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晶睿通訊股份有限公司

MS. JOANNE CHANG, SENIOR SPECIALIST



MS. JOANNE CHANG, SENIOR SPECIALIST
 VIVOTEK INC
 6TH FL, 192 LIEN CHENG RD
 CHUNG HO DISTRICT
 NEW TAIPEI
 235 TAIWAN

Date: 2012/12/06
 Subscriber: 100504413
 PartySite: 1733621
 File No: E324690
 Project No: 12CA60817
 PD No: 12047927
 Type: R
 PO Number: P121016-01

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>
	X2		Index Page(s)	
2012/12/06	X2	A37	Cert of Compliance	
2012/12/06	X2	A37	Add New Proc/Report Sect	

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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.

Please review this material and report any inaccuracies to UL's Customer Service Professionals. Contact information for all of UL's global offices can be found at <http://www.ul.com/global/eng/pages/corporate/contactus>.

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TPI File

File		Volume	Page	Date:
E324690	Index	X2	1	2012-12-06

Index

Product Type	Model/Type Reference	Report Reference #	Status
Outdoor Network Camera	IP8330, IP8332	E324690-A4-UL	
Network Camera	IP8162, IP8162P, CIVS-IPC-6000P	E324690-A9-UL	
Network Camera	FD8162, FD8162V, FD8362, FD8362E, CIVS-IPC-6020, CIVS-IPC-6030, CIVS-IPC-3530, CIVS-IPC-3520	E324690-A10-UL	
Network Video Recorder	NR8201, NR8301	E324690-A12-UL	
Network Camera	IP8352	E324690-A13-UL	
Network Camera	FE8171V	E324690-A15-UL	
Video Encoder, 4 Port, Standalone; Video Encoder, 8 Port, Standalone	CIVS-SENC-4P-K9, CIVS-SENC-8P-K9, CIVS-SENC-4P, CIVS-SENC-8P	E324690-A16-UL	
Network Camera	1) MD8562 2) MD8562D	E324690-A17-UL	
Network Camera	IP8362	E324690-A18-UL	
Network Camera	IK-WD14A, IK-WR14A	E324690-A21-UL	
Outdoor Dome Network Camera	FD8372; CIVS-IPC-7030	E324690-A22-UL	
Network Camera	FE8172, FE8172V	E324690-A25-UL	
Network Camera	IP8332-C	E324690-A28-UL	
Outdoor Speed Dome Network Camera	SD833XE (X = 0~9, A~Z or blank)	E324690-A29-UL	
Network Camera	IP8172, IP8172P	E324690-A30-UL	
Network Camera	CIVS-IPC-6400	E324690-A31-UL	
Network Camera	CIVS-IPC-3421V	E324690-A33-UL	
Indoor Dome Network Camera	FD8136-FXX (The XX=0-9, A-Z or blank for marketing purpose)	E324690-A34-UL	
Network Camera	IP8372	E324690-A37-UL	

CERTIFICATE OF COMPLIANCE

Certificate Number 20121206-E324690
Report Reference E324690-A37-UL
Issue Date 2012-DECEMBER-06

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


This is to certify that representative samples of INFORMATION TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL BUSINESS EQUIPMENT
Network Camera: IP8372

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

Standard(s) for Safety: UL 60950-1 - Information Technology Equipment - Safety - Part 1: General Requirements
CSA C22.2 No. 60950-1-07 - Information Technology Equipment - Safety - Part 1: General Requirements

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.

The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with "C" and "US" identifiers:  the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.



William R. Carney, Director, North American Certification Programs
UL LLC

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UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	NWGQ, NWGQ7 (Information Technology Equipment Including Electrical Business Equipment)
Product:	Network Camera
Model:	IP8372
Rating:	Optional, (1) 12Vdc, 0.82A (2) 24Vac, 0.83A, 50-60 Hz (3) 48Vdc, 0.246A (For POE)
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.

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

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Prepared by: Hans Chen

Reviewed by: Eric Liu

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

The equipment is a Class III Network Camera, consists of electronic components mounted on PWB and is equipped with a progressive scan CMOS sensor then housed within metal enclosure, also provides a General I/O block and RJ45 Cable Connector, which is used to connect external input/output devices. The EUT installs to the wall. The power source can choose to use POE or external AC power adapter.

Model Differences

N/A

Technical Considerations

- Equipment mobility : fixed
- Connection to the mains : NA
- 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 (A) : N/A

- Pollution degree (PD) : PD2
- IP protection class : IP 67
- Altitude of operation (m) : Up to 2000 meters
- Altitude of test laboratory (m) : Less than 2000 meters
- Mass of equipment (kg) : 1.13 kg (Unit only), 0.464 kg (for Mounting Means)
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50 degree C
- The product was investigated to the following additional standards: 1) IEC 60529, Degrees of Protection Provided by Enclosures, Edition 2.1, Revision Date October 2009 (IP Code); , 2) UL60950-22, Information Technology Equipment - Safety - Part 22: Equipment to be Installed Outdoors, Edition 1, Issue Date April 23, 2007.
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All output ports
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
- The power supply in this equipment was: Investigated to UL 60950-1 earlier, edition (2nd edition). As part of the investigation of this product, the power, supply and its test report were reviewed and found to comply with UL 60950-1, latest effective edition/revision.
- The outdoor equipment/enclosure is: IP rated 67
- The outdoor equipment/enclosure has a minimum ambient of: -33 degree C
- Based upon the product specification provided by the manufacturer, this unit is intended to be supplied by an UL Listed power supply suitable for use at Tma 50 degree C whose output meets SELV, and is rated 48Vdc, 0.246A (for POE) /24Vac, 0.83A, 50-60Hz /12Vdc, 0.82A.
- Additional considerations taken from the UL Application Guideline: Certification of Information Technology Equipment Installed Outdoors.
- For the compliance with UL 60950-22, all interconnecting cables are to be routed inside UL Listed flexible conduits marked "outdoor".

Additional Information

- All related test and consideration of UL 60950-22 for outdoor use refer to Report E324690-A31.

- The protection against water test of IEC 60529 is considered to be representative of IEC 60950-22 Annex B test.

- The enclosure material is made of aluminum and considered to be complying with outdoor corrosion requirements.

Additional Standards

The product fulfills the requirements of: 1) IEC 60529, Degrees of Protection Provided by Enclosures, Edition 2.1, Revision Date October 2009 (IP Code); 2) UL60950-22, Information Technology Equipment - Safety - Part 22: Equipment to be Installed Outdoors, Edition 1, Issue Date April 23, 2007.

Markings and instructions

Clause Title	Marking or Instruction Details
Inter-connecting cables - External detachable	Listee's Name and Part number (Marking or Instruction)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Instruction/Installation/Safety	<p>Instruction/Installation/Safety Manual shall be shipped with unit.</p> <p>If the power adapter doesn't ship with the unit, the user manual shall have the description as below or equivalent: "This product is intended to be supplied by a Listed Power Adapter with LPS, rated 12Vdc, 0.82A minimum or 48Vdc, 0.246A (for POE) minimum or 24Vac, 0.83A, 50-60Hz minimum."</p>
Manual	See enclosure 6-01.

Special Instructions to UL Representative

N/A

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
N/A	--	--	--	--	--	--
<u>Earthing Continuity Test Exemptions - This test is not required for the following models:</u>						
See models and rating						
<u>Electric Strength Test Exemptions - This test is not required for the following models:</u>						
See models and rating						
<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>						
--						
<u>Sample and Test Specifics for Follow-Up Tests at UL</u>						
Model	Component	Material	Test	Sample(s)	Test Specifics	
N/A	--	--	--	--	--	

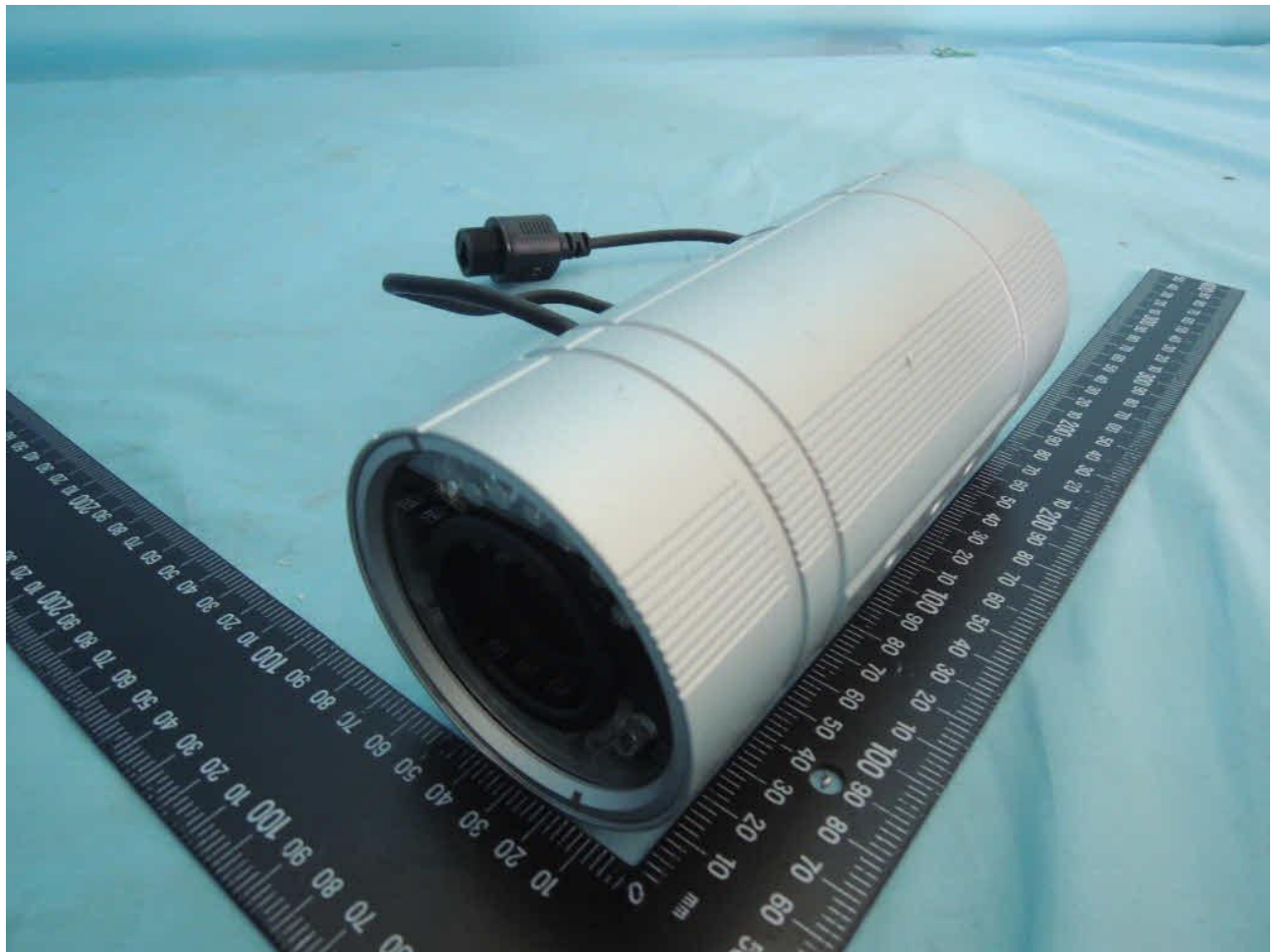
TABLE: List of Critical Components

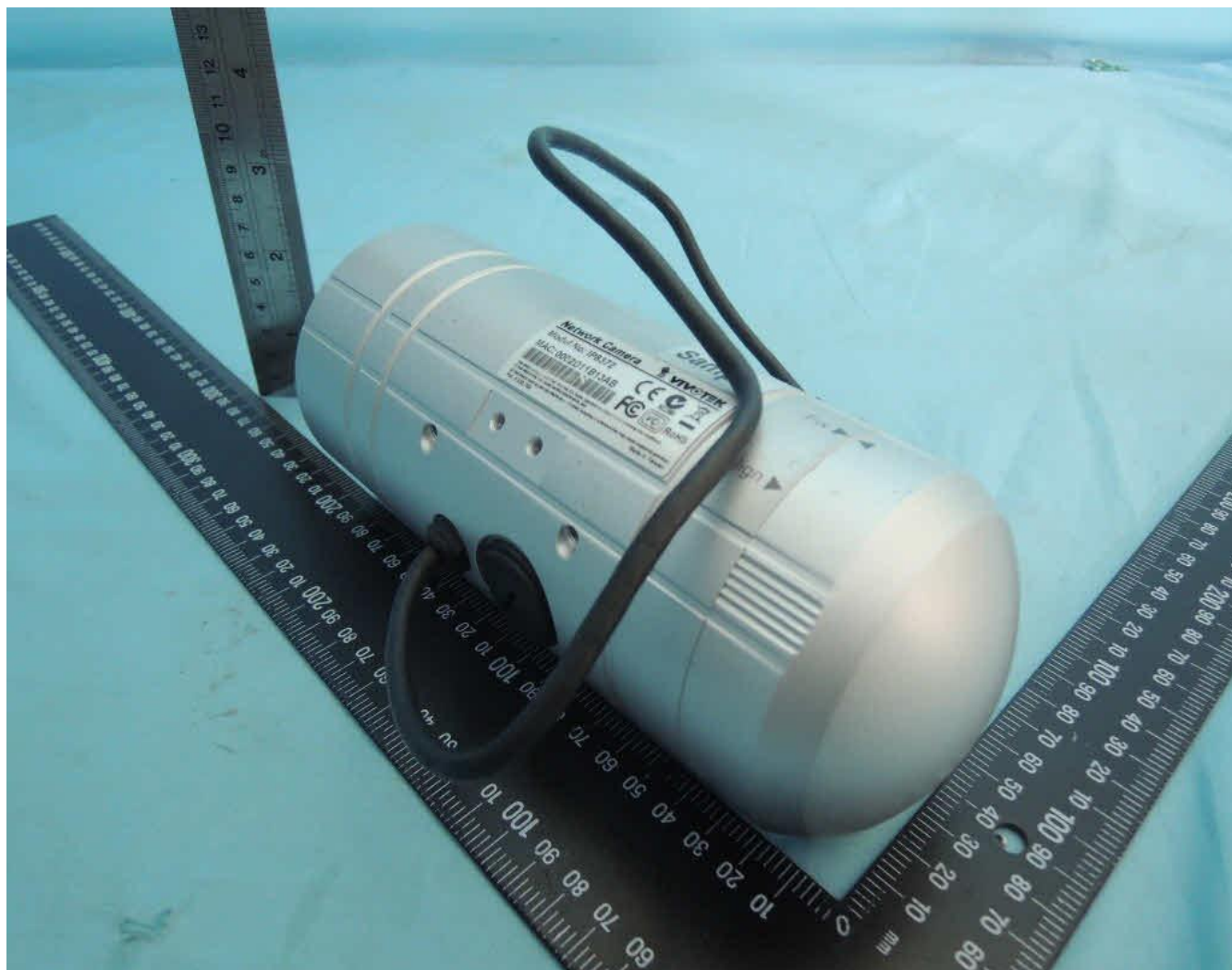
Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
01. Power Adapter (optional)	--	--	O/P: 12Vdc, 0.82A minimum, Marked with "LPS" or "Limited Power Source" or complied with "Limited Power Source" checked by inspection. Tma: 50 degree C	QQGQ	UL
02. Power from AC source (optional)	--	--	O/P: 24Vac, 50-60Hz, 0.83A minimum, Marked with "LPS" or "Limited Power Source" or complied with "Limited Power Source" checked by inspection. Tma: 50 degree C	QQGQ	UL
03. Label	Various	Various	60 degree C if max. Surface temperature is not specified.	PGDQ2, PGJ12	UL
04. Metal Enclosure	--	--	Aluminium alloy, 1.9 mm thickness minimum, overall see Enclosure /Diagrams ID 4-01 for details	--	--
05. Wiring, internal secondary SELV circuits	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1 or FT-1, min. 30V, 80 degree C	AVLV2	UL
06. Internal Plastic Part/Materials	Various	Various	Rated HB min.	QMFZ2	UL
07. PWB	--	--	V-1 or better, 105 degree C min.	ZPMV2	UL
08. Transformer of PoE Board (T1)	Coilcraft Inc.	POE13F-12L	105 degree C. See Enclosure /Diagrams ID 4-02 for details.	--	--
08a. Transformer of PoE Board (T1) (alternate)	Acroparts Technology Co., Ltd.	POE13F-12L (13W12V)	105 degree C. See Enclosure /Diagrams ID 4-03 for details.	--	--
09. Connectors and Receptacles (secondary SELV circuits)	Various	Various	Metal/Plastics, Copper alloy pins housed in bodies of plastic rated V-2 min.	DUXR2, RTRT2, ECBT2, QMFZ2	UL
10. Interconnecting Cable (Optional)	Various	Various	Minimum 60 degree C, 30V minimum, maximum 3.05 m long, VW-1 or FT-1 or better.	AVLV2, ZPFW2	UL
10a. Interconnecting Cable (Optional) (alternate)	Various	Various	Maximum 3.05 m long, type CMP, CMR, CMG, CM, CMX, CMUC, or CMH.	DUZX, ZPFW2, DUXR, DUXR2	UL
11. Liquid-tight plug (for General I/O Terminal)	AVC INDUSTRIAL CORP.	SPG-M20-B-V0F1	Polyamide 66, overall see Enclosure /Diagrams ID 4-04 for details.	--	--

Object/part or Description	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
(not necessary if Cable Glands is appear)					
11-1. Rubber Washer (located on Liquid-tight plug) (optional)	AVC INDUSTRIAL CORP.	P-WS-M20-U-SG-V0	Silicone, overall see Enclosure /Diagrams ID 4-05 for details.	--	--
11-1-1. Material of Rubber Washer (located on Liquid-tight plug)	Dow Corning Toray Co Ltd	SH881U	HB min., 80 degree C.	QMFZ2	--
11a. Cable Glands (alternate)	AVC INDUSTRIAL CORP.	MG20A-14-ST	V-2 min., 80 degree C.	QCRV	--
12. O-ring (near Len cover) (near General I/O Terminal) (optional)	CHEN YUAN HSING YEH CO., LTD.	612025700G	Silicone, overall see Enclosure /Diagrams ID 4-06 for detail.	--	--
12-1. Material of O-ring (near Len cover)	Momentive Performance Materials Japan L L C	TSE221-5U	HB min., 150 degree C.	QMFZ2	--
13. Rubber Washer (located on RJ45 connector cable) (optional)	AVC INDUSTRIAL CORP.	P-WS-M10-SG-V0	Silicone, overall see Enclosure /Diagrams ID 4-07 for details.	--	--
13-1. Material of Rubber Washer (located on RJ45 connector cable)	Dow Corning Toray Co Ltd	SH881U	HB min., 80 degree C.	QMFZ2	--
14. Wall mounting mean	--	--	Aluminum. Overall see Enclosure /Diagrams ID 4-08 for details.	--	--
15. Lens cover	--	--	Glass.	--	--

Enclosures

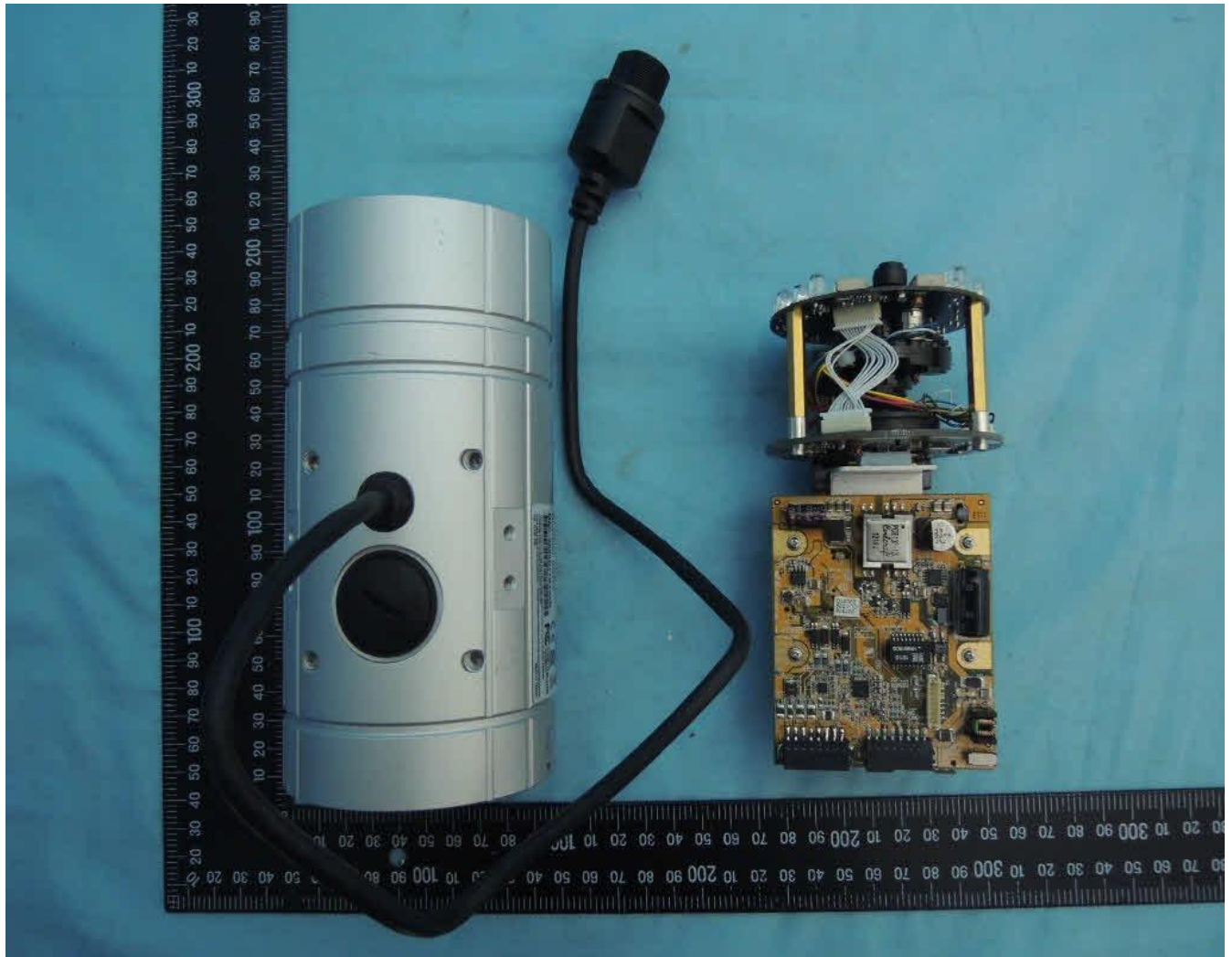
<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Overall view-1
Photographs	3-02	Overall view-2
Photographs	3-03	Connector view
Photographs	3-04	Internal view-1
Photographs	3-05	Internal view-2
Photographs	3-06	Mainboard view-1
Photographs	3-07	Mainboard view-2
Photographs	3-08	I/O Board view-1
Photographs	3-09	I/O Board view-2
Photographs	3-10	Sensor Board view-1
Photographs	3-11	Sensor Board view-2
Photographs	3-12	LED Board view-1
Photographs	3-13	LED Board view-2
Diagrams	4-01	Enclosure with mounting kit drawing
Diagrams	4-02	T1 Spec. Coilcraft Inc. PN: POE13F-12L
Diagrams	4-03	T1 Spec. Acroparts Technology Co., Ltd. PN: POE13F-12L
Diagrams	4-04	Liquid-tight Plug (for General I/O Terminal) drawing
Diagrams	4-05	Rubber Washer (located on Liquid-tight Plug) drawing
Diagrams	4-06	O-ring (near Len cover) (near General I/O Terminal) drawing
Diagrams	4-07	Rubber Washer (located on RJ45 connector cable) drawing
Diagrams	4-08	Wall Mounting Means drawing
Schematics + PWB		
Manuals	6-01	Installation manual
Miscellaneous	7-01	Part 22 TRF report
Miscellaneous	7-02	Additional Table
Miscellaneous	7-03	IP67 Letter Report

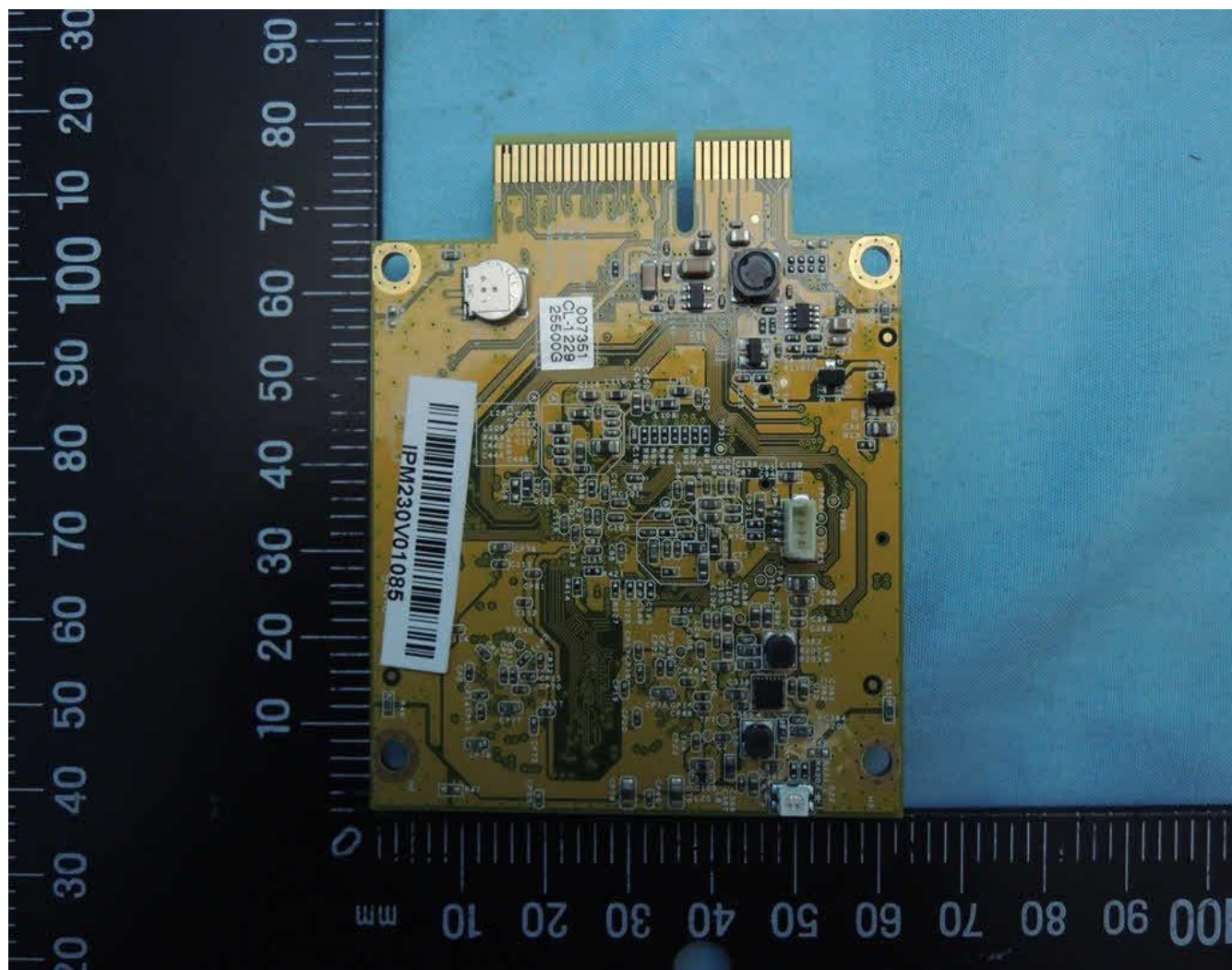


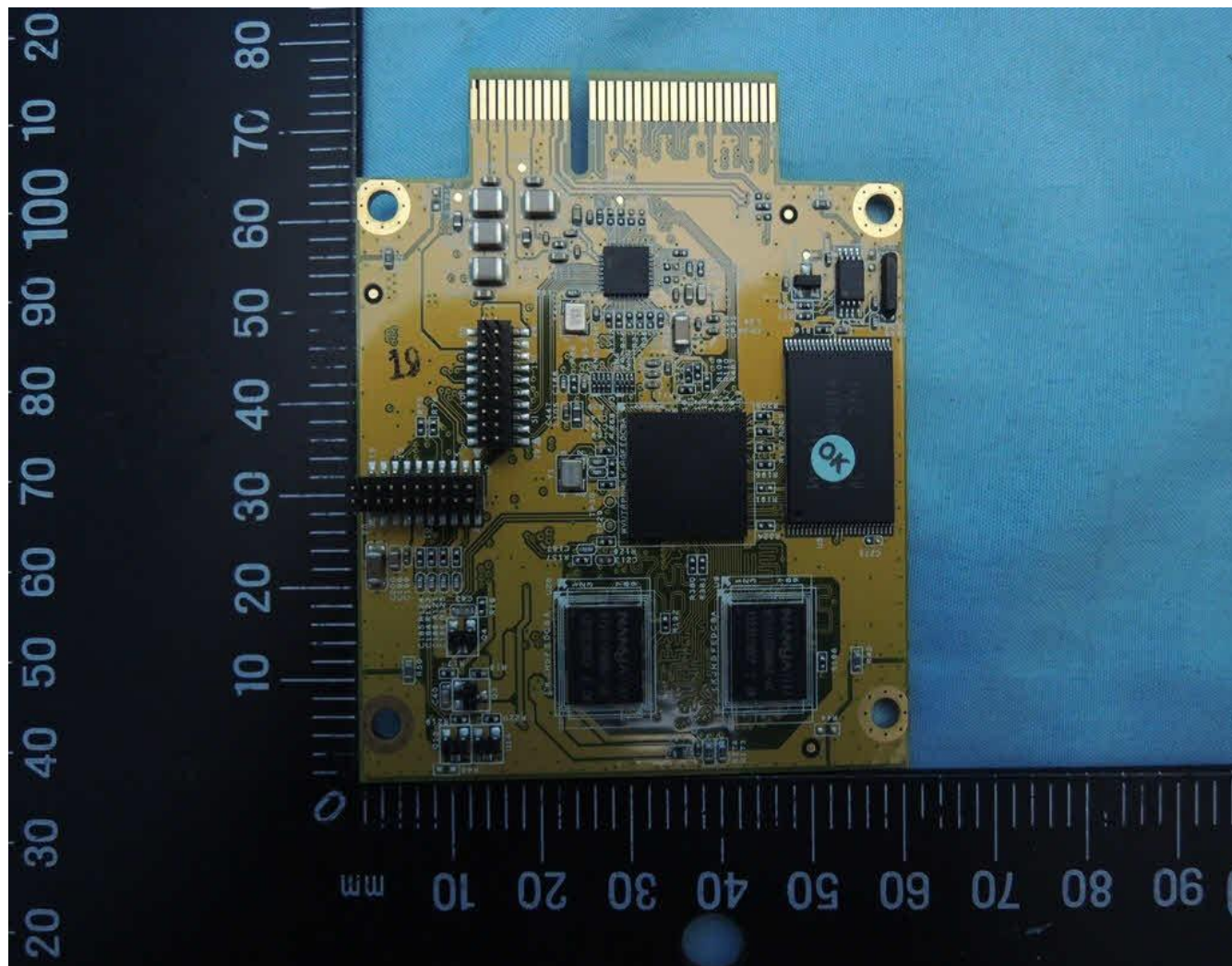


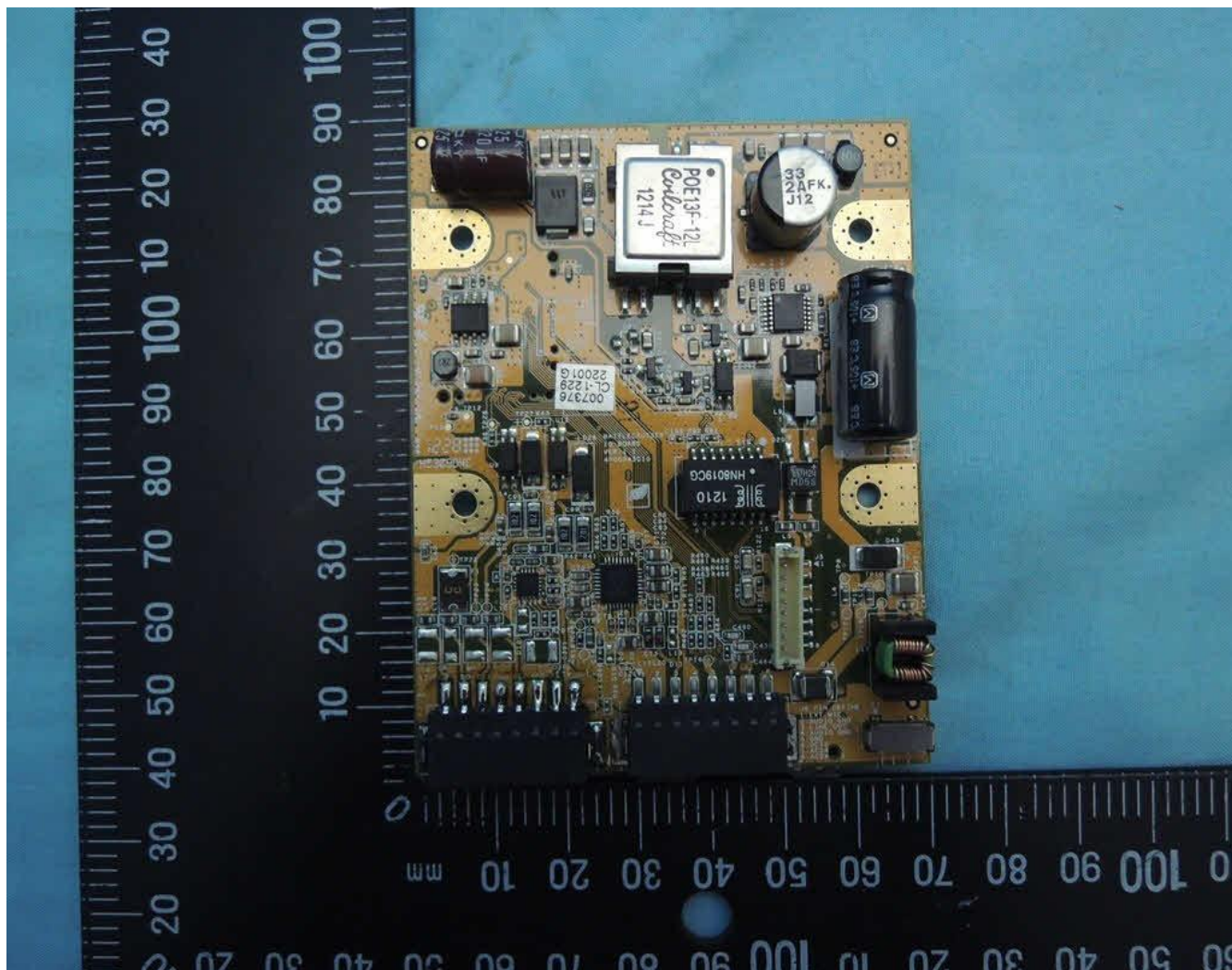


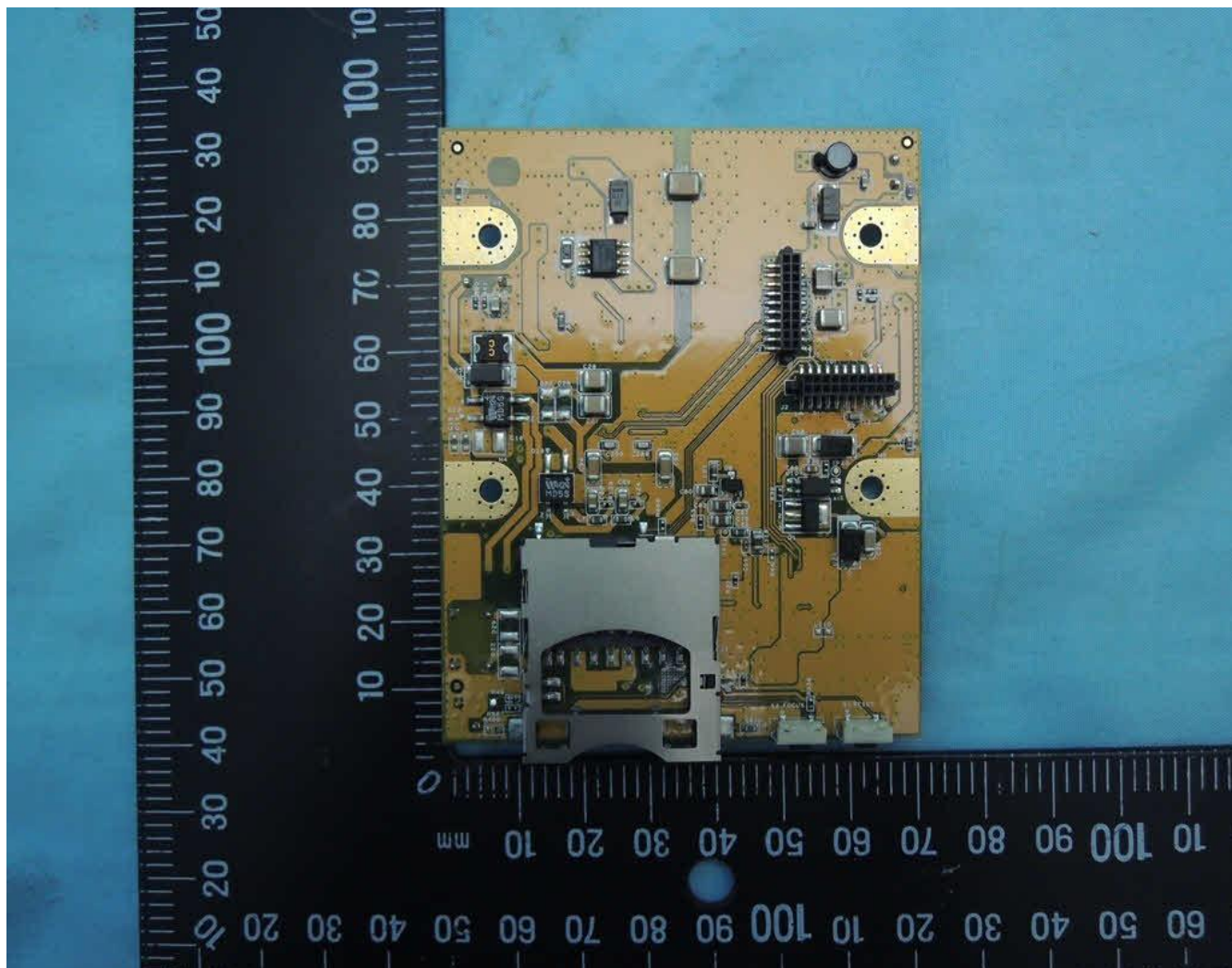


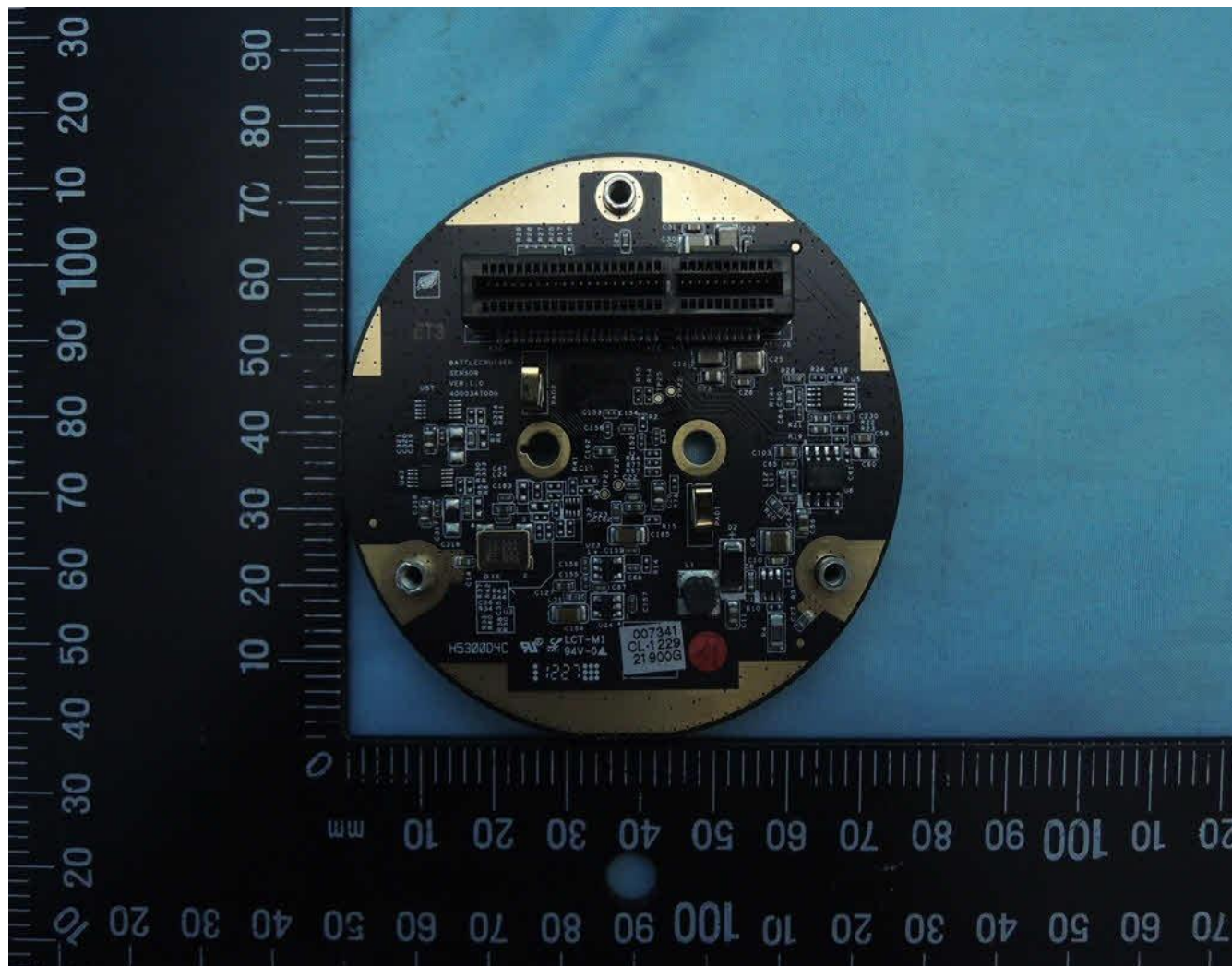


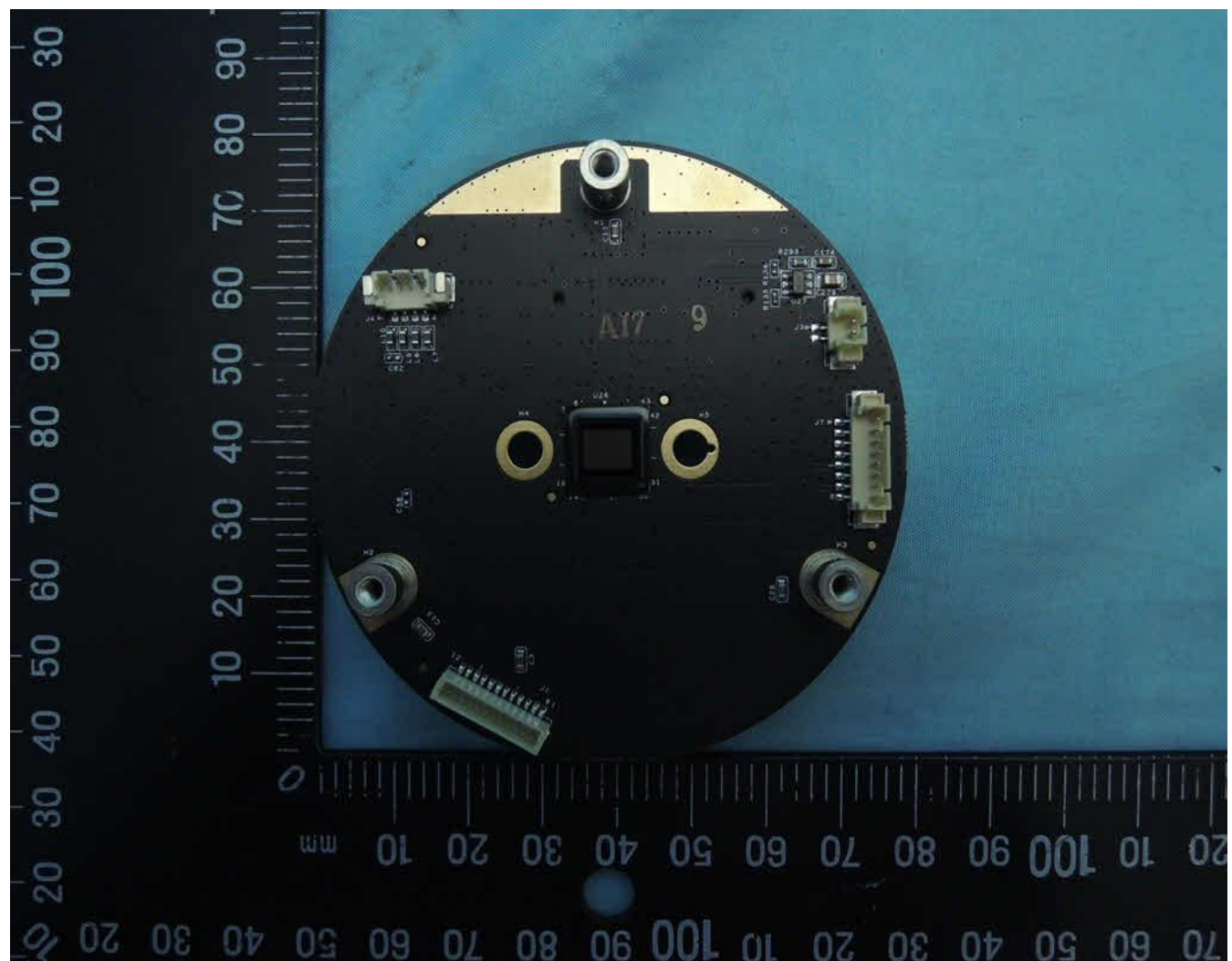


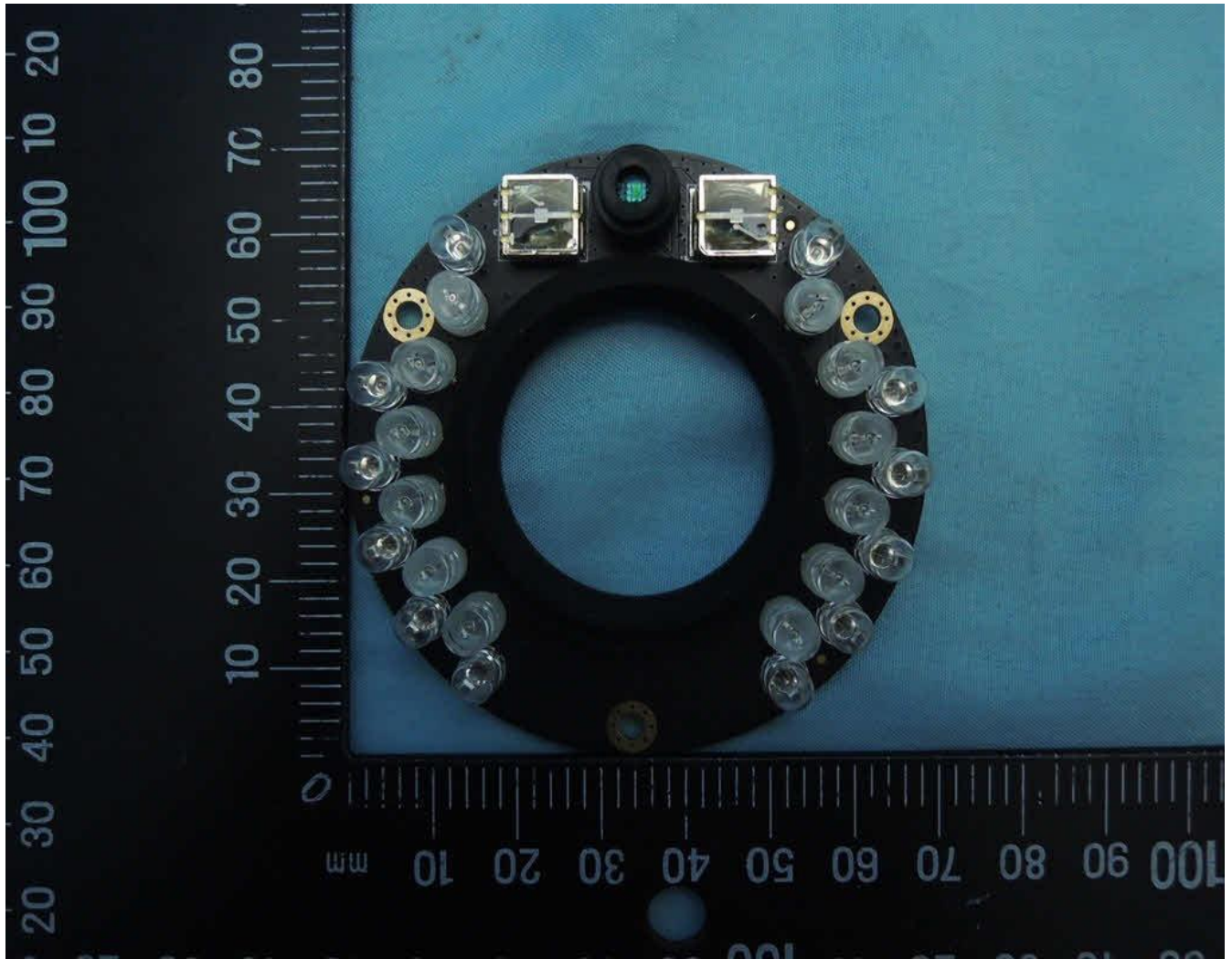


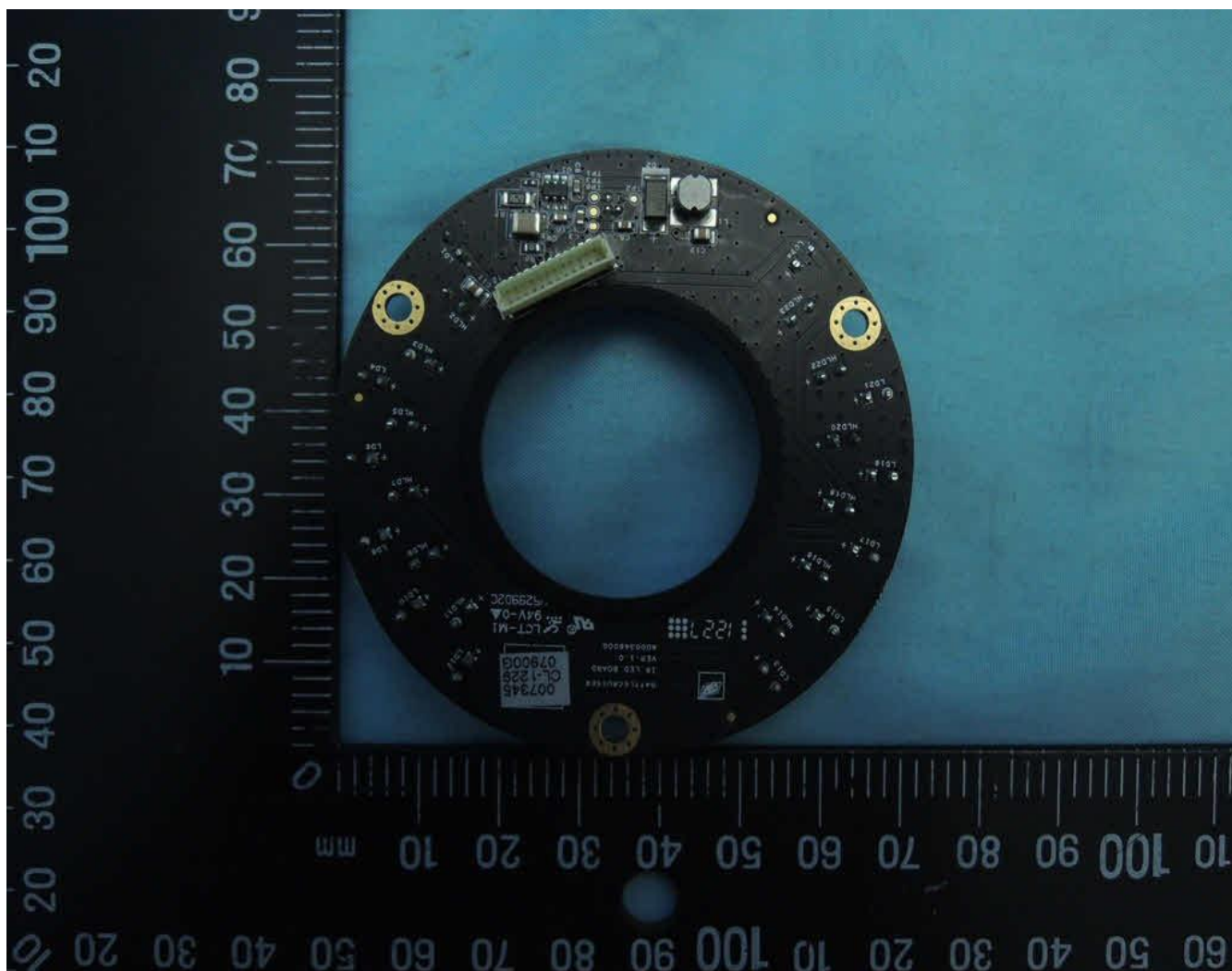




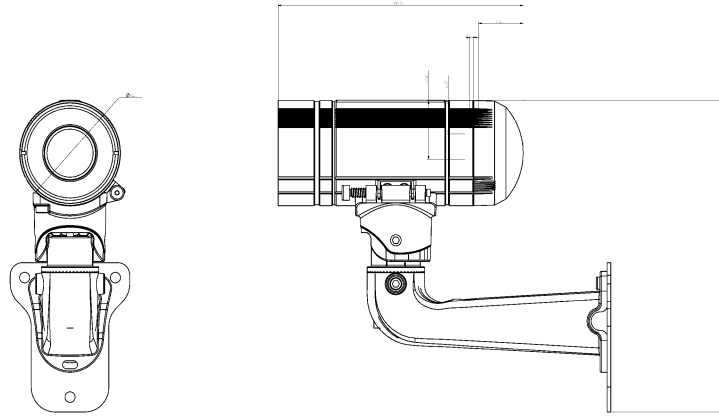








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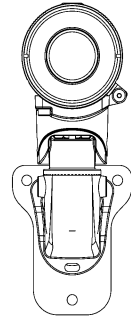
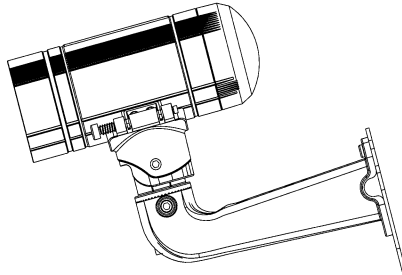
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50-100 ±	0.18
100-200 ±	0.20
200-300 ±	0.25
>300 ±	0.30

ANGULAR X ± °

XX ±	0.5°
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	DRN	Jack Chan				
	CHK	Joy				
APRV	Arway	DRAWING NO.				
MTL		ISSUE DATE		REV.		
FINISH		SCALE		1.000	UNIT	mm
WI-RD-03-01-3	第二角法	SIZE	A2	SHEET	1 OF 1	

REVISIONS				
REV	DESCRIPTION	ENGINEER	REQUIRE	DATE
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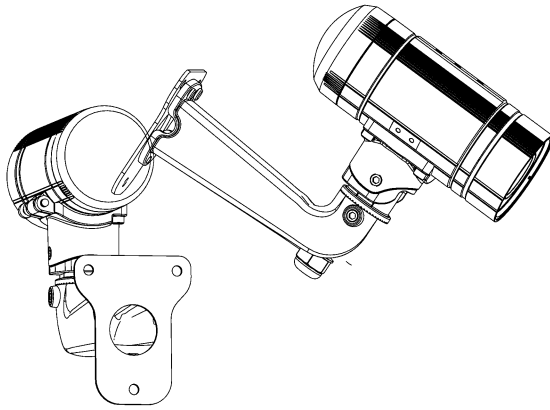
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50-100 ±	0.18
100-200 ±	0.20
200-300 ±	0.25
>300 ±	0.30

ANGULARX ± °

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 VIVOTEK Incorporated	PART NO.			
	ENGR	Jack Chan	MODEL	
	DRN	Jack Chan	DRAWING TITLE	IP8372-DIMENSION
	CHK	Joy	DRAWING NO.	
	APRV	Arway	MATERIAL	ISSUE DATE
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FINISH		第三角法	UNIT	mm
WI-RD-03-01-3		SIZE	A2	SHEET 1 OF 1

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REV	DESCRIPTION	ENGINEER	REQUIRE	DATE
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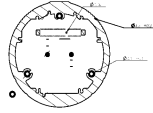
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100-200	± 0.20
200-300	± 0.25
>300	± 0.30

ANGULARX ± 1°

XX	± 0.5°
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 VIVOTEK Incorporated	PART NO.		MODEL	
	ENGR	Jack Chan	DRAWING	IP8372-DIMENSION
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WI-RD-03-01-3	第三角法	SIZE	A2	SHEET 1 OF 1

REVISIONS				
REV	DESCRIPTION	ENGINEER	REQUIRE	DATE
01	New Edition			



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ALL DIMENSIONS ARE IN mm

TOLERANCE ON:

LINEAR <30 ±	0.10
30-50 ±	0.15
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100-200 ±	0.20
200-300 ±	0.25
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ANGULARX ± °

XX ±	0.5°
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PART NO.		MODEL		DRAWING TITLE	
ENGR	Jack Chan			IP8372-DIMENSION	
DRN	Jack Chan				
CHK	Joy				
APRV	Arway				
MTL		ISSUE DATE		REV.	
FINISH		SCALE	1:000	UNIT	mm
WI-RD-03-01-3	第二角法	SIZE	A2	SHEET	1 OF 1

C O I L C R A F T C H I N A
梅县线艺电子有限公司

SPECIFICATION FOR APPROVAL

CUSTOMER : Vivotek
DESCRIPTION : transformer
CUSTOMER PART NO : POE13F-12L
COILCRAFT SAMPLE NO : POE13F-12L
APPROVED BY : Holly Wen DATE : 2007-11-08
PREPARED BY : Jim Wang DATE : 2007-11-08

CUSTOMER APPROVAL SIGNATURE

DISPOSITION :

APPROVED REJECTED OTHERS

AUTHORIZED SIGNATURE :

_____ DATE : _____

1. ELECTRICAL SPECIFICATION :

Part number ¹ <i>Click for samples</i>	Power (W)	L at 0 A	L at I _{pk}	DCR (Ohms)			Leakage L max ⁴ (μH)	Turns ratio		I _{pk} ³ (A)	Secondary output ⁵
		±10% ² (μH)	±10% ³ (μH)	pri	sec	bias		pri:sec	pri:bias		
<u>POE13F-12L</u>	13	35.0	31.5	0.095	0.017	0.150	0.6	1:0.35	1:0.35	2.1	12 V, 1.1 A

1 When ordering, please specify **packaging** code: e.g. POE13F-12L**D**

Packaging: **D = 13" machine-ready reel**

EIA 481 embossed plastic tape (200 parts per full reel).

B = Less than full reel

In tape, but not machine-ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

2 Inductance tested at 250 kHz, 0.3 V_{rms}, 0 A_{dc}

3 Peak primary current drawn at minimum input voltage.

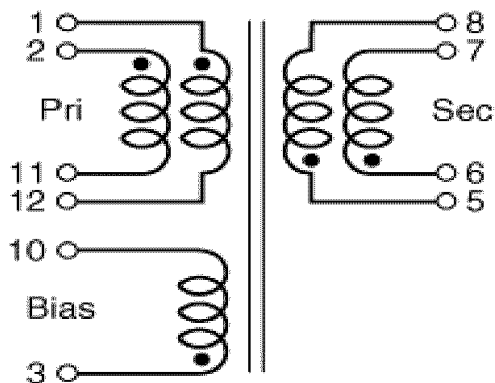
4 Leakage inductance is for the primary winding with the secondary winding shorted.

5 Bias winding output: 12 V, 0.2 A.

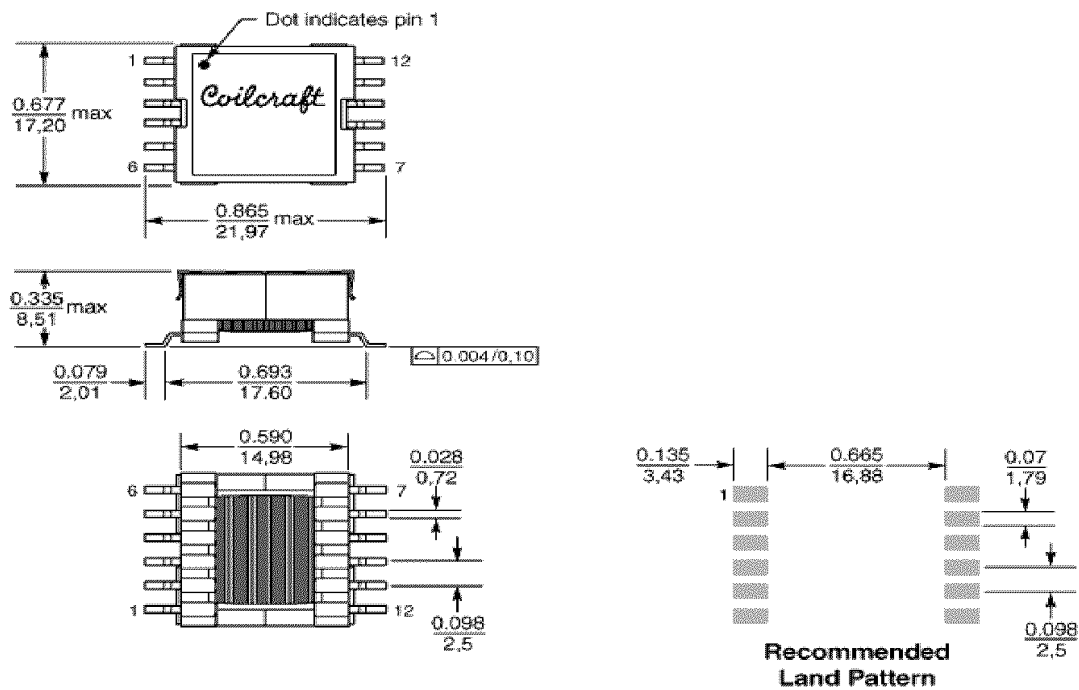
6 Operating temperature range -40°C to +125°C.

7 Electrical specifications at 25°C.

2. Schematic



3. DIMENSION :



4. PACKING SPECIFICATION :



碩哲科技股份有限公司

ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

SPECIFICATION FOR APPROVAL

CUSTOMER : 晶睿通訊股份有限公司

CUSTOMER P/N : 350016200G

ATC P/N : 13W12V
SW-FD15SH-5201-10035A

QUANTITY : 5 PCS

DATE : 2011.06.01

Please confirm your acceptance of this approval sheet by return fax.

APPROVED

REJECTED



DRAWN BY	CHECKED BY	APPROVED BY
林月霞 Alice	張德名 Richard	葉任銘 J.M.Yeh

Acroparts Technology Co., Ltd.

1F No.16 Tze Chiang St. Yangmei, Taoyuan, Taiwan
TEL : +886-3-4881133 FAX : +886-3-4881177



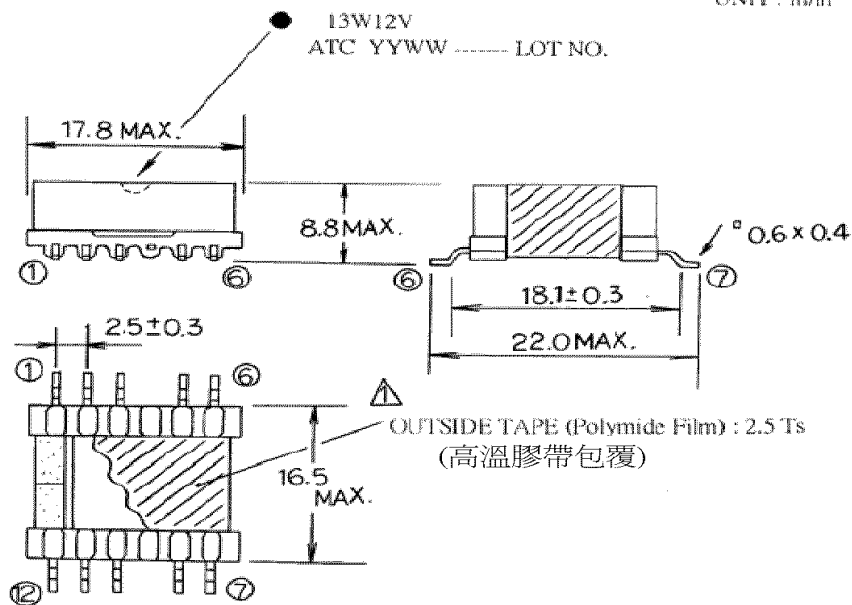
碩哲科技股份有限公司

ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

13W12V Series Specification

6 Configuration and Dimensions:

UNIT: m/m



- REMARKS: 1. PIN 4,9 CUT OFF.
2. LABEL ON TOP SIDE.
3. FIXING TAPE FOR CORE: 1 mil, 2 Ts MIN.
4. LOT NO.: YY WW



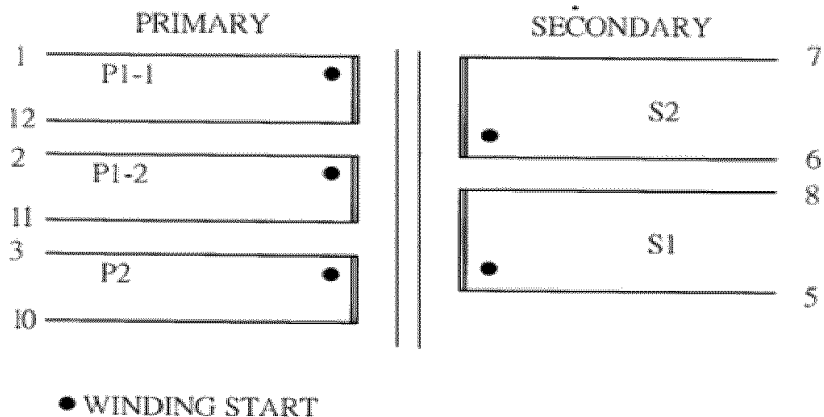


碩哲科技股份有限公司

ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

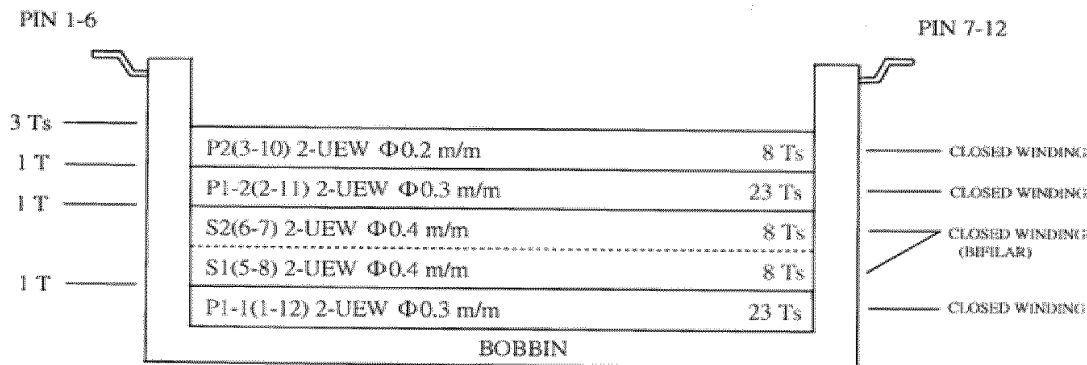
13W12V Series Specification

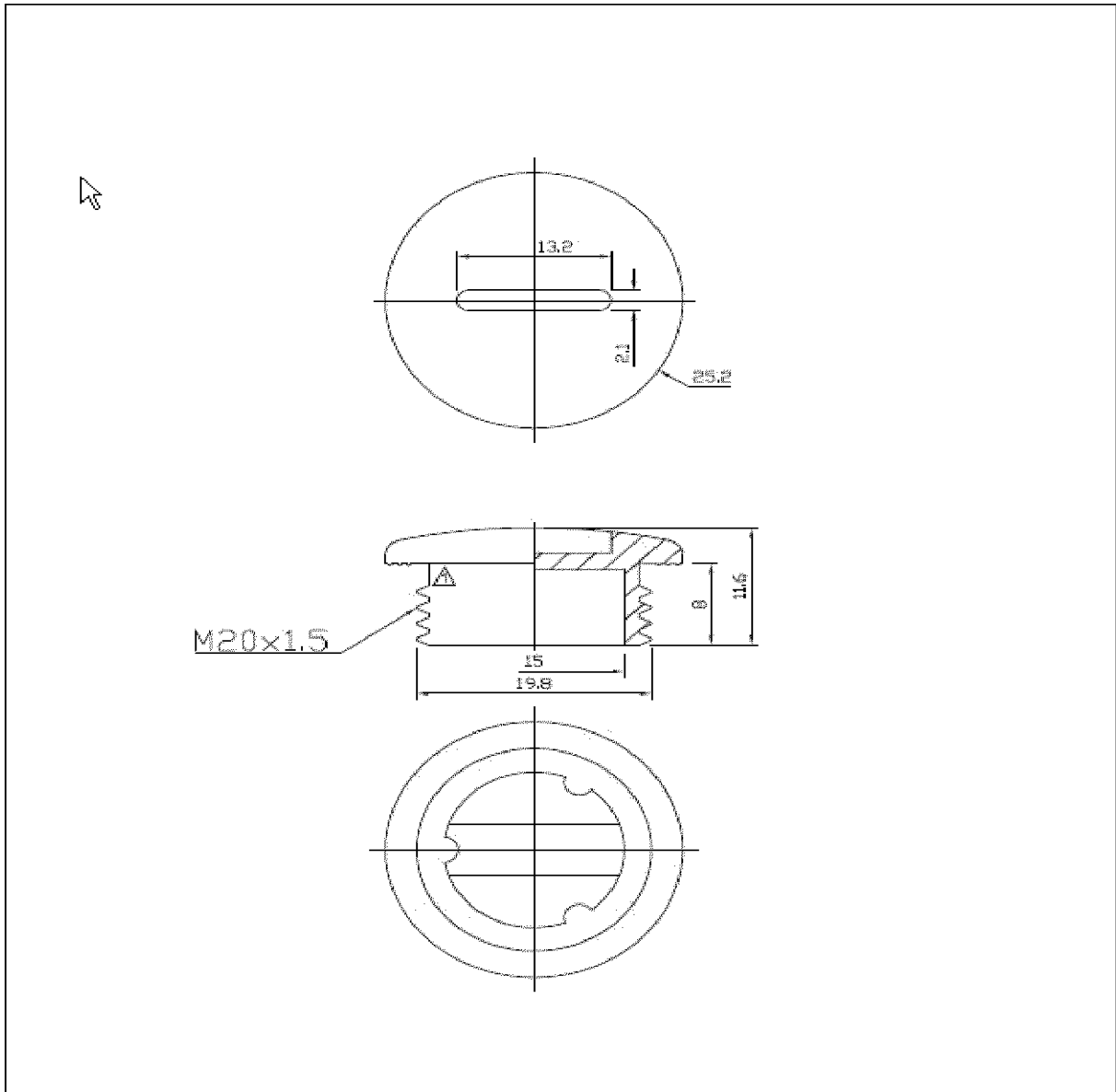
8 SCHEMATIC



8 WINDING CONSTRUCTION

INSULATION TAPE: 1 mil x 9.0 m/m





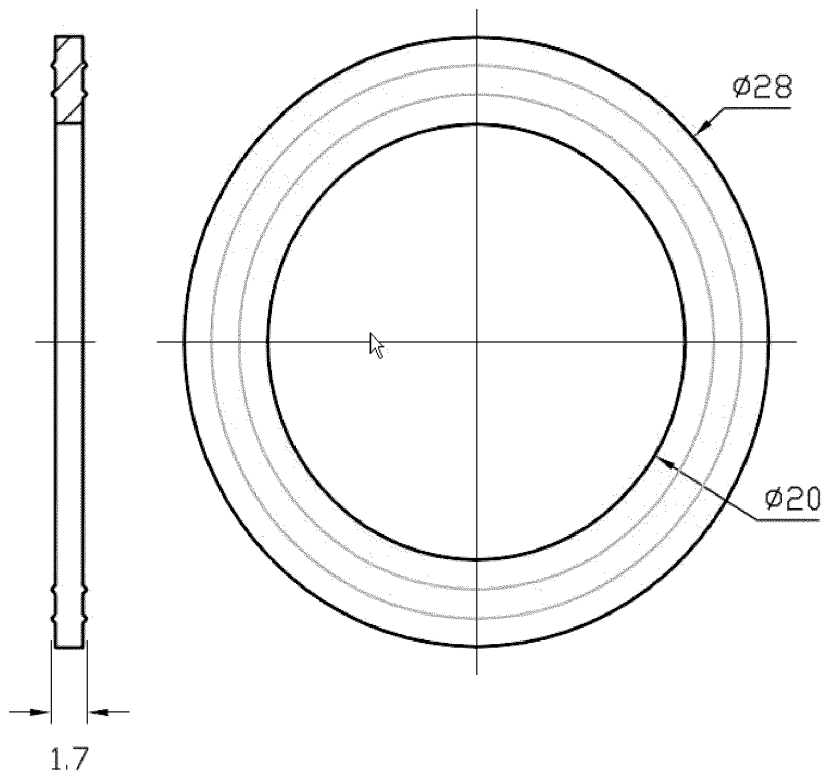
Drawing Spec.Reference Only

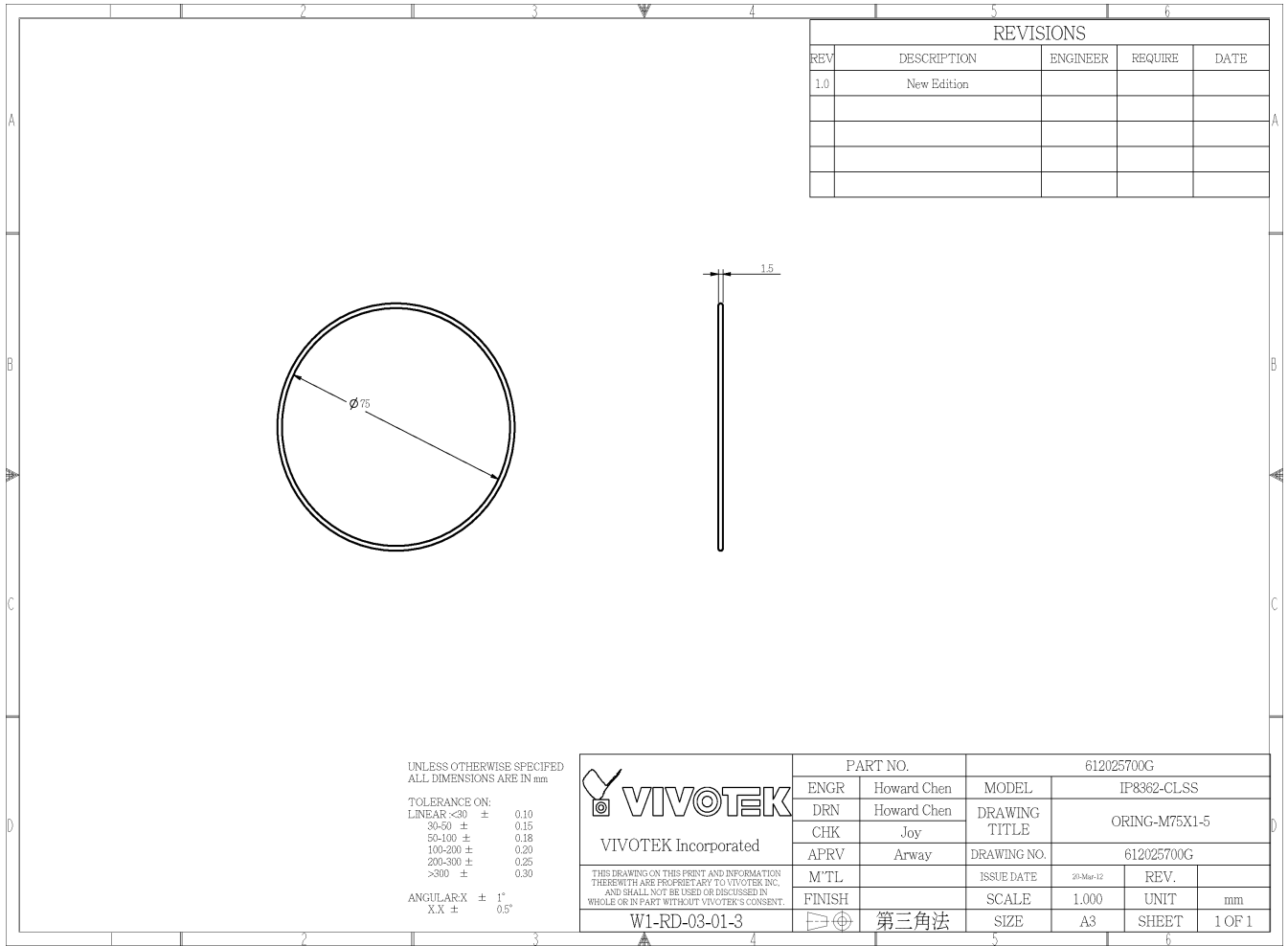
Note :
If gasket (rubber washer) is also needed for this plug ,
the most suitable AVC gasket part no. is "P-WS-M20-D-SG-V0"

SCALE: 2:1

Description:		Date:			
▲ New gasket groove design against loss		2012/11			
AVC 全冠企業有限公司 AVC Industrial Corp.		INSPECTED BY	YAWEN	2012.12.01	TOLERANCE: 6.1-9±0.5 18.1-30±0.8 6.1-9±0.6 30.1-50±0.9 8.1-18±0.7 50.1-80±1.1
PRODUCT: NYLON SCREW PLUGS		DRAWN BY	LING GHIOU	2012.12.01	
PART NO.: SPG-M20-B-V0F1		MATERIAL	BLACK PA 66(FD) UL94V-0		REMARK: All rights reserved < > inside reference value
SCALE: 2:1	UNIT: mm	REV. 4.4			





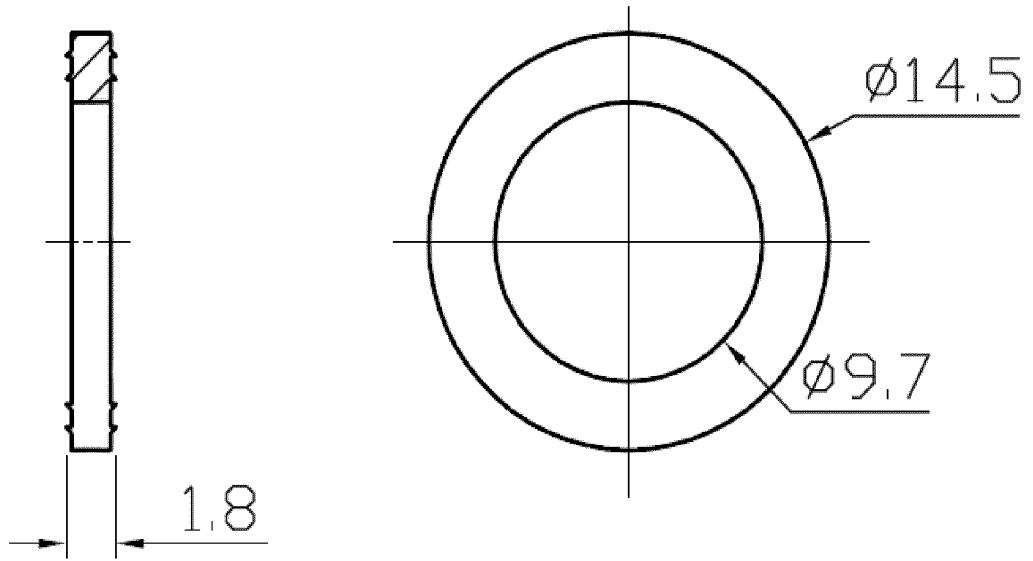


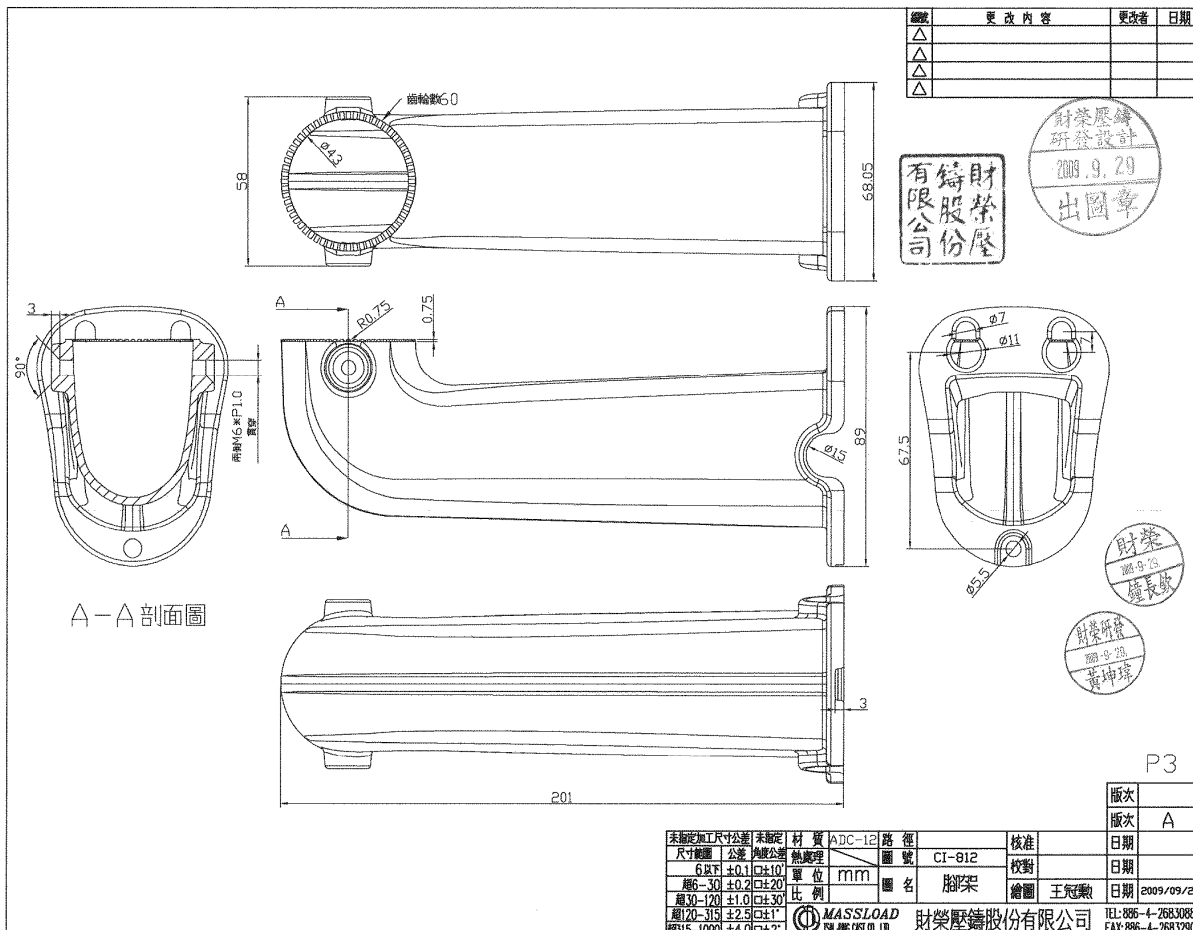
REVISIONS				
REV	DESCRIPTION	ENGINEER	REQUIRE	DATE
1.0	New Edition			

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN mm

TOLERANCE ON:
 LINEAR <30 ± 0.10
 30-50 ± 0.15
 50-100 ± 0.18
 100-200 ± 0.20
 200-300 ± 0.25
 >300 ± 0.30
 ANGULAR X ± 1°
 X.X ± 0.5°

 VIVOTEK Incorporated	PART NO.		612025700G			
	ENGR	Howard Chen	MODEL	IP8362-CLSS		
	DRN	Howard Chen	DRAWING TITLE	ORING-M75X1-5		
	CHK	Joy	DRAWING NO.	612025700G		
APRV	Arway	ISSUE DATE	20-Mar-12	REV.		
THIS DRAWING ON THIS PRINT AND INFORMATION THEREON ARE PROPRIETARY TO VIVOTEK INC. AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT VIVOTEK'S CONSENT.	M'TL	SCALE	1,000	UNIT	mm	
W1-RD-03-01-3	第三角法	SIZE	A3	SHEET	1 OF 1	





編號	更改內容	更改者	日期
△			
△			
△			

財榮鑄造
研發設計
2009.9.29
出圖章

財榮鑄造
股份有限公司

財榮鑄造
董事長
黃坤璋

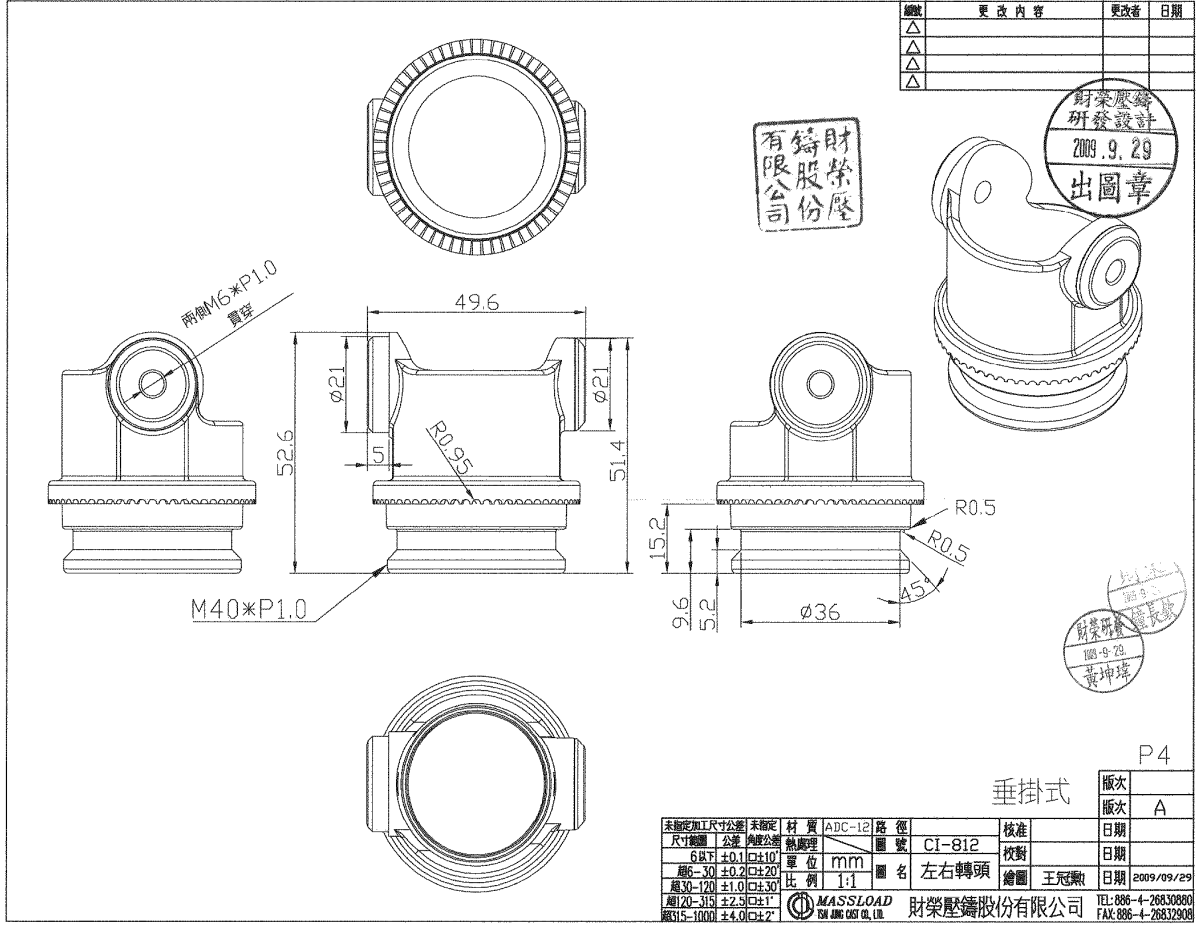
財榮鑄造
副經理
王冠勳

P3

未加工尺寸公差	未加工尺寸公差	材料	ADC-12	路徑	圖號	核准	日期
6以下	+0.1	熱處理		CI-812	校對		
6-30	+0.2	單位	mm	腳架	繪圖	王冠勳	2009/09/29
30-120	+1.0	比例					
120-315	+2.5						
315-1000	+4.0						

財榮鑄造
SHANGHAI CASTING CO., LTD.

財榮鑄造股份有限公司
TEL: 886-4-26830880
FAX: 886-4-26832908



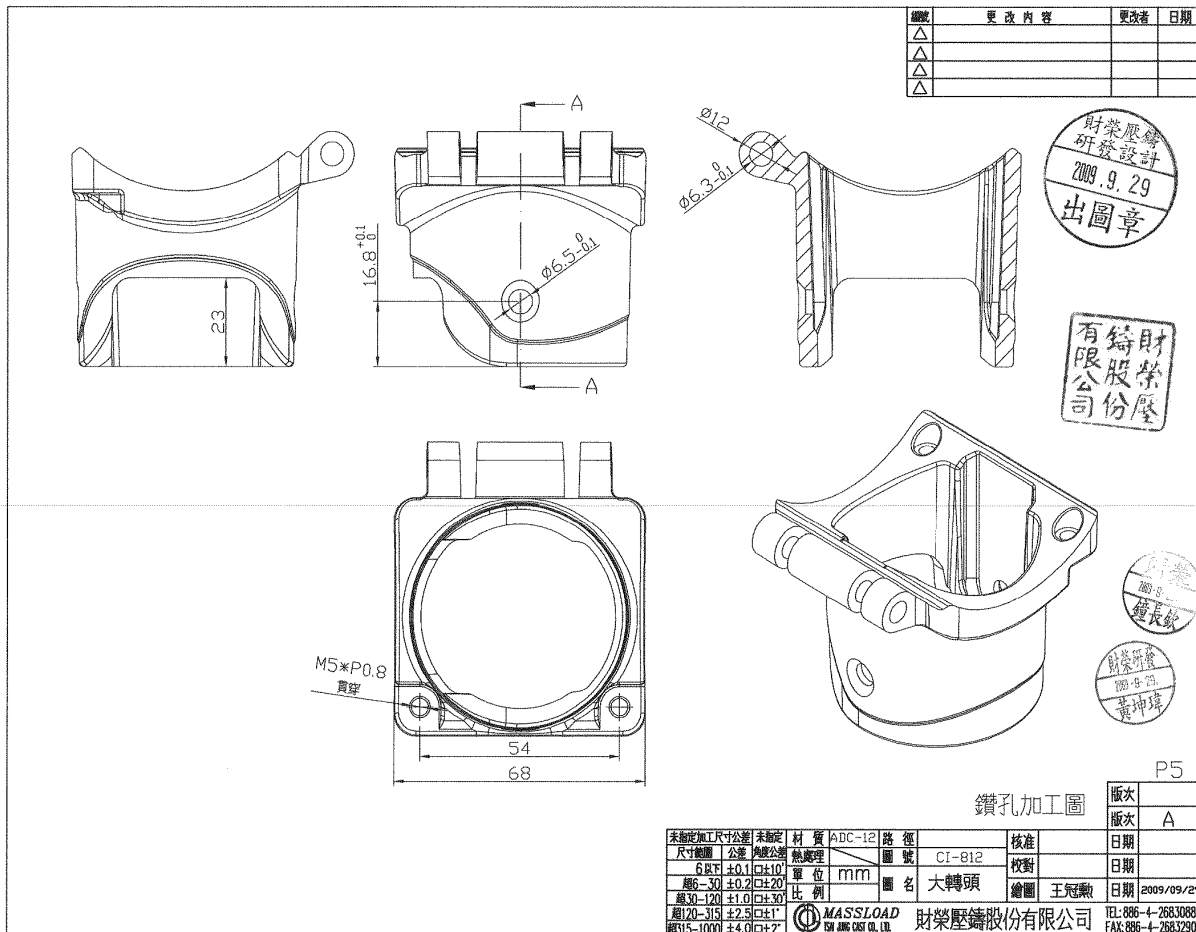
變更內容	更改者	日期
△		
△		
△		

財榮鑄研發設計
2009.9.29
出圖章

財榮鑄
股份有限公司

財榮鑄研發設計
圖章
財榮鑄研發設計
圖章
黃坤璋

未指定加工尺寸公差	未指定	材質	ADC-12	路徑		核准	
尺寸範圍	公差	熱處理		圖號	CI-812	校對	
6以下	±0.1			單位	mm	日期	
6-30	±0.2			圖名	左右轉頭	繪圖	王冠勳
30-120	±1.0			比例	1:1	日期	2009/09/29
120-315	±2.5			MASLOAD	財榮鑄股份有限公司	TEL: 886-4-26830880	
315-1000	±4.0			財榮鑄股份有限公司		TEL: 886-4-26830880	
						TEL: 886-4-26832909	



編號	更改內容	更改者	日期
△			
△			
△			

財榮壓鑄
研發設計
2009.9.29
出圖章

財榮壓鑄
股份有限公司

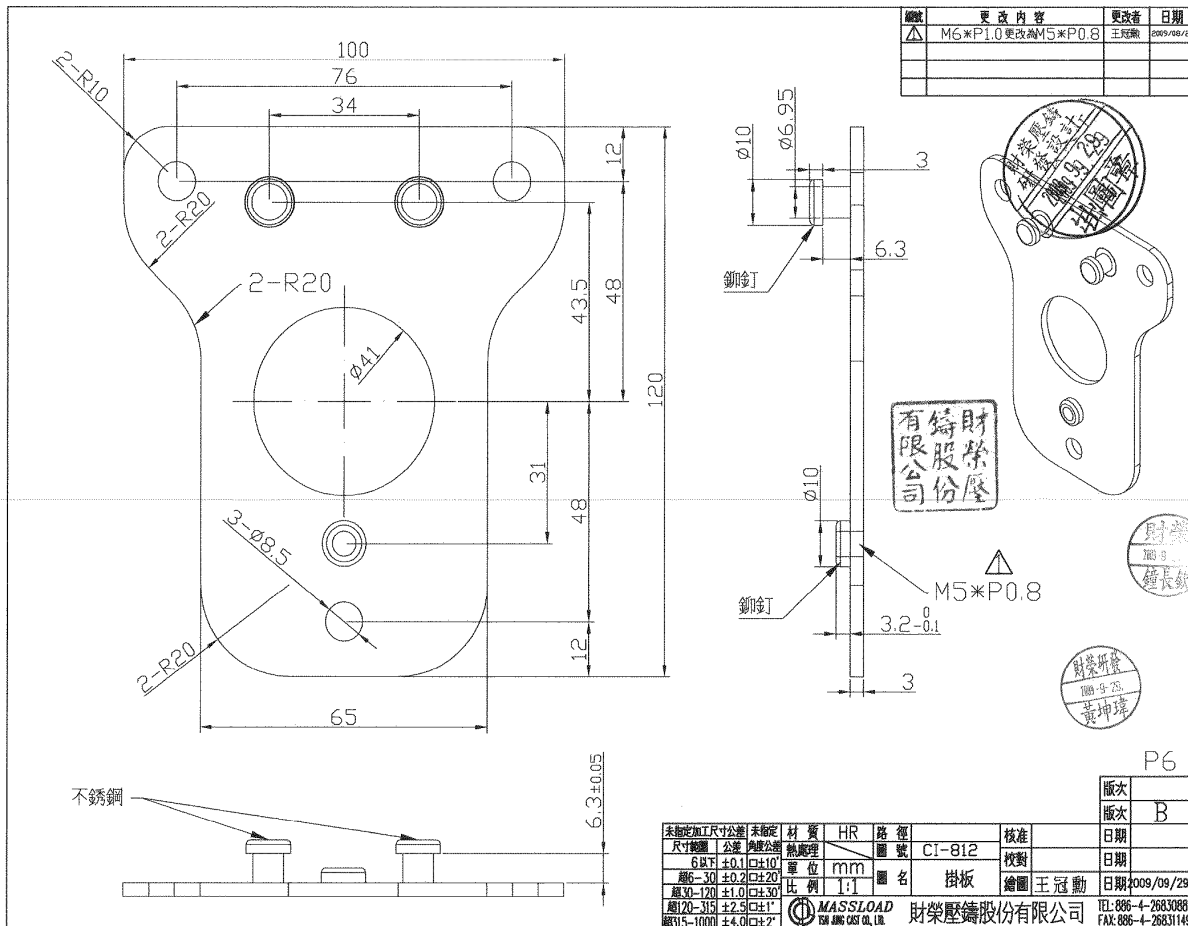
鐘長欽

財榮壓鑄
研發設計
黃坤瑋

鑽孔加工圖

版次	P5
版次	A

未加工尺寸公差	未加工尺寸公差	材料	ADC-12	規格	核准	日期
尺寸範圍	公差	熱處理		圖號	校對	日期
6-10	±0.1	單位	mm	圖名	王冠勳	2009/09/29
10-30	±0.2	比例		圖名	王冠勳	2009/09/29
30-120	±1.0	MASSLOAD 財榮壓鑄股份有限公司		TEL: 886-4-26830880		
120-315	±2.5			FAX: 886-4-26832908		
315-1000	±4.0					

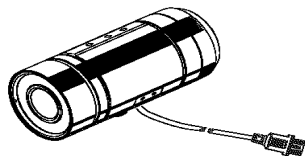


Warning Before Installation

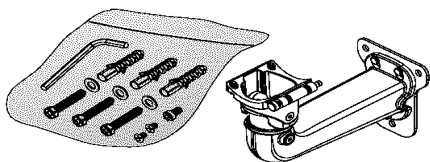
- Power off the Network Camera as soon as smoke or unusual odors are detected.
- Do not place the Network Camera on unsteady surfaces.
- Do not insert sharp or tiny objects into the Network Camera.
- Refer to your user's manual for the operating temperature.
- Do not touch the Network Camera during a lightning storm.
- Do not drop the Network Camera.

1 Package Contents

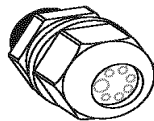
- IP8372 with an RJ45 Cable



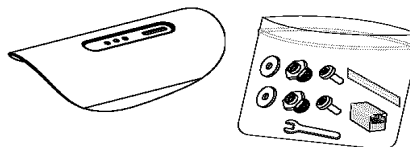
- Wall Mount Bracket



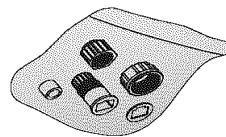
- Waterproof Connector (for backup use)



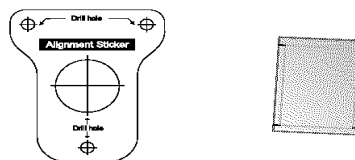
- Sun Shield / Wrench / RJ45 Female / Female Coupler / Double-sided Tape / Screws



- Waterproof Connector for RJ45 Ethernet Enclosure



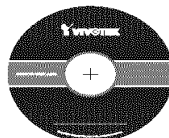
- Alignment Sticker / Desiccant Bag



● Quick Installation Guide



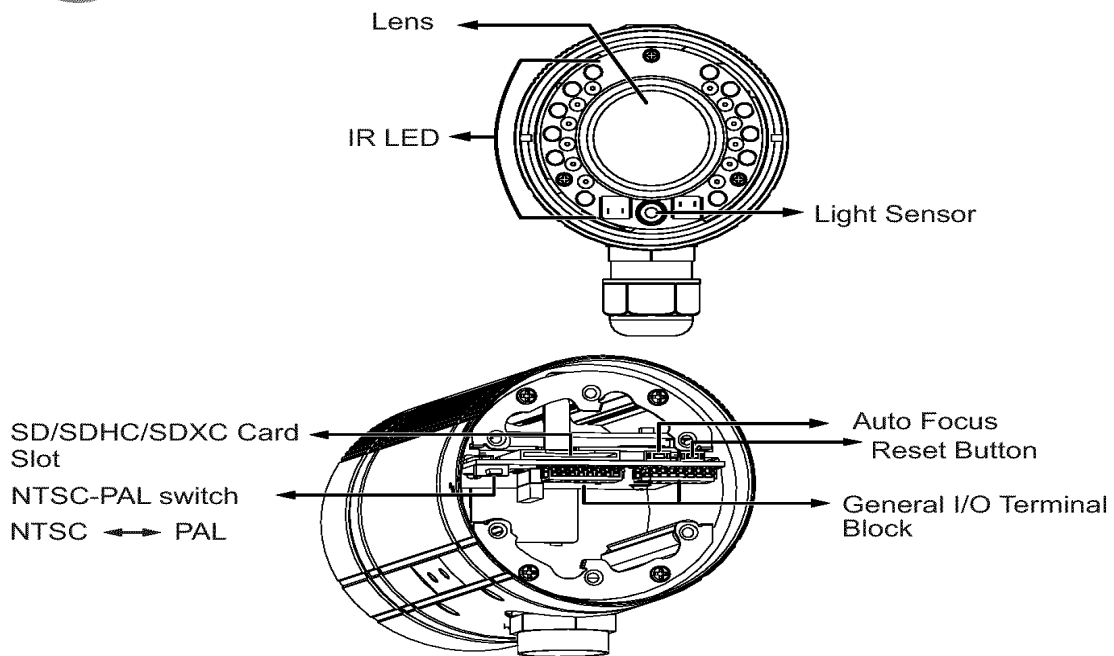
● Software CD



● Warranty Card

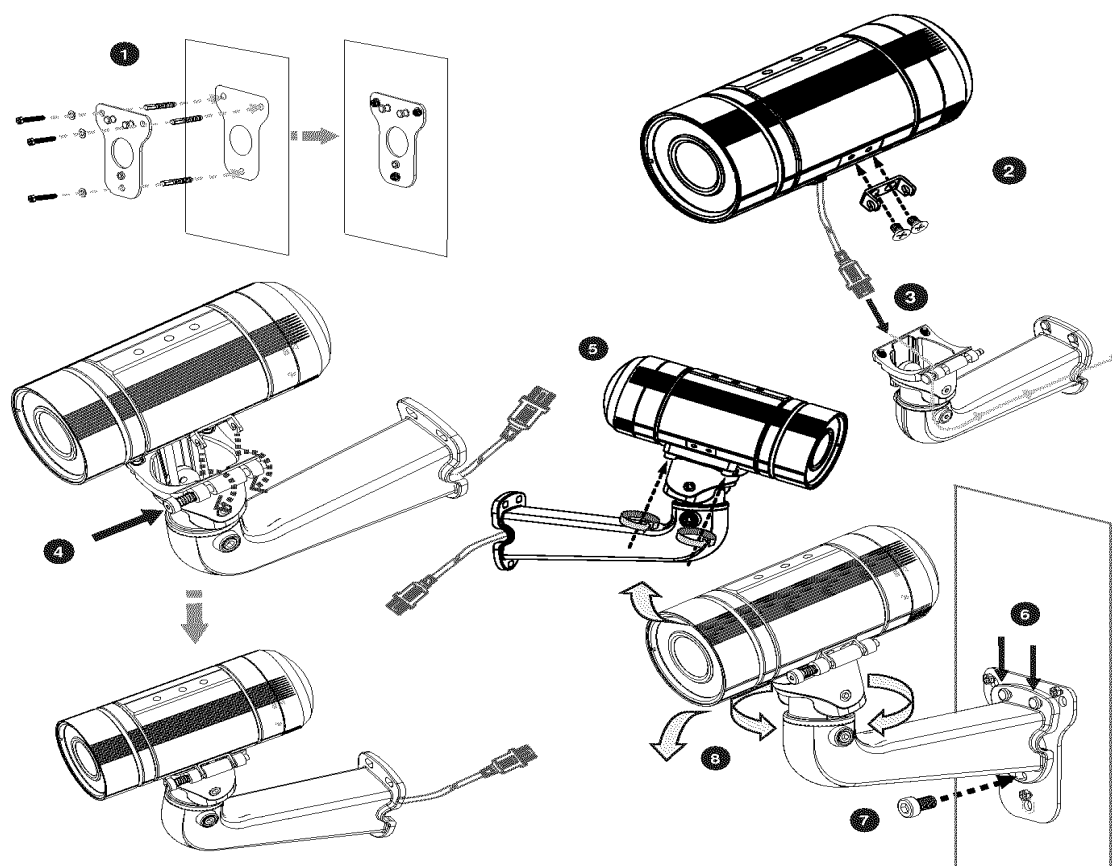


2 Physical Description



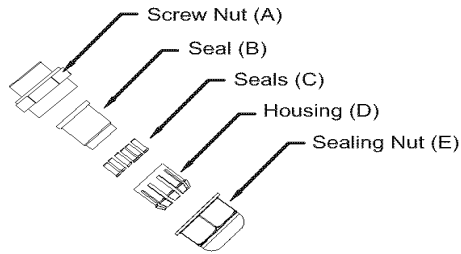
3 Hardware Installation

1. Attach the alignment sticker to the wall. Drill four holes into the wall. Then hammer the supplied plastic anchors into the holes and secure the plate with supplied screws.
2. Fix the intersection bracket to the side of the Network Camera with two screws.
3. Feed the RJ45 cable through the front opening of the wall mount bracket. (If you want to use external devices such as sensors and alarms, please refer to the assembling steps on the next page.)
4. Push the spring mortise and hook the bracket onto the groove of the wall mount bracket.
5. Secure the two screws on the other side of the wall mount bracket.
6. Hang the wall mount bracket to the mounting plate.
7. Fix the wall mount bracket with the supplied screw.
8. Adjust the angle of the wall mount bracket to aim at the shooting area.

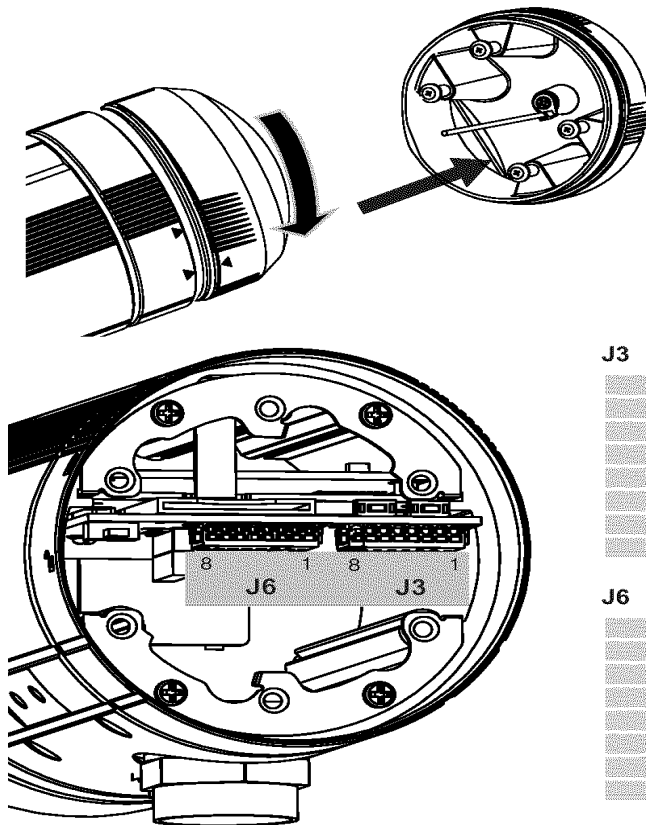


Waterproof Connector

● Components of the Waterproof Connector



● Pin Definitions



J3

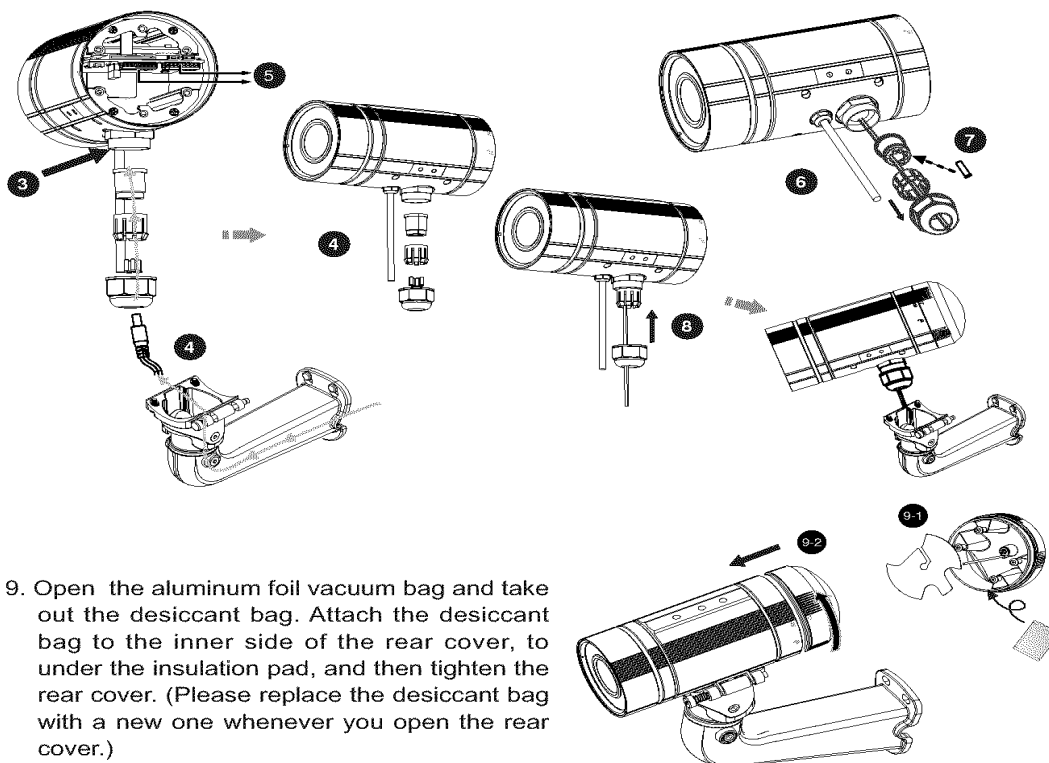
1	Do+ (12V)
2	Digital Output
3	Digital Input 1
4	Ground
5	Digital Input 2
6	Ground
7	TV Out +
8	TV Out -

J6

1	Ext. MIC
2	Audio Ground
3	Audio Line out
4	Audio Ground
5	Ground
6	DC 12V+
7	AC24V-
8	AC24V+

● Assembling Steps

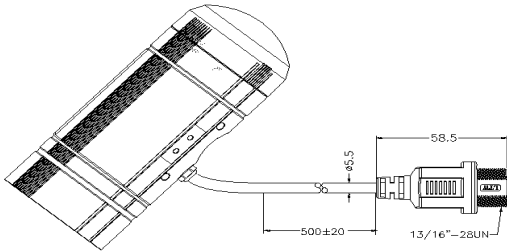
1. Disassemble the components of the waterproof connector into part (A) ~ (E) as shown above.
2. Open the rear cover of the Network Camera.
3. Remove the rubber stopper from the bottom of the Network Camera and secure the screw nut (A) tightly.
4. If you need extra power for external devices, please feed the power cable through the wall mount bracket and the waterproof connector (E --> D --> B --> A) as the illustration shown below. Then connect the power cord to the socket. Note: There are 7 holes on the seal (B), and the widest hole with a crack on the side is specific for power cord.
5. If you have external devices such as sensors and alarms, feed the cables through the wall mount bracket and the waterproof connector (E --> D --> B --> A) as the illustration shown below. Then refer to the pin definition to connect them to the general I/O terminal block. Note: The recommended cable gauge is 2.0 ~ 2.8 mm.
6. Push the seal (B) into the housing (D).
7. Insert the seals (C) into the empty holes on the seal (B) to avoid moisture.
8. Secure the sealing nut (E) tightly.



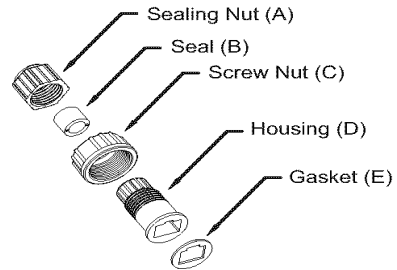
4 Cabling Assembly

RJ45 Cable Connector

RJ45 Cable Dimension (unit: mm)



Components of the Waterproof Connector



Assembling Steps

- 1 Prepare an Ethernet cable and strip part of the sheath.**

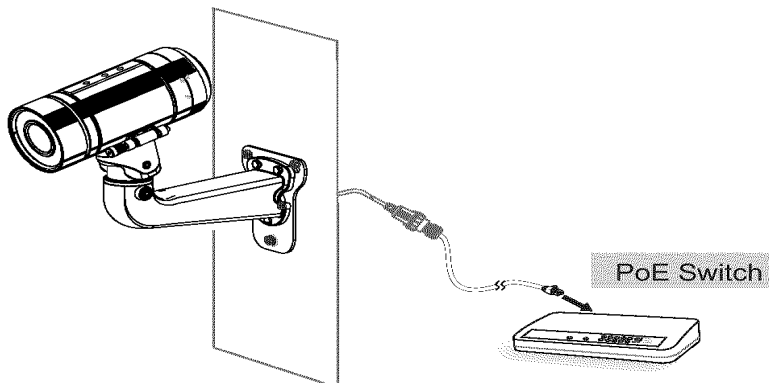
Recommended cable gauge: 24AWG (0.51 mm)
- 2 Insert the housing into the screw nut.**
- 3 Insert the seal into the housing.**
- 4 Insert the stripped Ethernet cable through the sealing nut and the housing.**
- 5 Clamp the cable with an RJ45 plug.**
- 6 Push the RJ45 plug into the housing, then secure the sealing nut tightly.**
- 7 Attach the gasket to the front of the housing.**
- 8 Connect the Ethernet cable to the RJ45 cable and secure the connectors tightly.**

5 Network Deployment

Power over Ethernet (PoE)

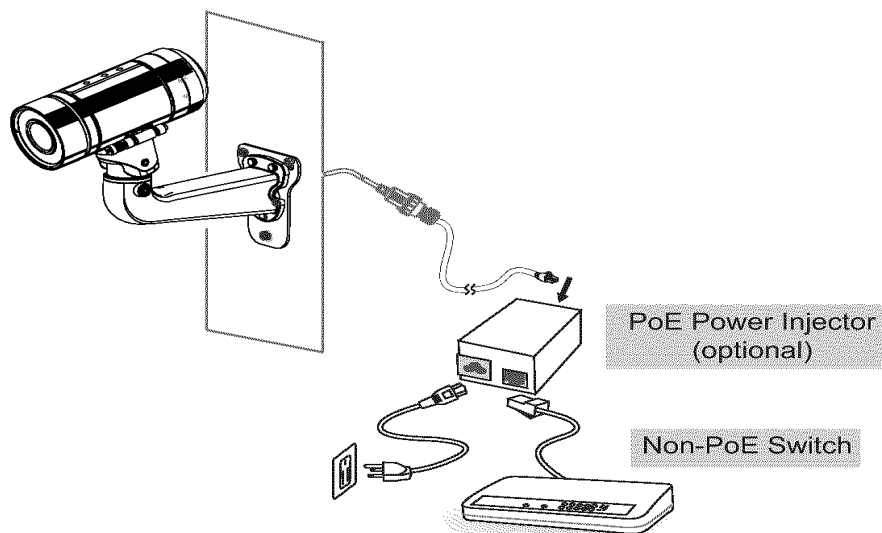
● When using a PoE-enabled switch

The Network Camera is PoE-compliant, allowing transmission of power and data via a single Ethernet cable. Follow the below illustration to connect the Network Camera to a PoE-enabled switch via Ethernet cable.



● When using a non-PoE switch

Use a PoE power injector (optional) to connect between the Network Camera and a non-PoE switch.

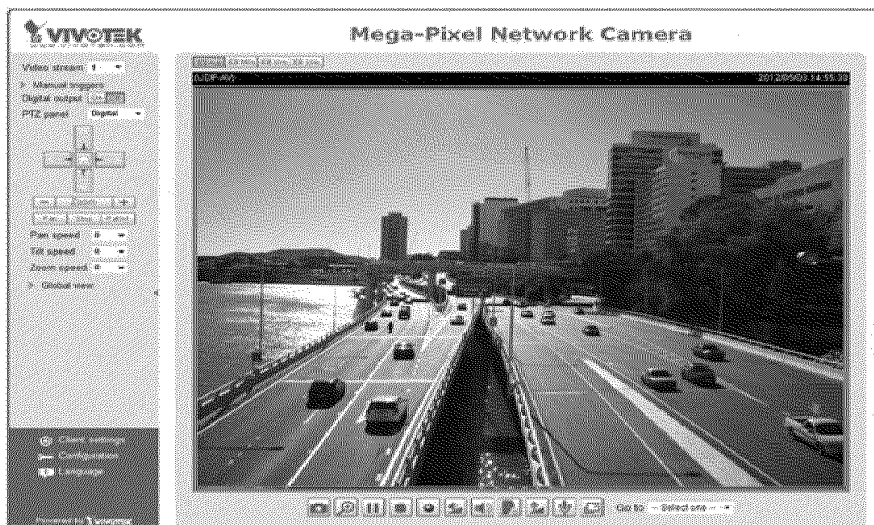


6 Assigning an IP Address

1. Install "Installation Wizard 2" from the Software Utility directory on the software CD.
2. The program will conduct an analysis of your network environment. After your network is analyzed, please click on the "Next" button to continue the program.
3. The program will search for VIVOTEK Video Receivers, Video Servers, and Network Cameras on the same LAN.
4. After a brief search, the main installer window will pop up. Double-click on the MAC address that matches the one printed on the camera label or the S/N number on the package box label to open a browser management session with the Network Camera.

7 Ready to Use

1. A browser session with the Network Camera should prompt as shown below
2. You should be able to see live video from your camera. You may also install the 32-channel recording software from the software CD in a deployment consisting of multiple cameras. For its installation details, please refer to its related documents.

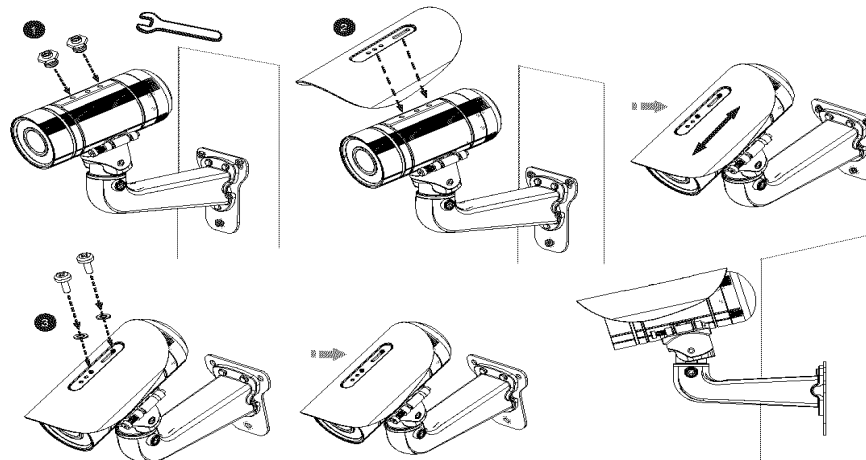


For further setup, please refer to the user's manual on the software CD.

NOTE:

If you want to use the supplied sun shield for outdoor environments, please follow the steps below to install:

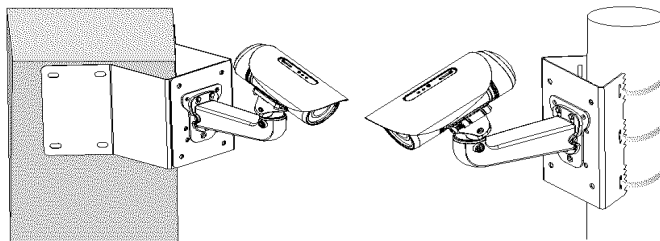
1. Tighten the supplied two hex couplers.
2. Attach the supplied sun shield to the Network Camera and slide it to the desired position.
3. Fix the sun shield with the supplied two screws.

**8****Accessories**

VIVOTEK also provides other accessories for versatile applications as the following illustrations. Please visit VIVOTEK's official website for more purchase information.

Corner Mount Bracket

Pole Mount Bracket


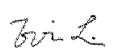




Test Report issued under the responsibility of:



TEST REPORT IEC 60 950-22 Information technology equipment Safety – Part 22: Equipment to be installed outdoors	
Report Reference No. :	E324690-A37
Date of issue..... :	2012-11-15
Total number of pages..... :	21
CB Testing Laboratory :	
Address..... :	
Applicant's name :	VIVOTEK INC
Address..... :	6TH FL, 192 LIEN CHENG RD CHUNG HO NEW TAIPEI 235 TAIWAN
Test specification:	
Standard..... :	IEC 60 950-22 : 2005 (1 st Edition)
Test procedure..... :	CB Scheme
Non-standard test method..... :	N/A
Test Report Form No. :	IEC60950_22A
Test Report Form(s) Originator..... :	The Standards Institution of Israel Ltd.
Master TRF..... :	Dated 2007-03
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Test item description :	Network Camera
Trade Mark..... :	None
Manufacturer..... :	
Model/Type reference..... :	IP8372
Ratings..... :	Optional, (1) 12Vdc, 0.82A (2) 24Vac, 0.83A, 50-60Hz (3) 48Vdc, 0.246A (for PoE)

Testing procedure and testing location:	
<input type="checkbox"/> CB Testing Laboratory:	
Testing location/ address	
<input type="checkbox"/> Associated CB Test Laboratory:	
Testing location/ address	
Tested by (name + signature)..... :	Hans Chen 
Approved by (+ signature)..... :	Eric Liu 
<input type="checkbox"/> Testing procedure: TMP	
Tested by (name + signature)..... :	
Approved by (+ signature)..... :	
Testing location/ address	
<input type="checkbox"/> Testing procedure: WMT	
Tested by (name + signature)..... :	
Witnessed by (+ signature)	
Approved by (+ signature)..... :	
Testing location/ address	
<input type="checkbox"/> Testing procedure: SMT	
Tested by (name + signature)..... :	
Approved by (+ signature)..... :	
Supervised by (+ signature)..... :	
Testing location/ address	
<input type="checkbox"/> Testing procedure: RMT	
Tested by (name + signature)..... :	
Approved by (+ signature)..... :	
Supervised by (+ signature)..... :	
Testing location/ address	

<p>Summary of testing:</p> <p>-- The manufacturer submitted representative production sample of Network Camera, Model IP8372.</p> <p>-- Only the test checked in "List of Tests" pages were deemed necessary.</p> <p>-- All tests except for water spray test were conducted under TDTDP(CAP/EA) by Prodigy Technology Consultant Co., Ltd. Located on No. 181 SEC 2 WUNHUA 1ST RD, LINKOU DISTRICT, NEW TAIPEI 224, TAIWAN.</p> <p>-- The water spray test was conducted by Electronics Testing Center, Taiwan. located No. 8, Lane 29, Wen0Ming Rd., Lo-Shan Tsun, Kui-Shan Hsiang, Taoyuan Hsien, Taiwan under WTDP program and according to IEC standard 60529 – Degrees of protection provided by enclosures (IP code).</p> <p>-- The results reported relate only to the items tested.</p>																								
<p>Tests performed (name of test and test clause):</p> <table border="1"> <tr><td>1.6.2 - INPUT TEST: SINGLE-PHASE</td></tr> <tr><td>2.2.2, 2.2.3, 2.2.4, Part 22 6.1 - SELV RELIABILITY TEST INCLUDING HAZARDOUS VOLTAGE MEASUREMENTS</td></tr> <tr><td>2.5 - LIMITED POWER SOURCE MEASUREMENTS</td></tr> <tr><td>4.2.1 - 4.2.4 – STEADY FORCE TESTS</td></tr> <tr><td>4.2.5, 4.2.1, PART 22 10.2 - IMPACT TEST</td></tr> <tr><td>4.2.10 - LOADING TESTS – WALL AND CEILING MOUNTED EQUIPMENT</td></tr> <tr><td>4.5.1, 1.4.12, 1.4.13 - HEATING TEST</td></tr> <tr><td>5.3.7 - OVERLOAD OF OPERATOR ACCESSIBLE CONNECTOR TEST</td></tr> <tr><td>PART 22, 8.5.1, ANNEX D.3 – COMPRESSION TEST – GASKETS, CLOSED CELL CONSTRUCTION</td></tr> <tr><td>PART 22, 8.5, ANNEX D.2 – TENSILE STRENGTH AND ELONGATION</td></tr> <tr><td>Resistance of Corrosion (Part 22 8.3, Annex A)</td></tr> <tr><td>Water Spray (Part 22 9.1, Annex B)</td></tr> </table>	1.6.2 - INPUT TEST: SINGLE-PHASE	2.2.2, 2.2.3, 2.2.4, Part 22 6.1 - SELV RELIABILITY TEST INCLUDING HAZARDOUS VOLTAGE MEASUREMENTS	2.5 - LIMITED POWER SOURCE MEASUREMENTS	4.2.1 - 4.2.4 – STEADY FORCE TESTS	4.2.5, 4.2.1, PART 22 10.2 - IMPACT TEST	4.2.10 - LOADING TESTS – WALL AND CEILING MOUNTED EQUIPMENT	4.5.1, 1.4.12, 1.4.13 - HEATING TEST	5.3.7 - OVERLOAD OF OPERATOR ACCESSIBLE CONNECTOR TEST	PART 22, 8.5.1, ANNEX D.3 – COMPRESSION TEST – GASKETS, CLOSED CELL CONSTRUCTION	PART 22, 8.5, ANNEX D.2 – TENSILE STRENGTH AND ELONGATION	Resistance of Corrosion (Part 22 8.3, Annex A)	Water Spray (Part 22 9.1, Annex B)	<p>Testing location:</p> <table border="1"> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Prodigy Technology Consultant</td></tr> <tr><td>Waived: Refer to IP (IEC 60529) test report of E324690-A31 report due to same material</td></tr> <tr><td>Waived: Refer to E324690-A31 report due to same material</td></tr> <tr><td>Waived: Per UL50, enclosure material is made of aluminum and considered to be complying with outdoor corrosion requirements</td></tr> <tr><td>Electronics Testing Center, Taiwan. / No. 8, Lane 29, Wen-Ming Rd., Lo-Shan Tsun, Kui-Shan Hsiang, Taoyuan Hsien, Taiwan</td></tr> </table>	Prodigy Technology Consultant	Prodigy Technology Consultant	Prodigy Technology Consultant	Prodigy Technology Consultant	Prodigy Technology Consultant	Prodigy Technology Consultant	Prodigy Technology Consultant	Waived: Refer to IP (IEC 60529) test report of E324690-A31 report due to same material	Waived: Refer to E324690-A31 report due to same material	Waived: Per UL50, enclosure material is made of aluminum and considered to be complying with outdoor corrosion requirements	Electronics Testing Center, Taiwan. / No. 8, Lane 29, Wen-Ming Rd., Lo-Shan Tsun, Kui-Shan Hsiang, Taoyuan Hsien, Taiwan
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<p>Summary of compliance with National Differences:</p> <p>CA, US</p>																								



Test item particulars	
Temperature range	-33 degree c to 50 degree C
Overvoltage category	<input checked="" type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV
IP protection class	IP67
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement.....	F (Fail)
Testing	
Date of receipt of test item	N/A
Date (s) of performance of tests	N/A
General remarks:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma (point) is used as the decimal separator.</p> <p>This Test Report Form is intended for the investigation of safety of equipment to be installed outdoors in accordance with IEC 60950-22. It can only be used together with the IEC 60950-1 requirements.</p>	
General product information:	
<p>-- The equipment is a Class III Network Camera, consists of electronic components mounted on PWB and is equipped with a progressive scan CMOS sensor the housed within metal enclosure, also provides a General I/O Terminal Block, and RJ45 Cable Connector, which is used to connect external input/output devices.</p> <p>-- The EUT installs to the wall.</p> <p>-- The power source can choose to use PoE or external AC power adapter.</p>	

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
4	CONDITIONS FOR OUTDOOR EQUIPMENT		
4.1	Ambient air temperature		Pass
	Suitability for use at any temperature in the range specified by the manufacturer. If not specified by the manufacturer, the range is taken as -33°C to +40°C	-33 degree C to 50 degree C	Pass
4.2	AC mains supply		N/A
	Suitability for the highest Overvoltage Category expected in the installation location	Class III equipment	N/A
	Components used to reduce the Overvoltage Category comply with IEC 61643-series		N/A
	Reference to installation instructions		N/A
4.3	Rise of earth potential		N/A
	Special earthing conditions	Class III equipment	N/A
	Reference to installation instructions		N/A
5	MARKING AND INSTRUCTIONS		Pass
	Special installation features for protection from conditions in the OUTDOOR LOCATION (see 1.7.2 of IEC 60950-1)		Pass
	OUTDOOR ENCLOSURE classification according to IEC 60529 (IP Code)	The unit is considered outdoor equipment	N/A
6	PROTECTION FROM ELECTRICAL SHOCK IN AN OUTDOOR LOCATION		Pass
6.1	Voltage limits of user-accessible parts in OUTDOOR LOCATIONS (2.2.2 and 2.2.3 of IEC 60950-1 with voltage limits of IEC60950-22)		Pass
	Voltages under normal conditions (V)	All accessible voltage are less than 21.2 Vp or 30Vdc and are classified as SELV.	Pass
	Voltages under fault conditions (V).....	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 15 V a.c., 21,2 V peak, or 30 V d.c. for longer than 0,2 s under single fault conditions.	Pass
6.2	Limited current circuits in outdoor locations		N/A
	The requirements of 2.4 of IEC60950-1 apply without change	UL60950-1 certificated power	N/A

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
7	WIRING TERMINALS FOR CONNECTION OF EXTERNAL CONDUCTORS		
	The mains supply terminations powered via the normal building installation wiring are as specified in 3.3 of IEC 60950-1	Class III equipment	N/A
	The mains supply terminations powered directly from the mains distribution system are as specified in IEC 60364		N/A
8	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		Pass
8.1	General		Pass
	Protection against corrosion by use of suitable materials or by application of a protective coating	Enclosure is Aluminium alloy	Pass
	Parts serving as a functional part of an OUTDOOR ENCLOSURE (e.g., dials, connectors, etc.) comply with the same environmental protection requirements as for the OUTDOOR ENCLOSURE		Pass
	Use of OUTDOOR ENCLOSURE to carry current during normal operation	The enclosure does not carry current	N/A
	Connection of a conductive part of an OUTDOOR ENCLOSURE to protective earth for carrying fault currents (see 2.6 of IEC 60950-1 and 8.3 of this standard)	Class III product	N/A
8.2	Resistance to ultra-violet radiation		Pass
	Resistance of non-metallic parts of an OUTDOOR ENCLOSURE to degradation by ultra-violet (UV) radiation	Enclosure is metal (AL), wiring is covered by UL certified (outdoor use) tubing when it used at outdoor.	Pass
	Parts providing mechanical support:	Metal	Pass
	Tensile strength test (ISO 527)		N/A
	Flexural strength test (ISO 178)		N/A
	Parts providing impact resistance:		N/A
	Charpy impact test (ISO 179)		N/A
	Izod impact test (ISO 180)		N/A
	Tensile impact test (ISO 8256)		N/A
	All parts:	Metal	Pass
	Flammability classification (1.2.12 and annex A of IEC 60950-1)	UL certificated components	Pass
8.3	Resistance to corrosion		Pass

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.1	General	The enclosure material is made of aluminium alloy and considered to be complying with outdoor corrosion requirements.	Pass
	Resistance of metallic parts of an OUTDOOR ENCLOSURE to the effects of water-borne contaminants	Enclosure is Aluminum alloy	Pass
	Alternate method for 8.3.2-8.3.4 (IEC 61587-1)		N/A
8.3.2	Test apparatus		N/A
	Salt-spray test (IEC 60068-2-11)		N/A
	Test in a water-saturated sulphur dioxide atmosphere (water-saturated sulphur dioxide atmosphere as described in Annex A; chamber as described in ISO 3231)		N/A
8.3.3	Test procedure		N/A
8.3.4	Compliance criteria		N/A
8.4	Bottoms of FIRE ENCLOSURES		N/A
	Comply with 4.6.2 of IEC 60950-1	No opening	N/A
	Bottom of FIRE ENCLOSURE of OUTDOOR EQUIPMENT mounted directly and permanently on a non-combustible surface (e.g., concrete or metal)		N/A
8.5	Gaskets		Pass
	If gaskets are used as the method for protection against the ingress of potential contaminants, requirements of 8.5.1 through 8.5.3 apply		Pass
8.5.1	General		Pass
8.5.2	Oil resistance	Equipment not intended to be subjected to oil or coolant	N/A
8.5.3	Securing means		Pass
9	PROTECTION OF EQUIPMENT WITHIN AN OUTDOOR ENCLOSURE		Pass
9.1	Protection from moisture (see Table 2)	The unit complied with the water spray test	Pass
9.2	Protection from plants and vermin	There are no opening in the unit	Pass
9.3	Protection from excessive dust	Used IP 67 enclosure	Pass

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
10	MECHANICAL STRENGTH OF ENCLOSURES		Pass
10.1	General		Pass
10.2	Impact test (4.2.5 of IEC 60950-1)	The result does not affect the ingress of dust and moisture.	Pass
	Compliance criteria:		Pass
	- after test the level of protection remains in accordance with 9.1 of this standard		Pass
	- after test the requirements of 4.2.1 of IEC 60950-1 are met		Pass
11	OUTDOOR EQUIPMENT CONTAINING VENTED BATTERIES		N/A
	Adequate ventilation in the compartment housing a vented battery, where gassing is possible during normal usage or over-charging	No any battery	N/A
	Protection against the risk of ignition of local concentrations of hydrogen and oxygen in a compartment containing both a battery and electrical components		N/A
	Hydrogen gas concentration measurement test		N/A
	Measured hydrogen gas concentration (% by volume)		—
	Max. allowed gas concentration for the mixture location in proximity to an ignition source (% by volume)	≤ 1% by volume	—
	Max. allowed gas concentration for the mixture location not in proximity to an ignition source (% by volume)	≤ 2% by volume	—
	Overcharging of rechargeable battery (see 4.3.8 of IEC 60950-1)	(see separate test report IEC 60950-1)	N/A
A	ANNEX A, WATER-SATURATED SULPHUR DIOXIDE ATMOSPHERE (see 8.3.2 and 8.3.3)		N/A
B	ANNEX B, WATER SPRAY TEST (see 9.1)		Pass
C	ANNEX C, ULTRAVIOLET LIGHT CONDITIONING TEST (see 8.2)		N/A
C.1	Test apparatus		N/A
C.2	Mounting of test samples		N/A
C.3	Carbon-arc light-exposure apparatus		N/A
C.4	Xenon-arc light-exposure apparatus		N/A

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
D	ANNEX D, GASKET TESTS (see 8.5)		Pass
D.1	Gasket tests	Refer to E324690-A31 tests report due to identical material See below	Pass
D.2	Tensile strength and elongation tests (for gaskets that can stretch)		Pass
	Tensile strength (%)	112.78%>75%	Pass
	Elongation (%)	102.24%.60%	Pass
	Visible deterioration, deformation, melting, cracking or hardening of the material	Intact	Pass
D.3	Compression test (for gaskets with closed cell construction)		Pass
	Initial thickness of the specimen (mm)	Sample A: 1.8mm, Sample B: 1.8mm, Sample C:1.8mm	Pass
	Thickness of the specimen after test a) (mm), compression set after test a) (%).....	Sample A: 1.77mm, Sample B: 1.77mm, Sample C: 1.77mm; 1.67%	Pass
	Thickness of the specimen after test b) (mm), compression set after test b) (%).....	Sample A: 1.77mm, Sample B: 1.77mm, Sample C: 1.77mm; 1.67%	Pass
	Thickness of the specimen after test c) (mm), compression set after test c) (%).....	Sample A: 1.77mm, Sample B: 1.77mm, Sample C: 1.77mm; 1.67%	Pass
	Visible cracks or deterioration	Intact	Pass
D.4	Oil immersion test	No intended function	N/A
	Swelling (%).....		N/A
	Shrinking (%)		N/A
E	ANNEX E, RATIONALE		---
E.1	General		---
E.2	Electric shock		---

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
E.3	Energy related hazards		—
E.4	Fire		—
E.5	Mechanical hazards		—
E.6	Heat related hazards		—
E.7	Radiation		—
E.8	Chemical hazards		—
E.9	Biological hazards		—
E.10	Explosion hazards		—

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-22:2005 – COMMON MODIFICATIONS			
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions		Pass
General	Delete all the "country" notes in the reference document according to the following list: 4.1 Note 3 4.3 Note 8.5 Note 10.2 Note D.3 Note D.4 Note		Pass

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		
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ZB	SPECIAL NATIONAL CONDITIONS		N/A
4.1	In Finland, Norway and Sweden , the temperature in winter may be extremely low. For OUTDOOR EQUIPMENT this will demand special design so that the equipment can withstand transport, erection and operation/service at temperatures down to -50°C		N/A
10.2	In Finland, Norway and Sweden there are additional requirements for the minimum ambient temperature. See 4.1 of this annex.		N/A
D.3	In Finland, Norway and Sweden there are additional requirements for the minimum ambient temperature. See 4.1 of this annex.		N/A

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

8.2	TABLE: Resistance to ultra-violet radiation		
8.2a)	Tensile strength test (ISO 527)		N/A
Material identification (manufacturer, type designation)			—
Shape and dimensions of test samples.....			—
Conditioning for Set 1 of samples.....			—
Conditioning for Set 2 of samples (including Annex C)			—
Test conditions (T °C, RH %)			—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Tensile strength (MPa)	Test sample #	Tensile strength (MPa)
Arithmetic mean for Set 1 (MPa)			
Arithmetic mean for Set 2 (MPa)			
Retention (%)			
Supplementary information:			

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

8.2	TABLE: Resistance to ultra-violet radiation		
8.2b)	Flexural strength test (ISO 178)		N/A
Material identification (manufacturer, type designation)			—
Shape and dimensions of test samples.....			—
Conditioning for Set 1 of samples.....			—
Conditioning for Set 2 of samples (including Annex C)			—
Test conditions (T °C, RH %)			—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Flexural strength (MPa)	Test sample #	Flexural strength (MPa)
Arithmetic mean for Set 1 (MPa)			
Arithmetic mean for Set 2 (MPa)			
Retention (%)			
Supplementary information:			

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

8.2	TABLE: Resistance to ultra-violet radiation		
8.2c)	Charpy impact test (ISO 179) - unnotched		N/A
Material identification (manufacturer, type designation)			—
Shape and dimensions of test samples.....			—
Conditioning for Set 1 of samples.....			—
Conditioning for Set 2 of samples (including Annex C)			—
Test method (according to Tables 2 and 3 of ISO 179)			—
Test conditions (T °C, RH %)			—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Charpy impact strength (kJ/m²)	Test sample #	Charpy impact strength (kJ/m²)
Arithmetic mean for Set 1 (kJ/m ²)			
Arithmetic mean for Set 2 (kJ/m ²)			
Retention (%)			
Supplementary information:			

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

8.2	TABLE: Resistance to ultra-violet radiation		
8.2d)	Charpy impact test (ISO 179) - notched		N/A
Material identification (manufacturer, type designation)			—
Shape and dimensions of test samples.....			—
Conditioning for Set 1 of samples.....			—
Conditioning for Set 2 of samples (including Annex C)			—
Test method (according to Tables 2 and 3 of ISO 179)			—
Test conditions (T °C, RH %)			—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Charpy impact strength (kJ/m ²)	Test sample #	Charpy impact strength (kJ/m ²)
Arithmetic mean for Set 1 (kJ/m ²)			
Arithmetic mean for Set 2 (kJ/m ²)			
Retention (%)			
Supplementary information:			

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

8.2	TABLE: Resistance to ultra-violet radiation																																																														
8.2e)	Izod impact test (ISO 180) - unnotched		N/A																																																												
	Material identification (manufacturer, type designation)		—																																																												
	Shape and dimensions of test samples.....		—																																																												
	Conditioning for Set 1 of samples.....		—																																																												
	Conditioning for Set 2 of samples (including Annex C)		—																																																												
	Test method (according to Table 1 of ISO 180)		—																																																												
	Test conditions (T °C, RH %)		—																																																												
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	Retention (%)																																																														
	Supplementary information:																																																														

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict
8.2	TABLE: Resistance to ultra-violet radiation		
8.2f)	Izod impact test (ISO 180) - notched		N/A
	Material identification (manufacturer, type designation)		—
	Shape and dimensions of test samples.....		—
	Conditioning for Set 1 of samples.....		—
	Conditioning for Set 2 of samples (including Annex C)		—
	Test method (according to Table 1 of ISO 180)		—
	Test conditions (T °C, RH %)		—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Izod impact strength (kJ/m ²)	Test sample #	Izod impact strength (kJ/m ²)
Arithmetic mean for Set 1 (kJ/m ²).....			
Arithmetic mean for Set 2 (kJ/m ²).....			
Retention (%).....			
Supplementary information:			

IEC 60950-22

Clause	Requirement + Test	Result - Remark	Verdict
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8.2	TABLE: Resistance to ultra-violet radiation		
8.2h)	Tensile impact test (ISO 8256) - notched		N/A
Material identification (manufacturer, type designation)			—
Shape and dimensions of test samples.....			—
Conditioning for Set 1 of samples.....			—
Conditioning for Set 2 of samples (including Annex C)			—
Test method (A or B)			—
Test conditions (T °C, RH %)			—
	Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)
	Test sample #	Tensile impact strength (kJ/m ²)	Test sample # Tensile impact strength (kJ/m ²)
	Arithmetic mean for Set 1 (kJ/m ²)		
	Arithmetic mean for Set 2 (kJ/m ²)		
	Retention (%)		
Supplementary information:			

IEC 60950-22			
Clause	Requirement + Test	Result - Remark	Verdict

List of test equipment used:

(Note: This is an example of the required attachment. Other forms with a different layout but containing similar information are also acceptable.)

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date
--	--	See append datasheet for detail	--	--

TABLE: evaluation of voltage limiting components in SELV circuits

	V peak	V d.c.	
T1 Pin 1,2 – Pin 5,6 (GND)	40.8	--	--
T1 Pin 3 – Pin 5,6 (GND)	3.2	--	--
T1 Pin 7,8 – Pin 5,6 (GND)	15.7	--	--
T1 Pin 10 – Pin 5,6 (GND)	17.6	--	--
T1 Pin 11,12 – Pin 5,6 (GND)	80.8	--	--
U2 Pin 1 – Pin 3 (GND)	7.2	--	--
U2 Pin 2 – Pin 3 (GND)	6.4	--	--
U2 Pin 4 – Pin 3 (GND)	--	2.4	--

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
T1 Pin 11,12 – Pin 5,6 short	5.2Vdc
T1 Pin 11,12 – Pin 7,8 short	12.6Vdc
T1 Pin 11,12 – Metal Enclosure short	5.4Vdc
U2 Pin 1 open (T1 Pin 1,2 – Pin 7,8 short)	0
U2 Pin 1 – Pin 2 short (T1 Pin 1,2 – Pin 7,8 short)	0
U2 Pin 3 – Pin 4 short (T1 Pin 1,2 – Pin 7,8 short)	0

TABLE: limited power sources

	Meas.	Limit	Meas.	Limit
Test Voltage: 12Vdc	--	--	--	--
J3 Pin3,5 (Uoc=6.03V)	0.01	8.0	0.01	100
J3 Pin7 (Uoc=1.9V)	0.01	8.0	0.01	100
J6 Pin1 (Uoc=1.98V)	0.01	8.0	0.01	100
J3 Pin2,4,6,8 (Uoc=0V)	0	8.0	0	100
J6 Pin2-4,7,8 (Uoc=0V)	0	8.0	0	100
RJ45 All Pins (Uoc=0V)	0	8.0	0	100

	Meas.	Limit	Meas.	Limit
Test Voltage: 24Vac/60Hz	--	--	--	--
J3 Pin1 (Uoc=11.08V)	1.60	8.0	7.97	100
J3 Pin1 Single fault: T1 Pin1,2 – Pin7,8 (Uoc=11.08V)	0.01	8.0	0.01	100
J3 Pin1 Single fault: U2 Pin1 open (Uoc=3.59V)	0.01	8.0	0.01	100
J3 Pin3,5 (Uoc=6.03V)	0.01	8.0	0.01	100
J3 Pin7 (Uoc=1.9V)	0.01	8.0	0.01	100
J6 Pin1 (Uoc=1.98V)	0.01	8.0	0.01	100
J3 Pin2,4,6,8 (Uoc=0V)	0	8.0	0	100
J6 Pin2-6 (Uoc=0V)	0	8.0	0	100
RJ45 All Pins (Uoc=0V)	0	8.0	0	100
Test Voltage: 48Vdc	--	--	--	--
J3 Pin1 (Uoc=11.08V)	1.60	8.0	7.97	100
J3 Pin1 Single fault: T1 Pin1,2 – Pin7,8 (Uoc=11.08V)	0.01	8.0	0.01	100
J3 Pin1 Single fault: U2 Pin1 open (Uoc=3.59V)	0.01	8.0	0.01	100
J3 Pin3,5 (Uoc=6.03V)	0.01	8.0	0.01	100
J3 Pin7 (Uoc=1.9V)	0.01	8.0	0.01	100
J6 Pin1 (Uoc=1.98V)	0.01	8.0	0.01	100
J3 Pin2,4,6,8 (Uoc=0V)	0	8.0	0	100
J6 Pin2-8 (Uoc=0V)	0	8.0	0	100

Sc=short circuit, Oc=Open circuit



Date - November 23, 2012

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E324690
12CA60817To Hans Chen
3013BTAI

Reference: File E324690 Project 12CA60817

Subject: LETTER REPORT FOR IP67 EVALUATION ON Network Camera, Model IP8372

Dear Hans,

We have completed our investigation, and this letter will serve as our report. For the file record, our evaluation only covers the applicable tests needed for IP66 in accordance with the requirements of IEC 60529, Degrees of Protection provided by enclosures, 2.1 Ed, Revision Date October 2009.

Samples of Model IP8372 were tested. The following table details the models tested, the test, the standard clauses, and the results.

Models	Test	Standard Clause	Results
Network Camera, Model IP8372	IP 6X	IEC 60529, Edition 2.1, Revision Date October 2009, CLAUSE 12	Since this device doesn't have any openings on the enclosure, this test was not considered necessary.
	IP 6X	IEC 60529, Edition 2.1, Revision Date October 2009, CLAUSE 13	Compliance
	IP X7	IEC 60529, Edition 2.1, Revision Date October 2009, CLAUSE 14	Compliance

See the attached Appendix containing the applicable test data discussed in the table above.

Please be sure to profile the Data Sheets in the DAP database when completing your project.



Date - November 23, 2012

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E324690
12CA60817

Should you have any questions or comments concerning the above, please feel free to contact me.

Sincerely,

Ailsa Chen

Ailsa Chen (Ext. 62536)
Conformity Assessment Specialist
Conformity Assessment Services,
3012CTAI

Reviewed by:

Cloud Chen

Cloud Chen
Associate Project Engineer
Conformity Assessment Services,
3012CTAI

Test Record

Test Record No. 1

-- The manufacturer submitted representative production samples of Network Camera, model IP8372.

-- All tests except for water spray test were conducted under TDTDP(CAP/EA) by Prodigy Technology Consultant Co., Ltd; Located on No. 181 SEC 2 WUNHUA 1ST RD, LINKOU DISTRICT, NEW TAIPEI 224, TAIWAN.

-- The water spray test was conducted by Electronics Testing Center, Taiwan. / No. 8, Lane 29, Wen-Ming Rd., Lo-Shan Tsun, Kui-Shan Hsiang, Taoyuan Hsien, Taiwan under WTDP program and according to IEC standard 60529 - Degrees of protection provided by enclosures (IP Code).

-- The unit was considered fixed with exposed SELV circuit.

-- Test RESULTS reported related only to the items tested.

The following tests were conducted:

Test	Testing Location/Comments
End Product Reference Page	
General Guidelines	
Input: Single-Phase (1.6.2)	
SELV Reliability (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	
Limited Power Source Measurements (2.5)	
Determination of Working Voltage; Hazardous Voltage (Circuit Measurement (2.10.2, Part 22 6.1)	
Steady Force (4.2.1 - 4.2.4)	
Impact (4.2.5, 4.2.1, Part 22 10.2)	
Loading - Wall and Ceiling Mounted Equipment (4.2.10)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Overload of Operator Accessible Connector (5.3.7)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

Test Record

The following supplements are provided as a part of this Test Record. NOTE: These supplements are only available to the Applicant via the CDA system.

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Datasheet	2-01	Datasheet (UL60950-1)
Attachment	2-02	CRD
Datasheet	2-03	Datasheet (IEC60529)