



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-A202-DescriptionUL
Figure-20-Total

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UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2019-05-09 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	NWQQ, NWQQ7 (Information Technology Equipment Including Electrical Business Equipment)
Complementary CCN:	N/A
Product:	NETWORK THERMAL CAMERA
Model:	TNO-4050T, TNO-4030T, TNO-4040T, TNO-4040TR, TNO-4030TR, TNO-L4030T, TNO-L4030TR, TNO-L4040TR, TNO-L4040T, TNO-L4050T
Rating:	Rated Input: 24 Vac, 50 or 60 Hz, 0.91 A or 12 Vdc, 0.83 A or PoE (37 Vdc - 57 Vdc) 0.27 A
Applicant Name and Address:	HANWHA VISION CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI GYEONGGI-DO 13488 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

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Prepared By: Lawrence Lee / Project Handler Reviewed By: SungIl Kim / 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 THERMAL CAMERA for indoor use.

Model Differences

Basic model is TNO-4050T. (Lens size: 35 mm)

Model TNO-4030T is identical to basic model TNO-4050T except for Lens size and model designation. (Lens size: 13 mm)

Model TNO-4040T is identical to basic model TNO-4050T except for Lens size and model designation. (Lens size: 19 mm)

Model TNO-4040TR is identical to basic model TNO-4050T except for model designation.

Model TNO-4030TR is identical to basic model TNO-4050T except for model designation.

Model TNO-L4030T, TNO-L4030TR are identical to basic model TNO-4050T except for F/W

Model TNO-L4040TR, TNO-L4040T, TNO-L4050T are identical to basic model except for S/W.

Test Item Particulars

Mass of equipment (kg)	2.66
Equipment mobility	stationary
Connection to the mains	No direct connection
Operating condition	continuous
Access location	operator accessible
Over voltage category (OVC)	OVC I
Mains supply tolerance (%) or absolute mains supply values	No direct connection
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class III (supplied by SELV)
Considered current rating of protective device as part of the building installation (A)	N/A
Pollution degree (PD)	PD 2
IP protection class	IP X0
Altitude of operation (m)	Up to 2 000
Altitude of test laboratory (m)	Less than 2 000

Technical Considerations

- ☐ The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 60 °C
- ☐ The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

Original (4788275364)

- Maximum normal load: Continuous operation connected with monitor.

Revision (4788792341)

- Addition of model name. (TNO-4040TR, TNO-4030TR)

4790501225

-Add model name : TNO-L4030T, TNO-L4030TR

Revision: SR# 5808800.1466086

Update Applicant Name to Hanwha Vision Co Ltd.

4791246719

- Add model name; TNO-L4040TR, TNO-L4040T, TNO-L4050T.

Additional Standards

The product fulfills the requirements of: N/A

Markings and Instructions

Clause Title	Marking or Instruction Details
Power rating - Ratings	
Power rating - Company identification	Listee's or Recognized companys name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."
Installation Manual - Network Environment	The following statement or similar shall be included in the User Manual: "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."

Installation Manual - UL Listed PoE Source	The following statement or similar shall be included in the User Manual: "The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802-3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1.
Installation Manual - Selection of Power Supply	The Users Manual should provide simple instructions for the correct selection of a suitable Listed Class 2 Power Units, including a statement such as "This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 24 Vac (50/60 Hz) min.0.91 A or 12 Vdc, min.0.83 A"
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
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All models					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All models					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:					

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

1.5.1	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
Power Supply (Optional)	Interchangeable	Interchangeable	Rated output: 24Vac, 50/60 Hz, min. 0.91 A, marked "LPS" or "Class 2".	QQGQ or EPBU	UL	
Power Supply (Optional)	Interchangeable	Interchangeable	Rated output 12 Vdc, min.0.83 A, marked "LPS" or "Class 2"	QQGQ or EPBU	UL	
Enclosure (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 3.0 mm thickness, See enclosure for dimension.	-	-	
Enclosure (Plastic) - Interface board cover	LOTTE ADVANCED MATERIALS CO LTD	NH-1035(+)	Min. 1.5 mm thickness, rated Min. V-0, 80 deg.C.	QMFZ2/8	UL (E115797)	
Internal Plastic Part	SAMYANG CORPORATION	3500G-(z)	Min. 1.5 mm thickness, rated Min. V-0, 125 deg.C.	QMFZ2/8	UL (E121254)	
Fuse (F1) - Interface board	LITTELFUSE INC	449 Series	125 V, 2 A	JDYX2/8	UL (E10480)	
Fuse (F1) - Power board	LITTELFUSE INC	449 Series	125 V, 2 A	JDYX2/8	UL (E10480)	
Lithium Battery (BAT1)	SEIKO INSTRUMENTS INC MICRO- ENERGY DIV	ML414H	Lithium (Coin), Rechargeable, Max Charging voltage: 3.4 Vdc, Max Charging current: 300 mA	BBCV2	UL (MH15628)	
Transformer (T8)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO LTD	EE1936R	130 deg.C, See enclosure for more detail.	-	-	

Line Filter (T3)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO LTD	PCM10020R	130 deg.C, 3.0 mH, See enclosure for more detail.	-	-	
Line Filter (T7)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO LTD	PCM10021R	130 deg.C, 18.0 mH, See enclosure for more detail.	-	-	
Connectors and Receptacles (Secondary circuits)	Interchangeable	Interchangeable	-	ECBT2 or RTRT2	UL	
Connectors and Receptacles (Secondary circuits) (alternate)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of plastic rated Min. V-2	QMFZ2	UL	
Internal Wiring (Secondary)	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; Min. 30 V, 80 deg.C	AVLV2	UL	
Thermal Pad	KOMOTECH CO LTD	GP-1	Min. 0.35 mm thickness, rated V-0, 150 deg.C	QMFZ2	UL(E245303)	
Cable	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; Min. 30 V, 80 deg.C	AVLV2	UL	
FPWB	Interchangeable	Interchangeable	Min. V-0, 80 deg.C.	QMFZ2 or QMTS2	UL	
PWB	Interchangeable	Interchangeable	Min. V-1, 105 deg.C.	ZPMV2	UL	
Label	Interchangeable	Interchangeable	Min.70 deg.C, if max. surface temperature not specified.	PGDQ2 or PGJI2	UL	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	Overall View -1
Photographs	03-02	Overall View -2
Photographs	03-03	Internal View -1
Photographs	03-04	Internal View -2
Photographs	03-05	Internal View -3
Photographs	03-06	Network board Top with heatsink
Photographs	03-07	Network board Bottom
Photographs	03-08	Power board Top
Photographs	03-09	Power board Bottom
Photographs	03-10	Interface board Top
Photographs	03-11	Interface board bottom
Manuals	06-01	Manual
Miscellaneous	07-01	Transformer (T8) spec by SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO LTD
Miscellaneous	07-02	Line filter (T3) spec by SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO LTD
Miscellaneous	07-03	Line filter (T7) spec by SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO LTD
Miscellaneous	07-04	Enclosure dimension
Miscellaneous	07-05	Label
Miscellaneous	07-06	Dual language safety labeling CRD
Miscellaneous	07-07	Label (Model TNO-4040TR)
Miscellaneous	07-08	Label (Model TNO-4030TR)

overview

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 lightning 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 Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 24 Vac (50/60 Hz) min.0.91 A or 12 Vdc, min.0.83 A.
16. 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.
17. 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.
18. 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.
19. 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.
20. Installing or using the product in water can cause serious damage to the product.



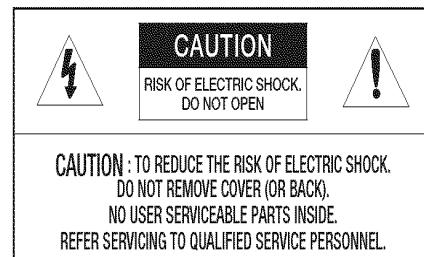
WARNING

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.

overview

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.

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.

The CVBS out terminal of the product is provided for easier installation, and is not recommended for monitoring purposes.

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

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

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802-3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.

Please read the following recommended safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Please wear protective gloves when installing/removing the camera.
The high temperature of the product surface may cause a burn.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction
- ※ Please read this manual for the safety before using of goods and keep it in the safe place.

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承认书

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	
客户料号 MODEL NO.	EP23-001074A
产品名称 PART NAME	POWER TRANSFORMER
产品型号 PART TYPE	EE1936R
版本 REV	X1
签名 SIGNATURE	制图: 审核: 批准: Approved by
客户承认 CUSTOMER APPROVAL	承认印: SIGNET 签名: SIGNATURE

深圳市联泰兴电子科技有限公司

SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD

地址: 深圳市宝安区石岩街道应人石工业区伟泰路 1 栋 (P. C: 518108)

ADD: No. 1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen.

TEL: +86 755 29810619 29810976 FAX: +86-755-29810159

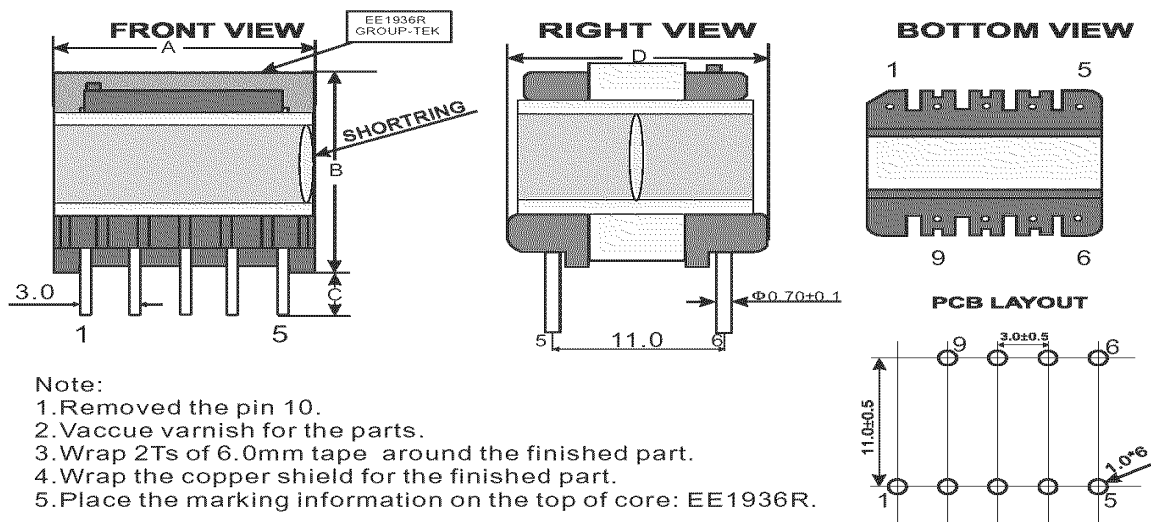
Http://www.group-tek.com E-mail:sale1@group-tek.com

GROUP-TEK[®]

A Leading Supplier of Magnetic Components

EE1936R

2. Mechanical Dimensions:



Note:

1. Removed the pin 10.
2. Vacuum varnish for the parts.
3. Wrap 2Ts of 6.0mm tape around the finished part.
4. Wrap the copper shield for the finished part.
5. Place the marking information on the top of core: EE1936R.

Unit: mm

A	B	C	D
Max	Max	± 0.5	Max
20.5	20.0	3.5	16.5

3. Electrical Characteristics :

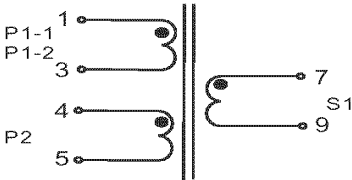
Specifications: at 25°C . Operating Temperature -40 to +125°C			
NO.	ITEM	TEST CONDITION	SPECIFICATION
1	Inductance	(1-3)@200kHz, 1.0Vac	160uH±7%.
2	Inductance	(4-5)@200kHz, 1.0Vac	76.5uH±15%.
3	Inductance	(7-9)@200kHz, 1.0Vac	60uH±15%.
4	Leakage Inductance	(1-3)@200kHz, 1.0Vac shorted other pins.	15uH Max.
5	DCR	(1-3) @ 25°C	0.265Ω Max.
6	DCR	(4-5) @ 25°C	0.970Ω Max.
7	DCR	(7-9) @ 25°C	0.096Ω Max.
8	HI-POT	PRI--SEC,AUX	1000Vac,5mA,60SEC
9	HI-POT	PRI,SEC,AUX--CORE	1000Vac,5mA,60SEC
10	INSULATION RESISTANCE	PRI--SEC DC500V	100MΩ Min.
11		PRI--CORE DC500V	100MΩ Min.
12		SEC--CORE DC500V	100MΩ Min.

4.Winding Information:

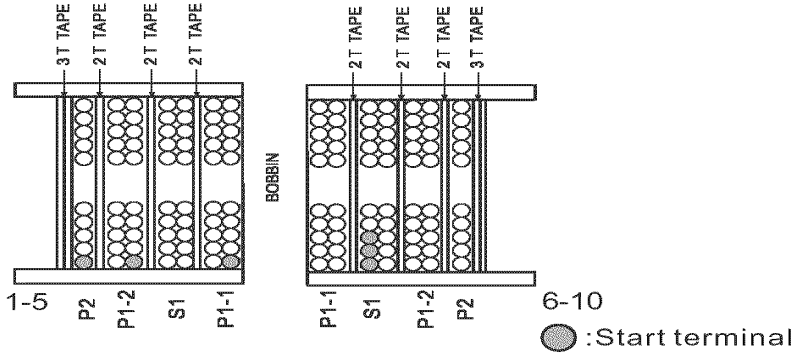
WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	TURNS/LAYER (REF)	WRAP INSUL.	SLEEVE	NOTE
P1-1	1--3	0.30mm 2UEW	50	50	2T w9.3mm	N/A	1,2.
S1	7--9	3*0.32mm 2UEW	30	30	2T w9.3mm	N/A	1,2.
P1-2	1--3	0.30mm 2UEW	50	50	2T w9.3mm	N/A	1,2.
P2	4--5	0.20mm 2UEW	32	32	3T w9.3mm	N/A	1,2.

Note:
1.Place the bobbin pins left side of operator.
2.Clockwise and close winding.

5.Schematic:



6.Winding construction

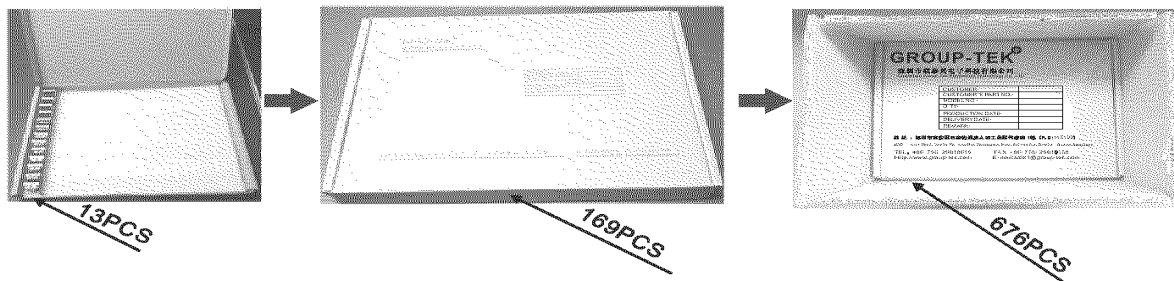


7. Material List

NO.	ITEM.	MATERIALS	SUPPLIERS/MANUFACTURES	UL FILE NO.
1	BOBBIN	PHENOLIC T375J UL RATING: 94V-0	CHANG CHUN PLASTICS CO LTD.	QMFZ2.E59481
2	CORE	EE 19 PG 232	High-tech Electronics Co.,Ltd	N/A
3	WIRE	POLYURETHANE ENAMELED TYPE NO: 2UEW/ MW82-C THERMAL RATING:180°C	ZHU HAI SUNTEK WIRE COLTD	OBMW2.E234867
4	TAPE	ADHESIVE POLYESTER TAPE TYPE NO.:HMT803(YELLOW) THERMAL RATING:130°C	Shen zhen XinHuaHui Packing material Co.,Ltd	E328315
5	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
6	Varnish	E962	ZHU HAI CHANGXIAN NEW MATERIALS TECHNOLOGY CO LTD.	OBOR2.E335405

8. Packing Information:

DESCRIPTION	QTY
PIECES PER CELL	1
PIECES PER TRAY	169
PIECES PER BOX	676
GROSS WEIGHT PER BOX(KG)	7.85
NET WEIGHT PER BOX(KG)	9.25



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承认书

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	
客户料号 MODEL NO.	EP07-001194A
产品名称 PART NAME	COMMON MODE CHOKE
产品型号 PART TYPE	PCM10020R
版本 REV	X1
签名 SIGNATURE	制图: 审核: 批准: Approved by
客户承认 CUSTOMER APPROVAL	承认印: SIGNET 签名: SIGNATURE

深圳市联泰兴电子科技有限公司

SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD

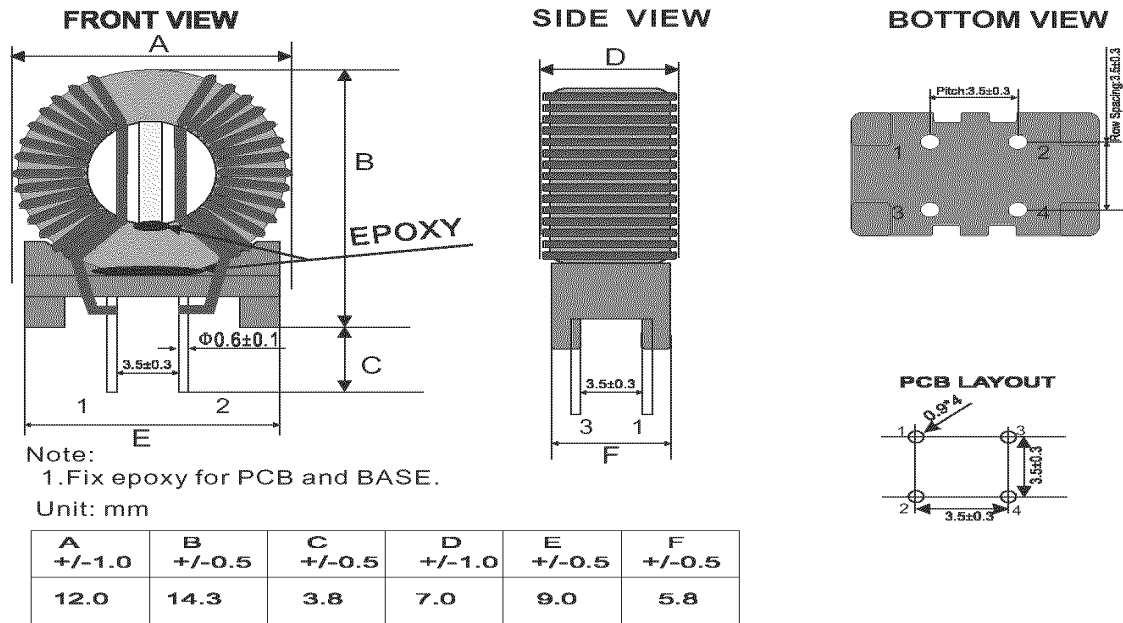
地址: 深圳市宝安区石岩街道应人石工业区伟泰路 1 栋 (P. C: 518108)

ADD: No. 1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen.

TEL: +86 755 29810619 29810976 FAX: +86-755-29810159

Http://www.group-tek.com E-mail:sale1@group-tek.com

2. Mechanical Dimensions:



3. Electrical Characteristics :

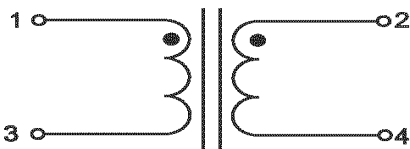
Specifications: at 25°C. Operating Temperature -40 to +125°C				
NO.	ITEM	TEST CONDITION	SPECIFICATION	REMARKS
1	Rated Voltage	Line to Line	AC250V	
2	Inductance	(1-3)(2-4) @16KHz, 1.0V	3.0mH+50% -30%	TH-2819
3	DCR	(1-3)(2-4) @25°C	79.0mΩ Max.	TH-2819
4	HI-POT	(1-3) to (2-4)	1500Vac, 1mA, 2SEC.	RK2670A
5	Rated current	@70°C	1.50A.	
6	ΔL	L(1-3)-L(2-4) @16KHz, 1.0V	0.20mH Max.	TH-2819

Remark: Use manual trigger mode of instrument for test.

4. Winding Information:

WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
1	1---3	0.40mm 2UEW(Red)	28±2.0T.				
2	2---4	0.40mm 2UEW(Red)	28±2.0T.				

5.Schematic:

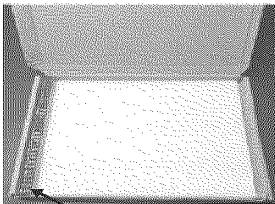


6.Material List

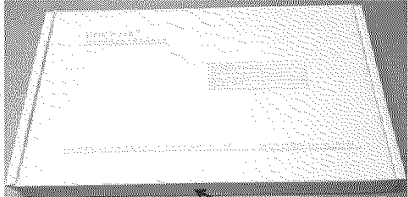
NO.	ITEM.	MATERIALS	SUPPLIERS/MANUFAXTURES	UL FILE NO.
1	CORE	T10*6*5 TTS-TH10	TTS TechnologyCo.,Ltd.	N/A
2	WIRE	POLYURETHANE ENAMELED TYPE NO: 2UEW/MW 82-C Ø0.40mm THERMAL RATING:180°C	ZHU HAI SUNTEK WIRE COLTD	OBMW2.E234867
3	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
4	Glue	E-500(XX) (E-504H-1)	Dong Guan city eatto electronic material Co.,Ltd	QMFZ2.E218090
5	BASE	PHENOLIC T375J UL RATING: 94V-0	CHANG CHUN PLASTICS CO LTD.	QMFZ2.E59481

7.Packing Information:

DESCRIPTION	QTY
PIECES PER CELL	1
PIECES PER TRAY	560
PIECES PER BOX	3360
GROSS WEIGHT PER BOX(KG)	10.5(kg)
NET WEIGHT PER BOX(KG)	8.736(kg)



28PCS



560PCS



3360PCS

GROUP-TEK®



承认书

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	
客户料号 MODEL NO.	EP07-001193A
产品名称 PART NAME	COMMON MODE CHOKE
产品型号 PART TYPE	PCM10021R
版本 REV	X1
签名 SIGNATURE	制图: 审核: 批准: Approved by
客户承认 CUSTOMER APPROVAL	承认印: SIGNET 签名: SIGNATURE

深圳市联泰兴电子科技有限公司

SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD

地址: 深圳市宝安区石岩街道应人石工业区伟泰路 1 栋 (P. C: 518108)

ADD: No. 1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen.

TEL: +86 755 29810619

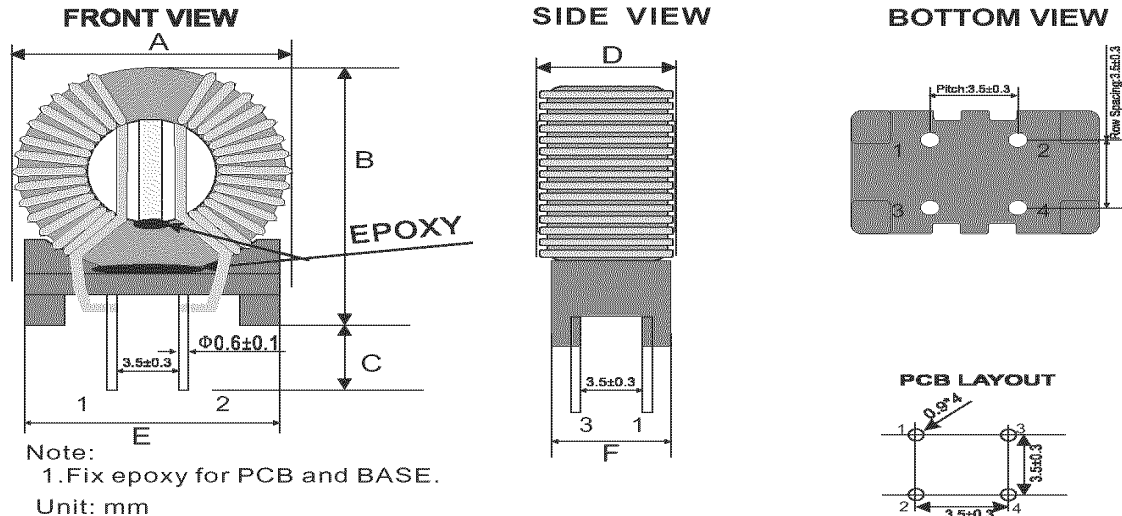
29810976

FAX: +86-755-29810159

Http://www.group-tek.com

E-mail:sale1@group-tek.com

2. Mechanical Dimensions:



A	B	C	D	E	F
+/-1.0	+/-0.5	+/-0.5	+/-1.0	+/-0.5	+/-0.5
12.0	14.3	3.8	7.0	9.0	5.8

3. Electrical Characteristics :

Specifications: at 25°C. Operating Temperature -40 to +125°C				
NO.	ITEM	TEST CONDITION	SPECIFICATION	REMARKS
1	Rated Voltage	Line to Line	AC250V	
2	Inductance	(1-3)(2-4) @16KHz, 1.0V	18mH+50% -30%	TH-2819
3	DCR	(1-3)(2-4) @25°C	500.0mΩ Max.	TH-2819
4	HI-POT	(1-3) to (2-4)	1500Vac, 1mA, 2SEC.	RK2670A
5	Rated current	@70°C	0.50A.	
6	ΔL	L(1-3)-L(2-4) @16KHz, 1.0V	0.60mH Max.	TH-2819

Remark: Use manual trigger mode of instrument for test.

4. Winding Information:

WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
1	1---3	0.25mm 2UEW	67±3.0T.				
2	2---4	0.25mm 2UEW	67±3.0T.				

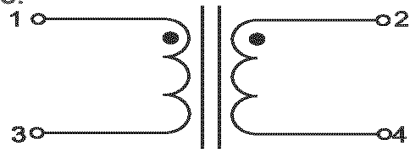
No. 1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen TEL:+86-755-29810619 FAX:+86-0755-29810159 Http://www.group-tek.com

GROUP-TEK®

A Leading Supplier of Magnetic Components

PCM10021R

5.Schematic:

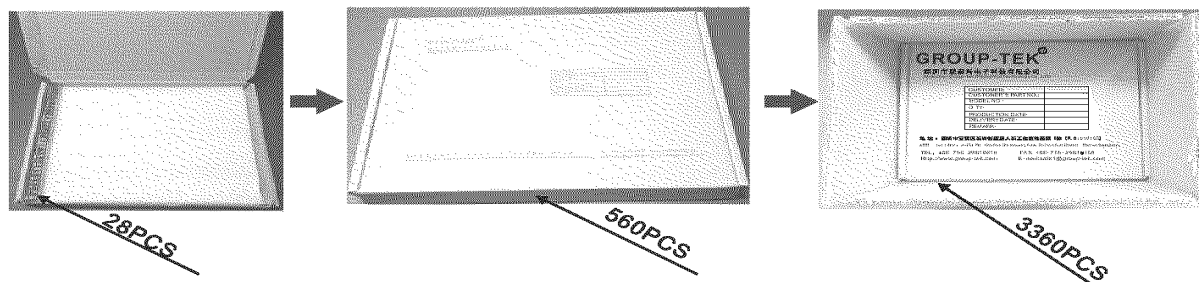


6.Material List

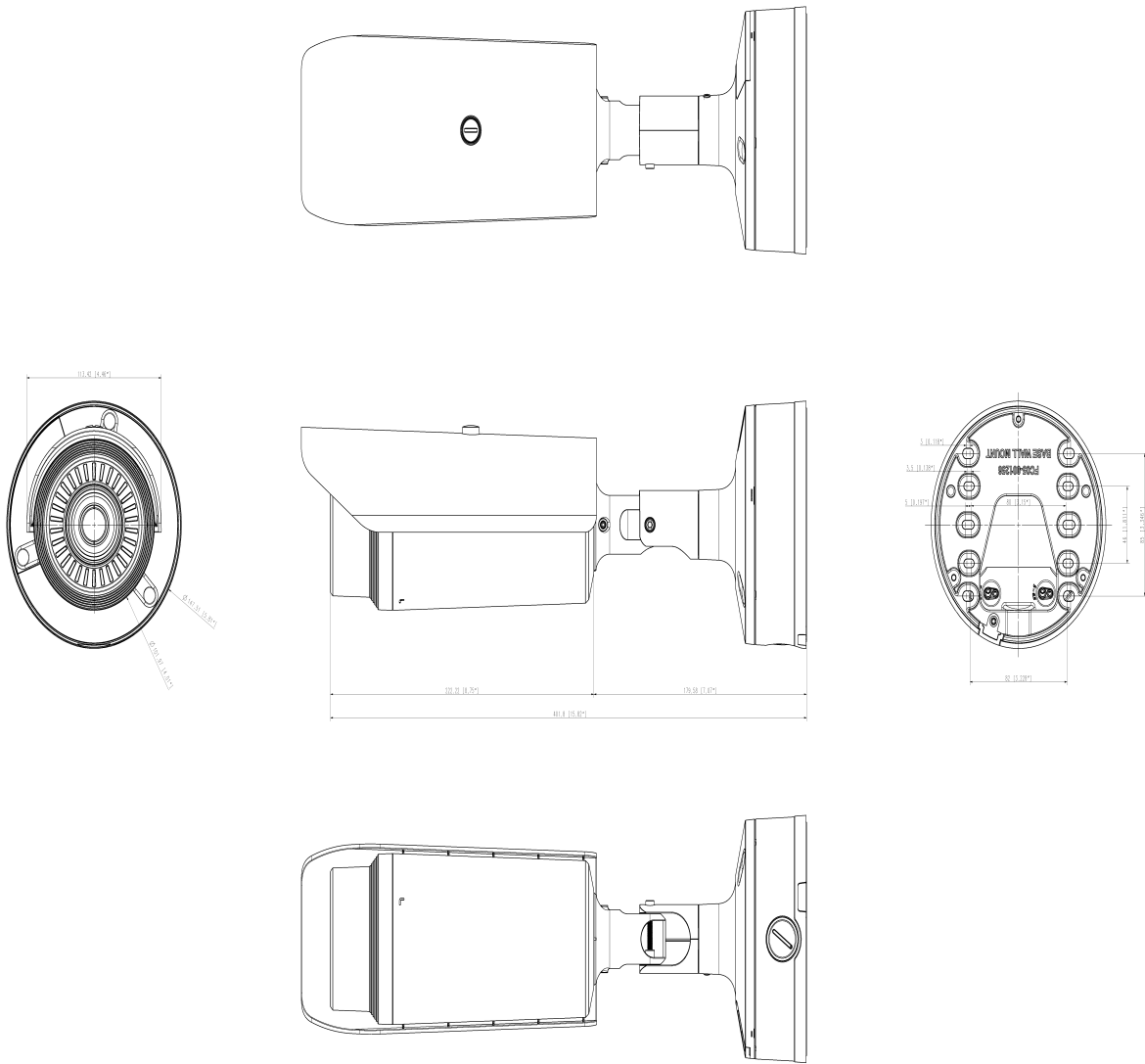
NO.	ITEM.	MATERIALS	SUPPLIERS/MANUFACTURES	UL FILE NO.
1	CORE	T10*6*5 TTS-TH10	TTS Technology Co.,Ltd.	N/A
2	WIRE	POLYURETHANE ENAMELED TYPE NO: 2UEW/MW 62-C Ø0.25mm THERMAL RATING:180°C	ZHU HAI SUNTEK WIRE COLTD	OBMW2.E234867
3	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
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5	BASE	PHENOLIC T375J UL RATING: 94V-0	CHANG CHUN PLASTICS CO LTD.	QMFZ2.E59481

7.Packing Information:

DESCRIPTION	QTY
PIECES PER CELL	1
PIECES PER TRAY	560
PIECES PER BOX	3360
GROSS WEIGHT PER BOX(KG)	10.14(kg)
NET WEIGHT PER BOX(KG)	9.50(kg)



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Apperance TNO-4040T
Unit : mm [inch]



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Project No. 4788275364 File E158873 Page 1
 Compliance Review Conducted by: _____
 Printed Name Signature Date

Standard SCC Requirements and Guidance - Product Edition/
 Certification Body Accreditation Program Revision
 Date 2016-04-06

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
9.2.3 CBs shall include dual language safety labeling within their product certification requirements, if so required by the standard or by the authority having jurisdiction.					
The manufacturer has confirmed they have the ability to include English and French safety labeling exactly as specified in the product standard; or, if NOT specified in the product standard, the ability to include English and French safety labelling consisting of markings associated with the signal words DANGER, WARNING, and CAUTION when required.	X			The ability of the manufacturer to include these markings was verified by either (1) visual inspection of the markings on the actual product or (2) draft of labels that will be applied to the product or (3) written confirmation from the customer of the markings that will appear on the product. If the product standard provides the exact translation, the evidence must match the exact translation. If the product standard does NOT provide the exact translation, the evidence must simply include both the English and French text (no verification of translation is required).	N/A

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Project No. 4788275364

File E158873

Page 2

Compliance

Review

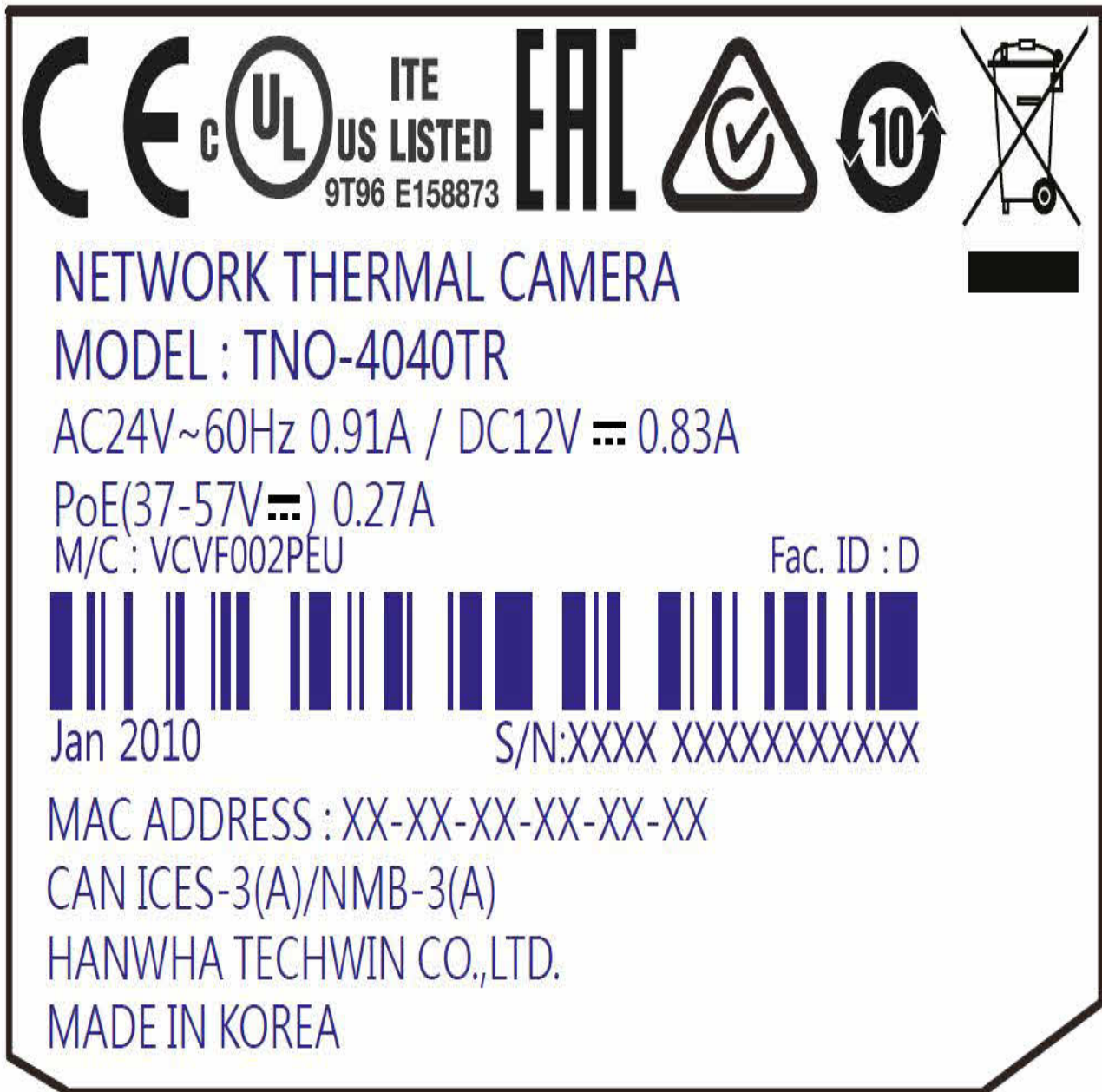
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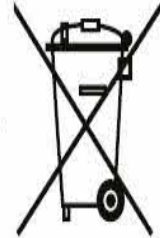
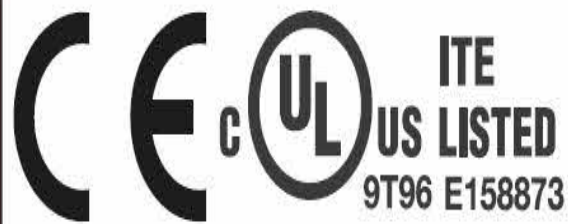
Printed Name

Signature

Date

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
Manufacturer has a method to manage distribution of products, IF all products with the Canadian certification mark are NOT going to include the dual language.	X			Evaluation staff are to only verify that the manufacturer has a method to control distribution. Evaluation staff do not have to record the method of control nor are the evaluation staff expected to verify the effectiveness of the method of control. This requirement to verify that a method exists will be noted in the FUS Procedure. The UL Field Engineer will verify the method during surveillance. If the manufacturer is going to include the dual language on all products with the Canadian certification mark, then this item is N/A; no further action required.	N/A





NETWORK THERMAL CAMERA

MODEL : TNO-4030TR

AC24V~60Hz 0.91A / DC12V $\equiv$ 0.83A

PoE(37-57V $\equiv$) 0.27A

M/C : VCVF002PEU

Fac. ID : D



Jan 2010

S/N:XXXX XXXXXXXXXXXXX

MAC ADDRESS : XX-XX-XX-XX-XX-XX

CAN ICES-3(A)/NMB-3(A)

HANWHA TECHWIN CO.,LTD.

MADE IN KOREA

