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 6TH FL, 192 LIEN CHENG RD  
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Date: 2019/10/24  
 Subscriber: 100504413  
 PartySite: 125336  
 File No: E324690  
 Project No: 4789100715  
 PD No: 19057627  
 Type: R  
 PO Number: C1291907086

Subject: **Procedure And/Or Report Material**

The following material resulting from the investigation under the above numbers is enclosed.

**Issue**

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
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Legible images may be viewed online

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

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TPI File

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IT9380T-HNWL and HC30WE5R2	3	US and CN
HC30WB2R1, IB9360-HNWL, HC30WB5R1, IB9380-HNWL, IB9360-H, IB9380-H	4	US and CN
HN300802(XX), HN301602(XX) (X may be any alphanumeric character for HDD information)	5	US and CN
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# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20191021-E324690  
**Report Reference** E324690-20190528  
**Issue Date** 2019-OCTOBER-21

**Issued to:** VIVOTEK INC  
6TH FL, 192 LIEN CHENG RD  
CHUNG HO DISTRICT  
NEW TAIPEI  
235 TAIWAN

**This certificate confirms that  
representative samples of**

AUDIO/VIDEO, INFORMATION AND COMMUNICATION  
TECHNOLOGY EQUIPMENT

See addendum page for Models/Product

Have been investigated by UL in accordance with the  
Standard(s) indicated on this Certificate.

**Standard(s) for Safety:**

UL 62368-1 & CAN/CSA C22.2 No. 62368-1-14 -  
Audio/video, Information and Communication Technology  
Equipment - Part 1: Safety Requirements

**Additional Information:**

See the UL Online Certifications Directory at  
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

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# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20191021-E324690  
**Report Reference** E324690-20190528  
**Issue Date** 2019-OCTOBER-21

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

- (1) **IR Dome 2MP, 2.8mm**, (1) HC30W42R3, FD9360-HNWL
- (2) **IR Dome 5MP, 2.8mm**, (2) HC30W45R3, FD9380-HNWL
- (3) **Network Camera**, (3) FD9360-H, FD9380-H



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

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File E324690  
Project 4788901284

May 28, 2019

REPORT

on

Audio/Video, Information and Communication Technology Equipment

Vivotek Inc  
New Taipei, Taiwan

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UL TEST REPORT AND PROCEDURE	
Standard:	UL 62368-1, 2nd Edition, 2014-12-01 (Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements) <b>CAN/CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12 (Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements)</b>
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/Video, Information and Communication Technology Equipment)
Complementary Certification CCN	N/A
Product:	<b>(1)</b> IR Dome 2MP, 2.8mm <b>(2)</b> IR Dome 5MP, 2.8mm <b>(3) Network Camera</b>
Model:	<b>(1)</b> HC30W42R3, FD9360-HNWL <b>(2)</b> HC30W45R3, FD9380-HNWL <b>(3) FD9360-H, FD9380-H</b>
Rating:	<b>For (1) and (2)</b> 12 Vdc, 0.48 A (Supplied by AC adaptor) 48 Vdc, 6.49 W max. (Supplied by PoE)  <b>For (3)</b> <b>PoE 37-57 Vdc, 0.17-0.11 A</b>
Applicant Name and Address:	VIVOTEK INC 6TH FL, 192 LIEN CHENG RD CHUNG HO DISTRICT NEW TAIPEI, 235 TAIWAN

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.

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\*Prepared by: **Jones Chang**

Reviewed by: **Chris Kao**

**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
- C. Listing Mark/Recognized Component Mark Data Page - 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**  
 \*The equipment is a Network Camera, intended for **indoor or outdoor** used **and associated with Audio/video, Information and Communication Technology Equipment.**

The equipment consists of electronic components mounted on PWB then housed with plastic and metal enclosure which was secured together by screws.

**Model Differences**

**Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL are for indoor use only**  
 FD9360-HNWL is identical to HC30W42R3, except for model designation.  
 FD9380-HNWL is identical to HC30W45R3, except for model designation.  
 HC30W42R3 is identical to HC30W45R3, except for resolution of image sensor.

**FD9360-H is similar to FD9360-HNWL except for enclosure shape and intended for outdoor use.**  
**FD9380-H is identical to FD9360-H except for resolution of image sensor and also intended for outdoor use.**

Model	Differences
HC30W42R3	2M sensor
HC30W45R3	5M sensor
<b>FD9360-H</b>	<b>2M sensor</b>
<b>FD9380-H</b>	<b>5M sensor</b>

**Test Item Particulars (NOT FOR FIELD REPRESENTATIVE'S USE)**

Classification of installation and use by.....:  Ordinary person  Instructed person  
 Skilled person

Supply Connection.....:  pluggable equipment  type A  type B  
 permanent connection  
 detachable power supply cord  
 non-detachable power supply cord  
 not directly connected to the mains

Equipment mobility.....:  movable  hand-held  transportable  
 stationary  for building-in  direct plug-in  
 rack-mounting  wall-mounted

Over voltage category (OVC) .....:  OVC I  OVC II  OVC III  OVC IV  
 other: not directly connected to the mains

Fundamental Frequency .....:  50/60 Hz  50 Hz  60 Hz  other supplied by DC

Class of equipment .....:  Class I  Class II  Class III  
 Not classified

Access location .....:  restricted access location  N/A

Pollution degree (PD) .....:  PD 1  PD 2  PD 3

IP protection class .....	<input checked="" type="checkbox"/> IP X0	<input type="checkbox"/> IP _____
Tested for IT power systems .....	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
IT testing, phase-phase voltage (V) .....	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> N/A
Altitude during operation (m) .....	<input checked="" type="checkbox"/> Up to 2,000	<input type="checkbox"/> Up to _____
Altitude of test laboratory (m) .....	<input checked="" type="checkbox"/> Less than 2,000	<input type="checkbox"/> Approximately _____
Mass of equipment (kg) .....	0.54 max.	

## Technical Consideration (NOT FOR FIELD REPRESENTATIVE'S USE)

- The product was submitted and evaluated for use at the maximum ambient temperature (T<sub>ma</sub>) permitted by the manufacturer's specification of: **60°C for indoor models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL and 55°C for outdoor models FD9360-H and FD9380-H.**
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual.
- \*Based upon the product specification provided by the manufacturer, **the models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL were** intended to be supplied by an UL Listed power supply suitable for **used** at T<sub>ma</sub> 60 degree C whose output meets ES1 (or SELV) and PS2 (or LPS), and rated 12 Vdc, 0.48 A min. (for AC adaptor) or 48 Vdc, 6.49 W min. (for PoE **adaptor**);
- **Based upon the product specification provided by the manufacturer, the models FD9360-H and FD9380-H were intended to be supplied by an UL Listed power supply suitable for used at T<sub>ma</sub> 55 degree C whose output meets ES1 (or SELV) and PS2 (or LPS), and rated 37-57 Vdc, 0.17-0.11 A.**
- LEDs provided in the product are considered low power devices: Yes
- IR LED provided in the product has been tested and complied with the requirement of Exempt Group according to standard IEC 62471.
- The product is only to be connected to PoE network without routing to outside plant.
- **The Models FD9360-H, FD9380-H were investigated to the following additional standards: CSA C22.2 NO. 60950-22-17 Edition 2, Revision Date 2017/03/31 & UL 60950-22 Edition 2, Revision Date 2017/03/31**
- **The outdoor equipment/enclosure was evaluated for use in an ambient range of: -20°C to 55°C**

Engineering Conditions of Acceptability (NOT FOR FIELD REPRESENTATIVE'S USE)

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The following product-line tests are conducted for this product:  Earthing Continuity  Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of:  Primary – Earthed Dead Meal: \_\_\_\_ Vrms, \_\_\_\_ Vpk;  Primary-Secondary: \_\_\_\_ Vrms, \_\_\_\_ Vpk
- The following output circuits are at  ES1  ES2  ES3 energy levels:
- The following output circuits are at  PS1  PS2  PS3 energy levels:
- The maximum investigated branch circuit rating is:  20 A  \_\_\_\_ A
- The investigated Pollution Degree is:  1  2  3
- The front bezel complies with the requirements for  V-1  HB flame rating
- Proper bonding to the end-product main protective earthing termination is:  Required  Not required
- An investigation of the protective bonding terminals has:  been conducted  not been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral:
- The following end-product enclosures are required:  Mechanical  Electrical  Fire
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C):
- The following components require special consideration during end-product Thermal (Heating) tests due to the indicated maximum temperature measurements during component-level testing: \_\_\_\_ (\_\_\_\_°C)
- The maximum continuous power supply output (Watts) relied on forced air cooling from: \_\_\_\_ W fan (\_\_\_\_) at \_\_\_\_ cfm (\_\_\_\_ cmm) applied to \_\_\_\_ (location/orientation of fan)
- The following input terminals were evaluated as suitable for direct connection to the DC Mains Supply:
- The equipment is suitable for direct connection to:  AC mains supply  DC mains supply  AC and/or DC mains supply
- The power supply was evaluated to be used at altitudes up to:  2,000 m  5,000 m  \_\_\_\_ m

## Additional Information

N/A

## Additional Standard

The product fulfils the requirements of:

Markings, instructions and instructional safeguards						
Clause Title		Marking or Instruction Details				
		English			French	
Equipment identification marking – Manufacturer identification		Listee's or Recognized company's name, Trade Name, Trademark or File Number				
Equipment identification marking – model identification		Model Number				
Equipment rating marking –ratings (optional)		Input Ratings (voltage, frequency/dc, current/power)				
Inter-connecting cables - External detachable		Listee's Name and Part number (Marking or Instruction)				
Special Instructions to UL Representative						
*Please verify the standard revision of UL Report of power adaptor which was / were certified by the following revision (UL 60950-1, 2nd Edition, dated <b>2014-10-14</b> or UL 62368-1, 2nd Edition, dated 2014-12-01).						
Please verify the Manufacturer has a method to manage distribution of all products with Canadian certification mark not intended include the dual markings.						
Production-Line Testing Requirements						
<u>Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.</u>						
Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
--	--	--	--	--	--	--
<u>Earthing Continuity Test Exemptions - This test is not required for the following models:</u>						
All models						
<u>Electric Strength Test Exemptions - This test is not required for the following models:</u>						
All models						
<u>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:</u>						
N/A						
<u>Sample and Test Specifics for Follow-Up Tests at UL</u>						
Model	Component	Material	Test	Sample(s)	Test Specifics	
--	--	--	--	--	--	

4.1.2	TABLE: list of critical components					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
<b>Below for Models HC30W42R3, FD9360- HNWL, HC30W45R3 and FD9380-HNWL</b>	--	--	--	--	--	--
01.Label	Interchangeable	Interchangeable	Min. 70 degree C to metal surface	PGDQ2 or PGJ12	UL	--
01a. Permanency of Marking (Alternate)	<b>Interchangeable</b>	<b>Interchangeable</b>	Engraved laser marking.	--	--	--
01b. Permanency of Marking (Alternate)	<b>Interchangeable</b>	<b>Interchangeable</b>	Permanently ink-stamped, silk- screened, molded in, or in self- adhesive labels.	--	--	--
02. AC adaptor (optional)	Interchangeable	Interchangeable	O/P: 12Vdc,0.48A min. Tma=60 degree C. Output complied with LPS or PS2	QQGQ, QQJQ	UL	--
03. PoE adaptor (optional)	Interchangeable	Interchangeable	O/P: 48Vdc, 6.49W min. Tma=60 degree C. Output complied with LPS or PS2	QQGQ, QQJQ	UL	--
*04. Lens cover	Mitsubishi Engineering-Plastics Corp	<b>S-3000(&amp;6)(f1), S-3001(&amp;6)(f1), S-3003(&amp;6)(f1)</b>	V-2, 1.7 mm thickness min., 115 degree C. See enclosure ID <b>Illustration-01</b> for details.	QMFZ2	UL	--
*05. Metal enclosure ( Top and bottom side)	--	--	Aluminum, 3.0 mm thickness min. See enclosure ID <b>Illustration-01</b> for details.	--	--	--
06. PWB	Interchangeable	Interchangeable	V-1 or better, min. 130 degree C	ZPMV2	UL	--
07. Electric double layer capacitor (BT1)	ELNA Co. LTD.	DSK-3R3K20 4T614-KL	Rated 3.3Vdc, 0.2F.	--	--	--
08. POE transformer (T1)	Interchangeable	Interchangeable	105 degree C. See enclosure ID <b>Illustration-03</b> for details.	--	--	--
09. Interconnecting Cable (except for PoE cable) (Optional)	Interchangeable	Interchangeable	Max. length 3.05 m. FEP, PTFE, PVC, TFE, neoprene, polyimide or rated VW-1 or FT- 1. Min. 80 degree C. Min. 30 V.	AVLV2	UL	--
09a. Interconnecting Cable (Optional) (Alternate)	Interchangeable	Interchangeable	Max. length 3.05 m. FEP, PTFE, PVC, TFE, neoprene, polyimide or rated VW-1 or FT-	AVLV2	UL	--

			1. Min. 80 degree C. Min. 60 V.			
09b. Interconnecting Cable (Optional) (Alternate)	Interchangeable	Interchangeable	Type CMP or CMR or CMG or CM or CMX or CMUC or CMH, 3.05 m long max.	DUXR or DUZX	UL	--
10. Internal Wiring (ES1 circuit)	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min. 30 V, 60 degree C.	AVLV2	UL	--
11. Connectors and Receptacles (ES1 circuit) (except for Lan port)	Interchangeable	Interchangeable	Min. 30 V	ECBT2, DUXR2	UL	--
11a. Connectors and Receptacles (ES1 circuit) (Alternate)	Interchangeable	Interchangeable	Min. 60 V	ECBT2, DUXR2	UL	--
11b. Connectors and Receptacles (ES1 circuit) (Alternate)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of (QMFZ2), and V-2 minimum.	QMFZ2	UL	--
12. Internal plastic parts (Optional)	Interchangeable	Interchangeable	HB min.	QMFZ2	UL	--
12a. Internal plastic parts (Optional) (Alternate)	<b>Interchangeable</b>	<b>Interchangeable</b>	Flammability level is ignored, when part is small part (4g or 1750mm <sup>3</sup> max.)	--	--	--
13. LED module	Lextar	PR35F0A	850 nm, 209 mW/sr for each LED. Comply IEC 62471 Exempt Group	--	--	--
*14. Thermal pad	<b>Interchangeable</b>	<b>Interchangeable</b>	Flammability level is ignore, due to small part (4g or 1750mm <sup>3</sup> max.). See enclosure ID I-02 for details.	--	--	--
<b>Below for Models FD9360-H and FD9380-H</b>	--	--	--	--	--	--
01. External Power Adaptor (Optional)	Interchangeable	Interchangeable	O/P: 37-57 Vdc, 0.17-0.11 A, 55 degree C minimum. Comply with PS2 or LPS.	NWQQ/7, QQQQ/7, AZOT/7, QQJQ/7	UL	--
02. Enclosure	--	--	--	--	--	--
02-1. Top plastic lens cover	<b>mitsubishi engineering-plastics corp</b>	<b>S-3000(&amp;6)(f1), S-3001(&amp;6)(f1), S-3003(&amp;6)(f1)</b>	<b>V-2minimum. 1.7 mm thick minimum. See enclosure ID Illustration-05 for details.</b>	<b>QMFZ2/8</b>	<b>UL</b>	<b>--</b>
02-2. Top metal	Interchangeable	Interchangeable	Aluminum alloy, 3.0 mm thick	--	--	--

enclosure			minimum. See enclosure ID Illustration-06 for details.			
02-3. Bottom metal enclosure	Interchangeable	Interchangeable	Aluminum alloy, 3.0 mm thick minimum. See enclosure ID Illustration-07 for details.	--	--	--
03. Adhesive (Between bottom enclosure and cable)	ITW Engineered Polymers	116FR	HB minimum.	QMFZ2/8	UL	--
04. Gasket (O-ring) (Between lens cover and top metal enclosure)	Momentive Performance Materials Japan L L C	TSE2186U(aq)	HB minimum, Silicone rubber. See enclosure ID Illustration-08 for details.	QMFZ2/8	UL	--
05. Gasket (O-ring) (Between top metal enclosure and bottom metal enclosure)	Momentive Performance Materials Japan L L C	TSE2186U(aq)	HB minimum, Silicone rubber. See enclosure ID Illustration-09 for details.	QMFZ2/8	UL	--
06. Gasket (O-ring) (On the bottom screw)	Momentive Performance Materials Japan L L C	TSE2186U(aq)	HB minimum, Silicone rubber. See enclosure ID Illustration-10 for details.	QMFZ2/8	UL	--
07. Electric Double Layer Capacitors (BT1) (On the MB board)	ELNA CO., LTD.	DSK-3R3K204T614-KL	Rated 3.3 Vdc, 0.2 F	--	--	--
08. Signal transformer (T1) (On the MB board)	Interchangeable	Interchangeable	105 degree C minimum. See enclosure ID Illustration-03 for details.	--	--	--
09. IR LED (Two provided)	Lextar Electronics Corporation	PR35F0A	850nm, 209 mW/sr for each. Exempt Group	--	--	--
10. Internal plastic parts/material	Interchangeable	Interchangeable	HB or HBF minimum	QMFZ2	UL	--
10a. Internal Plastic Part Materials (Optional) (Alternate)	Interchangeable	Interchangeable	Minimum HB or HBF, when plastic parts are separated from electrical parts (other than insulated wires and cables) by at least 13mm of air or by a solid barrier of V-1 class material	QMFZ2	UL	--
10b. Internal Plastic Part Materials (Optional) (Alternate)	Interchangeable	Interchangeable	Flammability level is ignored, when one or more layers of thin insulating material, used	--	--	--

			directly on any surface of V-2 class material within the fire enclosure			
10c. Internal Plastic Part Materials (Optional) (Alternate)	Interchangeable	Interchangeable	Flammability level is ignored, when small parts (1750mm <sup>3</sup> maximum) are mounted on V-1 class material	--	--	--
10d. Internal Plastic Part Materials (Optional) (Alternate)	Interchangeable	Interchangeable	Flammability level is ignored, when small parts (4g maximum or 1750mm <sup>3</sup> max.) are separated from electrical parts (other than insulated wires and cables) by at least 13mm of air or by a solid barrier of V-1 class material.	--	--	--
11. PWB	Interchangeable	Interchangeable	V-1 minimum, 105 degree C minimum.	ZPMV2	UL	--
12. Label	Interchangeable	Interchangeable	70 degree C if maximum surface temperature not specified.	PGDQ2, PGJI2	UL	--
12a. Permanency of Marking (Alternate)	Interchangeable	Interchangeable	Engraved laser marking.	--	--	--
12b. Permanency of Marking (Alternate)	Interchangeable	Interchangeable	Permanently ink-stamped, silk-screened, molded in, or in self-adhesive labels.	--	--	--
13. Interconnecting Cable (Optional)	Interchangeable	Interchangeable	Minimum 70 degree C, minimum 57 V, maximum 3.05 m long, jacketed, VW-1 or FT-1	AVLV2, ZPFW2, DVPJ	UL	--
13a. Interconnecting Cable (Optional) (Alternate)	Interchangeable	Interchangeable	Maximum 3.05 m long, jacketed, type CMP, CMR, CMG, CM, CMX, CMUC, or CMH.	DUZX, ZPFW2, DUXR/2	UL	--
14. Wiring, internal ES1 circuits (Optional)	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min 57 V, 70 degree C.	AVLV2	UL	--
15. Connectors and Receptacles (ES1)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of plastic rated V-2	QMFZ2	UL	--

<b>circuits)</b>			<b>minimum</b>			
<b>15a. Connectors and Receptacles (ES1 circuits) (alternate)</b>	<b>Interchangeable</b>	<b>Interchangeable</b>	<b>Minimum 57 V.</b>	<b>ECBT2, RTRT2</b>	<b>UL</b>	<b>--</b>
<b>15b. Connectors and Receptacles (ES1 circuits) (alternate)</b>	<b>Interchangeable</b>	<b>Interchangeable</b>	<b>--</b>	<b>DUXR2</b>	<b>UL</b>	<b>--</b>
<b>16. Thermal pad (On the Sensor board)</b>	<b>Interchangeable</b>	<b>Interchangeable</b>	<b>Flammability level is ignored, when small parts (4g maximum or 1750mm<sup>3</sup> max.), See enclosure ID Illustration-11 for details.</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>17. Thermal pad (Between MB board and bottom metal enclosure)</b>	<b>Interchangeable</b>	<b>Interchangeable</b>	<b>Flammability level is ignored, when small parts (4g maximum or 1750mm<sup>3</sup> max.), See enclosure ID Illustration-12 for details.</b>	<b>--</b>	<b>--</b>	<b>--</b>

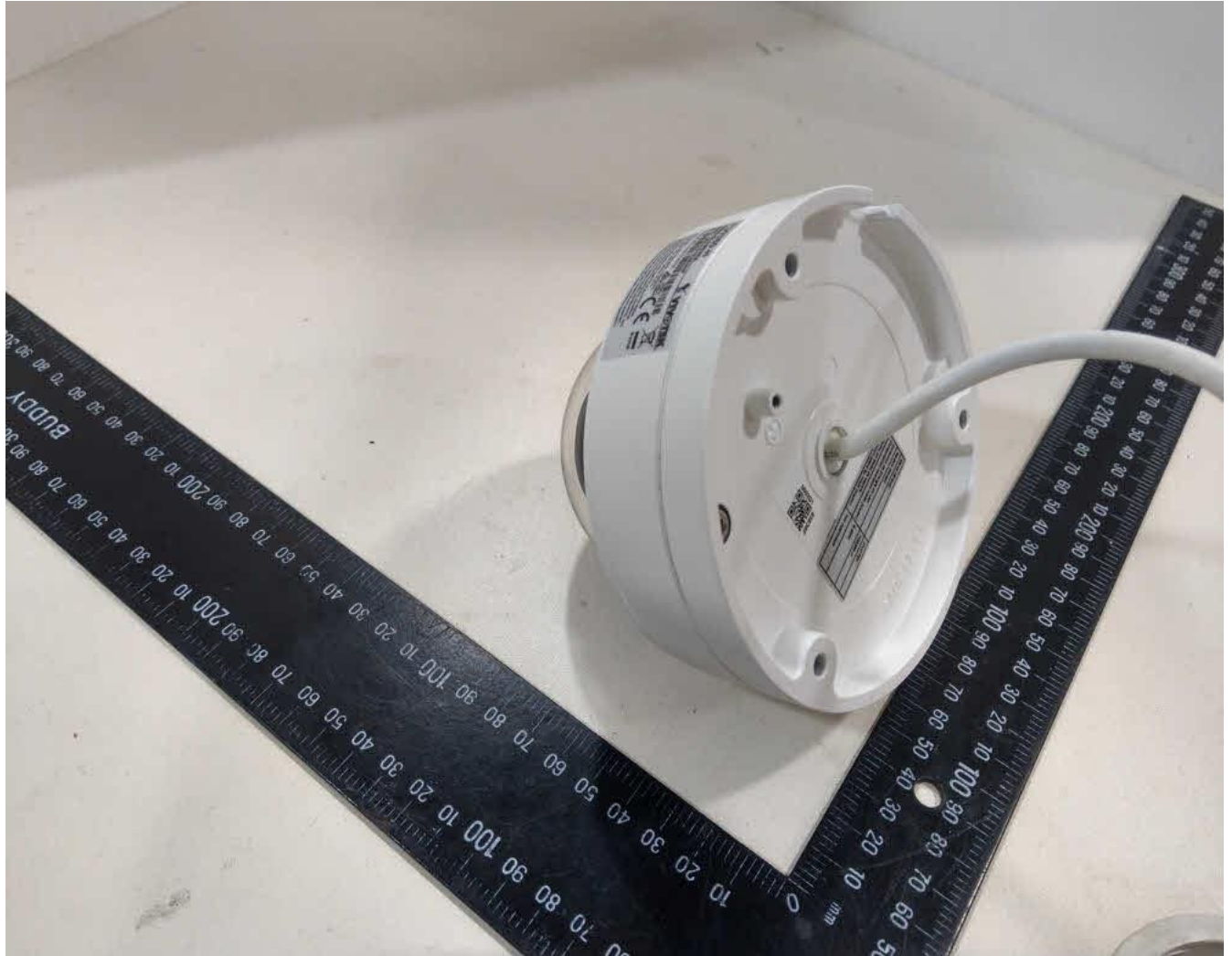
## ENCLOSURES

Type	Supplement Id	Description
Photographs	Figure-01	External overview-1 (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Figure-02	External overview-2 (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Figure-03	External overview-3 (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Figure-04	Internal overview-1 (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Figure-05	Internal overview-2 (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Figure-06	Internal overview-3
	Figure-07	Internal overview-4
	Figure-08	Internal overview-5
	Figure-09	Internal overview-6
	Figure-10	Internal overview-7
	Figure-11	Internal overview-8
	Figure-12	Main board top view
	Figure-13	Main board bottom view
	Figure-14	LED board top view
	Figure-15	LED board bottom view
	Figure-16	Sensor board top view
	Figure-17	Sensor board bottom view
	<b>Figure-18</b>	<b>External overview-1 (for FD9360-H and FD9380-H only)</b>
	<b>Figure-19</b>	<b>External overview-2 (for FD9360-H and FD9380-H only)</b>
	<b>Figure-20</b>	<b>Internal overview-1 (for FD9360-H and FD9380-H only)</b>
Illustrations	Illustration-01	Enclosure drawing (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Illustration-02	Thermal pad drawing (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	Illustration-03	PoE transformer spec (for all models)
	Illustration-04	User's manual (For indoor Models HC30W42R3, FD9360-HNWL, HC30W45R3 and FD9380-HNWL)
	<b>Illustration-05</b>	<b>Top plastic lens cover drawing (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-06</b>	<b>Top metal enclosure drawing (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-07</b>	<b>Bottom metal enclosure drawing (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-08</b>	<b>Gasket (O-ring) (Between lens cover and top metal enclosure) (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-09</b>	<b>Gasket (O-ring) (Between top metal enclosure and bottom</b>

		metal enclosure) (For outdoor Models FD9360-H and FD9380-H)
	<b>Illustration-10</b>	<b>Gasket (O-ring) (On the bottom screw) (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-11</b>	<b>Thermal pad (On the Sensor board) (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-12</b>	<b>Thermal pad (Between MB board and bottom metal enclosure) (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-13</b>	<b>User's manual (For outdoor Models FD9360-H and FD9380-H)</b>
	<b>Illustration-14</b>	<b>Installation Guide (FD9360-H and FD9380-H)</b>



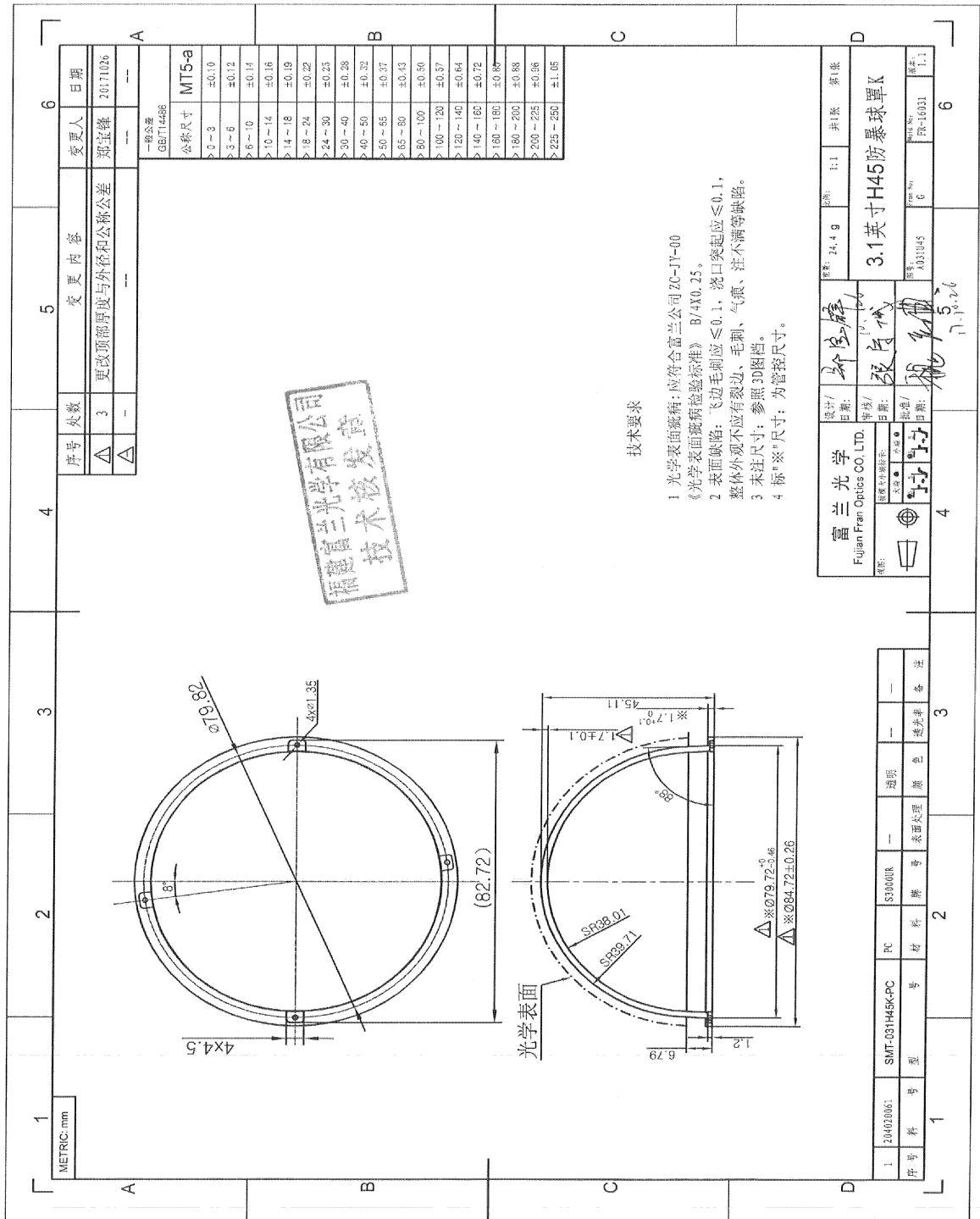
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福建富兰光学有限公司  
技术核发章

富兰光学  
Fujian Fran Optics CO. LTD.

设计/日期: 张有代 / 17.10.26  
审核/日期: 张有代 / 17.10.26  
批准/日期: 张有代 / 17.10.26

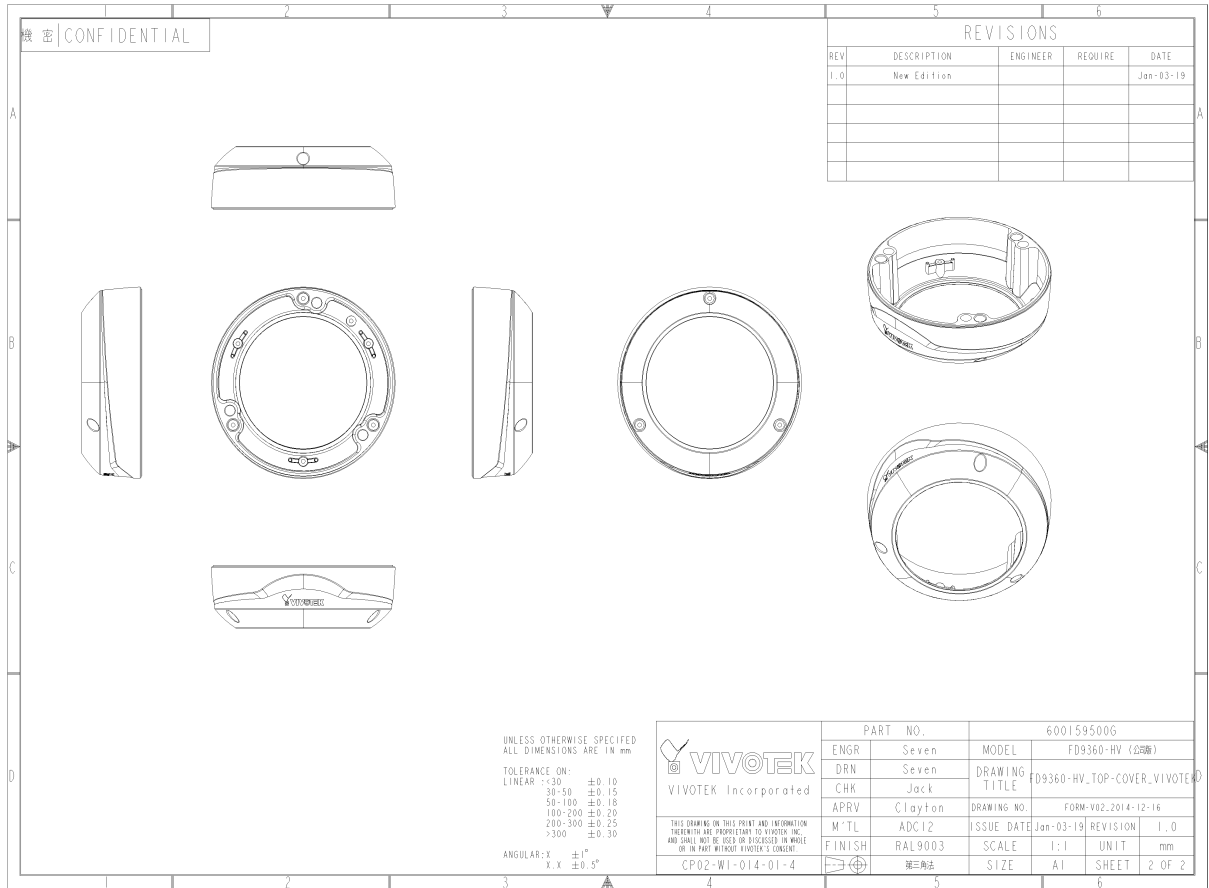
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3.1英寸H45防暴球罩K

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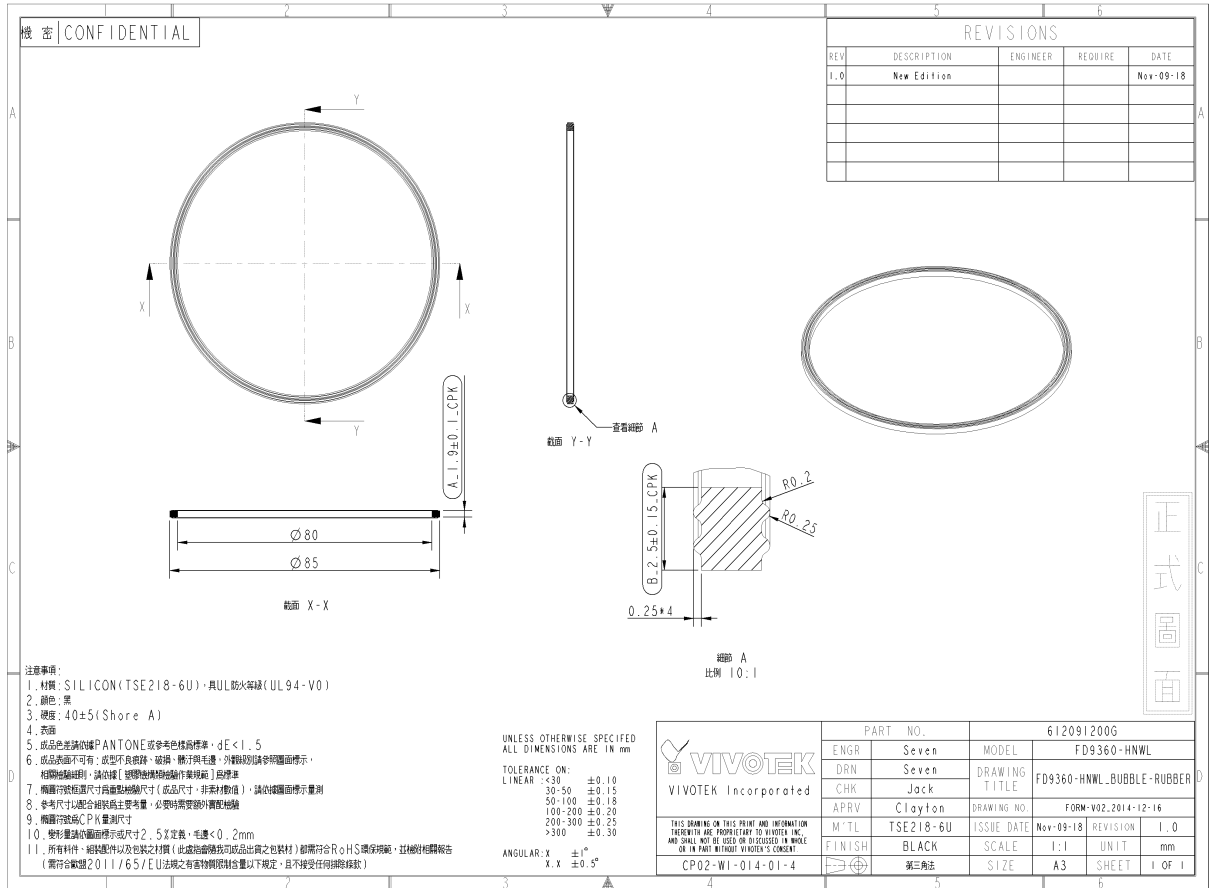
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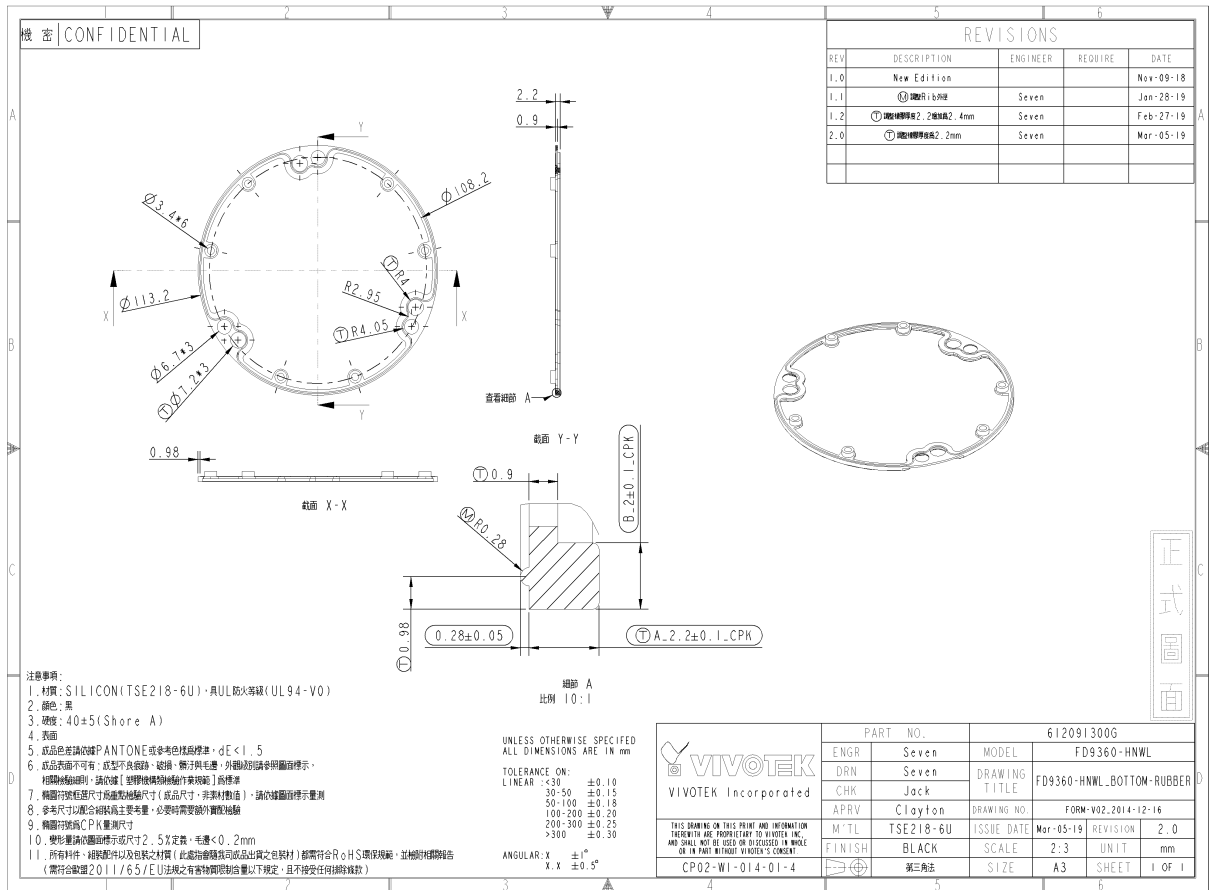


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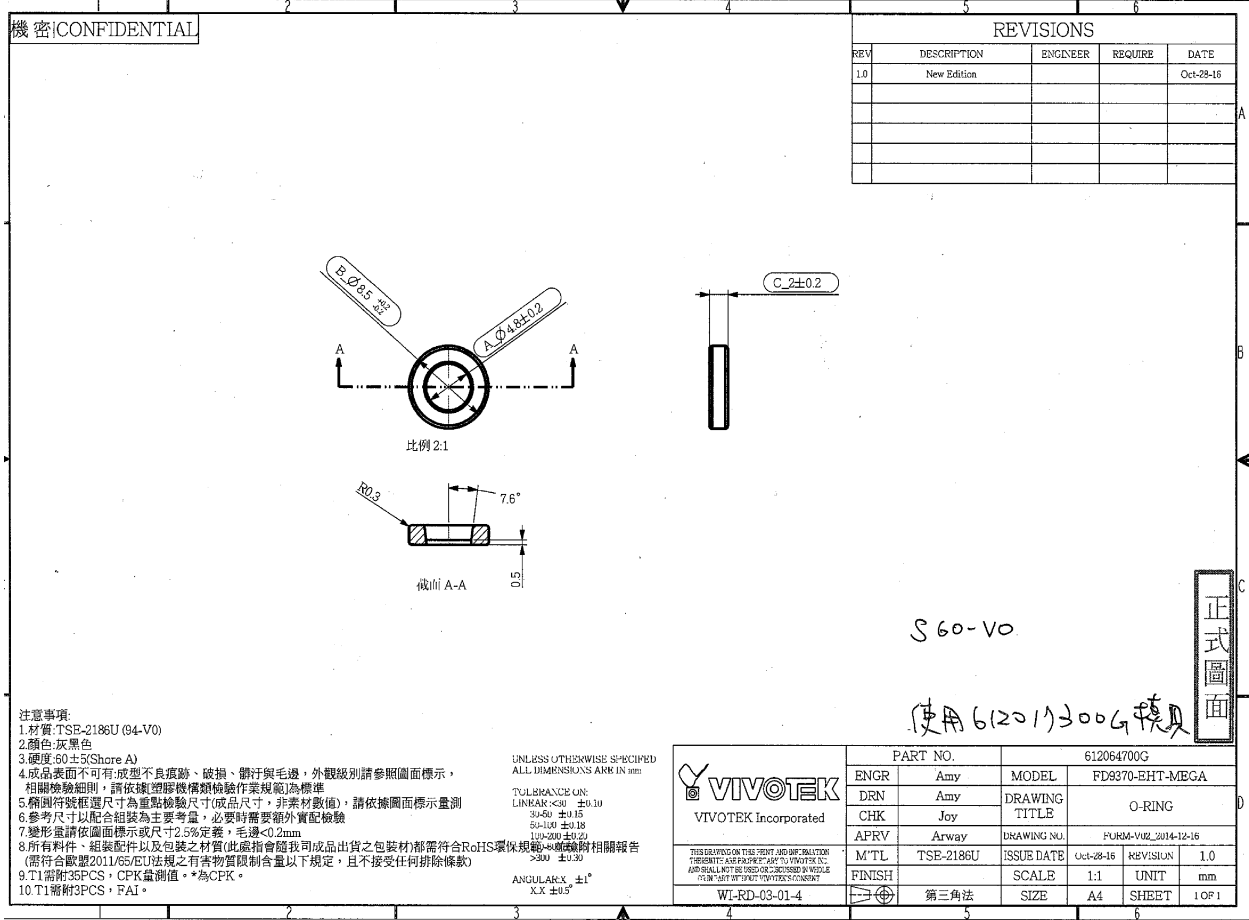




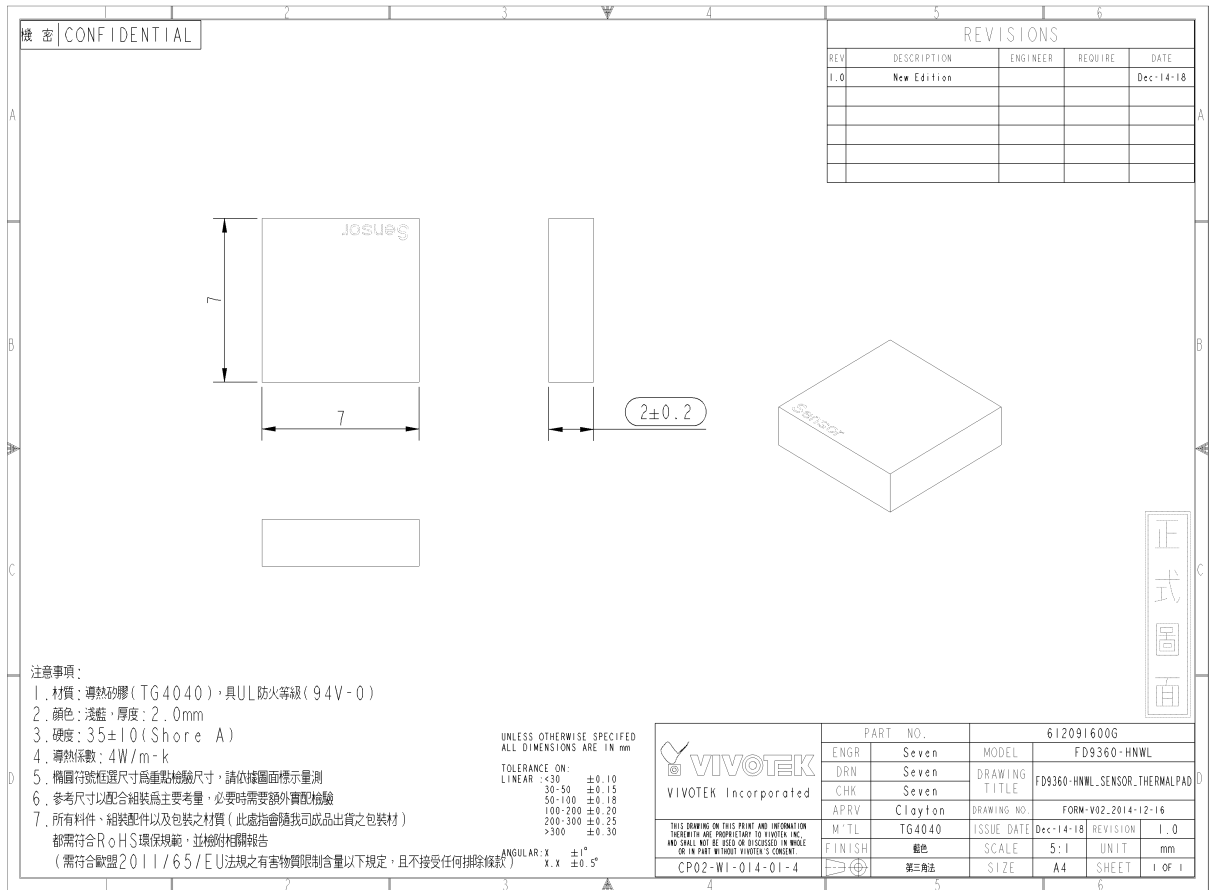
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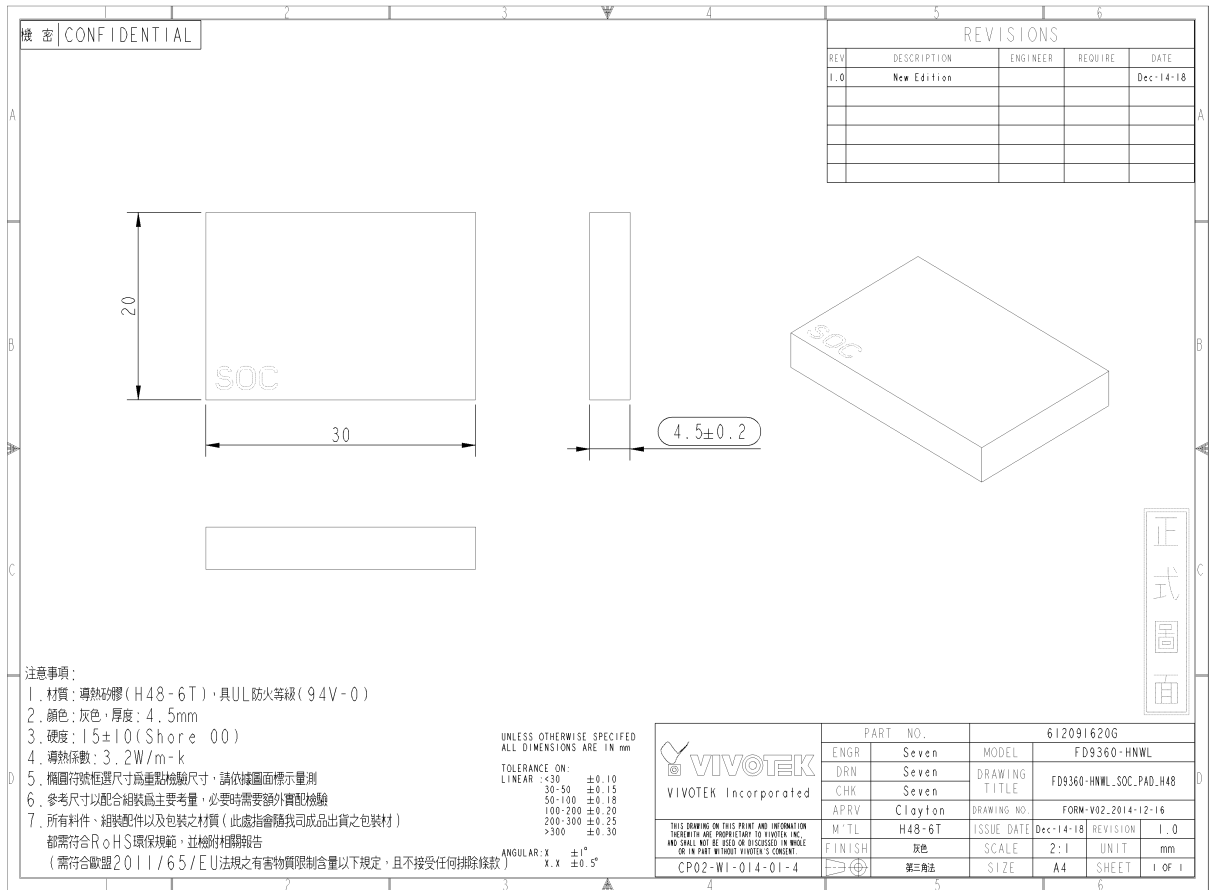
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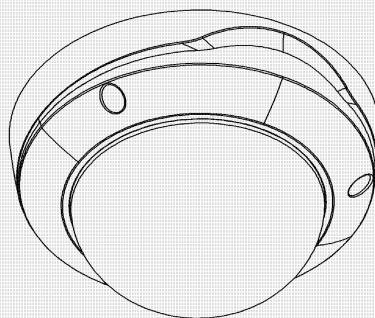


N192004980



FD9360-H  
FD9380-H Fixed Dome Network Camera  
**User's Manual**

5MP/2MP • Outdoor • IP66 • IK10 • Day & Night  
WDR Pro • Smart Stream III • 30M Smart IR



Rev. 1.0

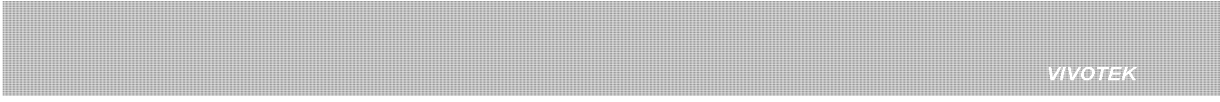
VIVOTEK

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2 - User's Manual

N192004982



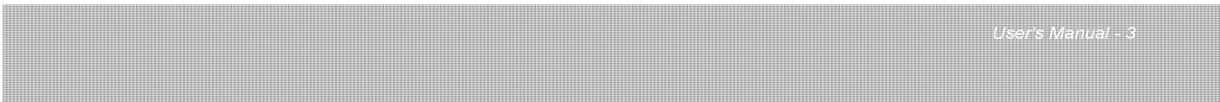
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## Overview

The FD9360 and FD9380 is an outdoor fixed dome network camera capable of 1920 x 1080 at 30 fps, or 2560 x 1920 resolution at 20 fps. At the 5MP resolution and with the WDR function enabled, the frame rate is slightly reduced to 20fps. The firmware comes with another 4MP resolution mode with a 30fps frame rate. With the most updated VIVOTEK WDR Pro technology, the camera series is capable of capturing the highest quality images in both low light and high contrast environments.

The onboard IR can provide illumination in total darkness. With the Smart IR feature, the firmware automatically adjusts the IR intensity for objects that came too close, in order to avoid over-exposure.

The cameras support WDR function at the effectiveness of up to 120dB. These models support local video storage on the MicroSD cards if network service should be interrupted. The cameras also come with configurable motion detection and tampering detection with up to 5 privacy mask areas.



VIVOTEK

## Revision History

- Rev. 1.0: Initial release.

## Read Before Use

The use of surveillance devices may be prohibited by law in your country. The Network Camera is not only a high-performance web-ready camera but can also be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of such devices is legal before installing this unit for its intended use.

It is important to first verify that all contents received are complete according to the Package Contents listed below. Take note of the warnings in the Quick Installation Guide before the Network Camera is installed; then carefully read and follow the instructions in the Installation chapter to avoid damage due to faulty assembly and installation. This also ensures the product is used properly as intended.

The Network Camera is a network device and its use should be straightforward for those who have basic networking knowledge. It is designed for various applications including video sharing, general security/surveillance, etc. The Configuration chapter suggests ways to best utilize the Network Camera and ensure proper operations. For creative and professional developers, the URL Commands of the Network Camera section serves as a helpful reference to customizing existing homepages or integrating with the current web server.

### **IMPORTANT:**

1. The product must be installed and protected in a location that is not easily accessible, and is away from impacts or heavy vibration. For example, at the location where the surveillance cameras are looking down or installed at high positions such as on a wall, or at least 3 meters above the ground.
2. Maintenance and repair work must always be carried out by qualified technical personnel. Disconnect power from the unit when performing a maintenance task.

## Package Contents

- FD9360-H or FD9380-H
- Screw pack and side lid.
- Alignment sticker.
- Quick Installation Guide.
- Waterproof cable gland.

**WARNING:**

1. IR lights emit from this product.
2. Use appropriate shielding or eye protection.

## Symbols and Statements in this Document



**INFORMATION:** provides important messages or advices that might help prevent inconvenient or problem situations.



**NOTE:** Notices provide guidance or advices that are related to the functional integrity of the machine.



**Tips:** Tips are useful information that helps enhance or facilitate an installation, function, or process.



**WARNING: or IMPORTANT:** These statements indicate situations that can be dangerous or hazardous to the machine or you.



**Electrical Hazard:** This statement appears when high voltage electrical hazards might occur to an operator.

**IMPORTANT:**

1. The camera is only to be connected to PoE networks without routing to outside plants.
2. For PoE connection, use only UL listed I.T.E. with PoE output.

1. La caméra ne doit être raccordée qu'à des réseaux PoE, sans routage vers des installations extérieures.
2. Pour les raccordements PoE, utilisez uniquement un équipement de TI homologué UL, avec une sortie PoE.

Use the camera only with a DC power supply that is UL listed, and limited power source (LPS) certified. The power supply should bear the UL listed and LPS marks. The power supply should also meet any safety and compliance requirements for the country of use.

n'utilisez la caméra qu'avec un bloc d'alimentation CC homologué UL, ainsi qu'avec une alimentation limitée (LPS) certifiée. Le bloc d'alimentation doit porter les indications d'homologation UL et LPS. Il doit également répondre aux exigences en matière de sécurité et de conformité relatives au pays d'utilisation.

**VIVOTEK** **FD9360-H, FD9380-H**  
**Quick Installation Guide**

P/N: 02500250G

**Warning Before Installation / Warnung vor der Installation / Waarschuwing voor installatie**

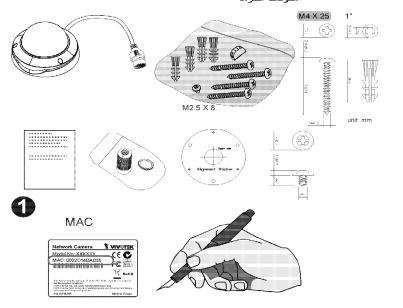
- The product must be installed and protected in a location that is not easily accessible and is away from impact or heavy vibration. For example, at the location where the vibration of a nearby machine is felt or in a room where the machine is located. Das Produkt muss an einem schwer zugänglichen Ort installiert und geschützt werden, der von Stößen oder starken Vibrationen geschützt ist. Zum Beispiel an dem Ort, an dem die Vibrationen eines benachbarten Gerätes zu spüren sind oder in einem Raum, in dem sich das Gerät befindet.
- Do not install the product on an unstable mount or surface. Installieren Sie das Produkt nicht auf einer instabilen Halterung oder Oberfläche. Installeer het product niet op een onstabiele standaard of oppervlakte.
- Do not disassemble the camera or perform maintenance. Zeopen Sie die Kamera nicht. Führen Sie keine Wartungsarbeiten durch, wenn das Gerät an die Stromversorgung angeschlossen ist. Don't deconstruct the camera or do any kind of maintenance work if it is connected to power.

**Zanim začasněm — zalecenia dotyczące bezpieczeństwa / Перед установкой / Upozornění před instalací**

- Produkt należy zamontować i zabezpieczyć w miejscu, które nie jest łatwo dostępne i nie jest narażone na silne wibracje lub uderzenia. Nie przykładaj ręki do kamery, nie wykonuj prac konserwacyjnych ani nie demontuj kamery. Nie należy rozkręcać kamery, nie należy demontować kamery, nie należy demontować kamery. Nie należy demontować kamery. Nie należy demontować kamery.
- Produkt należy zamontować na stabilnym urządzeniu lub powierzchni. Nie należy demontować kamery ani nie demontować kamery. Nie należy demontować kamery. Nie należy demontować kamery.
- Produkt należy zamontować w miejscu, które nie jest łatwo dostępne i nie jest narażone na silne wibracje lub uderzenia. Nie przykładaj ręki do kamery, nie wykonuj prac konserwacyjnych ani nie demontuj kamery. Nie należy rozkręcać kamery, nie należy demontować kamery, nie należy demontować kamery.

**Package Contents / Packungsinhalt / Inhoud van de verpakking**

- Check the contents of the package. / Проверка комплектации / Общახ балани
- Verify the content of the package. / Verifieer het inhoud van de verpakking / Pakettinhåll / Kassens indhold / Комплектация



**インストール前の注意 / 安装前注意 / 安装警告 / 安装前的注意**

- 本产品必须在易于安装且不易接近且远离冲击或重振动的地方安装。例如，在附近可以感觉到振动的地方或在机器所在房间。本产品必须在易于安装且不易接近且远离冲击或重振动的地方安装。例如，在附近可以感觉到振动的地方或在机器所在房间。
- 请勿在不稳定的支架或表面上安装本产品。请勿在不稳定的支架或表面上安装本产品。请勿在不稳定的支架或表面上安装本产品。
- 请勿拆卸摄像机或进行维护。请勿拆卸摄像机或进行维护。请勿拆卸摄像机或进行维护。

**Avvertenza prima dell'installazione / Kurulum Öncesi Uyarılar / Varning innan installation**

- Il prodotto deve essere installato e protetto in un luogo non facilmente accessibile e lontano da fonti di urti o vibrazioni. Per esempio, in luoghi in cui le vibrazioni di un macchinario vicino al prodotto sono avvertibili o in un ambiente dove il prodotto è esposto a urti o vibrazioni. Il prodotto deve essere installato e protetto in un luogo non facilmente accessibile e lontano da fonti di urti o vibrazioni.
- Non smontare la fotocamera o eseguire attività di manutenzione quando l'alimentazione è collegata. Non smontare la fotocamera o eseguire attività di manutenzione quando l'alimentazione è collegata. Non smontare la fotocamera o eseguire attività di manutenzione quando l'alimentazione è collegata.

**Avertissement avant installation / Aviso antes da instalação / Advertencia antes de la instalación**

- Le produit doit être installé et protégé dans un endroit difficilement accessible, à l'écart des chocs et des vibrations importantes. Par exemple, à l'endroit où les vibrations d'un appareil voisin sont ressenties ou dans un environnement où le produit est exposé à des chocs ou à des vibrations importantes. Le produit doit être installé et protégé dans un endroit difficilement accessible, à l'écart des chocs et des vibrations importantes.
- Né démontez pas la caméra et n'effectuez pas de travaux de maintenance lorsque celle-ci est sous tension. Né démontez pas la caméra et n'effectuez pas de travaux de maintenance lorsque celle-ci est sous tension. Né démontez pas la caméra et n'effectuez pas de travaux de maintenance lorsque celle-ci est sous tension.

**Advarsel inden installation / Peringatan Sebelum Pemasangan**

- Das Produkt muss an einem schwer zugänglichen Ort installiert und geschützt werden, der von Stößen oder starken Vibrationen geschützt ist. Zum Beispiel an dem Ort, an dem die Vibrationen eines benachbarten Gerätes zu spüren sind oder in einem Raum, in dem sich das Gerät befindet. Das Produkt muss an einem schwer zugänglichen Ort installiert und geschützt werden, der von Stößen oder starken Vibrationen geschützt ist.
- Das Produkt sollte in Überlebensumgebung mit dem richtigen Gewicht installiert werden. Das Produkt sollte in Überlebensumgebung mit dem richtigen Gewicht installiert werden. Das Produkt sollte in Überlebensumgebung mit dem richtigen Gewicht installiert werden.

**Hardware Installation / Hardwareinstallation / Hardware installeren**

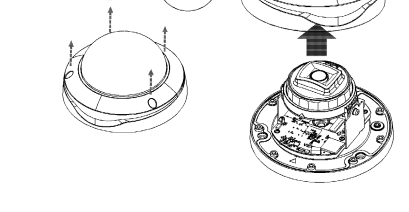
**硬体安装 / ハードウェア / インストール**

**Instalación de material / Instalacao de Hardware / Instalación del hardware**

**Instalatione aparatur / Монтаж оборудования / Instalace hardwaru**

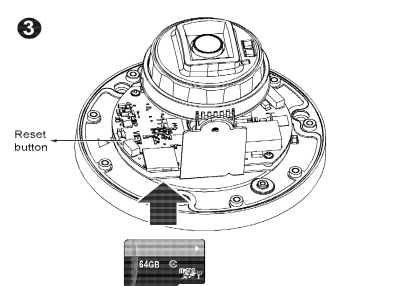
**Installation hardware / Donanım Montajı / Installation av hårdvara**

**Installation af hardware / Pemasangan Perangkat Keras**



**NOTE:**

- The camera is only to be connected to PoE networks without routing to outside plants.
- For PoE connection, use only UL listed I.T.E. with PoE output.
- If powered by a power adapter, the adapter should be properly grounded.



TEST RECORD NO. 2

SAMPLES:

The manufacturer submitted representative production samples of 1. IR Dome 2MP, 2.8mm; 2. IR Dome 5MP, 2.8mm; 3. Network Camera, Model 1. HC30W42R3, FD9360-HNWL; 2. HC30W45R3, FD9380-HNWL; 3. FD9360-H, FD9380-H, employed for:

- (1) Add new model names: FD9360-H and FD9380-H.
- (2) Add new produce name: Network Camera for the new models use.
- (3) Add rating for the new models use.
- (4) Add Outdoor investigation for the new models.

GENERAL:

Test results relate only to the items tested.

Unless otherwise noted, all clauses and tests were not considered necessary based upon previous evaluation under the CB scheme. The CB Scheme Test Certificate Ref. No. DK-88581-UL, dated 2019-10-16, and Report Ref. No. CB1291907086B, dated 2019-10-09 was prepared by UL(Demko).

The Construction Review had completed during the CB certification. Also, sample was reviewed at the client side during the investigation of witness trip.

[ ] Tests were considered covered as follows:

Test	File Reference	Report Date	Test Record No.

The test methods and results of the above tests have been reviewed and found in accordance with the requirements in CAN/CSA C22.2 NO. 62368-1-14, Edition 2, Issue Date 2014/12/01, UL 62368-1, Edition 2, Issue Date 2014/12/01.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Report by:

Jones Chang

Project Engineer  
Conformity Assessment Services

Reviewed by:

Chris Kao

Senior Project Engineer  
Conformity Assessment Services