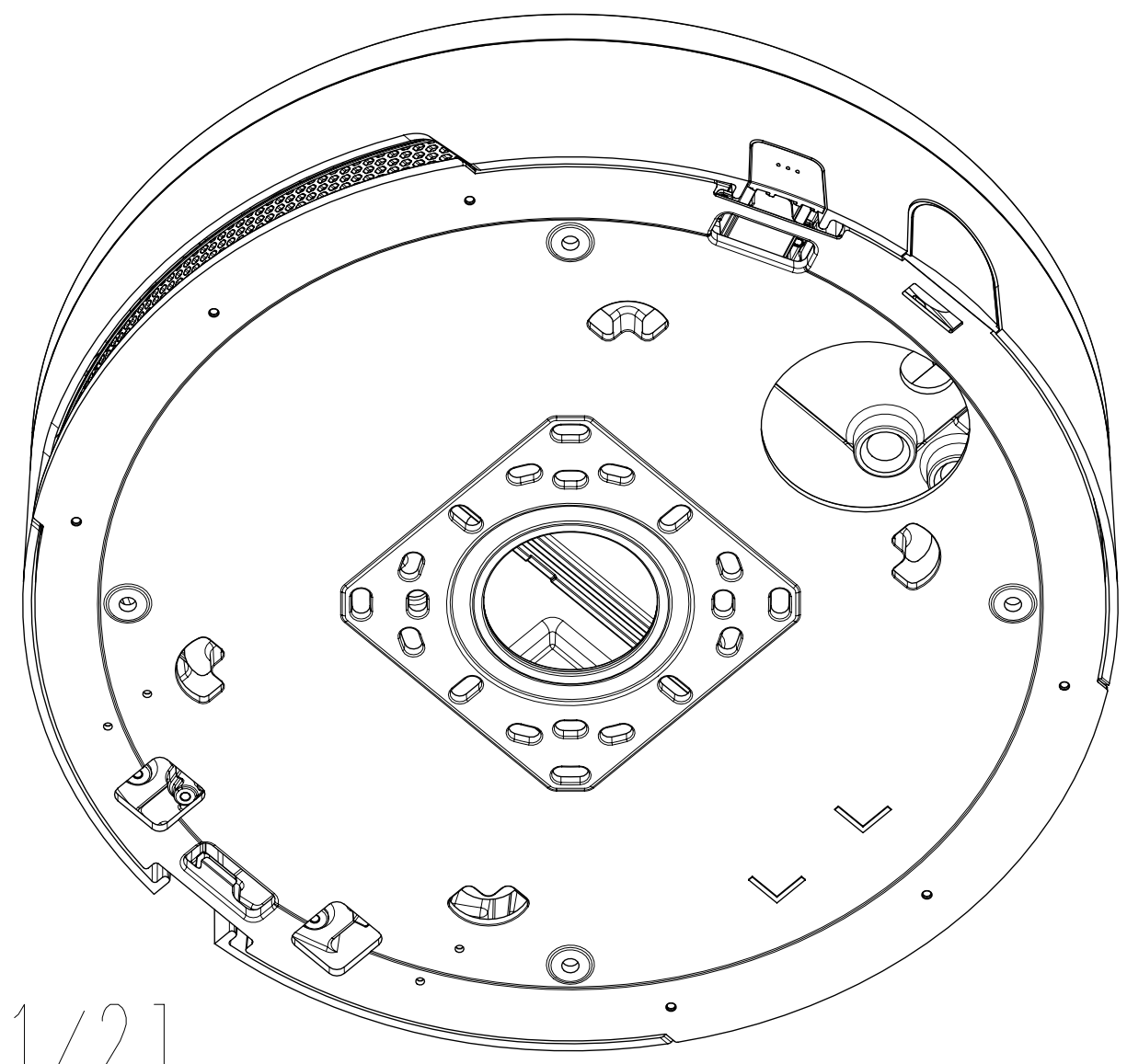
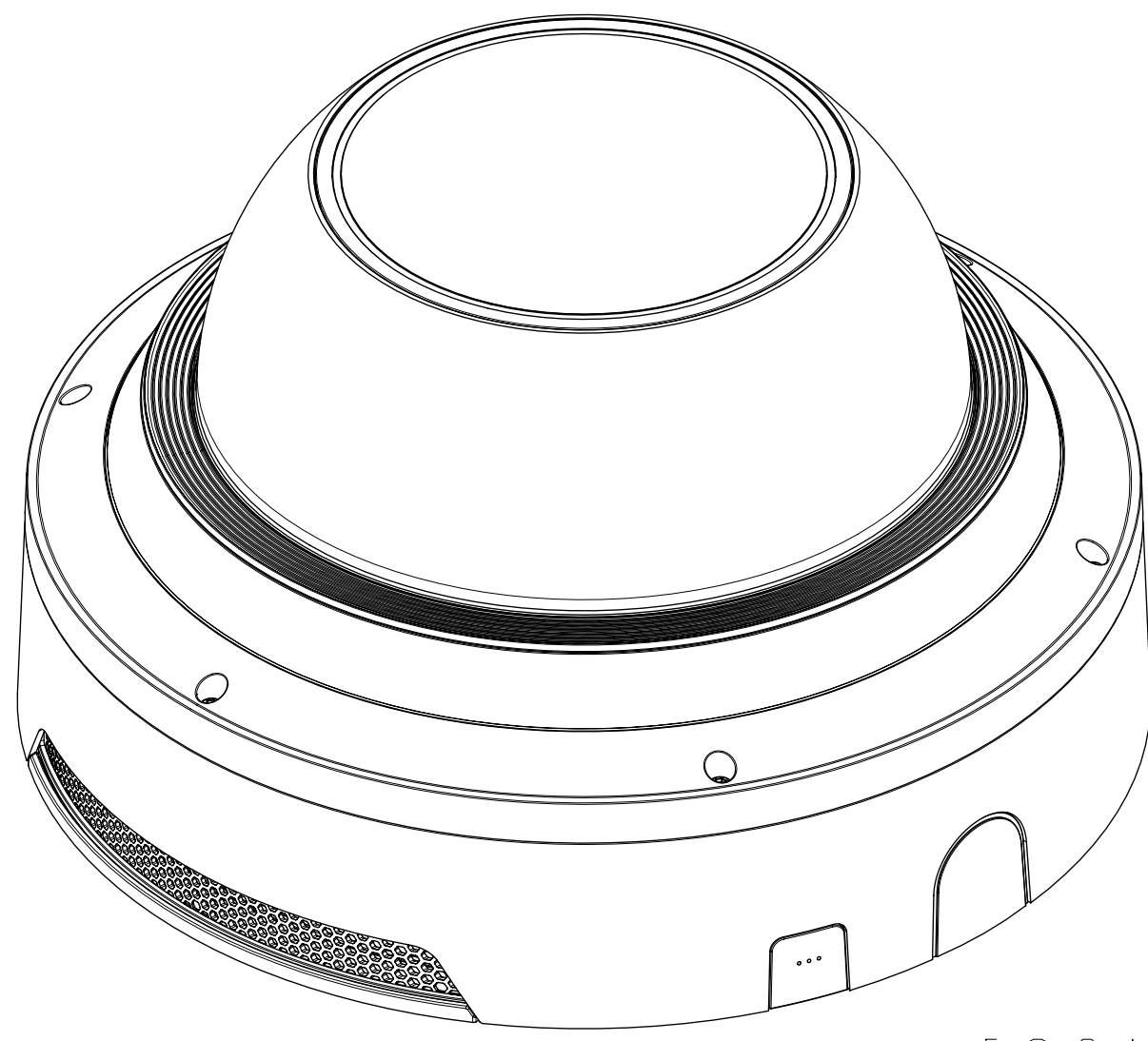
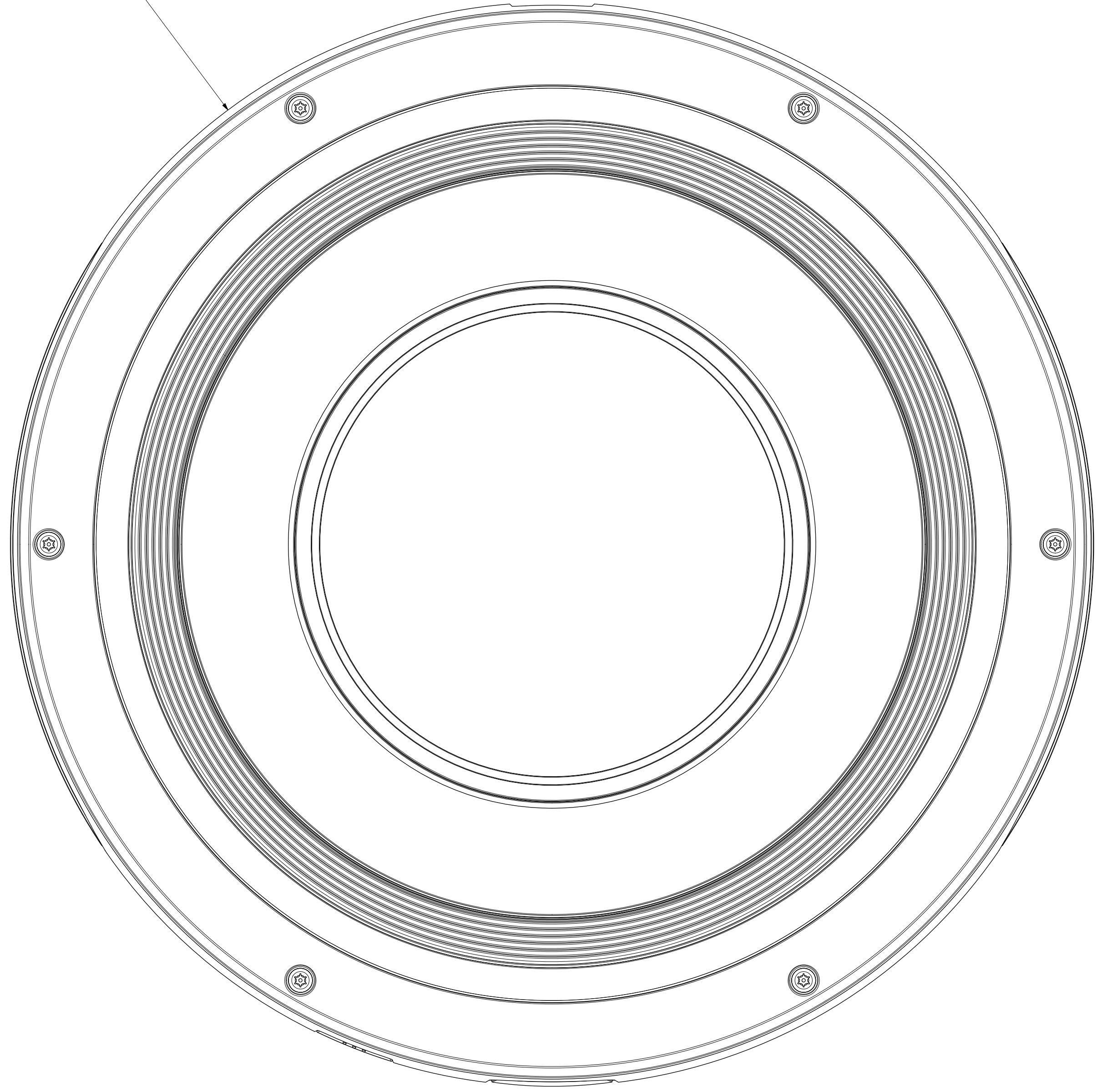
Type	Supplement Id	Description
Photographs	03-01	External View - 1
Photographs	03-02	External View - 2
Photographs	03-04	Internal View - 1
Photographs	03-05	Internal View - 2
Photographs	03-06	Internal View - 3
Photographs	03-07	Main board view top
Photographs	03-08	Main board view bottom
Photographs	03-09	Connector board view
Photographs	03-10	Power board view top
Photographs	03-11	Power board view bottom
Photographs	03-12	SUB board view
Photographs	03-13	Main motor view
Photographs	03-14	Motor view
Photographs	03-15	Camera module view
Photographs	03-16	Interface board view
Photographs	03-17	IR LED board view
Diagrams	04-01	Diagrams
Manuals	06-01	Manual-1
Manuals	06-02	Manual-2
Miscellaneous	07-01	Transformer (T1) Specification
Miscellaneous	07-02	Transformer (L32) Specification
Miscellaneous	07-03	Transformer (CT1) Specification
Miscellaneous	07-04	Label

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

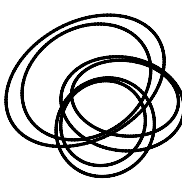
4- Ø 5 [.2] HOLE



Ø 315 [12.4]



[SCALE: 1/2]

3	MODEL 2	
2	MODEL 1	
1	PNM-C32084RQZ	'24.04.24
No.	MODEL NAME	DATE
Unit:mm[inch]	SCALE: 1/1	 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.

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 (55 Vdc), 1.29 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. Screen distortion could occur outside of the subject distance.
23. While encoding, a real time fps fluctuation of ± 1 fps could occur.
24. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.
25. This device has been verified using STP cable. The use of appropriate GND grounding and STP cable is recommended to effectively protect your product and property from transient voltage, thunderstroke, communication interruption.
26. The operating temperature of the product is -40°C to $+55^{\circ}\text{C}$ (-40°F ~ $+131^{\circ}\text{F}$).

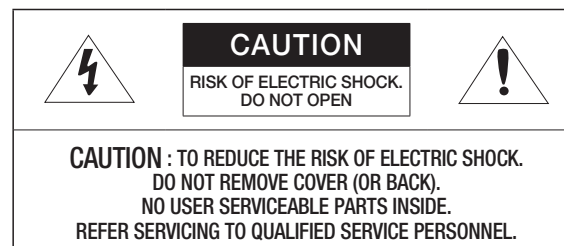
WARNING

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.

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.

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

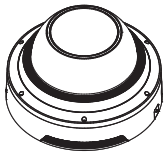
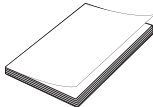
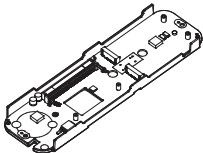
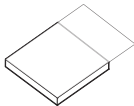
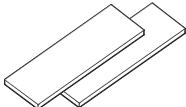
※ Please read this manual for the safety before using of goods and keep it in the safe place.

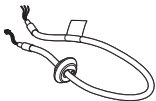
We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

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.)

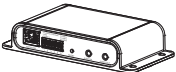
Appearance	Item Name	Quantity	Description
	Camera	1	
	Quick Guide (Optional)	1	
	PCB module	1	Used to install a separately sold graphics card or SSD.
	Thermal pads	1	Thermal pad for a graphics card
		2	Thermal pad for an SSD

Appearance	Item Name	Quantity	Description
	Screws	5	Used to assemble the PCB module.
		2	Screws for fixing SSD
		2	Screws for fixing a graphics card
	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.



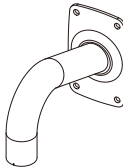
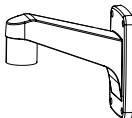
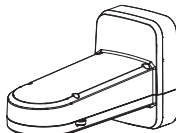
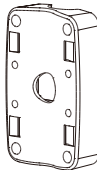
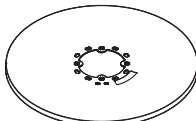
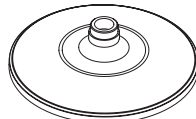
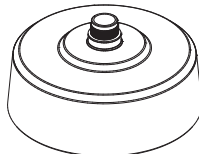
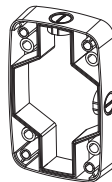
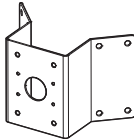
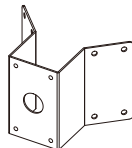
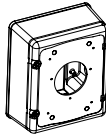
■ Use installation screws of at least M4, L30 for the installation of this product.

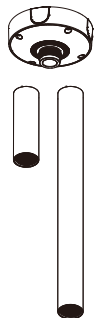
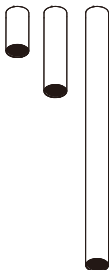
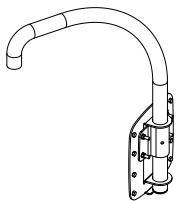
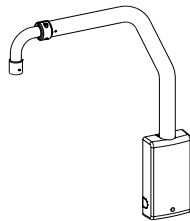
NETWORK I/O BOX - SEPARATELY SOLD PRODUCT

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

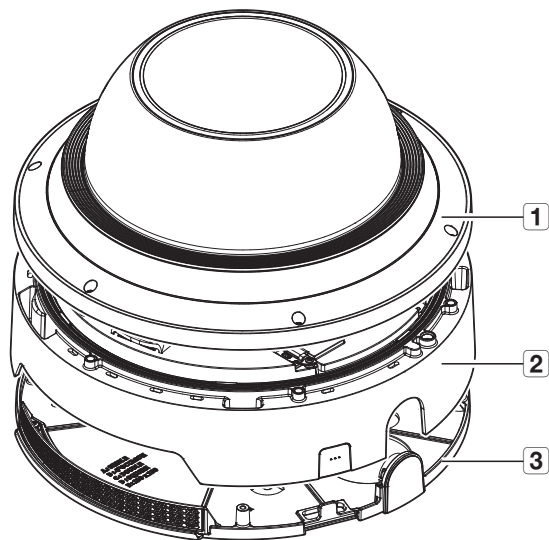
You can purchase appropriate optional accessories available.

Wall Mount and Pole Mount	Mounting Hole Cover	Hanging Mount	Wall Mount Base	Corner Mount	Installation Box
 SBP-300WMW (Wall Mount) * SBP-300PMW2 required for pole installation  SBP-300WMW1 (Wall Mount) * SBP-300PMW2 required for pole installation  SBP-250WMW  SBP-400WMW  SBP-300PMW2 (Pole Mount)	 SBP-315C	 SBP-315HMW  SBP-317HMWP	 SBP-300BW1	 SBP-156KMW  SBP-300KMW1	 SBP-300NBW

Ceiling Mount		Parapet Mount
Assembly	Individual Parts	
 SBP-300CMTS (Ball Head)  SBP-300CMTW  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-300LMW  SBP-156LMW1

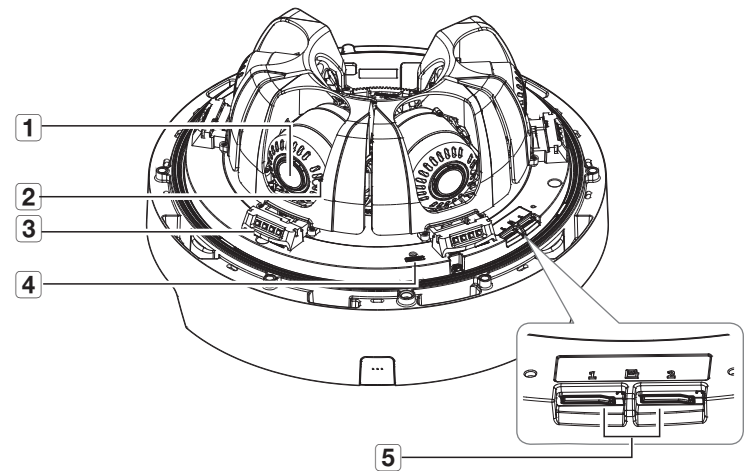
AT A GLANCE

Appearance



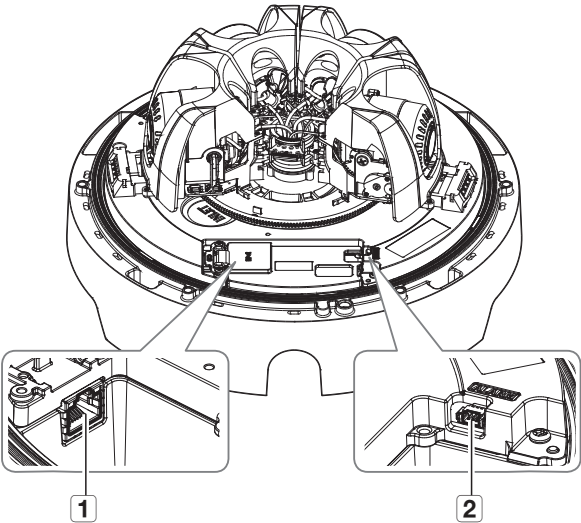
Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera body	Body part where the camera lens and connection terminals are included.
3 Mount plate	Plate that fixes the camera when mounting it to the ceiling or attaching it to a separately sold mount.

Components (Front Side)



Item	Description
1 Lens	4 camera lenses show different directions.
2 Illumination Sensor	Detects incoming light to control the IR LED.
3 IR LED	These infrared LED's are controlled by the illumination sensor.
4 Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. I If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
5 Micro SD card slot	Compartment for the Micro SD card.

Components (Rear Side)



Item	Description
1 HPoE Connection port	This port connects power and network via HPoE injector.
2 Alarm cable port	This port is where you connect the alarm cable to connect to an external alarm device.

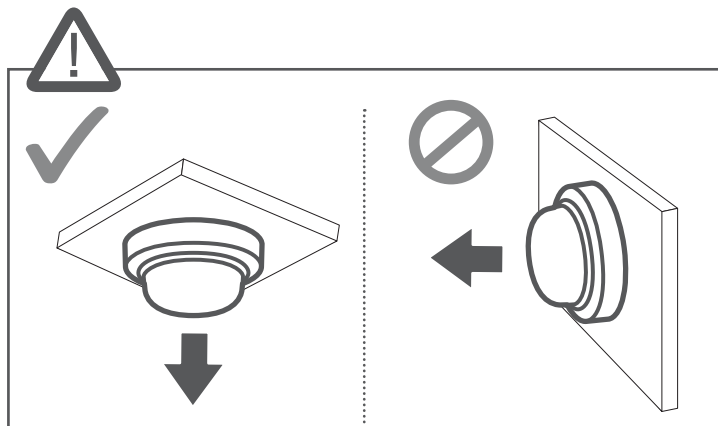
INSTALLATION

- 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

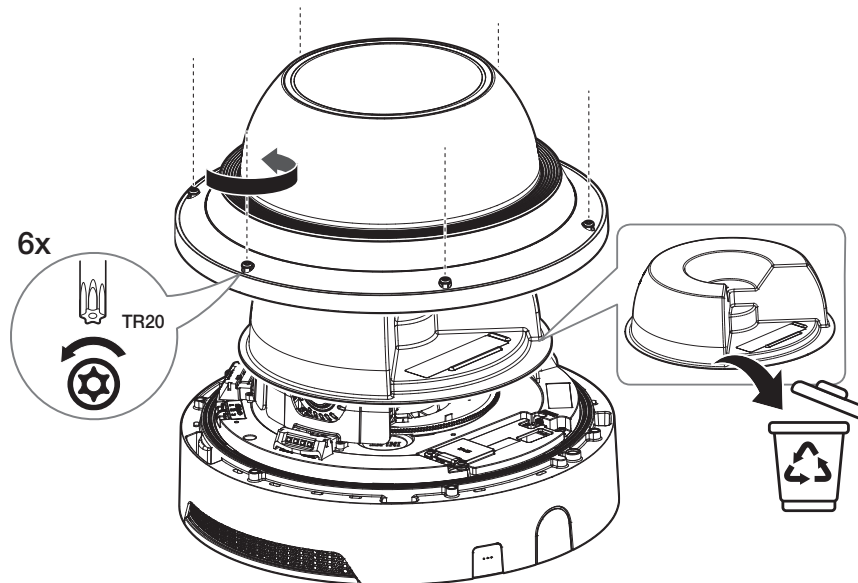
Ensure you read out the following instructions before installing the camera:

- 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.

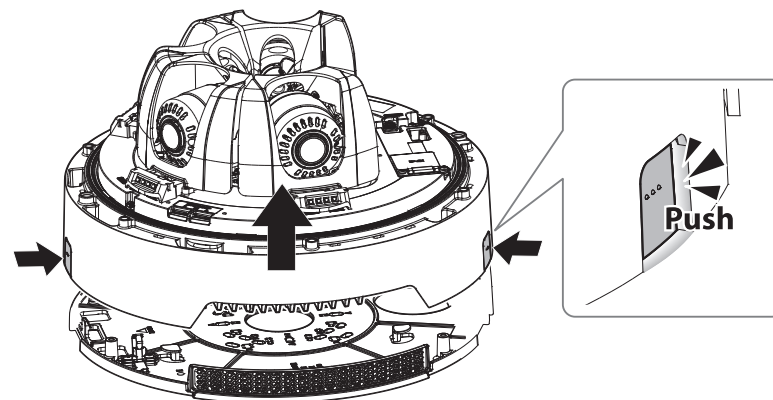


Disassembling

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



2. Remove the mount plate after pressing the buttons on both sides as shown in the figure.



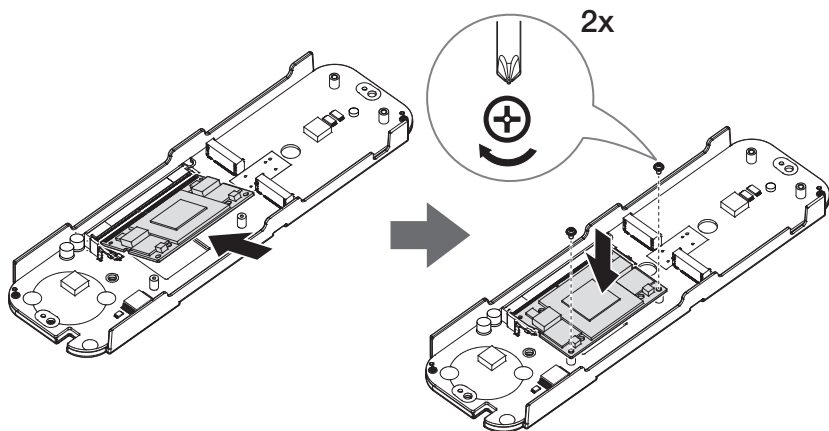
The following Page(s) are related to Manuals-02. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

Installing a graphics card or SSD (separately sold)

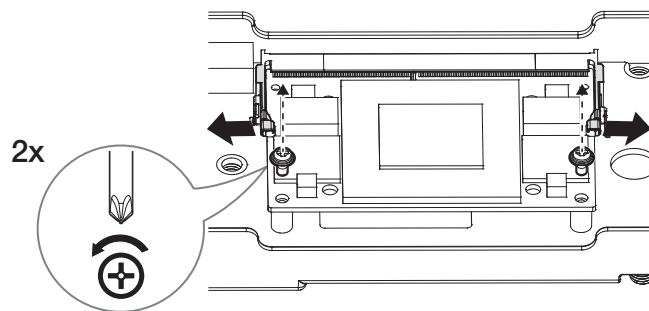
You can install a separately sold graphics card or SSD.

- ! ■ Before installing the camera, insert a graphics card or SSD with the power source and the body removed.
- Do not forcibly insert it in the reverse direction. The graphics card or SSD may be damaged.
- When it rains or the humidity is high, it is not recommended to insert or remove a graphics card or SSD.
- When inserting or removing a graphics card or SSD, be sure to place the product body on a flat ground to prevent accidents caused by drop or loss of parts.

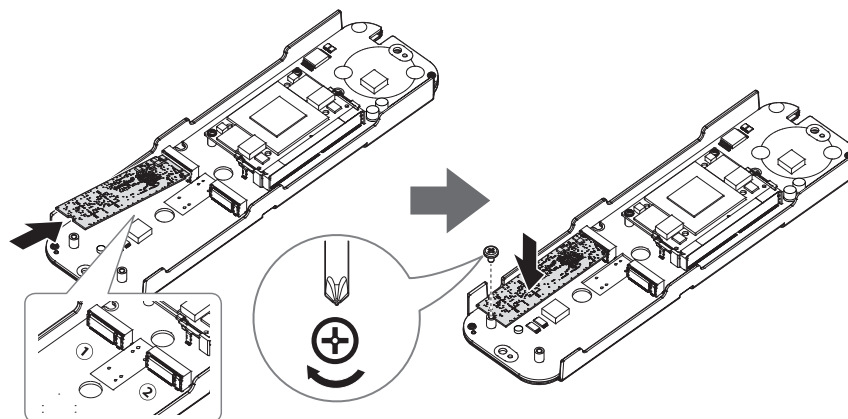
1. Insert the graphics card into its slot on the PCB module as shown in the figure, and then fix it with the provided screws.



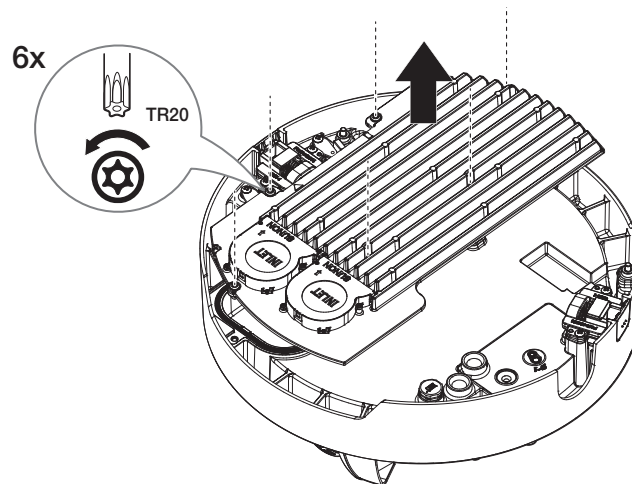
- ! ■ To remove the graphics card, loosen screws and then push the fixing flip to both sides.



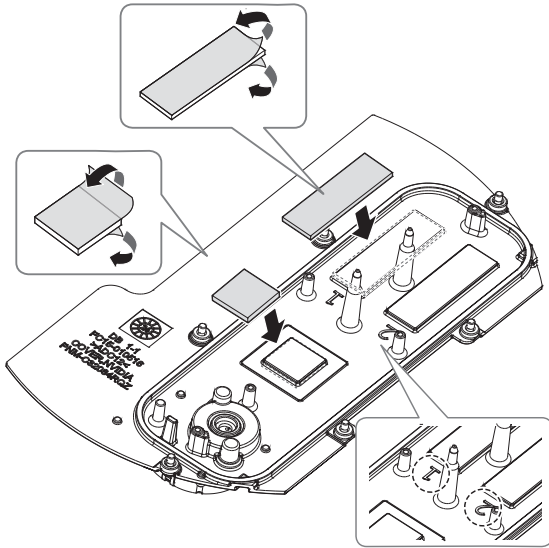
2. Insert the SSD into the SSD slot on the PCB module as shown in the figure, and then fix it with the provided screws.
 - The SSD has two slots. Check the engraved slot number and then install it starting from Slot 1.



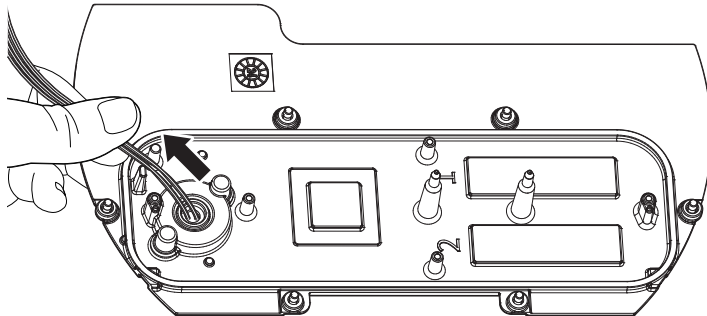
3. Loosen the fastening screws and then remove the PCB module cover.
 - It is not required to completely remove screws from the PCB module cover.



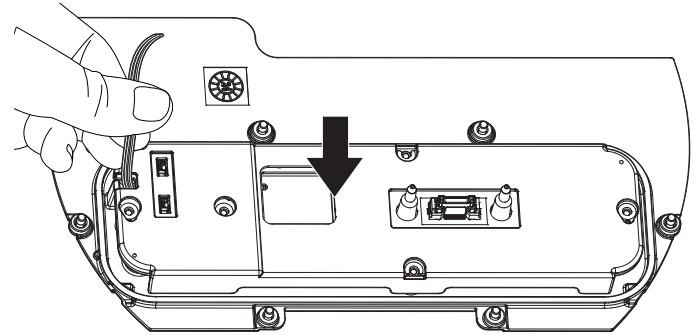
4. Once the graphics card or SSD has been installed, attach the provided thermal pad inside the PCB module cover.
- Check the number of the installed SSD and then attach the thermal pad.
 - Be sure to remove the protective films on both sides of the thermal pad.



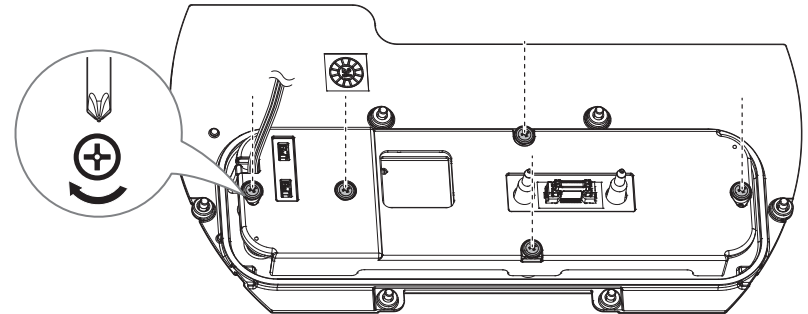
5. Pull the cooling fan's power cable toward the RIB.



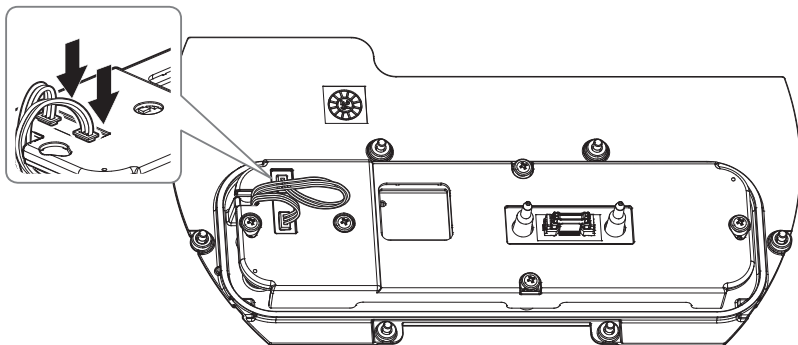
6. Fix the cooling fan's power cable so that it is not damaged or caught, and then assemble the PCB module.



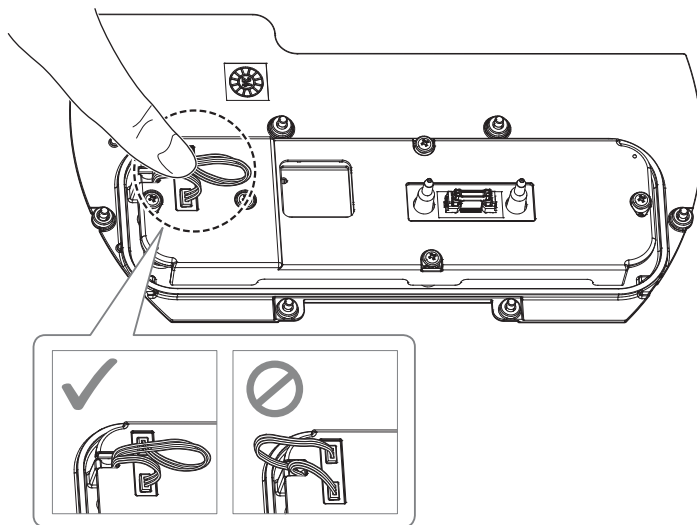
7. Fix the PCB module to the PCB module cover with the provided screws.



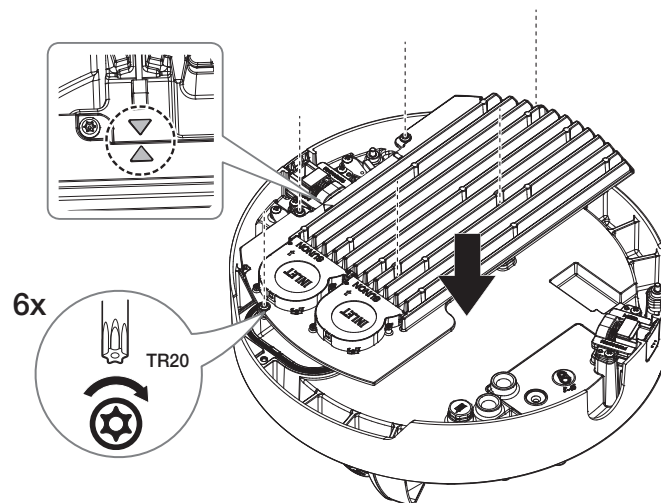
8. Connect the connector of the cooling fan's power cable to the PCB module's port.



9. Press the cooling fan's power cable inward to have a bent shape.



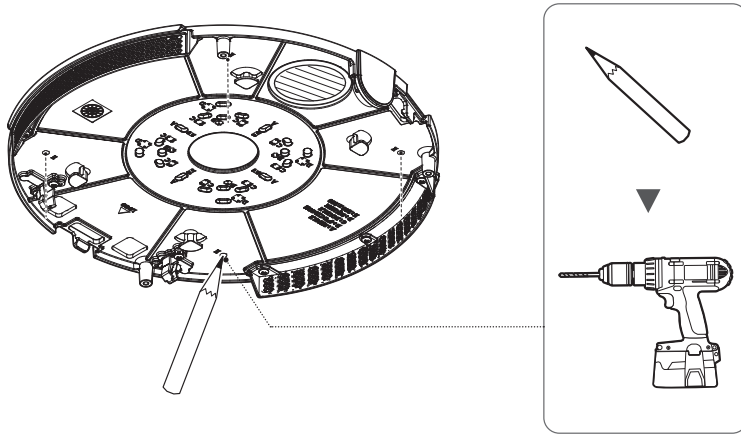
10. Tighten the fastening screws to assemble the PCB module cover on the camera body.
■ Assemble the camera body and PCB module cover by aligning the direction guide on them.



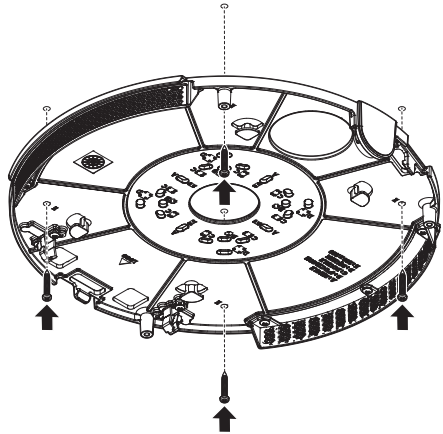
Installation (mount plate)

[Directly installing on ceiling]

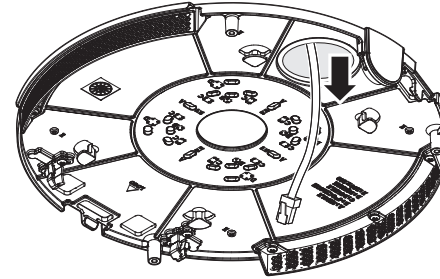
- 1-1. Place the mount plate on the desired location considering the direction to be monitored, mark the locations for the screw holes and cable holes, and then drill the holes.



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

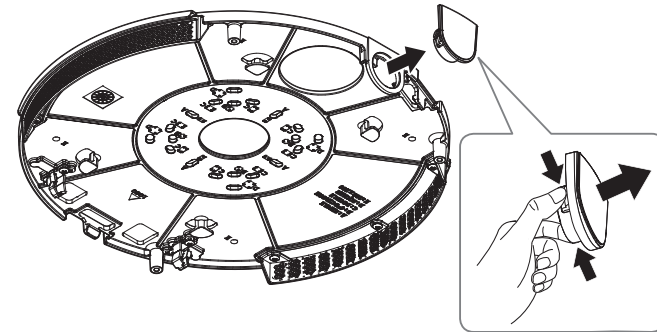


- 1-3. Take out the necessary cables from among the network and alarm cables through the hole of the mount plate.



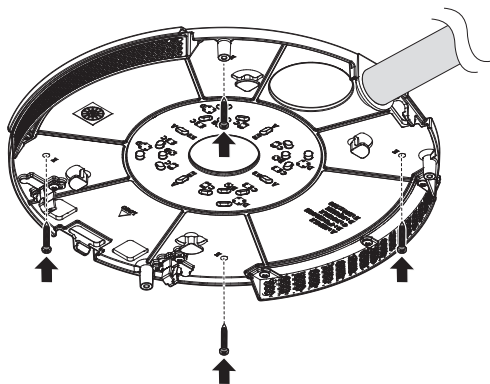
[Installing using pipe]

- 2-1. Place the mount plate on the desired location considering the direction to be monitored, mark the locations for the screw holes, and then drill the holes.
- 2-2. Separate the pipe cover of the mount plate by pressing its sides.

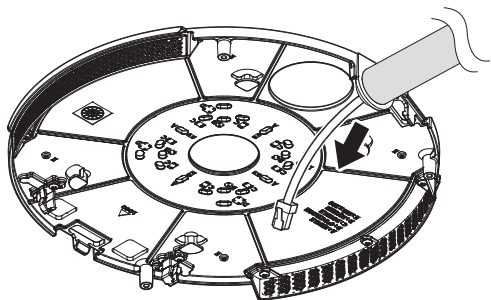


2-3. Place the pipe on the mount plate.

2-4. Fix the mount plate using appropriate screws.



2-5. Take out the necessary cables from among the network and alarm cables through the pipe.

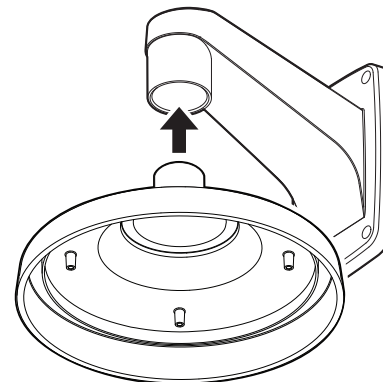


[Attaching to the unbundled adapter]

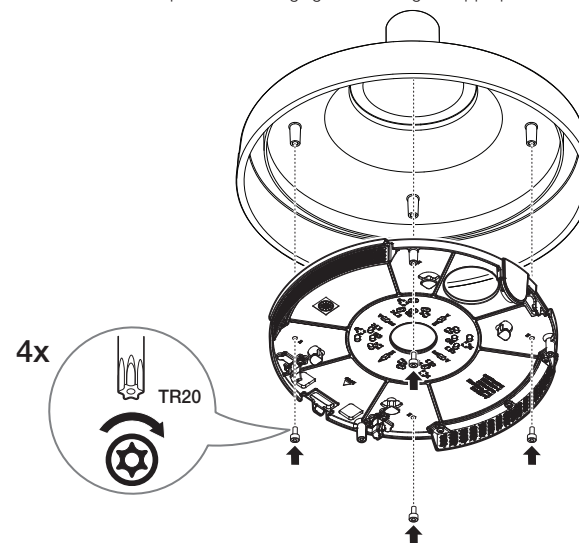
Choose and purchase a necessary one of the following options (unbundled) that is suitable to the installation site or for your convenience.

3-1. Install the hanging mount adapter to the wall mount.

- Wall mounts and hanging mount adapters are sold separately.

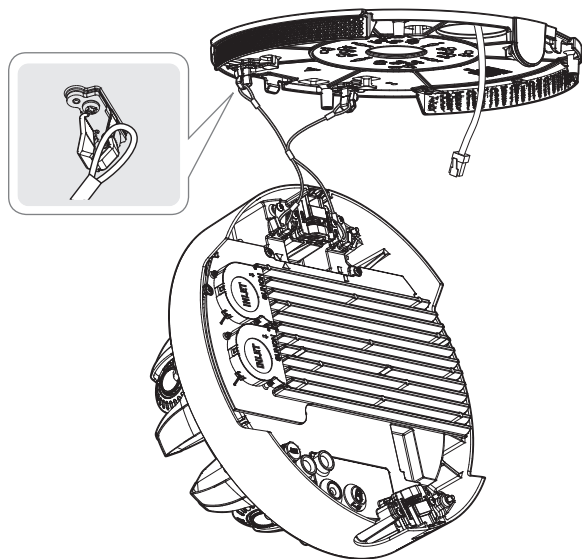


3-2. Install the mount plate to the hanging mount using the appropriate screws.

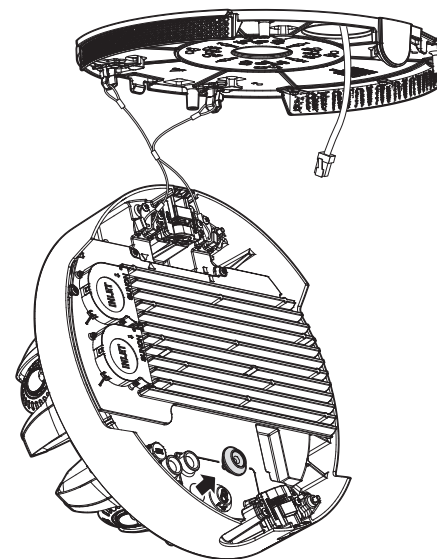


Installation (camera body and dome cover)

1. Connect the safety wire to the mount plate.



2. Pull out the cable bushing from the camera body, as shown in the figure.

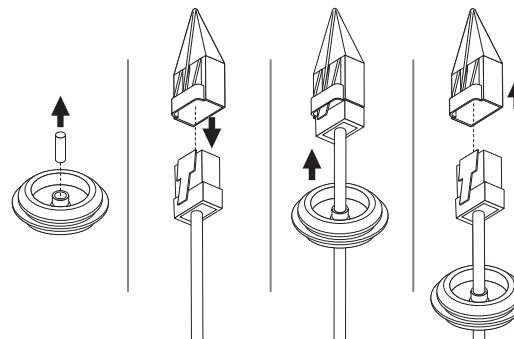


[Installing the network cable] (IP66)

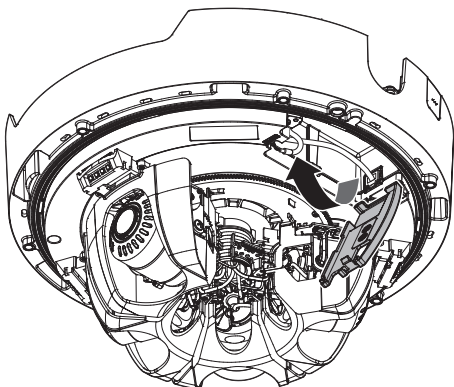
- ! ■ Use a cable bushing compliant with the network cable to be connected.
 - Camera main: use a cable with the diameter of Ø5 to 6.5
- You can only use a network cable with a diameter of Ø6.5 or less.

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

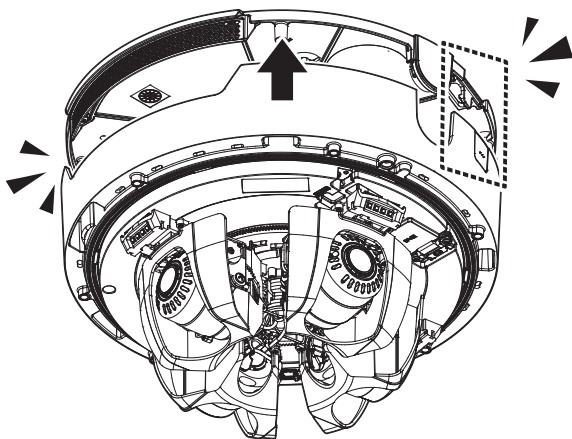
4. Use the cap installer to route the network cable through the cable bushing.



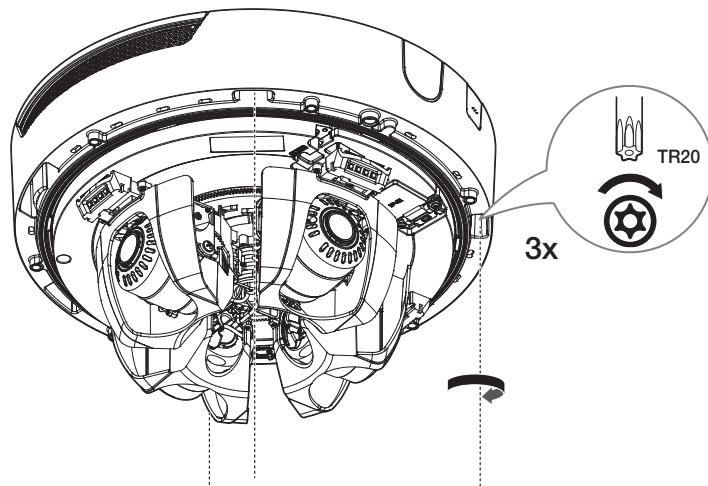
12. Connect the cables to the ports inside the camera, and then close the cable cover until a click sound is heard.



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

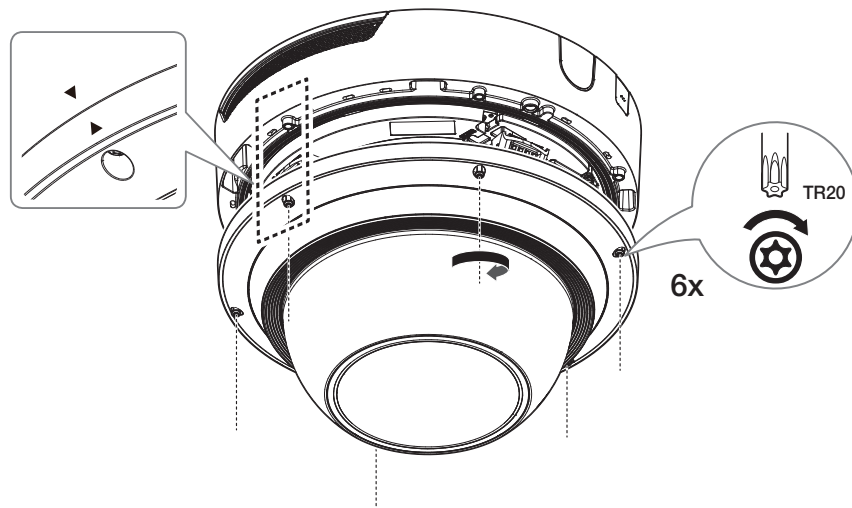


14. Fix the camera body by tightening the fastening screws on the camera body.



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.
 - To ensure there are no issues with waterproofing, tighten the fastening bolts tightly.



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



TO MESSRS : MSP

(SWITCHING TRANS) SPECIFICATION

MODEL NAME : _____ PART NO : UPDH110-T1 _____

CUSTOMER'S SPEC. NO : _____ DI SPEC. NO : RM10"V"8PIN _____

CLASS B

APPROVED	REFERENCE

DATE : 2024. 03. 19.



DONG IN SYSTEM CO.,LTD.



HEAD OFFICE	124-116 SUNG-EU DONG NAM-KU , INCHEON , KOREA TEL : 82-32-887-0040 FAX : 82-32-887-0111
CHINA PLANT	#589-1 SHENYANG ROAD ZHANGCUN TOWN WEIHAI CITY CHINA TEL : 86-631-5763828 FAX : 86-631-5763925

APPROVAL SHEET

DATE

2024. 03. 19

PAGE

OF

CUSTOMER MSP

PART NAME SWITCHING TRANS

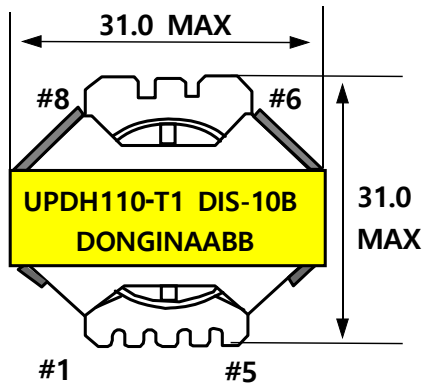
MODEL NO.

PART NO. UPDH110-T1

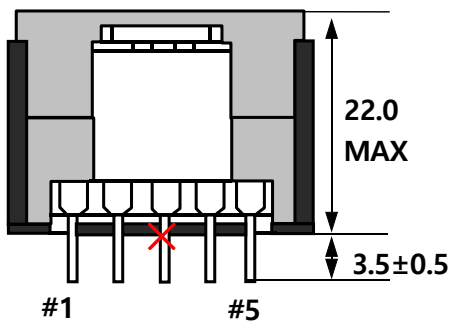
DESCRIPTION

RM10"V"8PIN

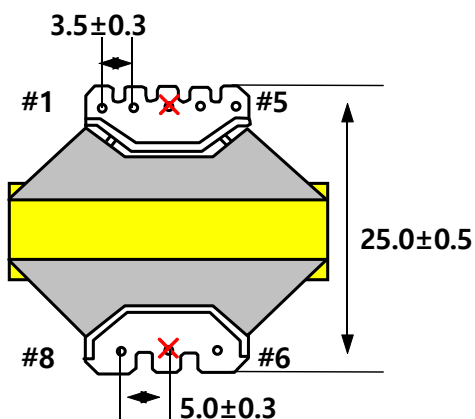
1. DIMENSIONS (UNIT:mm)



TOP VIEW



FRONT VIEW

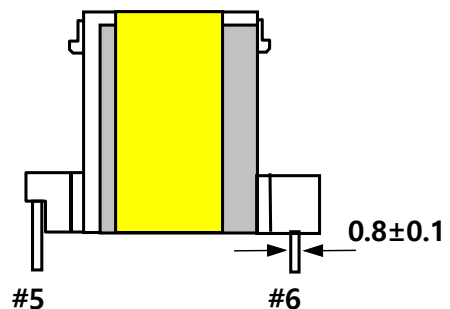


BOTTOM VIEW

* MARKING *

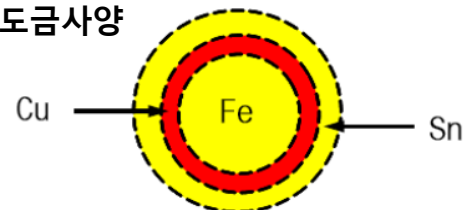
UPDH110-T1 DIS-10B ← PART NO
DONGINAABB ← LOT NO
WEEK
YEAR
MAKER

MARKING	
PART NO.	UPDH110-T1
(LOT NO)	AA : YEAR BB : WEEK
MAKER	DONG IN SYSTEM
DIS-10B	INSULATION SYSTEM



SIDE VIEW

PIN 도금사양



DRAWN BY

CHECK BY

APPR. BY

REVISION

DATE



Safety

DIS

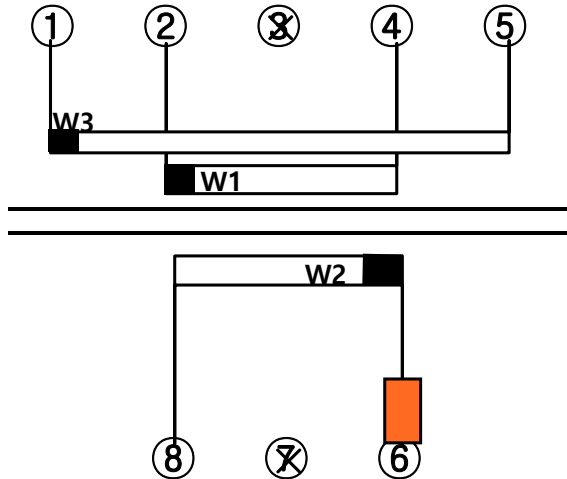
DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET

DATE 2024. 03. 19
PAGE OF

CUSTOMER	MSP		
PART NAME	SWITCHING TRANS	MODEL NO.	
PART NO.	UPDH110-T1	DESCRIPTION	RM10"V"8PIN

2. CONNECTION (BOTTOM VIEW)



REMOVED PIN	#3,7
CUT PIN	#
N.C PIN	#
P/I TAPE,TUBE	#6
FLUX BAND	#
DOT MARK	■ START OF WINDING

3. WINDING SPECIFICATION

NO	TERMINAL		WIRE	Ts	WINDING METHOD	INSULATION		BARRIER	
	S	F				MATERIAL(t/mm)	Ts	PIN	TOP
W1	2	4	USTC0.10ØX30P	12	SOLENOID	POLYESTER TAPE 0.025 / 10.5	2	-	-
W2	6	8	USTC0.10ØX50PX2P	9	SOLENOID	POLYESTER TAPE 0.025 / 10.5	2	-	-
W2	1	5	USTC0.10ØX30P	12	SOLENOID	POLYESTER TAPE 0.025 / 10.5 (WHITE)	3	-	-
CORE FIXING TAPE						POLYESTER TAPE 0.025 / 7.0(YELLOW)	2		
CORE FIXING TAPE						POLYESTER TAPE 0.025 / 10.0(YELLOW)	2		

W2 #6 고온테이프 감싸줄것

DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE

APPROVAL SHEET				DATE	2024. 03. 19																																																
				PAGE	OF																																																
CUSTOMER	MSP																																																				
PART NAME	SWITCHING TRANS		MODEL NO.																																																		
PART NO.	UPDH110-T1		DESCRIPTION	RM10"V"8PIN																																																	
4. INSULATION TAPE																																																					
<table><tr><td>NO</td><td>COIL</td><td>MATERIALS</td><td>WRAPS (T)</td><td colspan="2">THICKNESS(mm) × WIDTH(mm)</td></tr><tr><td>1</td><td>W1</td><td>POLYESTER FILM TAPE</td><td>2</td><td colspan="2">0.025t x 10.5 mm</td></tr><tr><td>2</td><td>W2</td><td>POLYESTER FILM TAPE</td><td>2</td><td colspan="2">0.025t x 10.5 mm</td></tr><tr><td>3</td><td>W2</td><td>POLYESTER FILM TAPE</td><td>3</td><td colspan="2">0.025t x 10.5 mm (WHITE COLOR)</td></tr><tr><td>4</td><td>CORE FIXING TAPE</td><td>POLYESTER FILM TAPE</td><td>2</td><td colspan="2">0.025t x 7.0 mm (YELLOW COLOR)</td></tr><tr><td>5</td><td>CORE FIXING TAPE</td><td>POLYESTER FILM TAPE</td><td>2</td><td colspan="2">0.025t x 10.0 mm (YELLOW COLOR)</td></tr><tr><td></td><td></td><td></td><td></td><td colspan="2"></td></tr><tr><td></td><td></td><td></td><td></td><td colspan="2"></td></tr></table>						NO	COIL	MATERIALS	WRAPS (T)	THICKNESS(mm) × WIDTH(mm)		1	W1	POLYESTER FILM TAPE	2	0.025t x 10.5 mm		2	W2	POLYESTER FILM TAPE	2	0.025t x 10.5 mm		3	W2	POLYESTER FILM TAPE	3	0.025t x 10.5 mm (WHITE COLOR)		4	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 7.0 mm (YELLOW COLOR)		5	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 10.0 mm (YELLOW COLOR)													
NO	COIL	MATERIALS	WRAPS (T)	THICKNESS(mm) × WIDTH(mm)																																																	
1	W1	POLYESTER FILM TAPE	2	0.025t x 10.5 mm																																																	
2	W2	POLYESTER FILM TAPE	2	0.025t x 10.5 mm																																																	
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5	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 10.0 mm (YELLOW COLOR)																																																	
** REGARDING ABOVE TABLE STANDARD, WIDTH, THICKNESS, TURNS OF TAPE MUST BE OVER SPECIFICATION RANGE. ※ POLYESTER FILM TAPE TOLERANCE ① 7.0mm ±0.5mm ② 10.0mm ±0.5mm ③ 10.5mm ±0.5mm																																																					
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CUSTOMER	MSP																												
PART NAME	SWITCHING TRANS		MODEL NO.																										
PART NO.	UPDH110-T1		DESCRIPTION	RM10"V"8PIN																									
5. RELIABILITY TEST																													
<table><tr><td>ITEM</td><td>TEST CONDITION</td><td colspan="2">SPEC</td></tr><tr><td rowspan="2">HUMIDITY - RESISTANCE</td><td>TEMPERATURE:40±2℃, HUMIDITY:90~95%RH, TIME:96HR</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)</td></tr><tr><td rowspan="2">HEAT SHOCK - RESISTANCE</td><td>-25℃ 1HR → 85℃ 1HR : 10 CYCLES</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)</td></tr><tr><td rowspan="2">HEAT - RESISTANCE</td><td>TEMPERATURE:105±2℃, TIME:96HR</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)</td></tr><tr><td rowspan="2">COLD - RESISTANCE</td><td>TEMPERATURE:-25±2℃, TIME:96HR</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)</td></tr></table>						ITEM	TEST CONDITION	SPEC		HUMIDITY - RESISTANCE	TEMPERATURE:40±2℃, HUMIDITY:90~95%RH, TIME:96HR	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)	HEAT SHOCK - RESISTANCE	-25℃ 1HR → 85℃ 1HR : 10 CYCLES	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)	HEAT - RESISTANCE	TEMPERATURE:105±2℃, TIME:96HR	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)	COLD - RESISTANCE	TEMPERATURE:-25±2℃, TIME:96HR	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENGTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)
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6. ENDURANCE TEST																													
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PART NAME		SWITCHING TRANS		MODEL NO.	
PART NO.		UPDH110-T1		DESCRIPTION	RM10"V"8PIN
9. MATERIAL LIST					
NO	ITEM	MATERIAL	MANUFACTURER	FILE NO.	
1	CORE	FERRITE CORE RM10 LP-4 OR HX-40 OR PC-40	RING TONG FERRITE CO., LTD. NAN TONG FERRITE CO., LTD. JI SHUN MAGNETICS CO., LTD		
2	BOBBIN	PHENOL 94V-0 RM10 "V" 8PIN	SUMITOMO BAKELITE CO LTD CHANG CHUN PLASTICS CO LTD	E41429 E59481	
3	CAP	P.E.T	E I DUPONT DE NEMOURS & CO INC	E41938	
4	WIRE	POLYURETHANE ENAMELED COPPER WIRE USTC 0.10ØX30P USTC 0.10ØX50P	YANTAI ROME ELECTRONIC CO LTD JIANGSU DARTONG M&E CO LTD SHANDONG SAINT ELECTRONIC CO LTD ZHEJIANG HONFBO TECHNOLOGY CO LTD	E166187 E237377 E194410 E221719	
5	INSULATION TAPE	POLYESTERS TAPE T = 0.025mm,T=0.050mm W =10.5mm W =10.5mm (WHITE)	DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111	
		POLYIMIDE TAPE	Meixin New Material Co Ltd JINGJIANG YAHUA PRESSURE SENSITIVE GLUE	E304309 E165111	
6	CORE FIXING TAPE	POLYESTERS TAPE T = 0.025mm W = 7.0mm (YELLOW) W = 10.0mm (YELLOW)	DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111	
7	PIN TERMINAL	SOLDER COATED COPPER	DAE-A LEAD CO.,LTD.		
8	VARNISH	DVB-2177(@) T4260(a)	NOROO PAINT & COATINGS CO LTD SHZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	E93947 E228349	
9	ADHESIVE	SK-015B	SEKYE EPOXY RESIN CO., LTD.		
10	SOLDER	Sn99.3 / Cu0.7 or EQV.	ALPHA METALS CO.,LTD or EQV.		
11	MARKING	INK (BON MARQUE) or EQV.	ATL CO.,LTD or EQV.		
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PART NAME	SWITCHING TRANS	MODEL NO.	
PART NO.	UPDH110-T1	DESCRIPTION	RM10"V"8PIN

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Systems, Electrical Insulation - Component

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DONG IN SYSTEM CO LTD
97BL-5LT NAMDONG INDUSTRIAL COMPLEX
664-4 GOJAN-DONG NAMDONG-GU
INCHEON, 405-817 REPUBLIC OF KOREA

E242921

Class 130 (B) electrical insulation systems, designated DIS-0401B

Class 130 (B) transformer or coil electrical insulation systems, designated DIS-10B

Marking: Company name and system designation.

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Component - Plastics Guide Information SUMITOMO BAKELITE CO LTD 5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU TOKYO 140-0002 JP PM-9823 Phenolic (PF) "SUMIKON", furnished as pellets <table><thead><tr><th>Color</th><th>Min. Thk (mm)</th><th>Flame Class</th><th>HWI</th><th>HAI</th><th>RTI Elec</th><th>RTI Imp</th><th>RTI Str</th></tr></thead><tbody><tr><td>BK</td><td>0.15</td><td>V-0</td><td>4</td><td>1</td><td>150</td><td>150</td><td>150</td></tr><tr><td></td><td>0.7</td><td>V-0</td><td>1</td><td>0</td><td>150</td><td>150</td><td>150</td></tr><tr><td></td><td>3.0</td><td>V-0</td><td>0</td><td>0</td><td>150</td><td>150</td><td>150</td></tr></tbody></table> Comparative Tracking Index (CTI): 3 Dielectric Strength (kV/mm): 15 High-Voltage Arc Tracking Rate (HVTR): 0 Dimensional Stability (%): - Inclined Plane Tracking (IPT) kV: - Volume Resistivity (10^x ohm-cm): 17 High Volt, Low Current Arc Resis (D495): 5 ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date: 2011-03-30 Last Revised: 2019-09-04 Component - Plastics Guide Information SUMITOMO BAKELITE CO LTD 5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU TOKYO 140-0002 JP PM-9820 Phenolic (PF) "Sumikon", furnished as pellets, granular material <table><thead><tr><th>Color</th><th>Min. Thk (mm)</th><th>Flame Class</th><th>HWI</th><th>HAI</th><th>RTI Elec</th><th>RTI Imp</th><th>RTI Str</th></tr></thead><tbody><tr><td>BK</td><td>0.16</td><td>V-0</td><td>-</td><td>-</td><td>150</td><td>150</td><td>150</td></tr><tr><td>BK, BN</td><td>0.18</td><td>V-0</td><td>-</td><td>-</td><td>150</td><td>150</td><td>150</td></tr><tr><td></td><td>0.51 - 0.69</td><td>V-0</td><td>3</td><td>1</td><td>150</td><td>150</td><td>150</td></tr><tr><td></td><td>0.70</td><td>V-0</td><td>1</td><td>2</td><td>150</td><td>150</td><td>150</td></tr><tr><td></td><td>1.5</td><td>V-0</td><td>0</td><td>2</td><td>150</td><td>150</td><td>150</td></tr><tr><td></td><td>3.0</td><td>V-0</td><td>0</td><td>2</td><td>150</td><td>150</td><td>150</td></tr></tbody></table> Comparative Tracking Index (CTI): 3 Dielectric Strength (kV/mm): 14 High-Voltage Arc Tracking Rate (HVTR): 0 Dimensional Stability (%): - Inclined Plane Tracking (IPT) kV: - Volume Resistivity (10^x ohm-cm): 11 High Volt, Low Current Arc Resis (D495): 5 ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date: 1997-11-03 Last Revised: 2019-05-23							Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	BK	0.15	V-0	4	1	150	150	150		0.7	V-0	1	0	150	150	150		3.0	V-0	0	0	150	150	150	Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	BK	0.16	V-0	-	-	150	150	150	BK, BN	0.18	V-0	-	-	150	150	150		0.51 - 0.69	V-0	3	1	150	150	150		0.70	V-0	1	2	150	150	150		1.5	V-0	0	2	150	150	150		3.0	V-0	0	2	150	150	150
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OF

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MSP

PART NAME

SWITCHING TRANS

MODEL NO.

PART NO.

UPDH110-T1

DESCRIPTION

RM10"V"8PIN

BOBBIN

Component - Plastics

Guide Information

E59481

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200HF

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3
Dielectric Strength (kV/mm): 6
High-Voltage Arc Tracking Rate (HVTR): 0
Dimensional Stability (%): -

Inclined Plane Tracking (IPT) kV: -
Volume Resistivity (10^x ohm-cm): 11
High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-03-15

Last Revised: 2015-10-08

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Component - Plastics

Guide Information

E59481

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200NA

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3
Dielectric Strength (kV/mm): 6
High-Voltage Arc Tracking Rate (HVTR): 0
Dimensional Stability (%): -

Inclined Plane Tracking (IPT) kV: -
Volume Resistivity (10^x ohm-cm): 11
High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1976-01-06

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Component - Plastics Guide Information E I DUPONT DE NEMOURS & CO INC Mobility & Materials, 200 Powder Mill Road #304, Wilmington DE 19803 FR530(I)(+)(f1), FR530L(I)(+)(f1) Polyethylene Terephthalate (PET), glass reinforced, flame retardant "Rynite", furnished as pellets <table><thead><tr><th>Color</th><th>Min.Thk (mm)</th><th>Flame Class</th><th>HWI</th><th>HAI</th><th>RTI Elec</th><th>RTI Imp</th><th>RTI Str</th></tr></thead><tbody><tr><td>NC, BK</td><td>0.35</td><td>V-0</td><td>3</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>ALL</td><td>0.75</td><td>V-0</td><td>2</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>NC</td><td>0.9</td><td>V-0, 5VA</td><td>2</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>NC, BK</td><td>1.5</td><td>V-0, 5VA</td><td>0</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>ALL</td><td>2.0</td><td>V-0, 5VA</td><td>0</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td></td><td>3.0</td><td>V-0, 5VA</td><td>0</td><td>1</td><td>155</td><td>155</td><td>155</td></tr></tbody></table> Comparative Tracking Index (CTI): 2 Dielectric Strength (kV/mm): 34 High-Voltage Arc Tracking Rate (HVTR): 1 Dimensional Change (%): 0 Inclined Plane Tracking (IPT) kV: - Volume Resistivity (10³ ohm-cm): 16 Surface Resistivity (10³ ohms/square): - High Volt, Low Current Arc Resis (D495): 6 (*) - Virgin and regrind up to 50% by weight inclusive, have the same basic material characteristics. (f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C. (I) - Recognized ground insulation component at 0.4 mm with MW79 in UL1446 Class 155 electrical insulation system designated R201N (File E69939). NOTE - (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" for Zytel or "MIN" for Minlon or "DEL" for Delrin or "CRA" for Crastin or "RYN" for Rynite or "ETPV" for ETPV or "SOR" for Sorona grades. ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date: 1996-01-04 Last Revised: 2022-07-04 © 2022 UL Solutions CULUS						Color	Min.Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	NC, BK	0.35	V-0	3	1	155	155	155	ALL	0.75	V-0	2	1	155	155	155	NC	0.9	V-0, 5VA	2	1	155	155	155	NC, BK	1.5	V-0, 5VA	0	1	155	155	155	ALL	2.0	V-0, 5VA	0	1	155	155	155		3.0	V-0, 5VA	0	1	155	155	155
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NC	0.9	V-0, 5VA	2	1	155	155	155																																																						
NC, BK	1.5	V-0, 5VA	0	1	155	155	155																																																						
ALL	2.0	V-0, 5VA	0	1	155	155	155																																																						
	3.0	V-0, 5VA	0	1	155	155	155																																																						
WIRE																																																													
Magnet Wire Guide Information Yantai Rommix Electronic CO.,LTD Daxindian Town, Penglai Shandong 265612 CN PTMW75, xUEW/130, QA-x/130 <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp.(°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>PTMW75, xUEW/130, QA-x/130</td><td>MW 75-C</td><td>130</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> x - Where x may be replaced by 0, 1, 2 or 3 denoting the coating thickness. Report Date: 1996-02-20 Last Revised: 2021-04-16 © 2022 UL LLC UL						Mark Designation	ANSI Type	Temp.(°C)	Basecoat	Topcoat	Bondcoat	PTMW75, xUEW/130, QA-x/130	MW 75-C	130	Polyurethane	-	-																																												
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PART NO.	UPDH110-T1	DESCRIPTION	RM10"V"8PIN																				
WIRE																							
Magnet Wire Guide Information E237377 JIANGSU DARTONG M & E CO LTD 1 DARTONG RD, HUIAN ECONOMY DEVELOPMENT ZONE, HUIAN JIANGSU 223238 CN xUEW <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp (°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>xUEW</td><td>MW 79-C</td><td>155</td><td>Polyurethane</td><td>-</td><td>-</td></tr><tr><td></td><td>MW 75-C</td><td>130</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> x - Where x may be replaced by 0, -1, -2 or -3 indicating the film built. Report Date: 2003-06-12 Last Revised: 2022-01-10 © 2022 UL LLC 						Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	xUEW	MW 79-C	155	Polyurethane	-	-		MW 75-C	130	Polyurethane	-	-
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																		
xUEW	MW 79-C	155	Polyurethane	-	-																		
	MW 75-C	130	Polyurethane	-	-																		
Magnet Wire Guide Information E194410 SHANDONG SAINT ELECTRIC CO LTD No.9 Shuangshan Road, Economic Development Zone, XINTAI SHANDONG 271200 CN *UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp (°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>*UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C</td><td>MW 75-C</td><td>130[#]</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> * - May be prefixed by 0, 1, 2, 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: 1999-08-03 Last Revised: 2015-10-28 © 2019 UL LLC 						Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	*UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-						
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																		
UEW/130,QA-/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-																		
Magnet Wire Guide Information E221719 ZHEJIANG HONGBO TECHNOLOGY CO LTD Wan Tan Wan Industry Zone, Lianshi Town,, HUZHOU ZHEJIANG 313013 CN xUEW@/130, QA@-x/130 <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp (°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>xUEW@/130, QA@-x/130</td><td>MW 75-C</td><td>130[#]</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> @ - May be prefixed by LZ signifies magnet wires twisted together. x - Where x may be replaced by 0, 1, 2 or 3 denoting the 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: 2012-03-29 Last Revised: 2015-10-21 © 2019 UL LLC 						Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-						
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																		
xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-																		
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE																		
																							

DIS

DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET				DATE	2024. 03. 19
				PAGE	OF
CUSTOMER	MSP				
PART NAME	SWITCHING TRANS	MODEL NO.			
PART NO.	UPDH110-T1	DESCRIPTION	RM10"V"8PIN		
TAPE					
Insulating Tape E105147					
Guide Information					
DUCK SUNG HITECH CO LTD					
225-2 Shinneung-Ri Seoun-Myeon, Anseong-Si Gyeonggi-Do 456-850 KR					
DTS-204B (e)					
PET film insulating tapes with acrylic adhesive					
Color	Temp (°C)	Flame Retardant+	Sunlight Resistant+	Cold Resistant+	
All	130	No	No	No	
(e) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent.					
+ - Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements if authorized in the table above and when so marked.					
Report Date: 2003-09-30					
Last Revised: 2014-02-27					
© 2019 UL LLC					
UL					
Insulating Tape E165111					
Guide Information					
JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD					
SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN					
CT* (b)(g)					
Polyethylene terephthalate film insulating tapes					
Color	Temp (°C)	Flame Retardant+	Sunlight Resistant+	Cold Resistant+	
All except Clear	130	Yes	No	No	
(b) - Comparative Tracking Index (CTI) performance indicates material Group IIIa, PLC=2, CTI equal to or greater than 250 but less than 400 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					
+ - Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements if authorized in the table above and when so marked.					
Report Date: 1994-12-13					
Last Revised: 2016-01-12					
© 2019 UL LLC					
UL					
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE

APPROVAL SHEET

DATE 2024. 03. 19
PAGE OF

CUSTOMER	MSP		
PART NAME	SWITCHING TRANS	MODEL NO.	
PART NO.	UPDH110-T1	DESCRIPTION	RM10"V"8PIN

TAPE

Insulating Tape E304309
Guide Information

Meixin New Material Co Ltd
NO 192 INDUSTRY AREA, DAKAN VILLAGE TWO XILI TOWN, NAN SHAN, SHENZHEN GUANGDONG 518055 CN

MXPI-310F.310.312
Polyimide film insulating tapes with silicone adhesive

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Brown	180	A	-	-	-

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

Report Date: 2006-06-16
Last Revised: 2021-04-28 © 2022 UL LLC 

Insulating Tape E165111
Guide Information

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD
SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

PF^A (d)(g)
Polyimide film insulating tapes

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Amber	180	A, B, C, D, E, J	4/4	IIIb/IIIb	Adhesive/Film

(d) - Comparative Tracking Index (CTI) performance indicates material Group IIIb, PLC=4, CTI equal to or greater than 100 v but less than 175v.
(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: 2021-12-24 © 2022 UL LLC 

DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE
					

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DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET			DATE	2024. 03. 19																	
			PAGE	OF																	
CUSTOMER	MSP																				
PART NAME	SWITCHING TRANS		MODEL NO.																		
PART NO.	UPDH110-T1		DESCRIPTION	RM10"V"8PIN																	
VARNISH																					
Varnishes Guide Information E93947 NOROO PAINT & COATINGS CO LTD 615 PAKDAL-DONG, ANYANG-SHI KYONGGI-DO 430-030 KR DVB-2177(@) <table><thead><tr><th>ANSI Type</th><th>Twisted Pair Temp (°C)</th><th>Helical Coil Temp (°C)</th><th>Curved Electrode Temp (°C)</th></tr></thead><tbody><tr><td>MW 5-C</td><td>180</td><td>200</td><td>-</td></tr><tr><td>MW 80-C</td><td>155</td><td>-</td><td>-</td></tr></tbody></table> (@) - May be followed by suffix XX in which XX represents percentage of solid content, except S. Report Date: 2006-10-19 Last Revised: 2015-01-13 © 2019 UL LLC 						ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)	MW 5-C	180	200	-	MW 80-C	155	-	-				
ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)																		
MW 5-C	180	200	-																		
MW 80-C	155	-	-																		
Varnishes Guide Information E228349 SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD BEI SHI, WUJIANG JIANGSU 215214 CN T-4260(a) <table><thead><tr><th>ANSI Type</th><th>Twisted Pair Temp (°C)</th><th>Helical Coil Temp (°C)</th><th>Curved Electrode Temp (°C)</th></tr></thead><tbody><tr><td>MW 28-C</td><td>130</td><td>-</td><td>-</td></tr><tr><td>MW 80-C</td><td>155</td><td>-</td><td>-</td></tr><tr><td>MW 76-C</td><td>180</td><td>-</td><td>-</td></tr></tbody></table> (a) - May be followed by one or two alphanumeric suffix indicating viscosity. Report Date: 2002-11-01 Last Revised: 2014-03-26 © 2019 UL LLC 						ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)	MW 28-C	130	-	-	MW 80-C	155	-	-	MW 76-C	180	-	-
ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)																		
MW 28-C	130	-	-																		
MW 80-C	155	-	-																		
MW 76-C	180	-	-																		
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE																
																					

DIS

DONG - IN SYSTEM CO.,LTD.

SPECIFICATION

APPLICATION FOR APPROVAL OF

ITEM	: S/W TRANS
DESCRIPTION	: RM 10
CODE NO	:
MODEL NO	:
PART NO	: UPDH110-T1 (CLASS B)

This space is used for customer's approval

DONG HEUNG ELECTRONICS CO., LTD.

36, BAEKSEOKGONGDAN 6-GIL, SEOBUK-GU,
CHEONAN-SI, CHUNGCHEONGNAM-DO, KOREA

TEL : (041)552-1106~9
FAX : (041)552-3784

BAZHOU DONGXING

LAO DICUN, BAZHOU,HEIBEI PROVINCE,CHINA

YANTAI

No.9.DunHanBuShi Road,LaiShan
Yantai,Shandong,China

WEIHAI GIHEUNG

NO.27-9 SICHAN ROAD, WENDENG DISTRICT, WEIHAI
CITY, SHANDONG PROVINCE, CHINA

WEIHAI YUNHEUNG

NO.27-8 SICHAN ROAD, WENDENG DISTRICT, WEIHAI
CITY, SHANDONG PROVINCE,CHINA

DATE : 2024. 01. 08.

DRAWN BY H. J. JANG	DATE 2024. 01. 08.
CHECKED BY H. S. LEE	DATE 2024. 01. 08.
APPROVED BY J. C. JI	DATE 2024. 01. 08.

SPECIFICATION		SHEET NO.	1 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

1. GENERAL SPECIFICATION

1) SCOPE

This specification applies to inspection and approval of the S/T TRANS whose Manufacturing Solution Provide CO.,LTD.

2. GENERAL PREFERENCE

The reinspection & reapproval is required to change the structure, quality, progress of this Specification.

3. ABSOLUTE REGULARITY

1) Keep Temperature : $-40^{\circ}\text{C} \sim 100^{\circ}\text{C}$

2) Keep Humidity : 20% ~ 95%

3) Use Temperature : $-10^{\circ}\text{C} \sim 130^{\circ}\text{C}$

4) Use Humidity : 20% ~ 85%

4. MECHANICAL CHARACTERISTIC

1) TERMINAL TENSION INTENSITY

After fix the body, The Terminal Shall withstand for 5 seconds without losing when a static load of 2.0Kg is applied to drawing direction of the Terminal.

2) TERMINAL BEND INTENSITY

The Terminal shall withstand without breakage and bend when it returns after bend 1 time to the left side and 1 time right side with a static load.

3) VIBRATION TEST

After fix a body of the vibration board, The terminal shall withstand without losing and bend when it operates vibration test of 3 directions(X,Y,Z) for 2hours.

-Frequency : 10 - 55

-Amplitude : 0.75

5. ELECTRICAL CHARACTERISTIC

1) INSULATION RESISTANCE

① P COIL to S COIL : Shall be more than $100\text{M}\Omega$ when measured with DC 500V

② COIL TO CORE : Shall be more than $100\text{M}\Omega$ when measured with DC 500V

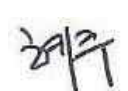
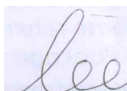
2) WITHSTAND VOLTAGE

① P COIL to S COIL : Shall be no damage when measured AC 2.0KV, 5mA for 1 MIN.

② COIL TO CORE : Shall be no damage when measured AC 1.0KV, 5mA for 1 MIN.

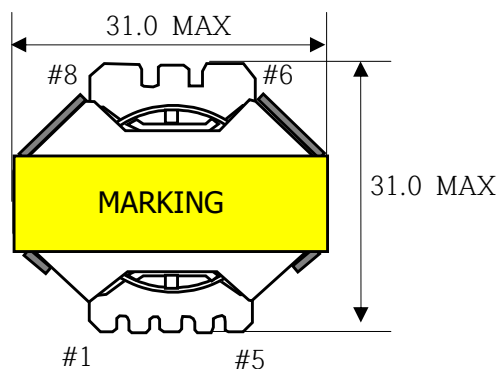
3) IMPULSE TEST(LAYER SHORT)

Shall be no damage when compare a film-insulation condition with standard sample after measured Surge Voltage AC 2.0KV on the both ends the Winding.

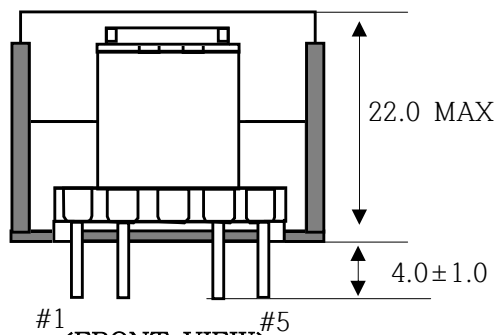
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
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SPECIFICATION		SHEET NO.	2 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

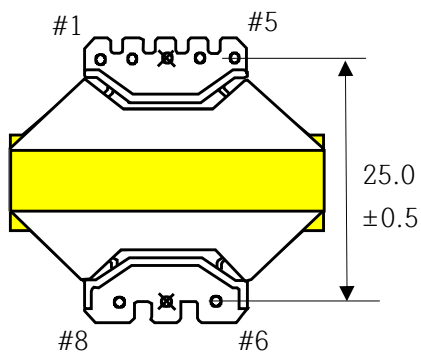
6. DIMENSION (UNIT : mm)



<TOP VIEW>



<FRONT VIEW>



<BOTTOM VIEW>

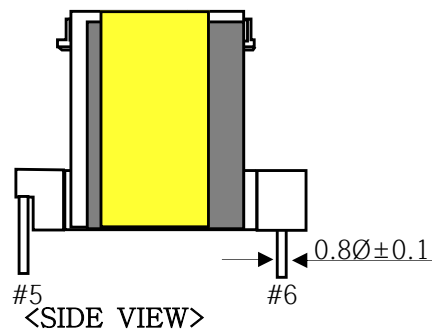
* MARKING

UPDH110-T1 → PART NO.
 DH 0000 DHB-001
 → CLASS B SYSTEM
 → PRODUCTION LINE
 → WEEK
 → YEAR
 → PRODUCTION MAKER

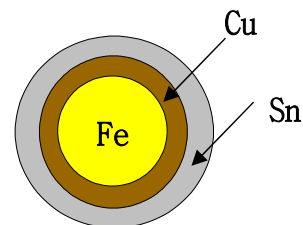
* YEAR
 2 : 2022
 3 : 2023
 4 : 2024
 5 : 2025

* WEEK
 01 : 1'st WEEK OF THE YEAR.
 02 : 2'nd WEEK OF THE YEAR.
 :
 54 : 54'th WEEK OF THE YEAR.

* PRODUCTION LINE
 1. A : CHUN AN
 2. B : BAZHOU
 3. Y : YANTAI
 4. C : WEIHAI



*. PIN PLATING SPEC



* PIN LENGTH : BEFORE SOLDERING

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
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SPECIFICATION		SHEET NO.	3 OF 15	
		DATE	2024. 01. 08.	
PART NAME	S/W TRANS	MODEL NAME		
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10	

7. SCHEMATIC DIAGRAM.

* ■ START MARK.
* ■ P/I TAPE

① ② ~~③~~ ④ ⑤

⑧ ~~⑦~~ ⑥

WINDING	BOTTOM VIEW	C.C.W
REMOVE PIN	#3,7	
N.C PIN		
CUT PIN		
TUBE,P/I TAPE PIN	#6	
BOBBIN INSERT	TOP	

8. WINDING SPECIFICATION

NO	TERMINAL		WIRE	TURNS	WINDING METHOD	INSULATION			BARRIER	
	S	F				MATERIAL	T/W	TS	PIN	TOP
W1	2	4	USTC 0.10Øx30#	12	SOLENOID	POLYESTER TAPE	0.025/10.5	2	-	-
W2	6	8	USTC 0.10Øx50#x2#	9	SOLENOID	POLYESTER TAPE	0.025/10.5	2	-	-
W3	1	5	USTC 0.10Øx30#	12	SOLENOID	POLYESTER TAPE	0.025/10.5{W}	3	-	-
* CORE FIX TAPE						POLYESTER TAPE	0.025/7.0{Y}	2	-	-
* CORE FIX TAPE						POLYESTER TAPE	0.025/10.0{Y}	2	-	-

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1				2/2	lee	J
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4						

SPECIFICATION		SHEET NO.	4 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

9. 신뢰성 시험(Reliability Test)

ITEM	TEST CONDITION	SPEC
내 습 성 (HUMIDITY-RESISTANCE)	40±2℃ 90~95℃RH 96HR, 상온에서 60分 이상 방치 후 측정 (Measure after leave more than 60Min, Normal Temperature.)	INITIAL INDUCTANCE ±10%
열 충격 (HEAT SHOCK-RESISTANCE)	-40℃ →100℃ 1시간→10CYCLE 시험 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after Test.)	INITIAL INDUCTANCE ±10%
내 열 성 (HEAT-RESISTANCE)	105±2℃ 96HR 방치 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after leave 105±2℃, 96HR.)	INITIAL INDUCTANCE ±10%
내 한 성 (COLD-RESISTANCE)	-25±2℃ 96HR, 상온에서 60분 이상 방치 후 측정 (Temperature.Measure after leave more than 60Min, Normal)	INITIAL INDUCTANCE ±10%

10. 내구성 시험(Endurance Test)

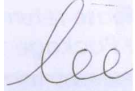
ITEM	TEST CONDITION	SPEC
SOLDERING 부착성 (ADHESION)	SOLDER POT ℃ : 280±5℃ SOLDERING HR : 2±0.5 SEC	90% 이상
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDER POT ℃ : 260±5℃ SOLDERING HR : 10±1.0 SEC	90% 이상

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1				2/2	lee	
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SPECIFICATION		SHEET NO.	5 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

11. TEST SPECIFICATION AT 25℃

NO.	ITEM	TERMINAL	SPECIFICATION	REMARKS
1	INDUCTANCE	1,2 - 4,5	400.0 [uH] MIN	HP-4284A at 1KHz, 1Vrms
		6 - 8	230.0 [uH] MIN	
2	LEAKAGE INDUCTANCE	1,2 - 4,5 (SECONDARY ALL SHORT)	2.00 [uH] MAX	
3	DC RESISTANCE	1,2 - 4,5	0.04 [Ω] MAX	HIOKI TYPE RM3544
		6 - 8	0.02 [Ω] MAX	
4	WITHSTANDING VOLTAGE	P COIL - S COIL	AC 2.0KV, 1 MIN	KIKUSUI : TOS-9200 (CUT OFF CURRENT=5mA)
		COIL - CORE	AC 1.0KV, 1 MIN	
5	INSULATION RESISTANCE	100Mohm MIN DC 500V		KIKUSUI : TOS-9200
6	IMPULSE TEST	AC 2.0KV , 60Hz, 3 PULSE		

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1						
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SPECIFICATION		SHEET NO.	7 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

13. MATERIAL LIST

NO	I T E M	MATERIALS & DIMENSIONS		MANUFACTURER	REMARK
1	CORE	RM 10	YR28	TONGXIANG YAORUN ELECTRONIC CO LTD	
			DMR40	HENGDIAN GROUP DMEGC MAGNETICS CO LTD	
			KP4	HANGHAI KANGSHUN MAGNETISM COMPONENT CO LTD	
			GP4	NANTONG GUANYOUDA MAGNETIC CO LTD	
2	BOBBIN	RM 10mm 8P(5+3) PHENOL (94V-0)		SUMITOMO BAKELITE CO LTD CHANG CHUN PLASTICS CO LTD	E41429 E59481
3	CAP	P.E.T		E I DUPONT DE NEMOURS & CO INC	E41938
4	W I R E	USTC 0.10 ϕ x30# USTC 0.10 ϕ x50#		Yantai Rommix Electronic CO.,LTD JIANGSU DARTONG M & E CO LTD SHANDONG SAINT ELECTRIC CO LTD ZHEJIANG HONGBO TECHNOLOGY CO LTD	E166187 E237377 E194410 E221719
5	INSULATION TAPE	POLYESTER TAPE 0.025t x 10.5mm 0.025t x 10.5mm {WHITE}		DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111
		POLYIMIDE TAPE		Meixin New Material Co Ltd JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E304309 E165111
6	CORE FIXING TAPE	POLYESTER TAPE 0.025t W=7.0mm {YELLOW} 0.025t W=10.0mm {YELLOW}		DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111
7	VARNISH	DVB-2177(@) T-4260(a)		NOROO PAINT & COATINGS CO LTD SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	E93947 E228349
8	SOLDER	Sn98/Cu2.0		SAMWOO ALLOY METAL CO LTD TIANJIN SONGBENENVIRONMENTAL SCIENCE&TECH CO LTD	
9	INK & LASER	MS-6853 JP-K12,K33 JP-K72 TH-TYPE A JP-K72 W89		WUHAN LEADJET SCIENCE AND TECHNOLOGY DEVELOPMENT CO LTD HITACHI INDUSTRIAL EQUIPMENT CO LTD TIANJIN LIANJIIEZHUORUIPENGMAKEJI YOUXIANGONGSI	
10	FLUX	8EB34 L-8EB34		KAIFENG SONGQING ELECTRONIC MATERIALS CO LTD TIANJIN QINGHE SCIENCE-TECH DEVELOPMENT CO LTD	

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1				2/1/2	lee	J
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SPECIFICATION		SHEET NO.	8 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

* UL. FILE *BOBBIN

Systems, Electrical Insulation - Component

See General Information for Systems, Electrical Insulation - Component

DONG HEUNG ELECTRONICS CO LTD
555-31 BAEKSSUK-DONG
CHONAN-SHI, CHUNG-NAM 330-220 REPUBLIC OF KOREA
Class 130 (B) transformer insulation system, designated *DHB-001*.

E141730

Marking: Company name or tradename "DH" and system designation.

Last Updated on 2003-05-22

Component - Plastics
Guide Information

E41429

SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU TOKYO 140-0002 JP
PM-9820, PM-9825
Phenolic (PF) "SUMIKON", furnished as pellets, granular material

Color	Min. Thk (mm)	Flame Class	HWI	HA	RTI Elec	RTI Imp	RTI Str
BK	0.16	V-0	-	-	150	150	150
BK, BN	0.18	V-0	-	-	150	150	150
	0.51 - 0.69	V-0	3	0	150	150	150
	0.70	V-0	1	0	150	150	150
	1.5	V-0	0	0	150	150	150
	3.0	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3	Inclined Plane Tracking (IPT) kV: -
Dielectric Strength (kV/mm): 14	Volume Resistivity (10 ^x ohm-cm): 11
High-Voltage Arc Tracking Rate (HVTR): 0	Surface Resistivity (10 ^x ohms/square): -
Dimensional Change (%): -	High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1997-11-03
Last Revised: 2022-09-15

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	9 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

Component - Plastics

Guide Information

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200HF

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min.Thk (mm)	Flame Class	HWI	HA	RTI Elec	RTI Imp	RTI Str
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 6

High-Voltage Arc Tracking Rate (HVTR): 0

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10^x ohm-cm): 11

Surface Resistivity (10^x ohms/square): -

High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-03-15

Last Revised: 2015-10-08

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E59481

Component - Plastics

Guide Information

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200NA

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min.Thk (mm)	Flame Class	HWI	HA	RTI Elec	RTI Imp	RTI Str
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 6

High-Voltage Arc Tracking Rate (HVTR): 0

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10^x ohm-cm): 11

Surface Resistivity (10^x ohms/square): -

High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

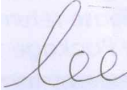
Report Date: 1976-01-06

Last Revised: 2015-10-08

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E59481

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	10 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

* CAP

Component - Plastics

Guide Information

E I DUPONT DE NEMOURS & CO INC

Mobility & Materials, 200 Powder Mill Road #304, Wilmington DE 19803

FR530(I)(+)(f1), FR530L(I)(+)(f1)

Polyethylene Terephthalate (PET), glass reinforced, flame retardant "Rynite", furnished as pellets

E41938

Color	Min Thk (mm)	Flame Class	HWI	HA	RTI Elec	RTI Imp	RTI Str
NC, BK	0.35	V-0	3	1	155	155	155
ALL	0.75	V-0	2	1	155	155	155
NC	0.9	V-0, 5VA	2	1	155	155	155
NC, BK	1.5	V-0, 5VA	0	1	155	155	155
ALL	2.0	V-0, 5VA	0	1	155	155	155
	3.0	V-0, 5VA	0	1	155	155	155

Comparative Tracking Index (CTI): 2

Dielectric Strength (kV/mm): 34

High-Voltage Arc Tracking Rate (HVTR): 1

Dimensional Change (%): 0

Inclined Plane Tracking (IPT) KV: -

Volume Resistivity (10⁸ ohm-cm): 16

Surface Resistivity (10⁸ ohms/square): -

High Volt, Low Current Arc Resis (D495): 6

(*) - Virgin and regrind up to 50% by weight inclusive, have the same basic material characteristics.

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

(I) - Recognized ground insulation component at 0.4 mm with MW79 in UL1446 Class 155 electrical insulation system designated R201N (File E69939).

NOTE - (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" for Zytel or "MIN" for Minlon or "DEL" for Delrin or "CRA" for Crastin or "RYN" for Rynite or "ETPV" for ETPV or "SOR" for Sorona grades.

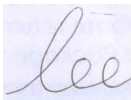
ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1996-01-04

Last Revised: 2022-07-04

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	11 OF 15			
		D A T E	2024. 01. 08.			
PART NAME	S/W TRANS	MODEL NAME				
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10			

*WIRE

Magnet Wire

Guide Information

E166187

Yantai Rommix Electronic CO.,LTD

Daxindian Town, Penglai Shandong 265612 CN

PTMW75, xUEW/130, QA-x/130

Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat
PTMW75, xUEW/130, QA-x/130	MW 75-C	130	Polyurethane	-	-

x - Where x may be replaced by 0, 1, 2 or 3 denoting the coating thickness.

Report Date: 1996-02-20

Last Revised: 2021-04-16

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Magnet Wire

Guide Information

E237377

JIANGSU DARTONG M & E CO LTD

1 DARTONG RD, HUAIAN ECONOMY DEVELOPMENT ZONE, HUAIAN JIANGSU 223238 CN

xUEW

Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat
xUEW	MW 79-C	155	Polyurethane	-	-
	MW 75-C	130	Polyurethane	-	-

x - Where x may be replaced by 0, -1, -2 or -3 indicating the film built.

Report Date: 2003-06-12

Last Revised: 2022-01-10

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Magnet Wire

Guide Information

E194410

SHANDONG SAINT ELECTRIC CO LTD

No.9 Shuangshan Road, Economic Development Zone, XINTAI SHANDONG 271200 CN

***UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C**

Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat
UEW/130,QA-/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-

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

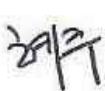
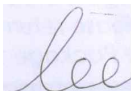
[#] - The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end-product testing. Further consideration is necessary prior to its use in testing.

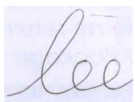
Report Date: 1999-08-03

Last Revised: 2021-01-04

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	12 OF 15															
		D A T E	2024. 01. 08.															
PART NAME	S/W TRANS	MODEL NAME																
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10															
Magnet Wire Guide Information E221719 ZHEJIANG HONGBO TECHNOLOGY CO LTD Wan Tan Wan Industry Zone, Lianshi Town,, HUZHOU ZHEJIANG 313013 CN xUEW@/130, QA@-x/130 <table><tr><td>Mark Designation</td><td>ANSI Type</td><td>Temp.(°C)</td><td>Basecoat</td><td>Topcoat</td><td>Bondcoat</td></tr><tr><td>xUEW@/130, QA@-x/130</td><td>MW 75-C</td><td>130[#]</td><td>Polyurethane</td><td>-</td><td>-</td></tr></table> @ - May be prefixed by LZ signifies magnet wires twisted together. x - Where x may be replaced by 0, 1, 2 or 3 denoting the 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: 2012-03-29 Last Revised: 2021-01-04 © 2022 UL LLC 							Mark Designation	ANSI Type	Temp.(°C)	Basecoat	Topcoat	Bondcoat	xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-
Mark Designation	ANSI Type	Temp.(°C)	Basecoat	Topcoat	Bondcoat													
xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-													
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED												
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SPECIFICATION		SHEET NO.	13 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

* TAPE

Insulating Tape E105147
Guide Information

DUCK SUNG HITECH CO LTD
225-2 Shinneung-Ri Seoun-Myeon, Anseong-Si Gyeonggi-Do 456-850 KR

DTS-204 (e)
PET film insulating tapes with acrylic adhesives

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
All and clear	130	A C D E F H I	20	-	Film/Adhesive

(e) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent.
+ - See the Guide Information for alphabetical end-use Functional Use codes.

Report Date: 2010-05-15
Last Revised: 2021-09-16 © 2022 UL LLC



Insulating Tape E165111
Guide Information

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD
SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

CT* (b)(g)
Polyethylene terephthalate film insulating tapes

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
All except Clear	130	A	-	-	-

(b) - Comparative Tracking Index (CTI) performance indicates material Group IIIa, PLC=2, CTI equal to or greater than 250 but less than 400 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: 2021-04-26 © 2022 UL LLC



NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
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SPECIFICATION		SHEET NO.	14 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

Insulating Tape

Guide Information

E165111

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD

SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

PF⁺ (d)(g)

Polyimide film insulating tapes

<u>Color</u>	<u>Temp</u> (°C)	<u>Functional</u> <u>Use +</u>	<u>CTI</u> <u>ASTM</u> <u>D3638</u>	<u>CTI</u> <u>IEC</u> <u>112</u>	<u>Exposed</u> <u>Side</u>
Amber	180	A, B, C, D, E, J	4/4	IIIb/IIIb	Adhesive\Film

(d) - Comparative Tracking Index (CTI) performance indicates material Group IIIb, PLC=4, CTI equal to or greater than 100 v but less than 175v.

(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: 2021-12-24

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Insulating Tape

Guide Information

E304309

Meixin New Material Co Ltd

NO 192 INDUSTRY AREA, DAKAN VILLAGE TWO XILI TOWN, NAN SHAN, SHENZHEN GUANGDONG 518055 CN

MXPI-310F.310.312

Polyimide film insulating tapes with silicone adhesive

<u>Color</u>	<u>Temp</u> (°C)	<u>Functional</u> <u>Use +</u>	<u>CTI</u> <u>ASTM</u> <u>D3638</u>	<u>CTI</u> <u>IEC</u> <u>112</u>	<u>Exposed</u> <u>Side</u>
Brown	180	A	-	-	-

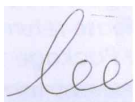
+ - See the Guide Information for alphabetical end-use Functional Use codes.

Report Date: 2006-06-16

Last Revised: 2021-04-28

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SPECIFICATION		SHEET NO.	15 OF 15
		D A T E	2024. 01. 08.
PART NAME	S/W TRANS	MODEL NAME	
PART NO.	UPDH110-T1 (CLASS B)	TYPE	RM 10

*VARNISH

Varnishes

Guide Information

NOROO PAINT & COATINGS CO LTD

351 Bakdal-ro Manan-gu, Anyang-si Gyeonggi-do 13977 KR

DVB-2177(@)

ANSI Type	Twisted Pair Temp.(°C)	Helical Coil Temp.(°C)	Curved Electrode Temp.(°C)
MW 5-C	180	200	-
MW 80-C	155	-	-

(@) - May be followed by suffix XX in which XX represents percentage of solid content, except S.

Report Date: 2006-10-19

Last Revised: 2021-06-09

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E93947

Varnishes

Guide Information

SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD

BEI SHI, WUJIANG JIANGSU 215214 CN

T-4260(a)

ANSI Type	Twisted Pair Temp.(°C)	Helical Coil Temp.(°C)	Curved Electrode Temp.(°C)
MW 28-C	130	-	-
MW 80-C	155	-	-
MW 76-C	180	-	-

(a) - May be followed by one or two alphanumeric suffix indicating viscosity.

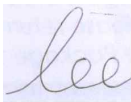
Report Date: 2002-11-01

Last Revised: 2022-03-01

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E228349

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
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The following Page(s) are related to Miscellaneous-02. The next supplement, if applicable, will be identified with a new Supplement Page Heading.



TO MESSRS : MSP

(SWITCHING TRANS) SPECIFICATION

MODEL NAME : _____ PART NO : UPDH110-L32 _____

CUSTOMER'S SPEC. NO : _____ DI SPEC. NO : RM10"V"8PIN _____

CLASS B

APPROVED	REFERENCE

DATE : 2024. 03. 19.



DONG IN SYSTEM CO.,LTD.



HEAD OFFICE	124-116 SUNG-EU DONG NAM-KU , INCHEON , KOREA TEL : 82-32-887-0040 FAX : 82-32-887-0111
CHINA PLANT	#589-1 SHENYANG ROAD ZHANGCUN TOWN WEIHAI CITY CHINA TEL : 86-631-5763828 FAX : 86-631-5763925

APPROVAL SHEET

DATE

2024. 03. 19

PAGE

OF

CUSTOMER MSP

PART NAME SWITCHING TRANS

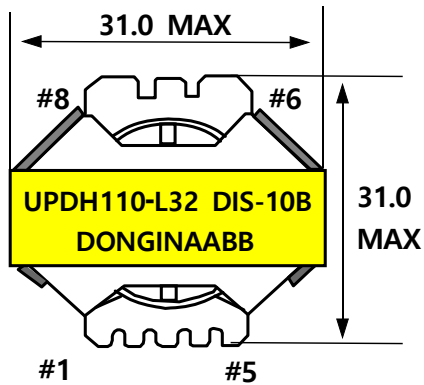
MODEL NO.

PART NO. UPDH110-L32

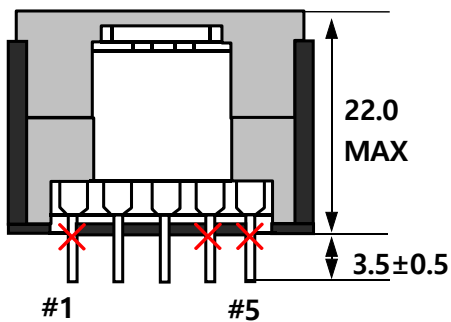
DESCRIPTION

RM10"V"8PIN

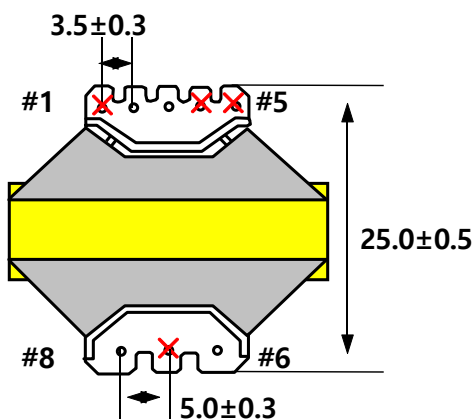
1. DIMENSIONS (UNIT:mm)



TOP VIEW



FRONT VIEW

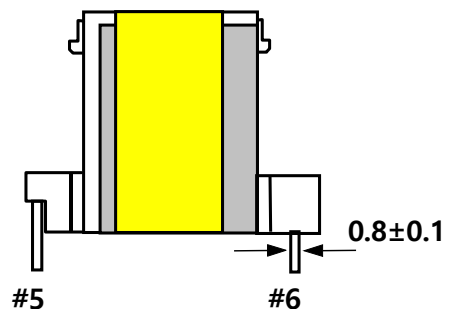


BOTTOM VIEW

* MARKING *

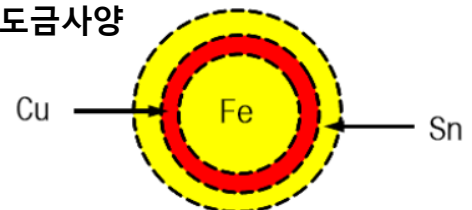
UPDH110-L32 DIS-10B ← PART NO
DONGINAABB ← LOT NO
WEEK
YEAR
MAKER

MARKING	
PART NO.	UPDH110-L32
(LOT NO)	AA : YEAR BB : WEEK
MAKER	DONG IN SYSTEM
DIS-10B	INSULATION SYSTEM



SIDE VIEW

PIN 도금사양



DRAWN BY

CHECK BY

APPR. BY

REVISION

DATE



Safety

DIS

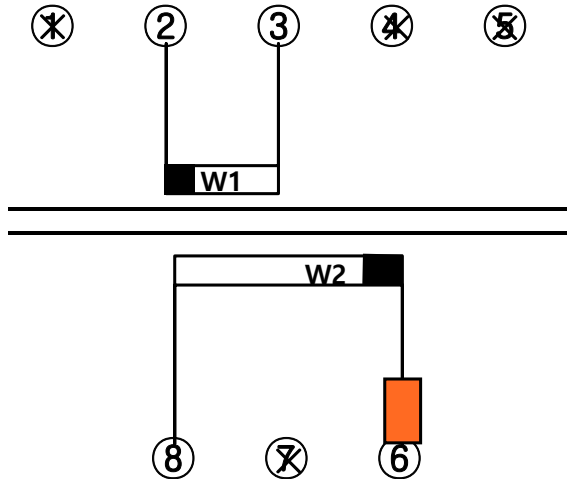
DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET

DATE 2024. 03. 19
PAGE OF

CUSTOMER	MSP		
PART NAME	SWITCHING TRANS	MODEL NO.	
PART NO.	UPDH110-L32	DESCRIPTION	RM10"V"8PIN

2. CONNECTION (BOTTOM VIEW)



REMOVED PIN	#1,4,5,7
CUT PIN	#
N.C PIN	#
P/I TAPE,TUBE	#6
FLUX BAND	#
DOT MARK	■ START OF WINDING
SK-015B CORE면 90%이상 도포	

3. WINDING SPECIFICATION

NO	TERMINAL		WIRE	Ts	WINDING METHOD	INSULATION		BARRIER	
	S	F				MATERIAL(t/mm)	Ts	PIN	TOP
W1	2	3	USTC0.10ØX30PX2P	9	SOLENOID	POLYESTER TAPE 0.025 / 10.5	3	2.0	2.0
W2	6	8	USTC0.10ØX160P	7	SOLENOID	POLYESTER TAPE 0.025 / 10.5 (WHITE)	3	-	-
CORE FIXING TAPE					POLYESTER TAPE 0.025 / 7.0(YELLOW)		2		
CORE FIXING TAPE					POLYESTER TAPE 0.025 / 10.0(YELLOW)		2		

W2 #6 고온테이프 감싸줄것

DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE

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DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET				DATE	2024. 03. 19																																																
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CUSTOMER	MSP																																																				
PART NAME	SWITCHING TRANS		MODEL NO.																																																		
PART NO.	UPDH110-L32		DESCRIPTION	RM10"V"8PIN																																																	
4. INSULATION TAPE																																																					
<table><tr><td>NO</td><td>COIL</td><td>MATERIALS</td><td>WRAPS (T)</td><td colspan="2">THICKNESS(mm) × WIDTH(mm)</td></tr><tr><td>1</td><td>W1</td><td>POLYESTER FILM TAPE</td><td>3</td><td colspan="2">0.025t x 10.5 mm</td></tr><tr><td>2</td><td>W2</td><td>POLYESTER FILM TAPE</td><td>3</td><td colspan="2">0.025t x 10.5 mm (WHITE COLOR)</td></tr><tr><td>3</td><td>CORE FIXING TAPE</td><td>POLYESTER FILM TAPE</td><td>2</td><td colspan="2">0.025t x 7.0 mm (YELLOW COLOR)</td></tr><tr><td>4</td><td>CORE FIXING TAPE</td><td>POLYESTER FILM TAPE</td><td>2</td><td colspan="2">0.025t x 10.0 mm (YELLOW COLOR)</td></tr><tr><td></td><td></td><td></td><td></td><td colspan="2"></td></tr><tr><td></td><td></td><td></td><td></td><td colspan="2"></td></tr><tr><td></td><td></td><td></td><td></td><td colspan="2"></td></tr></table>						NO	COIL	MATERIALS	WRAPS (T)	THICKNESS(mm) × WIDTH(mm)		1	W1	POLYESTER FILM TAPE	3	0.025t x 10.5 mm		2	W2	POLYESTER FILM TAPE	3	0.025t x 10.5 mm (WHITE COLOR)		3	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 7.0 mm (YELLOW COLOR)		4	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 10.0 mm (YELLOW COLOR)																			
NO	COIL	MATERIALS	WRAPS (T)	THICKNESS(mm) × WIDTH(mm)																																																	
1	W1	POLYESTER FILM TAPE	3	0.025t x 10.5 mm																																																	
2	W2	POLYESTER FILM TAPE	3	0.025t x 10.5 mm (WHITE COLOR)																																																	
3	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 7.0 mm (YELLOW COLOR)																																																	
4	CORE FIXING TAPE	POLYESTER FILM TAPE	2	0.025t x 10.0 mm (YELLOW COLOR)																																																	
** REGARDING ABOVE TABLE STANDARD, WIDTH, THICKNESS, TURNS OF TAPE MUST BE OVER SPECIFICATION RANGE. ※ POLYESTER FILM TAPE TOLERANCE ① 7.0mm ±0.5mm ② 10.0mm ±0.5mm ③ 10.5mm ±0.5mm																																																					
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CUSTOMER	MSP																												
PART NAME	SWITCHING TRANS		MODEL NO.																										
PART NO.	UPDH110-L32		DESCRIPTION	RM10"V"8PIN																									
5. RELIABILITY TEST																													
<table><tr><td>ITEM</td><td>TEST CONDITION</td><td colspan="2">SPEC</td></tr><tr><td rowspan="2">HUMIDITY - RESISTANCE</td><td>TEMPERATURE:40±2℃, HUMIDITY:90~95%RH, TIME:96HR</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)</td></tr><tr><td rowspan="2">HEAT SHOCK - RESISTANCE</td><td>-25℃ 1HR → 85℃ 1HR : 10 CYCLES</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)</td></tr><tr><td rowspan="2">HEAT - RESISTANCE</td><td>TEMPERATURE:105±2℃, TIME:96HR</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)</td></tr><tr><td rowspan="2">COLD - RESISTANCE</td><td>TEMPERATURE:-25±2℃, TIME:96HR</td><td rowspan="2">INITIAL INDUCTANCE ±10%</td><td rowspan="2">LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE</td></tr><tr><td>(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)</td></tr></table>						ITEM	TEST CONDITION	SPEC		HUMIDITY - RESISTANCE	TEMPERATURE:40±2℃, HUMIDITY:90~95%RH, TIME:96HR	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)	HEAT SHOCK - RESISTANCE	-25℃ 1HR → 85℃ 1HR : 10 CYCLES	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)	HEAT - RESISTANCE	TEMPERATURE:105±2℃, TIME:96HR	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)	COLD - RESISTANCE	TEMPERATURE:-25±2℃, TIME:96HR	INITIAL INDUCTANCE ±10%	LAYER SHORT DIELECTR STRENTH INSULATOR RESISTANCE	(UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)
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6. ENDURANCE TEST																													
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7. ELECTRICAL CHARACTERISTICS

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CUSTOMER		MSP			
PART NAME		SWITCHING TRANS		MODEL NO.	
PART NO.		UPDH110-L32		DESCRIPTION	RM10"V"8PIN
9. MATERIAL LIST					
NO	ITEM	MATERIAL	MANUFACTURER	FILE NO.	
1	CORE	FERRITE CORE RM10 LP-4 OR HX-40 OR PC-40	RING TONG FERRITE CO., LTD. NAN TONG FERRITE CO., LTD. JI SHUN MAGNETICS CO., LTD		
2	BOBBIN	PHENOL 94V-0 RM10 "V" 8PIN	SUMITOMO BAKELITE CO LTD CHANG CHUN PLASTICS CO LTD	E41429 E59481	
3	CAP	P.E.T	E I DUPONT DE NEMOURS & CO INC	E41938	
4	WIRE	POLYURETHANE ENAMELED COPPER WIRE USTC0.10ØX30P USTC0.10ØX160P	YANTAI ROME ELECTRONIC CO LTD JIANGSU DARTONG M&E CO LTD SHANDONG SAINT ELECTRONIC CO LTD ZHEJIANG HONFBO TECHNOLOGY CO LTD	E166187 E237377 E194410 E221719	
5	INSULATION TAPE	POLYESTERS TAPE T = 0.025mm,T=0.050mm W =10.5mm W =10.5mm (WHITE)	DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111	
		POLYIMIDE TAPE	Meixin New Material Co Ltd JINGJIANG YAHUA PRESSURE SENSITIVE GLUE	E304309 E165111	
6	CORE FIXING TAPE	POLYESTERS TAPE T = 0.025mm W = 7.0mm (YELLOW) W = 10.0mm (YELLOW)	DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111	
7	BARRIER TAPE	P.N W W=2.0mm			
8	PIN TERMINAL	SOLDER COATED COPPER	DAE-A LEAD CO.,LTD.		
9	VARNISH	DVB-2177(@) T4260(a)	NOROO PAINT & COATINGS CO LTD SHZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	E93947 E228349	
10	ADHESIVE	SK-015B	SEKYE EPOXY RESIN CO., LTD.		
11	SOLDER	Sn99.3 / Cu0.7 or EQV.	ALPHA METALS CO.,LTD or EQV.		
12	MARKING	INK (BON MARQUE) or EQV.	ATL CO.,LTD or EQV.		
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CUSTOMER	MSP		
PART NAME	SWITCHING TRANS	MODEL NO.	
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DONG IN SYSTEM CO LTD
97BL-5LT NAMDONG INDUSTRIAL COMPLEX
664-4 GOJAN-DONG NAMDONG-GU
INCHEON, 405-817 REPUBLIC OF KOREA

E242921

Class 130 (B) electrical insulation systems, designated DIS-0401B

Class 130 (B) transformer or coil electrical insulation systems, designated DIS-10B

Marking: Company name and system designation.

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	3.0	V-0	0	2	150	150	150																																																																																						

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OF

CUSTOMER

MSP

PART NAME

SWITCHING TRANS

MODEL NO.

PART NO.

UPDH110-L32

DESCRIPTION

RM10"V"8PIN

BOBBIN

Component - Plastics

E59481

Guide Information

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200HF

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3
Dielectric Strength (kV/mm): 6
High-Voltage Arc Tracking Rate (HVTR): 0
Dimensional Stability (%): -

Inclined Plane Tracking (IPT) kV: -
Volume Resistivity (10^x ohm-cm): 11
High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-03-15

Last Revised: 2015-10-08

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Component - Plastics

E59481

Guide Information

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200NA

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3
Dielectric Strength (kV/mm): 6
High-Voltage Arc Tracking Rate (HVTR): 0
Dimensional Stability (%): -

Inclined Plane Tracking (IPT) kV: -
Volume Resistivity (10^x ohm-cm): 11
High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1976-01-06

Last Revised: 2015-10-08

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Component - Plastics Guide Information E I DUPONT DE NEMOURS & CO INC Mobility & Materials, 200 Powder Mill Road #304, Wilmington DE 19803 FR530(I)(+)(f1), FR530L(I)(+)(f1) Polyethylene Terephthalate (PET), glass reinforced, flame retardant "Rynite", furnished as pellets <table><thead><tr><th>Color</th><th>Min.Thk (mm)</th><th>Flame Class</th><th>HWI</th><th>HAI</th><th>RTI Elec</th><th>RTI Imp</th><th>RTI Str</th></tr></thead><tbody><tr><td>NC, BK</td><td>0.35</td><td>V-0</td><td>3</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>ALL</td><td>0.75</td><td>V-0</td><td>2</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>NC</td><td>0.9</td><td>V-0, 5VA</td><td>2</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>NC, BK</td><td>1.5</td><td>V-0, 5VA</td><td>0</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td>ALL</td><td>2.0</td><td>V-0, 5VA</td><td>0</td><td>1</td><td>155</td><td>155</td><td>155</td></tr><tr><td></td><td>3.0</td><td>V-0, 5VA</td><td>0</td><td>1</td><td>155</td><td>155</td><td>155</td></tr></tbody></table> Comparative Tracking Index (CTI): 2 Dielectric Strength (kV/mm): 34 High-Voltage Arc Tracking Rate (HVTR): 1 Dimensional Change (%): 0 Inclined Plane Tracking (IPT) kV: - Volume Resistivity (10³ ohm-cm): 16 Surface Resistivity (10³ ohms/square): - High Volt, Low Current Arc Resis (D495): 6 (*) - Virgin and regrind up to 50% by weight inclusive, have the same basic material characteristics. (f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C. (I) - Recognized ground insulation component at 0.4 mm with MW79 in UL1446 Class 155 electrical insulation system designated R201N (File E69939). NOTE - (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" for Zytel or "MIN" for Minlon or "DEL" for Delrin or "CRA" for Crastin or "RYN" for Rynite or "ETPV" for ETPV or "SOR" for Sorona grades. ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL. Report Date: 1996-01-04 Last Revised: 2022-07-04 © 2022 UL Solutions CULUS						Color	Min.Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	NC, BK	0.35	V-0	3	1	155	155	155	ALL	0.75	V-0	2	1	155	155	155	NC	0.9	V-0, 5VA	2	1	155	155	155	NC, BK	1.5	V-0, 5VA	0	1	155	155	155	ALL	2.0	V-0, 5VA	0	1	155	155	155		3.0	V-0, 5VA	0	1	155	155	155
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ALL	2.0	V-0, 5VA	0	1	155	155	155																																																						
	3.0	V-0, 5VA	0	1	155	155	155																																																						
WIRE																																																													
Magnet Wire Guide Information Yantai Rommix Electronic CO.,LTD Daxindian Town, Penglai Shandong 265612 CN PTMW75, xUEW/130, QA-x/130 <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp.(°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>PTMW75, xUEW/130, QA-x/130</td><td>MW 75-C</td><td>130</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> x - Where x may be replaced by 0, 1, 2 or 3 denoting the coating thickness. Report Date: 1996-02-20 Last Revised: 2021-04-16 © 2022 UL LLC UL						Mark Designation	ANSI Type	Temp.(°C)	Basecoat	Topcoat	Bondcoat	PTMW75, xUEW/130, QA-x/130	MW 75-C	130	Polyurethane	-	-																																												
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PART NO.	UPDH110-L32	DESCRIPTION	RM10"V"8PIN																				
WIRE																							
Magnet Wire Guide Information E237377 JIANGSU DARTONG M & E CO LTD 1 DARTONG RD, HUIAN ECONOMY DEVELOPMENT ZONE, HUIAN JIANGSU 223238 CN xUEW <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp (°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>xUEW</td><td>MW 79-C</td><td>155</td><td>Polyurethane</td><td>-</td><td>-</td></tr><tr><td></td><td>MW 75-C</td><td>130</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> x - Where x may be replaced by 0, -1, -2 or -3 indicating the film built. Report Date: 2003-06-12 Last Revised: 2022-01-10 © 2022 UL LLC 						Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	xUEW	MW 79-C	155	Polyurethane	-	-		MW 75-C	130	Polyurethane	-	-
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																		
xUEW	MW 79-C	155	Polyurethane	-	-																		
	MW 75-C	130	Polyurethane	-	-																		
Magnet Wire Guide Information E194410 SHANDONG SAINT ELECTRIC CO LTD No.9 Shuangshan Road, Economic Development Zone, XINTAI SHANDONG 271200 CN *UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp (°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>*UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C</td><td>MW 75-C</td><td>130[#]</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> * - May be prefixed by 0, 1, 2, 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: 1999-08-03 Last Revised: 2015-10-28 © 2019 UL LLC 						Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	*UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-						
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																		
UEW/130,QA-/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-																		
Magnet Wire Guide Information E221719 ZHEJIANG HONGBO TECHNOLOGY CO LTD Wan Tan Wan Industry Zone, Lianshi Town,, HUZHOU ZHEJIANG 313013 CN xUEW@/130, QA@-x/130 <table><thead><tr><th>Mark Designation</th><th>ANSI Type</th><th>Temp (°C)</th><th>Basecoat</th><th>Topcoat</th><th>Bondcoat</th></tr></thead><tbody><tr><td>xUEW@/130, QA@-x/130</td><td>MW 75-C</td><td>130[#]</td><td>Polyurethane</td><td>-</td><td>-</td></tr></tbody></table> @ - May be prefixed by LZ signifies magnet wires twisted together. x - Where x may be replaced by 0, 1, 2 or 3 denoting the 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: 2012-03-29 Last Revised: 2015-10-21 © 2019 UL LLC 						Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-						
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																		
xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-																		
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE																		
																							

DIS

DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET

DATE	2024. 03. 19
PAGE	OF

CUSTOMER	MSP		
PART NAME	SWITCHING TRANS	MODEL NO.	
PART NO.	UPDH110-L32	DESCRIPTION	RM10"V"8PIN

TAPE

Insulating TapeE105147

Guide Information

DUCK SUNG HITECH CO LTD
225-2 Shinneung-Ri Seoun-Myeon, Anseong-Si Gyeonggi-Do 456-850 KR

DTS-204B (e)
PET film insulating tapes with acrylic adhesive

<u>Color</u>	<u>Temp (°C)</u>	<u>Flame Retardant+</u>	<u>Sunlight Resistant+</u>	<u>Cold Resistant+</u>
All	130	No	No	No

(e) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent.

+ - Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements if authorized in the table above and when so marked.

Report Date: 2003-09-30
Last Revised: 2014-02-27

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Insulating TapeE165111

Guide Information

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD
SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

CT* (b)(g)
Polyethylene terephthalate film insulating tapes

<u>Color</u>	<u>Temp (°C)</u>	<u>Flame Retardant+</u>	<u>Sunlight Resistant+</u>	<u>Cold Resistant+</u>
All except Clear	130	Yes	No	No

(b) - Comparative Tracking Index (CTI) performance indicates material Group IIIa, PLC=2, CTI equal to or greater than 250 but less than 400 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

+ - Complies with "Flame Retardant" and/or "Cold Resistant" and/or "Sunlight Resistant" requirements if authorized in the table above and when so marked.

Report Date: 1994-12-13
Last Revised: 2016-01-12

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APPROVAL SHEET

DATE	2024. 03. 19
PAGE	OF

CUSTOMER	MSP		
PART NAME	SWITCHING TRANS	MODEL NO.	
PART NO.	UPDH110-L32	DESCRIPTION	RM10"V"8PIN

TAPE

Insulating Tape

Guide Information

E304309

Meixin New Material Co Ltd

NO 192 INDUSTRY AREA, DAKAN VILLAGE TWO XILI TOWN, NAN SHAN, SHENZHEN GUANGDONG 518055 CN

MXPI-310F.310.312

Polyimide film insulating tapes with silicone adhesive

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Brown	180	A	-	-	-

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

Report Date: 2006-06-16

Last Revised: 2021-04-28

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Insulating Tape

Guide Information

E165111

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD

SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

PF^A (d)(g)

Polyimide film insulating tapes

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Amber	180	A, B, C, D, E, J	4/4	IIIb/IIIb	Adhesive/Film

(d) - Comparative Tracking Index (CTI) performance indicates material Group IIIb, PLC=4, CTI equal to or greater than 100 v but less than 175v.

(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: 2021-12-24

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APPROVAL SHEET

DATE

2024. 03. 19

PAGE

OF

CUSTOMER

MSP

PART NAME

SWITCHING TRANS

MODEL NO.

PART NO.

UPDH110-L32

DESCRIPTION

RM10"V"8PIN

BARRIER TAPE

Insulating Tape

Guide Information

E105147

DUCK SUNG HITECH CO LTD

225-2 Shinneung-Ri Seoun-Myeon, Anseong-Si Gyeonggi-Do 456-850 KR

DTS-280

Polyester film insulating tapes with acrylic adhesive

<u>Color</u>	<u>Temp</u> (°C)	<u>Functional</u> <u>Use +</u>	<u>CTI</u> <u>ASTM</u> <u>D3638</u>	<u>CTI</u> <u>IEC</u> <u>112</u>	<u>Exposed</u> <u>Side</u>
White	130	A, B, D, E, F, G, J	-	-	-

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

Report Date: 1996-01-05

Last Revised: 2021-09-16

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Insulating Tape

Guide Information

E165111

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD

SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

WF* (c)(h)

Nonwoven cloth/polyethylene terephthalate film insulating tapes

<u>Color</u>	<u>Temp</u> (°C)	<u>Functional</u> <u>Use +</u>	<u>CTI</u> <u>ASTM</u> <u>D3638</u>	<u>CTI</u> <u>IEC</u> <u>112</u>	<u>Exposed</u> <u>Side</u>
White	130	A	-	-	-

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

(h) - 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: 2021-04-26

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APPROVAL SHEET			DATE	2024. 03. 19																	
			PAGE	OF																	
CUSTOMER	MSP																				
PART NAME	SWITCHING TRANS		MODEL NO.																		
PART NO.	UPDH110-L32		DESCRIPTION	RM10"V"8PIN																	
VARNISH																					
Varnishes Guide Information E93947 NOROO PAINT & COATINGS CO LTD 615 PAKDAL-DONG, ANYANG-SHI KYONGGI-DO 430-030 KR DVB-2177(@) <table><thead><tr><th>ANSI Type</th><th>Twisted Pair Temp (°C)</th><th>Helical Coil Temp (°C)</th><th>Curved Electrode Temp (°C)</th></tr></thead><tbody><tr><td>MW 5-C</td><td>180</td><td>200</td><td>-</td></tr><tr><td>MW 80-C</td><td>155</td><td>-</td><td>-</td></tr></tbody></table> (@) - May be followed by suffix XX in which XX represents percentage of solid content, except S. Report Date: 2006-10-19 Last Revised: 2015-01-13 © 2019 UL LLC 						ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)	MW 5-C	180	200	-	MW 80-C	155	-	-				
ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)																		
MW 5-C	180	200	-																		
MW 80-C	155	-	-																		
Varnishes Guide Information E228349 SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD BEI SHI, WUJIANG JIANGSU 215214 CN T-4260(a) <table><thead><tr><th>ANSI Type</th><th>Twisted Pair Temp (°C)</th><th>Helical Coil Temp (°C)</th><th>Curved Electrode Temp (°C)</th></tr></thead><tbody><tr><td>MW 28-C</td><td>130</td><td>-</td><td>-</td></tr><tr><td>MW 80-C</td><td>155</td><td>-</td><td>-</td></tr><tr><td>MW 76-C</td><td>180</td><td>-</td><td>-</td></tr></tbody></table> (a) - May be followed by one or two alphanumeric suffix indicating viscosity. Report Date: 2002-11-01 Last Revised: 2014-03-26 © 2019 UL LLC 						ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)	MW 28-C	130	-	-	MW 80-C	155	-	-	MW 76-C	180	-	-
ANSI Type	Twisted Pair Temp (°C)	Helical Coil Temp (°C)	Curved Electrode Temp (°C)																		
MW 28-C	130	-	-																		
MW 80-C	155	-	-																		
MW 76-C	180	-	-																		
DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE																
																					

CUSTOMER : Manufacturing Solution Provide CO.,LTD.

NO :

SPECIFICATION

APPLICATION FOR APPROVAL OF

ITEM	: PFC TRANS
DESCRIPTION	: RM 10
CODE NO	:
MODEL NO	:
PART NO	: UPDH110-L32 (CLASS B)

This space is used for customer's approval

DONG HEUNG ELECTRONICS CO., LTD.

36, BAEKSEOKGONGDAN 6-GIL, SEOBUK-GU,
CHEONAN-SI, CHUNGCHEONGNAM-DO, KOREA

TEL : (041)552-1106~9
FAX : (041)552-3784

BAZHOU DONGXING

LAO DICUN, BAZHOU,HEIBEI PROVINCE,CHINA

YANTAI

No.9.DunHanBuShi Road,LaiShan
Yantai,Shandong,China

WEIHAI GIHEUNG

NO.27-9 SICHAN ROAD, WENDENG DISTRICT, WEIHAI
CITY, SHANDONG PROVINCE, CHINA

WEIHAI YUNHEUNG

NO.27-8 SICHAN ROAD, WENDENG DISTRICT, WEIHAI
CITY, SHANDONG PROVINCE,CHINA

DATE : 2024. 01. 18.

DRAWN BY H. J. JANG	DATE 2024. 01. 18.
CHECKED BY H. S. LEE	DATE 2024. 01. 18.
APPROVED BY J. C. JI	DATE 2024. 01. 18.

SPECIFICATION		SHEET NO.	1 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

1. GENERAL SPECIFICATION

1) SCOPE

This specification applies to inspection and approval of the PFC TRANS whose Manufacturing Solution Provide CO.,LTD.

2. GENERAL PREFERENCE

The reinspection & reapproval is required to change the structure, quality, progress of this Specification.

3. ABSOLUTE REGULARITY

1) Keep Temperature : $-40^{\circ}\text{C} \sim 100^{\circ}\text{C}$

2) Keep Humidity : 20% ~ 95%

3) Use Temperature : $-10^{\circ}\text{C} \sim 130^{\circ}\text{C}$

4) Use Humidity : 20% ~ 85%

4. MECHANICAL CHARACTERISTIC

1) TERMINAL TENSION INTENSITY

After fix the body, The Terminal Shall withstand for 5 seconds without losing when a static load of 2.0Kg is applied to drawing direction of the Terminal.

2) TERMINAL BEND INTENSITY

The Terminal shall withstand without breakage and bend when it returns after bend 1 time to the left side and 1 time right side with a static load.

3) VIBRATION TEST

After fix a body of the vibration board, The terminal shall withstand without losing and bend when it operates vibration test of 3 directions(X,Y,Z) for 2hours.

-Frequency : 10 - 55

-Amplitude : 0.75

5. ELECTRICAL CHARACTERISTIC

1) INSULATION RESISTANCE

① P COIL to S COIL : Shall be more than $100\text{M}\Omega$ when measured with DC 500V

② COIL TO CORE : Shall be more than $100\text{M}\Omega$ when measured with DC 500V

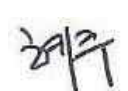
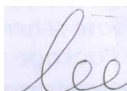
2) WITHSTAND VOLTAGE

① P COIL to S COIL : Shall be no damage when measured AC 1.5KV, 5mA for 1 MIN.

② COIL TO CORE : Shall be no damage when measured AC 0.5KV, 5mA for 1 MIN.

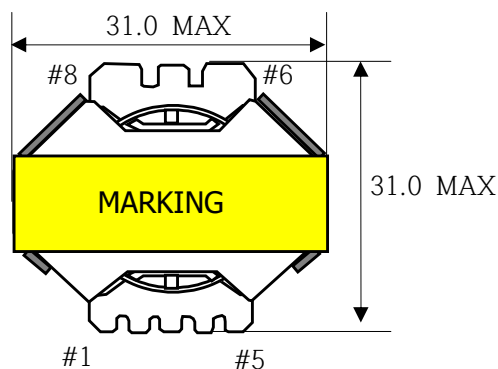
3) IMPULSE TEST(LAYER SHORT)

Shall be no damage when compare a film-insulation condition with standard sample after measured Surge Voltage AC 2.0KV on the both ends the Winding.

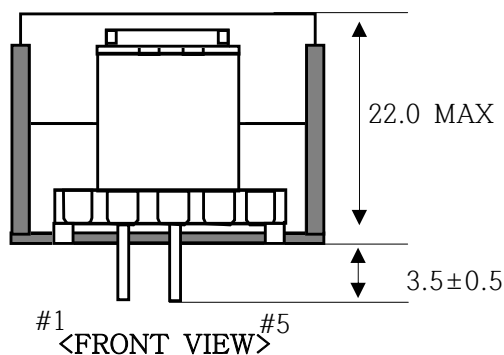
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

SPECIFICATION		SHEET NO.	2 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

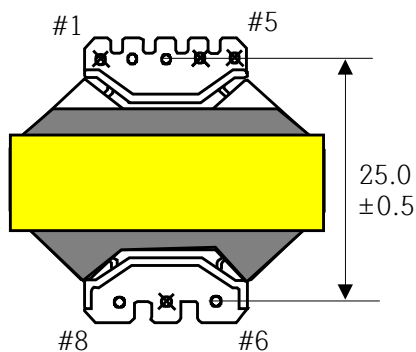
6. DIMENSION (UNIT : mm)



<TOP VIEW>



<FRONT VIEW>



<BOTTOM VIEW>

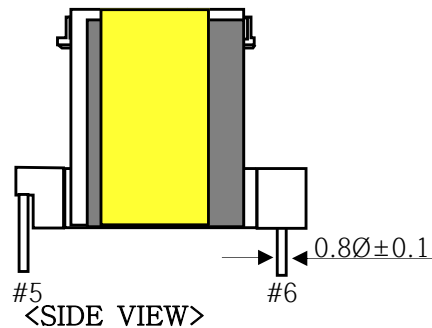
* MARKING

UPDH110-L32 → PART NO.
 DH 0000 DHB-001
 → CLASS B SYSTEM
 → PRODUCTION LINE
 → WEEK
 → YEAR
 → PRODUCTION MAKER

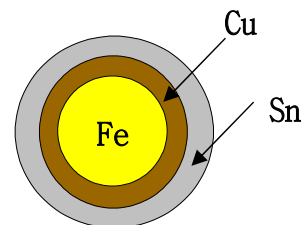
※ YEAR
 2 : 2022
 3 : 2023
 4 : 2024
 5 : 2025

※ WEEK
 01 : 1'st WEEK OF THE YEAR.
 02 : 2'nd WEEK OF THE YEAR.
 :
 54 : 54'th WEEK OF THE YEAR.

※ PRODUCTION LINE
 1. A : CHUN AN
 2. B : BAZHOU
 3. Y : YANTAI
 4. C : WEIHAI



*. PIN PLATING SPEC

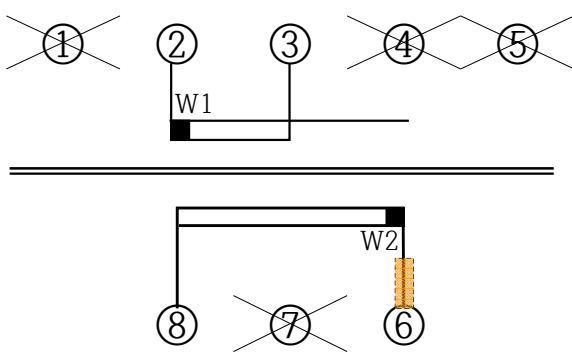


* PIN LENGTH : BEFORE SOLDERING

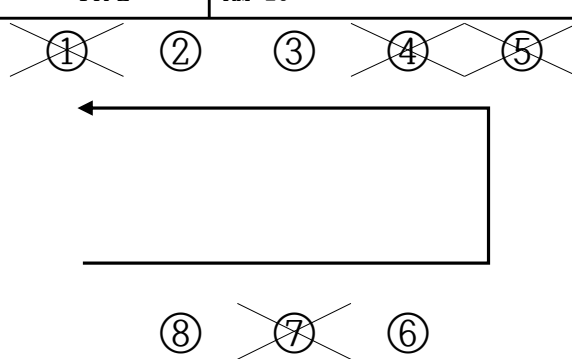
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

SPECIFICATION		SHEET NO.	3 OF 16	
		DATE	2024. 01. 18.	
PART NAME	PFC TRANS	MODEL NAME		
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10	

7. SCHEMATIC DIAGRAM.



* START MARK.
* P/I TAPE



WINDING	BOTTOM VIEW	C.C.W
REMOVE PIN	#1,4,5,7	
N.C PIN		
CUT PIN		
TUBE,P/I TAPE PIN	#6	
BOBBIN INSERT	TOP	

8. WINDING SPECIFICATION

NO	TERMINAL		WIRE	TURNS	WINDING METHOD	INSULATION			BARRIER	
	S	F				MATERIAL	T/W	TS	PIN	TOP
W1	2	3	2UEW 0.30 $\varnothing$ x2#	9	SOLENOID	POLYESTER TAPE	0.025/10.5	3	2.0	2.0
W2	6	8	USTC 0.10 $\varnothing$ x160#	7	SOLENOID	POLYESTER TAPE	0.025/10.5{W}	3	-	-
* CORE FIX TAPE						POLYESTER TAPE	0.025/7.0{Y}	2	-	-
* CORE FIX TAPE						POLYESTER TAPE	0.025/10.0{Y}	2	-	-

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1				2/2	lee	[Signature]
2						
3						
4						

SPECIFICATION		SHEET NO.	4 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

9. 신뢰성 시험(Reliability Test)

ITEM	TEST CONDITION	SPEC
내 습 성 (HUMIDITY-RESISTANCE)	40±2℃ 90~95℃RH 96HR, 상온에서 60分 이상 방치 후 측정 (Measure after leave more than 60Min, Normal Temperature.)	INITIAL INDUCTANCE ±10%
열 충격 (HEAT SHOCK-RESISTANCE)	-40℃ →100℃ 1시간→10CYCLE 시험 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after Test.)	INITIAL INDUCTANCE ±10%
내 열 성 (HEAT-RESISTANCE)	105±2℃ 96HR 방치 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after leave 105±2℃, 96HR.)	INITIAL INDUCTANCE ±10%
내 한 성 (COLD-RESISTANCE)	-25±2℃ 96HR, 상온에서 60분 이상 방치 후 측정 (Temperature.Measure after leave more than 60Min, Normal)	INITIAL INDUCTANCE ±10%

10. 내구성 시험(Endurance Test)

ITEM	TEST CONDITION	SPEC
SOLDERING 부착성 (ADHESION)	SOLDER POT ℃ : 280±5℃ SOLDERING HR : 2±0.5 SEC	90% 이상
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDER POT ℃ : 260±5℃ SOLDERING HR : 10±1.0 SEC	90% 이상

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1				2/2	lee	
2						
3						
4						

SPECIFICATION		SHEET NO.	5 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

11. TEST SPECIFICATION AT 25℃

NO.	ITEM	TERMINAL	SPECIFICATION	REMARKS
1	INDUCTANCE	6 - 8	6.50 [uH] $\pm 10\%$	HP-4284A at 1KHz, 1Vrms
		2 - 3	9.75 [uH] $\pm 35\%$	
2	DC RESISTANCE	6 - 8	0.05 [Ω] MAX	HIOKI TYPE RM3544
		2 - 3	0.08 [Ω] MAX	
3	WITHSTANDING VOLTAGE	P COIL - S COIL	AC 1.5KV, 1 MIN	KIKUSUI : TOS-9200 (CUT OFF CURRENT=5mA)
		COIL - CORE	AC 0.5KV, 1 MIN	
4	INSULATION RESISTANCE	100Mohm MIN DC 500V		KIKUSUI : TOS-9200
5	IMPULSE TEST	AC 2.0KV , 60Hz , 3 PULSE		

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1				2/2	lee	
2						
3						
4						

SPECIFICATION		SHEET NO.	7 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

13. MATERIAL LIST

NO	I T E M	MATERIALS & DIMENSIONS		MANUFACTURER	REMARK
1	CORE	RM 10	YR28	TONGXIANG YAORUN ELECTRONIC CO LTD	
			DMR40	HENGDIAN GROUP DMEGC MAGNETICS CO LTD	
			KP4	HANGHAI KANGSHUN MAGNETISM COMPONENT CO LTD	
			GP4	NANTONG GUANYOUDA MAGNETIC CO LTD	
2	BOBBIN	RM 10mm 8P(5+3) PHENOL (94V-0)		SUMITOMO BAKELITE CO LTD CHANG CHUN PLASTICS CO LTD	E41429 E59481
3	CAP	P.E.T		CELANESE INTERNATIONAL CORP	E41938
4	W I R E	2UEW 0.30Ø USTC 0.10Øx160#		Yantai Rommix Electronic CO.,LTD JIANGSU DARTONG M & E CO LTD SHANDONG SAINT ELECTRIC CO LTD ZHEJIANG HONGBO TECHNOLOGY CO LTD	E166187 E237377 E194410 E221719
5	INSULATION TAPE	POLYESTER TAPE 0.025t x 10.5mm 0.025t x 10.5mm {WHITE}		DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111
		POLYIMIDE TAPE		Meixin New Material Co Ltd JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E304309 E165111
6	CORE FIXING TAPE	POLYESTER TAPE 0.025t W=7.0mm {YELLOW} 0.025t W=10.0mm {YELLOW}		DUCK SUNG HITECH CO LTD JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	E105147 E165111
7	BARRIER TAPE	P.N.W TAPE W=2.0mm			
8	VARNISH	DVB-2177(@) T-4260(a)		NOROO PAINT & COATINGS CO LTD SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	E93947 E228349
9	EPOXY	UNI-BOND #812 SK-015B H-907 SERIES SW-860		GREENSTAR CO LTD SE KYE CHEMICAL CO LTD QINGDAO THREE-DIMENSIONAL POLYMERS NEW MATARIAL CO LTD SUNGWOO CHEMICAL CO LTD	
10	SOLDER	Sn98/Cu2.0		SAMWOO ALLOY METAL CO LTD TIANJIN SONGBENENVIRONMENTAL SCIENCE&TECH CO LTD	
11	INK & LASER	MS-6853 JP-K12,K33 JP-K72 TH-TYPE A JP-K72 W89		WUHAN LEADJET SCIENCE AND TECHNOLOGY DEVELOPMENT CO LTD HITACHI INDUSTRIAL EQUIPMENT CO LTD TIANJIN LIANJIJIEZHUORUIPENGMAKEJI YOUXIANGONGSI	
12	FLUX	8EB34 L-8EB34		KAIFENG SONGQING ELECTRONIC MATERIALS CO LTD TIANJIN QINGHE SCIENCE-TECH DEVELOPMENT CO LTD	

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	8 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

* UL. FILE *BOBBIN

Systems, Electrical Insulation - Component

See General Information for Systems, Electrical Insulation - Component

DONG HEUNG ELECTRONICS CO LTD
555-31 BAEKSSUK-DONG
CHONAN-SHI, CHUNG-NAM 330-220 REPUBLIC OF KOREA
Class 130 (B) transformer insulation system, designated DHB-001.

E141730

Marking: Company name or tradename "DH" and system designation.

Last Updated on 2003-05-22

Component - Plastics

Guide Information

E41429

SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU Tokyo 140-0002 JP
PM-9820, PM-9825
Phenolic (PF) "SUMIKON", furnished as pellets, granular material

Color	Min. Thk (mm)	Flame Class	HWI	HA1	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
BK	0.16	V-0	-	-	150	150	150
BK, BN	0.18	V-0	-	-	150	150	150
	0.51 - 0.69	V-0	3	0	150	150	150
	0.70	V-0	1	0	150	150	150
	1.5	V-0	0	0	150	150	150
	3.0	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3
Dielectric Strength (kV/mm): 14
High-Voltage Arc Tracking Rate (HVTR): 0
Dimensional Change (%): -
Inclined Plane Tracking (IPT) kV: -
Volume Resistivity (10⁸ ohm-cm): 11
Surface Resistivity (10⁸ ohms/square): -
High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1997-11-03
Last Revised: 2022-09-15

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SPECIFICATION		SHEET NO.	9 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

Component - Plastics

Guide Information

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200HF

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min. Thk (mm)	Flame Class	HWI	HA	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 6

High-Voltage Arc Tracking Rate (HVTR): 0

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10^X ohm-cm): 11

Surface Resistivity (10^X ohms/square): -

High Volt, Low Current Arc Resis (D495): 5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-03-15

Last Revised: 2015-10-08

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ALSO CERTIFIED TO IEC REQUIREMENTS

Component - Plastics

Guide Information

CHANG CHUN PLASTICS CO LTD

No 8 Huaxi Rd, Daliao District, Kaohsiung City 83164 TW

T200NA

Phenolic Molding Compound (PMC), furnished as pellets, granular material, or powder

Color	Min. Thk (mm)	Flame Class	HWI	HA	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
BK, BN	0.38	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	1.0	V-0	0	0	150	150	150
	2.0	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): 6

High-Voltage Arc Tracking Rate (HVTR): 0

Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -

Volume Resistivity (10^X ohm-cm): 11

Surface Resistivity (10^X ohms/square): -

High Volt, Low Current Arc Resis (D495): 5

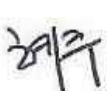
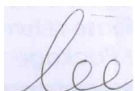
ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

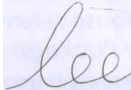
Report Date: 1976-01-06

Last Revised: 2015-10-08

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ALSO CERTIFIED TO IEC REQUIREMENTS

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	10 OF 16				
		D A T E	2024. 01. 18.				
PART NAME	PFC TRANS	MODEL NAME					
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10				
* CAP							
Component - Plastics							
Guide Information		View Certificate of Compliance			E41938		
CELANESE INTERNATIONAL CORP							
8040 DIXIE HWY, FLORENCE KY 41042-2904							
FR530(I)(+)(f1), FR530L(I)(+)(f1)							
Polyethylene Terephthalate (PET), glass reinforced, flame retardant "Rynite", furnished as pellets [contains mechanically recycled content]							
Attention Materials Users! This product Certification has been changed on 2023-02-16; UL94 Flame class has been revised click here to learn more							
Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec (°C)	RTI Imp (°C)	RTI Str (°C)
NC, BK	0.35	V-0	3	1	155	155	155
ALL	0.75	V-0	2	1	155	155	155
NC, BK	1.5	V-0, 5VA	0	1	155	155	155
ALL	2.0	V-0, 5VA	0	1	155	155	155
	3.0	V-0, 5VA	0	1	155	155	155
Comparative Tracking Index (CTI): 2			Inclined Plane Tracking (IPT) kV: -				
Dielectric Strength (kV/mm): 34			Volume Resistivity (10 ^x ohm-cm): 16				
High-Voltage Arc Tracking Rate (HVTR): 1			Surface Resistivity (10 ^x ohms/square): -				
Dimensional Change (%): 0			High Volt, Low Current Arc Resis (D495): 6				
(+)- Virgin and regrind up to 50% by weight inclusive, have the same basic material characteristics.							
(f1)- Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.							
(I)- Recognized ground insulation component at 0.4 mm with MW79 in UL1446 Class 155 electrical insulation system designated R201N (File E69939).							
NOTE - (1) Material designations that are color pigmented may be followed by suffix letters and numbers. (2) Material designations may be prefixed by "ZYT" for Zytel or "MIN" for Minlon or "DEL" for Delrin or "CRA" for Crastin or "RYN" for Rynite or "ETPV" for ETPV or "SOR" for Sorona grades.							
ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.							
Report Date: 1996-01-04							
Last Revised: 2023-02-17							
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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED	
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SPECIFICATION		SHEET NO.	11 OF 16																					
		D A T E	2024. 01. 18.																					
PART NAME	PFC TRANS	MODEL NAME																						
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10																					
*WIRE																								
Magnet Wire E166187																								
Guide Information																								
Yantai Rommix Electronic CO.,LTD																								
Daxindian Town, Penglai Shandong 265612 CN																								
PTMW75, xUEW/130, QA-x/130																								
<table><tr><td>Mark Designation</td><td>ANSI Type</td><td>Temp (°C)</td><td>Basecoat</td><td>Topcoat</td><td>Bondcoat</td></tr><tr><td>PTMW75, xUEW/130, QA-x/130</td><td>MW 75-C</td><td>130</td><td>Polyurethane</td><td>-</td><td>-</td></tr></table>							Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	PTMW75, xUEW/130, QA-x/130	MW 75-C	130	Polyurethane	-	-						
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																			
PTMW75, xUEW/130, QA-x/130	MW 75-C	130	Polyurethane	-	-																			
x - Where x may be replaced by 0, 1, 2 or 3 denoting the coating thickness.																								
Report Date: 1996-02-20																								
Last Revised: 2021-04-16																								
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Magnet Wire E237377																								
Guide Information																								
JIANGSU DARTONG M & E CO LTD																								
1 DARTONG RD, HUIAN ECONOMY DEVELOPMENT ZONE, HUIAN JIANGSU 223238 CN																								
xUEW																								
<table><tr><td>Mark Designation</td><td>ANSI Type</td><td>Temp (°C)</td><td>Basecoat</td><td>Topcoat</td><td>Bondcoat</td></tr><tr><td>xUEW</td><td>MW 79-C</td><td>155</td><td>Polyurethane</td><td>-</td><td>-</td></tr><tr><td></td><td>MW 75-C</td><td>130</td><td>Polyurethane</td><td>-</td><td>-</td></tr></table>							Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	xUEW	MW 79-C	155	Polyurethane	-	-		MW 75-C	130	Polyurethane	-	-
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																			
xUEW	MW 79-C	155	Polyurethane	-	-																			
	MW 75-C	130	Polyurethane	-	-																			
x - Where x may be replaced by 0, -1, -2 or -3 indicating the film built.																								
Report Date: 2003-06-12																								
Last Revised: 2022-01-10																								
© 2023 UL Solutions																								
Magnet Wire E194410																								
Guide Information																								
SHANDONG SAINT ELECTRIC CO LTD																								
No.9 Shuangshan Road, Economic Development Zone, XINTAI SHANDONG 271200 CN																								
UEW/130,QA-/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C																								
<table><tr><td>Mark Designation</td><td>ANSI Type</td><td>Temp (°C)</td><td>Basecoat</td><td>Topcoat</td><td>Bondcoat</td></tr><tr><td>*UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C</td><td>MW 75-C</td><td>130[#]</td><td>Polyurethane</td><td>-</td><td>-</td></tr></table>							Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat	*UEW/130,QA-*/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-						
Mark Designation	ANSI Type	Temp (°C)	Basecoat	Topcoat	Bondcoat																			
UEW/130,QA-/130,*UEW/130 Litz,QA-*/130 Litz,MW75-C	MW 75-C	130[#]	Polyurethane	-	-																			
* - May be prefixed by 0, 1, 2, 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: 1999-08-03																								
Last Revised: 2021-01-04																								
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SPECIFICATION		SHEET NO.	12 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

Magnet Wire

E221719

Guide Information

ZHEJIANG HONGBO TECHNOLOGY CO LTD

Wan Tan Wan Industry Zone, Lianshi Town,, HUZHOU ZHEJIANG 313013 CN

xUEW@/130, QA@-x/130

Mark Designation	ANSI Type	Temp.(°C)	Basecoat	Topcoat	Bondcoat
xUEW@/130, QA@-x/130	MW 75-C	130[#]	Polyurethane	-	-

@ - May be prefixed by LZ signifies magnet wires twisted together.

x - Where x may be replaced by 0, 1, 2 or 3 denoting the coating thickness.

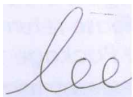
[#] - The magnet wire may perform better than the rating reflects and may not be suitable for insulation system, varnish or end-product testing. Further consideration is necessary prior to its use in testing.

Report Date: 2012-03-29

Last Revised: 2021-01-04

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	13 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

* TAPE

Insulating Tape E105147
Guide Information

DUCK SUNG HITECH CO LTD
225-2 Shinneung-Ri Seoun-Myeon, Anseong-Si Gyeonggi-Do 456-850 KR

DTS-204 (e)
PET film insulating tapes with acrylic adhesives

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
All and clear	130	A C D E F H I	20	-	Film/Adhesive

(e) - May be marked: "Film side CTI Performance Level Category PLC=2 Voltage 260, per UL 746A/ASTM D 3638," and/or "Adhesive side CTI Performance Level Category PLC=0 Voltage 600, per UL 746A/ASTM D 3638" or equivalent.
+ - See the Guide Information for alphabetical end-use Functional Use codes.

Report Date: 2010-05-15
Last Revised: 2021-09-16 © 2022 UL LLC



Insulating Tape E165111
Guide Information

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD
SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

CT* (b)(g)
Polyethylene terephthalate film insulating tapes

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
All except Clear	130	A	-	-	-

(b) - Comparative Tracking Index (CTI) performance indicates material Group IIIa, PLC=2, CTI equal to or greater than 250 but less than 400 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: 2021-04-26 © 2022 UL LLC



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SPECIFICATION		SHEET NO.	14 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

Insulating Tape

Guide Information

E165111

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD
 SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

PF* (d)(g)
 Polyimide film insulating tapes

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Amber	180	A, B, C, D, E, J	4/4	IIIb/IIIb	Adhesive/Film

(d) - Comparative Tracking Index (CTI) performance indicates material Group IIIb, PLC=4, CTI equal to or greater than 100 v but less than 175v.
 (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: 2021-12-24

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Insulating Tape

Guide Information

E304309

Meixin New Material Co Ltd
 NO 192 INDUSTRY AREA, DAKAN VILLAGE TWO XILI TOWN, NAN SHAN, SHENZHEN GUANGDONG 518055 CN

MXPI-310F.310.312
 Polyimide film insulating tapes with silicone adhesive

Color	Temp (°C)	Functional Use +	CTI ASTM D3638	CTI IEC 112	Exposed Side
Brown	180	A	-	-	-

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

Report Date: 2006-06-16
 Last Revised: 2021-04-28

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	15 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

* BARRIER TAPE

Insulating TapeE105147

Guide Information

DUCK SUNG HITECH CO LTD
225-2 Shinneung-Ri Seoun-Myeon, Anseong-Si Gyeonggi-Do 456-850 KR

DTS-280
Polyester film insulating tapes with acrylic adhesive

<u>Color</u>	<u>Temp</u> (°C)	<u>Functional</u> <u>Use +</u>	<u>CTI</u> <u>ASTM</u> <u>D3638</u>	<u>CTI</u> <u>IEC</u> <u>112</u>	<u>Exposed</u> <u>Side</u>
White	130	A, B, D, E, F, G, J	-	-	-

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

Report Date: 1996-01-05

Last Revised: 2021-09-16

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Insulating TapeE165111

Guide Information

JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD
SOUTHWEST AROUND RD, JINGJIANG JIANGSU 214500 CN

WF* (c)(h)
Nonwoven cloth/polyethylene terephthalate film insulating tapes

<u>Color</u>	<u>Temp</u> (°C)	<u>Functional</u> <u>Use +</u>	<u>CTI</u> <u>ASTM</u> <u>D3638</u>	<u>CTI</u> <u>IEC</u> <u>112</u>	<u>Exposed</u> <u>Side</u>
White	130	A	-	-	-

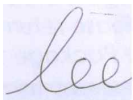
(c) - Comparative Tracking Index (CTI) performance indicates material Group I, PLC=0, CTI equal to or greater than 600 v.
(h) - The CTI test was conducted per IEC 60112, 4th Edition 2003 and the assigned level is based on the testing of both film and adhesive sides.
* - May be followed by suffixes
+ - See the Guide Information for alphabetical end-use Functional Use codes.

Report Date: 1994-12-13

Last Revised: 2021-04-26

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SPECIFICATION		SHEET NO.	16 OF 16
		D A T E	2024. 01. 18.
PART NAME	PFC TRANS	MODEL NAME	
PART NO.	UPDH110-L32 (CLASS B)	TYPE	RM 10

*VARNISH

Varnishes

Guide Information

E93947

NOROO PAINT & COATINGS CO LTD

351 Bakdal-ro Manan-gu, Anyang-si Gyeonggi-do 13977 KR

DVB-2177(@)

ANSI Type	Twisted Pair Temp.(°C)	Helical Coil Temp.(°C)	Curved Electrode Temp.(°C)
MW 5-C	180	200	-
MW 80-C	155	-	-

(@) - May be followed by suffix XX in which XX represents percentage of solid content, except S.

Report Date: 2006-10-19

Last Revised: 2021-06-09

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E228349

Varnishes

Guide Information

E228349

SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD

BEI SHI, WUJIANG JIANGSU 215214 CN

T-4260(a)

ANSI Type	Twisted Pair Temp.(°C)	Helical Coil Temp.(°C)	Curved Electrode Temp.(°C)
MW 28-C	130	-	-
MW 80-C	155	-	-
MW 76-C	180	-	-

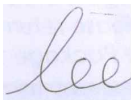
(a) - May be followed by one or two alphanumeric suffix indicating viscosity.

Report Date: 2002-11-01

Last Revised: 2022-03-01

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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0705-00양식04

DONG HEUNG ELECTRONICS CO., LTD.

- 16 -

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



TO MESSRS : M S P

(LINE FILTER) SPECIFICATION

MODEL NAME :

PART NO : SNP-6320RH-CT1

CUSTOMER'S SPEC. NO :

DI SPEC. NO : UU1014"V"4PIN

APPROVED	REFERENCE

DATE : 2014. 11. 07.



DONG IN SYSTEM CO.,LTD.



HEAD OFFICE	124-116 SUNG-EU DONG NAM-KU , INCHEON , KOREA TEL : 82-32-887-0040 FAX : 82-32-887-0111
CHINA PLANT	GANGTOU VILLAGE YANGTING TOWN HUANCUI ZONE WEIHAI CITY CHINA TEL : 86-631-5763828 FAX : 86-631-5763925

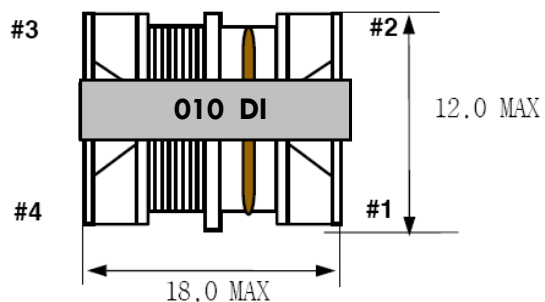
APPROVAL SHEET

DATE 2014. 11. 07

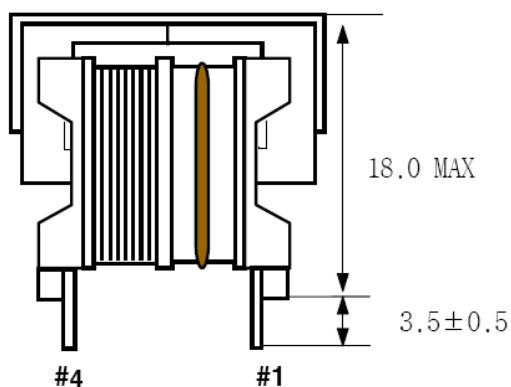
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CUSTOMER	M S P		
PART NAME	LINE FILTER	MODEL NO.	
PART NO.	SNP-6320RH-CT1	DESCRIPTION	UU1014"V"4PIN

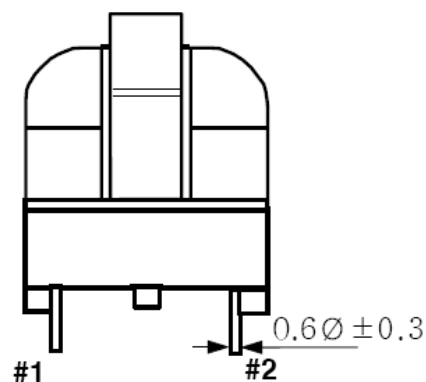
1. DIMENSIONS (UNIT:mm)



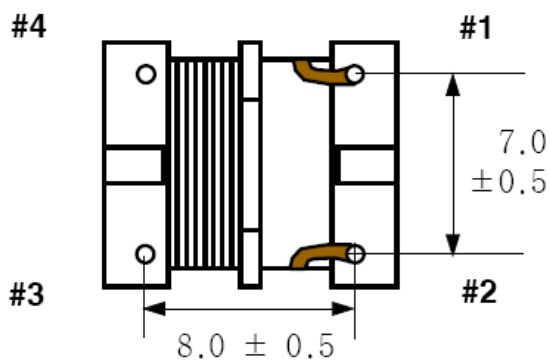
TOP VIEW



SIDE VIEW



FRONT VIEW



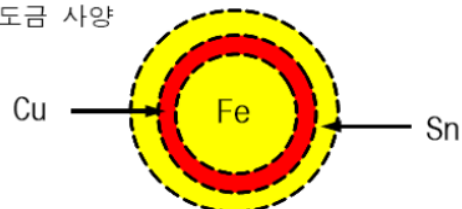
BOTTON VIEW

* MARKING *

010 DI ← PART NO

MARKING	
PART NO.	010
MAKER	DI

★. PIN 도금 사양



DRAWN BY	CHECK BY	APPR. BY	REVISION		DATE

APPROVAL SHEET

DATE

2014. 11. 07

PAGE

OF

CUSTOMER

M S P

PART NAME

LINE FILTER

MODEL NO.

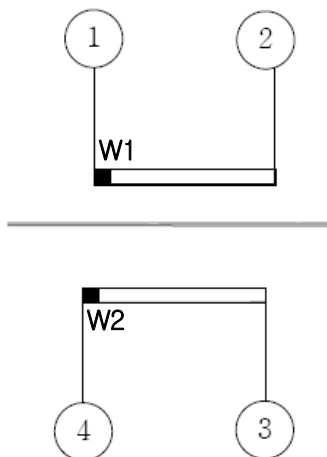
PART NO.

SNP-6320RH-CT1

DESCRIPTION

UU1014"V"4PIN

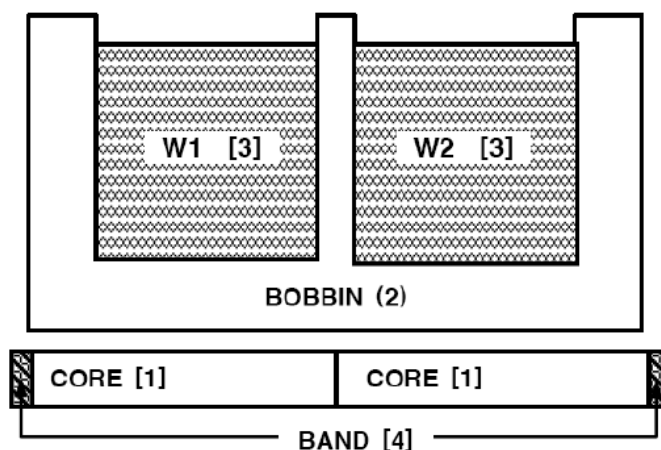
2. CONNECTION



3. WINDING SPECIFICATION

NO	TERMINAL		WIRE	Ts		WINDING METHOD	INSULATION	
	S	F					MATERIAL (t / mm)	Ts
W1	1	2	UEW 0.80Ø	1 TS				
W2	4	3	UEW 0.25Ø	70 TS (ref)				

4. CONSTRUCTION



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DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET

DATE

2014. 11. 07

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OF

CUSTOMER

M S P

PART NAME

LINE FILTER

MODEL NO.

PART NO.

SNP-6320RH-CT1

DESCRIPTION

UU1014"V"4PIN

5. ELECTRICAL CHARACTERISTICS

NO	ITEM	TERMINAL	SPEC	REMARK
1	INDUCTANCE	1 - 2	0.5uH MIN	LCR METER AG 4304 HP-4274A at 1KHz 1V
		4 - 3	4.0 mH MIN	
2	DC RESISTANCE (20℃)	1 - 3 6 - 4	3.0 ohm MAX 1.0 ohm MAX	WHEATSTONE BRIDGE HIOKI 3540 (mΩ METER)
3	WITHSTANDING VOLTAGE	COIL - CORE	AC 1.5 KV RMS 1 SEC. CC=10mA	KIKUSUI TOS-5050 , TOS-8750
		COIL - COIL	AC 1.5 KV RMS 1 SEC. CC=10mA	
4	INSULATION RESISTANCE	COIL - COIL COIL - CORE	100 Mohm MIN at DC 500V	MEGOHM METER (SM-5E)

6. MATERIAL LIST

NO	ITEM	MATERIAL	MANUFACTURER	FILE NO.
1	CORE	SM-100 UU1014 R10K UU1014 P12K UU1014	SAM WHA CORPORATION. JI SHUN MAGNETIC CO.,LTD. NANTONG HUAXING MAGNETIC MATERIAL CO.,LTD	
2	BOBBIN	PHENOL 94V-0 UU1014 "V" TYPE 4PIN	SUMITOMO BAKELITE CO., LTD.	E41429
3	WIRE	POLYURETHANE ENAMELED COPPER WIRE 2UEW 0.80Ø 2UEW 0.25Ø	DONG YANG ELECTRONICS IND CO LTD.	E102761
4	PIN TERMINAL	SOLDER COATED COPPER	DAE-A LEAD CO.,LTD.	
5	VARNISH	SR-337A,B	SEKYE CHEMICAL CO.,LTD.	E257443
6	SOLDER	Sn99.3 / Cu0.7 or EQV.	ALPHA METALS CO.,LTD or EQV.	
7	MARKING	INK (BON MARQUE) or EQV.	ATL CO.,LTD or EQV.	

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DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET

DATE

2014. 11. 07

PAGE

OF

CUSTOMER

M S P

PART NAME

LINE FILTER

MODEL NO.

PART NO.

SNP-6320RH-CT1

DESCRIPTION

UU1014"V"4PIN

7.UL LIST



the standard in safety

Underwriters
Laboratories

NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

01/04/2011

Dong In System Co Ltd
Mr. Young-Hoo Kim
97bl-5lt Namdong Industrial Complex
664-4 Gojan-dong Namdong-gu
Incheon 405-817, Kr

Our Reference: File E242921, Vol. 1 Project Number 10CA62347
Your Reference: Jae Kim 11/30/2010
Project Scope: USR: ELECTRONIC ADOPTION OF COSMOLINK CIS.04 (E258545) TO BE DESIGNATED DIS-10B
APPLICATION FOR INSULATION SYSTEM / CLASS B (130°C)

BOBBIN

SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME
SHINAGAWA-KU
TOKYO, 140-0002 JAPAN

E41429

Mtl Dsg	Color	Min.	Flame	H	H	H	RTI		C
		Thk		W	A	V	Elec	Mech	T
		mm	Class	I	I	A		Imp	Str
PM-8375	BK	0.49	V-0	-	-	-	150	150	150
		3.0	V-0	-	-	-	150	150	150
PM-9820	BK	0.16	V-0	-	-	-	150	150	150
		0.51	V-0	3	1	-	150	150	150
PM-9630	BK	0.16	V-0	4	0	-	150	150	150
		0.32	V-0	3	0	-	150	150	150

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APPR. BY

REVISION

DATE



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DONG - IN SYSTEM CO.,LTD.

APPROVAL SHEET

DATE

2014. 11. 07

PAGE

OF

CUSTOMER

M S P

PART NAME

LINE FILTER

MODEL NO.

PART NO.

SNP-6320RH-CT1

DESCRIPTION

UU1014"V"4PIN

WIRE/VARNISH

DONG YANG ELECTRONICS IND CO LTD

5-20 BANGYE-RI

MUNMAK-EUB

WONJU-SHI, KANGWON-DO 220-800 REPUBLIC OF KOREA

E102761

Mtl Dsg	Coat Typ		ANSI Type	TI
	BC	OC		
EIW	Polyester-imide		MW30	180
NY-EIW	Polyester-imide	Polyamide	MW75	180
NY-PEW	Polyester	Polyamide	MW24	155
NY-PEW(F)	Polyester	Polyamide	MW24	155
NY-UEW	Polyurethane	Polyamide	MW80,	155,
			MW28#	130
UEW(F)	Polyurethane	—	MW79,	155,
UEW(B)	Polyurethane	—	MW75#	130
UAL	Polyurethane	—	@	155
PEW	Polyester	—	@	180
			MW5#	155

Note: UAL is the alternate aluminum grade designation of magnet wire designated UEW. @- Non-ANSI type.

#- The wire may perform better than the rating reflects and hence may not be suitable for insulation system testing.

Marking: Company name or "E102761" and material designation or marked designation on package or reel.

Last Updated on 2007-01-08

Varnishes - Component

[See General Information for Varnishes - Component](#)

SE KYE CHEMICAL CO LTD

360 GUIJEON-RI

TONGJIN-EUP

KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA

E257443

Varnish Dsg	ANSI Magnet Wire Type	Varnish Thermal Class C		
		TP	HC	CE
SR-337(#)	MW75	130	130	—

- May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance.

Marking: Company name and varnish designation on shipping container.

[Last Updated](#) on 2006-06-28

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CHECK BY

APPR. BY

REVISION

DATE



Safety

DIS

DONG - IN SYSTEM CO.,LTD.

S P E C I F I C A T I O N

APPLICATION FOR APPROVAL OF

ITEM	: LINE FILTER
DESCRIPTION	: UU 10x14mm
CODE NO	: LFU10-0104R5
MODEL NO	: SNP-6320RH-CT1

This space is used for customer's approval

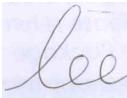
DONG HEUNG ELECTRONICS CO., LTD.

36, BAEKSEOKGONGDAN 6-GIL, SEOBUK-GU,
CHEONAN-SI, CHUNGCHEONGNAM-DO, KOREA
TEL : (041)552-1106~9
FAX : (041)552-3784
BAZHOU DONGXING
LAO DICUN, BAZHOU, HEIBEI PROVINCE, CHINA
YANTAI

No.9.DunHanBuShi Road,LaiShan
Yantai, Sandong, China
WEIHAI GIHEUNG
NO.27-9 SICHAN ROAD, WENDENG DISTRICT, WEIHAI
CITY, SHANDONG PROVIENCE, CHINA
WEIHAI YUNHEUNG
NO.27-8 SICHAN ROAD, WENDENG DISTRICT, WEIHAI
CITY, SHANDONG PROVIENCE, CHINA

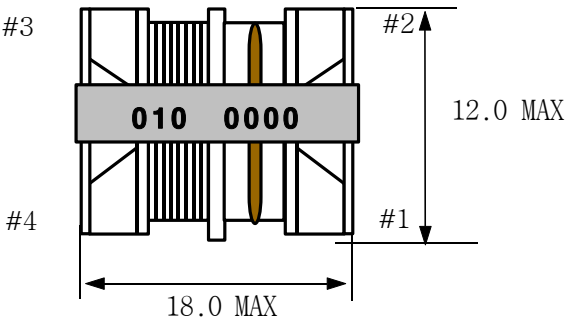
DATE : 2024 . 01 . 08

DRAWN BY H. J. JANG		DATE 2024. 01. 08.
CHECKED BY H. S. LEE		DATE 2024. 01. 08.
APPROVED BY J. C. JI		DATE 2024. 01. 08.

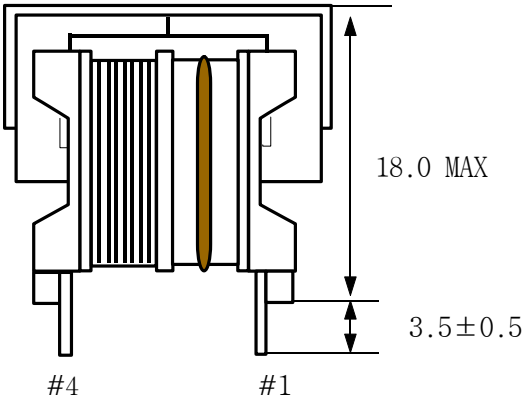
SPECIFICATION		SHEET NO.	1 OF 12			
		DATE	2024. 01. 08			
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1			
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14			
1. GENERAL SPECIFICATION 1) SCOPE This specification applies to inspection and approval of the LINE FILTER whose Manufacturing Solution Provide Co.,LTD. 2. GENERAL PREFERENCE The reinspection & re approval is required to change the structure, quality, progress of this Specification. 3. ABSOLUTE REGULARITY 1) Keep Temperature : -40℃ ~ 85℃ 2) Keep Humidity : 20% ~ 95% 3) Use Temperature : -10℃ ~ 130℃ 4) Use Humidity : 20% ~ 85% 4. MECHANICAL CHARACTERISTIC 1) TERMINAL TENSION INTENSITY After fix the body, The Terminal Shall withstand for 5 seconds without losing when a static load of 1.01Kg is applied to drawing direction of the Terminal. 2) TERMINAL BEND INTENSITY The Terminal shall withstand without breakage and bend when it returns after bend 1 time to the left side and 1 time right side with a static load. 3) VIBRATION TEST After fix a body of the vibration board, The terminal shall withstand without losing and bend when it operates vibration test of 3 directions(X,Y,Z) for 2hours. -Frequency : 10 - 55 -Amplitude : 0.75 5. ELECTRICAL CHARACTERISTIC 1) INSULATION RESISTANCE ① P COIL to S COIL : Shall be more than 100MΩ when measured with DC 500V ② COIL TO CORE : SHALL be more than 100MΩ when measured with DC 500V 2) WITHSTAND VOLTAGE ① P COIL to S COIL : Shall be no damage when measured AC 1.2KV, 5mA for 1 MiN. ② COIL TO CORE : SHALL be no damage when measured AC 1.2KV, 5mA for 1 MiN. 3) IMPULSE TEST(LAYER SHORT) Shall be no damage when compare a film-insulation condition with standard sample after measured Surge Voltage AC 1.5KV on the both ends the Winding.						
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

SPECIFICATION		SHEET NO.	2 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

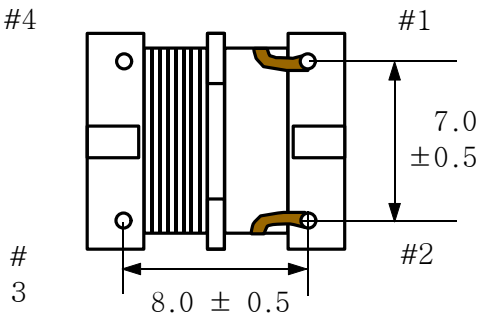
6. APPEARANCE & DIMENSION (UNIT:mm)



- TOP VIEW -



- SIDE VIEW -



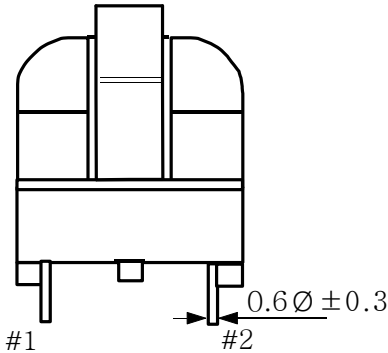
※ MARKING (BLACK)

010 0000

PRODUCTION LINE
WEEK
YEAR

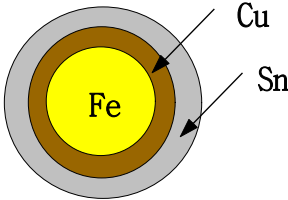
※ PRODUCTION LINE

A : CHUN AN
B : BAZHOU
Y : YANTAI
C : WEIHAI



- FRONT VIEW -

※. PIN PLATING SPEC

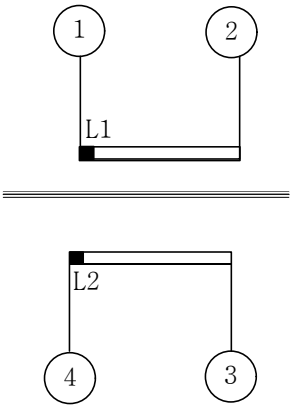


※ PIN LENGTH : BEFORE SOLDERING

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1				2/2/24 lee	lee	j
2						
3						
4						

SPECIFICATION		SHEET NO.	3 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

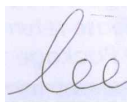
7. SCHEMATIC DIAGRAM





WINDING	BOTTOM VIEW	C.C.W
REMOVED PIN		
CUT PIN		
TUBE		

8. WINDING SPECIFICATION					
WINDING ORDER	NAME	TERMINAL NO. (S - F)	W I R E	TURN S	WINDING METHOD
W1	L1	1 - 2	UEW 0.80Ø	1Ts	SOLENOID WINDING
W2	L2	4 - 3	UEW 0.25Ø	70Ts REF.	SOLENOID WINDING

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

SPECIFICATION		SHEET NO.	4 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

9. 신뢰성 시험(Reliability Test)

ITEM	TEST CONDITION	SPEC
내 습 성 (HUMIDITY-TESTISTANCE)	40±2℃ 90~95℃RH 96HR, 상온에서 60分 이상 방치 후 측정 (Measure after leave more than 60Min, Normal Temperature.)	INITLAL INDUCTANCE ±10%
열 충 격 (HEAT SHOCK-RESISTANCE)	-20℃→85℃ 1시간→10CYCLE 시험 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after Test.)	INITLAL INDUCTANCE ±10%
내 열 성 (HEAT-RESISTANCE)	105±2℃ 96HR 방치 후 상온에서 60분 이상 보존 후 측정 (Measure after keep more than 60Min, Normal Temperature after leave 105±2℃, 96HR.)	INITLAL INDUCTANCE ±10%
내 한 성 (COLD-RESISTANCE)	-25±2℃ 96HR, 상온에서 60분 이상 방치 후 측정 (Temperature.Measure after leave more than 60Min, Normal)	INITLAL INDUCTANCE ±10%

10. 내구성 시험(Endurance Test)

ITEM	TEST CONDITION	SPEC
SOLDERING 부착성 (ADHESION)	SOLDER POT ℃ : 280±5℃ SOLDERING HR : 2±0.5 SEC	90% 이상
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDER WAVE ℃ : 260±5℃ SOLDERING HR : 10±1.0 SEC	90% 이상
SOLDERING 내열성 (HEAT RESISTANCE)	SOLDERING IRON ℃ : 400±5℃ SOLDERING HR : 5±1.0 SEC	90% 이상

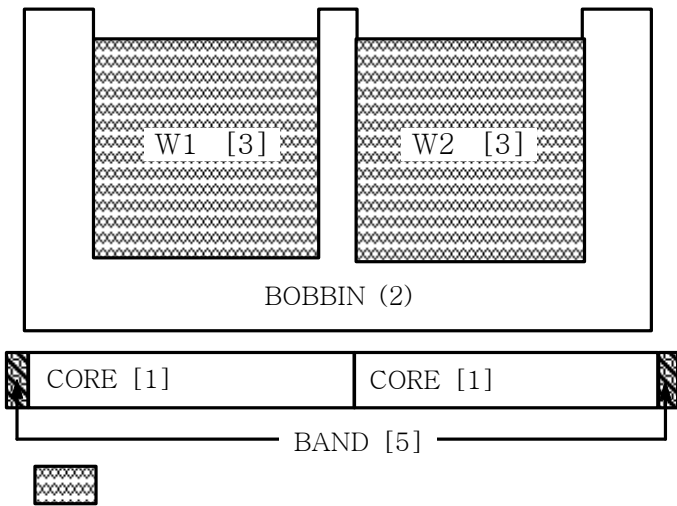
NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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3						
4						

SPECIFICATION		SHEET NO.	5 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

11. ELECTRICAL CHARACTERISTICS

NO.	CLOSURE	TERMINAL	ELECTRICAL CHARACTERISTICS	TOLERANCE	TEST CONDITION
1	INDUCTANCE	1 - 2 4 - 3	0.5 [uH] 4.0 [mH]	MIN MIN	HP-4284A at 1KHz, 1Vrms
2	DC RESISTANCE	1 - 2 4 - 3	3.0 [Ω] 1.0 [Ω]	MAX MAX	WHEATSTONE BRIDGE YEW TYPE 2755 HIOKI TYPE RM3544
3	LAYER SHORT	AC 1.5KV, 60 Hz			
4	WITHSTANDING VOLTAGE	AC 1.2KV, 1 MINUTE. 5mA (PRIMARY TO SECONDARY) AC 1.2KV, 1 MINUTE. 5mA (COIL TO CORE)			
5	INSULATION RESISTANCE	DC 500V, 100M OHM MIN. (COIL TO COIL, ANY COIL TO CORE)			

12. INTERNAL CONSTRUCTION



NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
3						
4						

CUSTOMER : Manufacturing Solution Provide CO., Ltd.

SPECIFICATION		SHEET NO.	6 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

13. INTERNAL CONSTRUCTION

NO	I T E M	MATERIALS & DIMENSIONS	MANUFACTURER	REMARK
1	C O R E	UU10x14mm SM-100,R10K,R12K,TS-10,A10 or Equiv.	SAM HWA ELECTRONICS CO., LTD. ZHEJING DONGYANG DMEGC MAGNETIC CO.,LTD ZIBO YANGGUANG ELECTRONICS CO., LTD TDG HOLDING CO., LTD. ACME CO.,LTD or Equiv.	
2	BOBBIN	UU 10 x 14mm [4P] PHENOL (94V - 0)	MOMENTIVE SPECIALTY CHEMICALS GMBH. SUMITOMO BAKELITE CO., LTD. CHANG CHUN PLASTICS CO LTD.	E61040 E41429 E59481
3	W I R E	UEW 0.25Ø UEW 0.80Ø	DONG YANG ELECTRONICS IND CO.,LTD. SHANDONG PENGTAI STOCK CO., LTD. ZHEJIANG XIANDENG ELECTRICAL APPLIANCES CO., LTD JIANGSU DARTONG M&E CO.,LTD HANGZHOU WEIFENG ELECTRONIC CO LTD	E102761 E166187 E218270 E237377 E229341
4	IMPREGNATION	SR-337A, SR-337B 319-5	SE KYE CHEMICAL CO., LTD. JIANG CITY DENG FENG ELETRICAL METERIAL CO., LTD.	E257443 E236421
5	B A N D	UU 10 x 14mm STAINLESS STEEL	DAE HEUNG CO., LTD. BOO KYOUNG ELECTRONICS CO.,LTD. ZIBO YANGGUANG ELECTRONICS CO., LTD SUNG WOO BOBBIN CO., LTD. or Equiv.	

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
1						
2						
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4						

SPECIFICATION		SHEET NO.	7 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

*BOBBIN

MOMENTIVE SPECIALTY CHEMICALS GMBH
POSTFACH 7154, ISERLOHN 58609 DE

E61040

PF 2736(a)(b)
Phenolic (PF), "Bakelite "R"

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.46	V-0	-	-	150	150	150
NC, GN, BK	0.81	V-0	0	2	150	150	150
ALL	0.81	V-1	0	2	150	150	150
ALL	1.5	V-0	0	2	150	150	150
	3.0	V-0	0	2	150	150	150

Comparative Tracking Index (CTI):3
Dielectric Strength (kV/mm):-
High-Voltage Arc Tracking Rate (HVTR):0
Dimensional Stability (%):-

Inclined Plane Tracking (IPT):-
Volume Resistivity (10x ohm-cm) :-
High Volt, Low Current Arc Resis (D495):5

(a) - Optional Suffix "H".
(b) - Grade designation may be followed by a four digit number representing color, P or S indicating type of molding, a single digit representing slight color variation.

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:2004-03-26
Last Revised:2008-01-09

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SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU, TOKYO 140-0002 JP

E41429

PM-8375
Phenolic (PF), "SUMIKON", furnished as pellets or granular

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.49	V-0	-	-	150	150	150
	3.0	V-0	-	-	150	150	150

Comparative Tracking Index (CTI):3
Dielectric Strength (kV/mm):-
High-Voltage Arc Tracking Rate (HVTR):-
Dimensional Stability (%):-

Inclined Plane Tracking (IPT):-
Volume Resistivity (10x ohm-cm) :-
High Volt, Low Current Arc Resis (D495):-

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1999-07-21
Last Revised:2003-10-24

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SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME, SHINAGAWA-KU, TOKYO 140-0002 JP

E41429

PM-9820
Phenolic (PF), "Sumikon", furnished as pellets, granular material

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.16	V-0	-	-	150	150	150
BK,BN	0.18	V-0	-	-	150	150	150
	0.51-0.69	V-0	3	1	150	150	150
	0.70	V-0	1	2	150	150	150
	1.5	V-0	0	2	150	150	150
	3.0	V-0	0	2	150	150	150

Comparative Tracking Index (CTI):3
Dielectric Strength (kV/mm):14
High-Voltage Arc Tracking Rate (HVTR):0
Dimensional Stability (%):-

Inclined Plane Tracking (IPT):-
Volume Resistivity (10x ohm-cm) :11
High Volt, Low Current Arc Resis (D495):5

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date:1997-11-03
Last Revised:2012-11-20

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	8 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

Component – Plastics

E59481

CHANG CHUN PLASTICS CO LTD

7TH FL, 301 SONGKIANG RD, TAIPEI 104 TW

T375HF

Phenolic Molding Compound (PMC), "LONGLITE", furnished as pellets, granular material, or powder

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.43	V-0	0	0	150	150	150
	0.75	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI):**4**

Dielectric Strength (kV/mm):**10**

High-Voltage Arc Tracking Rate (HVTR):**3**

Dimensional Stability (%)-

Inclined Plane Tracking (IPT):-

Volume Resistivity (10⁹ ohm-cm) :**11**

High Volt, Low Current Arc Resis (D495):**4**

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-03-29

Last Revised: 2008-08-28

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Component – Plastics

E59481

CHANG CHUN PLASTICS CO LTD

7TH FL, 301 SONGKIANG RD, TAIPEI 104 TW

T200HF

Phenolic Molding Compound (PMC), "LONGLITE", furnished as pellets, granular material, or powder

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.4	V-0	3	0	150	150	150
	0.7	V-0	0	0	150	150	150
	3.2	V-0	0	0	150	150	150

Comparative Tracking Index (CTI):**3**

Dielectric Strength (kV/mm):-

High-Voltage Arc Tracking Rate (HVTR):**2**

Dimensional Stability (%)-

Inclined Plane Tracking (IPT):-

Volume Resistivity (10⁹ ohm-cm) :-

High Volt, Low Current Arc Resis (D495):**5**

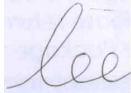
ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-03-15

Last Revised: 2008-07-25

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NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	9 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

*WIRE

Magnet Wire – Component

DONG YANG ELECTRONICS IND CO LTD

5-20 BANGYE-RI MUNMAK-EUB

WONJU-SHI, KANGWON-DO 220-800 REPUBLIC OF KOREA

E102761

		Coat Type	ANSI Type	TI
Mtl Dsg	BC	OC		
NY-PEW(F)	Polyester	Polyamide	MW24	155
DNY-U EW	Polyurethane	Polyamide	MW80,	155,
			MW28#	130
UEW(F)	Polyurethane	–	MW79,	155,
UEW(B)	Polyurethane	–	MW75#	130
UAL	Polyurethane	–	@	155
PEW	Polyester	–	@	180
NY-U EW	Polyurethane	Polyamide	MW5#	155

Note: UAL is the alternate aluminum grade designation of magnet wire designated UEW(F). @- Non-ANSI type.

#- 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.

Marking: Company name or "E102761" and material designation or marked designation on package or reel.

Last Updated on 2012-08-21

SHANDONG PENGTAI STOCK CO LTD				E166187	
DAXINDIAN TOWN					
PENGLAI SHANDONG 265612, CHINA					
Mtl Dsg	BC	Coat Type	OC	ANSI Type	Temp Class
PTMW35, xAI/EIW x(PEI/PAI)/200, Q(ZY/XY)-x/200		Polyester	Polyamide-imide	MW35	200
Q(ZY/XY)/200			-		
PTMW30, xEIW-180, PEI/180, QZY-x/180		Polyester-imide	-	MW30	180
PTMW73, EIA-W,		Polyester	Polyamide	MW73	200
(PEI/PAI)/200, Q(ZY/XY)/200		imide	-		
PTMW75, xUEW/130, QA-x/130		Polyurethane	-	MW75	130
EI/AIW220,		Polyester-	Polyamide-	@	220
(PEI/PAI)/220		imide	imide	MW35,MW73#	200
Q(ZY/XY)/220					
xAEI/AIW/220, Q(ZY/XY)L-x/220		Polyesterimide	Polyamideimide	MW 35-A	220
xAEI/AIW/200, Q(ZY/XY)L-x/200		Polyesterimide	Polyamideimide	@#	200
EI/AIW(F)/220, Q(ZY/XY)B-x/220		Polyesterimide	Polyamideimide	@	220
EI/AIW(F)/200, Q(ZY/XY)B-x/200		Polyesterimide	Polyamideimide	MW 36-C#	200
PTMW82, xUEW/180, QA-x/180		Polyurethane	-	MW82	180
xAUEW/180, QAL-x/180		Polyurethane	-	@	180
xAUEW/155, QAL-x/155		Polyurethane	-	@#	155
xUEWF/180, QAB-x/180		Polyurethane	-	@	180
xUEWF/155, QAB-x/155		Polyurethane	-	@#	155
PTMW79, xUEW/155, QA-x/155		Polyurethane	-	MW79	155
PTMW5, PEW, QZ(G)/155		Polyester	-	MW5	155
xAPEW/155, QZL-x/155		Polyester	-	@	155
PTMW5, PEW, QZ(G)/155		Polyester	-	MW5	155
QP-x/220	Theic-Modified	Polyesterimide	Polyamideimide	MW37-C	220
QP-x/200	Theic-Modified	Polyesterimide	Polyamideimide	MW73-C,MW35-C#	200
SEIW/180 or QZYH-x/180		Polyester-imide	-	MW77-C#	155
xSEIW(F)/180, QZYH(B)-x/180		Polyester-imide	-	@	180
xSPEW(F)/155, QZH(B)-x/155		Polyester-imide	-	@#	155
SPEW /155		Polyester-imide	-	MW26-C#	155
PTMW80 xUEW-N/155 or QA(X)-x/155		Polyurethane	Polyamide	MW80-C	155
xAUEW-N/155, QAXL-x/155		Polyurethane	Polyamide	MW80-A	155
xAUEW-N/130, QAXL-x/130		Polyurethane	Polyamide	MW28-A#	130
xUEW-N(F)/155, QAXB-x/155		Polyurethane	Polyamide	@	155
xUEW-N(F)/130, QAXB-x/130		Polyurethane	Polyamide	@#	130
PTMW28 xUEW-N/130 or QA(X)-x/130		Polyurethane	Polyamide	MW28-C#	130
@ - NON-ANSI Type.					
# - 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.					
x - May be prefixed by 0, 1, 2, 3 to indicate coating thickness.					
Marking: Company name or trademark and material designation or marked designation on package or reel and Recognized Component Mark.					
Last Updated on 2013-05-23					

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	10 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

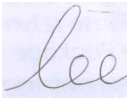
Magnet Wire - Component							E218270
ZHEJIANG XIANDENG ELECTRICAL APPLIANCES CO LTD							
INDUSTRIAL AREA							
YANGDAO SHUANG LIN							
HUZHOU, ZHEJIANG 313012 CHINA							
Mtl Dsg	Mark Dsg	Coat Type BC	OC	ANSI Type	Temp Class		
UEW	-	Polyurethane	-	MW82	180		
EI/AIW	-	Polyesterimide	Polyamide-imide	MW##@	220		
PEW	-	Polyester	-	MW35#, MW73#	200		
EIW/180	-	Polyesterimide	-	MW5#	155		
EIW/155	-	Polyesterimide	-	MW30-C	180		
QZ-130L	-	Polyesterimide	-	MW5-C#	155		
	-	Polyesterimide	-	--#	130		
@- MW 35C construction but with a 220°C thermal rating.							
# - 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.							
--None ANSI Type.							
Marking: Company name, material designation or marked designation on package or reel, and Recognized Component Mark.							
Last Updated on 2012-08-07							

Magnet Wire - Component							E237377
JIANGSU DARTONG M & E CO LTD							
1 DARTONG RD							
HUAIAN ECONOMY DEVELOPMENT ZONE							
HUAIAN, JIANGSU 223238 CHINA							
Mtl Dsg	Mark Dsg	Coat Type BC	OC	ANSI Type	Temp Class		
&UEW	(1)	Polyurethane	-	MW 79-C	155		
				MW 75-C	130		
&EIW	(1)	Polyester-imide	-	MW30#	180		
				@	200		
&UEW	UEW/180	Polyurethane	-	MW82	180		
&EI/AIW	(1)	Polyester-imide	Polyamide-imide	MW35#, MW73#	200		
				MW37	220		
&EI/AIW-220 (Aluminium)	(1)	Polyester-imide	Polyamide-imide	MW35A	220		
&EI/AIW-200 (Aluminium)	(1)	Polyester-imide	Polyamide-imide	@#	200		
&PEW	(1)	Polyester	-	MW5#	155		
&PEW/NY	(1)	Polyester	Polyamide	MW76	180		
				MW24#	155		
&UEW/NY	(1)	Polyurethane	Polyamide	MW80#	155		
				MW28#	130		
Q (ZY/XY) BP-1,2,3/200	(1)	Polyester	Polyamide-imide	MW35, MW73	200		
QY(F)* /240/UL	(1)	Polyimide	-	MW16-C	240		
QY* /220/UL	(1)	Polyimide	-	@	220#		
QY(F)L* /240/UL	(1)	Polyimide	-	@	240		
QYL* /220/UL	(1)	Polyimide	-	@	220#		
(1)-Marked designations are the same as the material designations.							
@-Non ANSI Type.							
#-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.							
&-May have a prefix 0, 1, 2, 3 indicating the film built.							
*-May have a suffix 0, -1, -2 or -3 indicating the film built."							
Marking: Company name and magnet wire designation or marked designation on package or reel and the UL Recognition Mark							
Last Updated on 2013-04-03							

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	11 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

Magnet Wire – Component						
HANGZHOU WEIFENG ELECTRONIC CO LTD				E229341		
DAICUN						
XIAOSHAN						
HANGZHOU, ZHEJIANG 311261 CHINA						
Mtl Dsg	Mark Dsg	Coat Type BC OC		ANSI Type	Temp Class	
UEW-@, QA-@/130	UEW-@, QA-@/130	Polyurethane	–	MW 75-C	130[#]	
UEW/NY-@, QAN-@/130	UEW/NY-@, QAN-@/130	Polyurethane	Polyamide	MW 28-C	130[#]	
UEWF-@, QA-@/155	UEWF-@, QA-@/155	Polyurethane	–	MW 79-C	155	
UEWF/NY-@, QAN-@/155	UEWF/NY-@, QAN-@/155	Polyurethane	Polyamide	MW 80-C	155[#]	
UEWH/NY-@, QAN-@/180	UEWH/NY-@, QAN-@/180	Polyurethane	Polyamide	MW 83-C	180	
WF-@	WF-@	Polyurethane	–	MW75-C	130[#]	
[#] – 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.						
@ – May be USTC (include polyester filament yarn covering) or LITZ (twisted wire only).						
Marking: Company name, material designation or marked designation and the Recognized Component Mark,  on the shipping spool label or smallest unit container in which the product is packaged.						
Last Updated on 2014-03-06						

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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SPECIFICATION		SHEET NO.	12 OF 12
		DATE	2024. 01. 08
PART NAME	LINE FILTER	MODEL NAME	SNP-6320RH-CT1
CODE NO.	LFU10-0104R5	DESCRIPTION	UU 10x14

* IMPREGNATION

SE KYE CHEMICAL CO LTD

E257443

360 GUIJEON-RI
TONGJIN-EUP
KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA

Varnish Dsg	ANSI Magnet Wire Type	TP	Varnish Theermal Class C HC	CE
SR-337(#)	MW75	130	130	-

- May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance.

Marking: Company name and varnish designation on shipping container.

Last Updated on 2006-06-28

JIANGYIN CITY DENG FENG ELECTRICAL MATERIAL CO LTD

E236421

RIVER EAST

ZHOU ZHANG TOWN

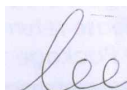
JIANGYIN, JIANGSU 214423 CHINA

Varnish	ANSI Magnet	Varnish Thermal Class C		
Dsg	Wire Type	TP	HC	CE
319-5(a)	MW80	155	-	-
	MW76	180	180	-
	MW5	155	-	-

(a) – May be followed by one or two numbers and/or one or two letters indicating the viscosity changes accomplished via inorganic fillers, solvents or a small amount of monomer.

Marking: Company name and varnish designation on shipping container.

Last Updated on 2009-07-23

NO	REVISION	DATE	CHECK	DRAWN	CHECKED	APPROVED
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NETWORK CAMERA,PNM-C32084RQZ
PoE(55V ) 1.29A

M/C: PNM-C32084RQZ/KEX Fac.ID:D



2024.05 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



