



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No: E134786-A77-CB-1

Date of issue: 2011-08-09

Total number of pages: 29

CB Testing Laboratory: Underwriters Laboratories Taiwan Co., Ltd.

Address: 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei

Applicant's name: DELTA ELECTRONICS INC

Address: 3 TUNGYUAN RD
CHUNGLI INDUSTRIAL ZONE
TAOYUAN COUNTY
32063 TAIWAN

Test specification:

Standard: IEC 60950-1:2005 (Second Edition)

Test procedure: CB Scheme

Non-standard test method: N/A

Test Report Form No.: IEC60950_1A

Test Report Form originator: SGS Fimko Ltd

Master TRF: 2009-09

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description	DLP Projector
Trade Mark	NEC
	
Manufacturer	SAME AS APPLICANT
Model/Type reference	NP-PH1000yyyy, NP-PH1400yyyy (y can be any character or blank for marketing purpose and no impact safety related critical components and constructions.)
Ratings	For NP-PH1000yyyy: 100-130 Vac, 11.2A, 50/60 Hz; 200-240 Vac, 5.4 A, 50/60 Hz For NP-PH1400yyyy: 200-240 Vac, 6.2 A, 50/60 Hz

Testing procedure and testing location:	
☐ CB Testing Laboratory	Testing location / address..... :
☐ Associated CB Test Laboratory	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (name + signature) ... :
☐ Testing Procedure: TMP	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
☒ Testing Procedure: WMT	Testing location / address..... :
Tested by (name + signature) :	Dylan Liang
Witnessed by (+ signature)..... :	Stephen Huang
Approved by (+ signature) :	Stalling Chen
Testing location / address..... :	DELTA ELECTRONICS INC, 2nd FL, 3 TUNG YUAN RD CHUNGGLI, INDUSTRIAL ZONE, TAOYUAN COUNTY, 32063 TAIWAN
☐ Testing Procedure: SMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :
☐ Testing Procedure: RMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :

List of Attachments

National Differences (2 pages)
Enclosures (20 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at DELTA ELECTRONICS INC, 2nd FL, 3 TUNG YUAN RD CHUNGGLI, INDUSTRIAL ZONE, TAOYUAN COUNTY, 32063 TAIWAN.

Tests performed (name of test and test clause)	Testing location / Comments
End Product Reference Page	

General Guidelines

Input: Single-Phase (1.6.2)

Limited Power Source Measurements (2.5)

Determination of Working Voltage; Working Voltage
Measurement (2.10.2)

Electric Strength for Circuits with Starting Pulses
(2.10.3.5)

Heating (4.5.1, 1.4.12, 1.4.13)

Abnormal Operation (5.3.1 - 5.3.9)

Abnormal Operation - Lamp Rupture (5.3.1, 5.3.9)

Overload of Operator Accessible Connector (5.3.7)

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, BG, BR, CA, CH, CN, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IL, IT, JP, KR, NL, NO, PL, RO, SE, SG, SI, SK, UA, US

The product fulfills the requirements of: EN 60950-1:2006 + A11:2009

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :

Equipment mobility: stationary
 Connection to the mains: pluggable A
 Operating condition: continuous
 Access location: operator accessible
 Over voltage category (OVC): OVC II
 Mains supply tolerance (%) or absolute mains supply values: +10%, -10%
 Tested for IT power systems: No
 IT testing, phase-phase voltage (V): N/A
 Class of equipment: Class I (earthed)
 Considered current rating (A): 20
 Pollution degree (PD): PD 2
 IP protection class: IP X0
 Altitude of operation (m): Up to 3,048 m
 Altitude of test laboratory (m): Up to 2,000 m
 Mass of equipment (kg): 39 kg max.

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(s) of receipt of test item: 2013-02-19
 Date(s) of Performance of tests: 2013-02-27 to 2013-03-07

General remarks:

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 testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 6.25 of IEC60950:

Yes

The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies):

1). DELTA VIDEO DISPLAY SYSTEM (WUJIANG) LTD
 WUJIANG ECONOMIC DEVELOPMENT ZONE, 1688 JIANGXING
 EAST RD, WUJIANG JIANGSU, CHINA

 2). DELTA ELECTRONICS, INC.

3, TUNG YUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN
COUNTY 32063, TAIWAN

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2013-03-19 to include the following changes/additions:

- This test report shall be read in conjunction with the original report, number:

1. E134786-A77-CB-1, issued 2011-08-09, with CB Certificate (DK-3974), issued 2011-08-09.

- Only limited tests were deemed necessary:

1.6.2 INPUT TEST: SINGLE-PHASE

2.5 LIMITED POWER SOURCE MEASUREMENT

2.10.2 DETERMINATION OF WORKING VOLTAGE - WORKING VOLTAGE MEASUREMENT TEST

2.10.3.5 ELECTRIC STRENGTH TESTS FOR CIRCUITS WITH STARTING PULSES

4.5.1, 1.4.12, 1.4.13 HEATING TEST

5.3.1 5.3.9 ABNORMAL OPERATION TESTS

5.3.1, 5.3.9 ABNORMAL OPERATION - LAMP RUPTURE

5.3.7 OVERLOAD OF OPERATOR ACCESSIBLE CONNECTOR TEST

- This report has been amended, due to alternate following items:

1. Ballast (MINEBEA CO LTD, PHG451A2***)

2. Lamp (Ushio, NSHA465DE)

3. DC fan (Delta, BFB0712HD, BFB0712HD-SP01)

4. Varistor (THINKING ELECTRONIC INDUSTRIAL CO LTD, TVR14471, TVR14621, TVR14511, TVR14561, TVR14681; EPCOS OHG, SIOVS14K420, SIOVS14K420E2K1, S14K420, S14K420E2)

5. Gas tube Suppressor (Okaya, RA-302\$)

6. Relay (Song Chuan Precision Co., Ltd., 507HN series)

7. Add new I/O board

8. Add new model name NP-PH1400yyyy

9. Add new rating 200-240 Vac, 6.2 A, 50/60 Hz for new model NP-PH1400yyyy.

Product Description

Consist of ballast, AC power supply and electric components mounted on PWB, housed with metal enclosure and equipped with signal input function of 1 Lan, 1 HDMI, 1 display port, 1 USB, 2 VGA (Computer 1, 2), 1 Video, 1 PC control, 1 remote, 1 RGBHV (Computer 3), 1 Monitor out, 1 S-Video, 1 DVI port, 1 Sync in, 1 Sync out and 1 optional slot. (For these connectors for optional.)

Model Differences

Model NP-PH1000yyyy is similar to Model NP-PH1400yyyy except for input rating and Model designation.

Additional Information

- The label is a draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

- For project 13CA13443:

Alternate following items:

1. Ballast (MINEBEA CO LTD, PHG451A2***)

2. Lamp (Ushio, NSHA465DE)

3. DC fan (Delta, BFB0712HD, BFB0712HD-SP01)
4. Varistor (THINKING ELECTRONIC INDUSTRIAL CO LTD, TVR14471, TVR14621, TVR14511, TVR14561, TVR14681; EPCOS OHG, SIOVS14K420, SIOVS14K420E2K1, S14K420, S14K420E2)
5. Gas tube Suppressor (Okaya, RA-302\$)
6. Relay (Song Chuan Precision Co., Ltd., 507HN series)
7. Add new I/O board
8. Add new model name NP-PH1400yyyy
9. Add new rating 200-240 Vac, 6.2 A, 50/60 Hz for new model NP-PH1400yyyy

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40°C
- The means of connection to the mains supply is: Pluggable A, Detachable power cord
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: Appliance inlet
- The product was investigated to the following additional standards: - EN 60950-1:2006+ A11:2009 (which includes all European national differences, including those specified in this test report)., - Japan deviation see Miscellaneous/ID 7-04., - IEC 60664-1: 1992 table A.2 with a multiplication factor of 1.14 through this report (3000m : 1.14, 4000m : 1.29, linear interpolation between this value was considered). , - The Clearances and Creepage Distances have additionally been assessed for suitability up to 3,000m elevation.
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All output connectors.
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Rated voltage(s) or voltage range(s) (V) ..:	100-130 Vac / 200-240 Vac or 200-240 Vac	Pass
	Rated current (mA or A)	11.2A / 5.4 A or 6.2 A	Pass
	Model identification or type reference	NP-PH1000yyyy, NP-PH1400yyyy (y can be any character or blank for marketing purpose and no impact safety related critical components and constructions.)	Pass
5.3.9	Compliance criteria for abnormal operating and fault conditions	- No fire, emission of molten metal or deformation was noted during the tests. - Electric Strength tests performed after abnormal and fault tests	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
01. Power Supply Cord (optional)	Various	Various	Min. 16 AWG/1.25 ² mm	--	--, --	
02. Interconnecting Cables (optionally provided; detachable)	Various	Various	Min. 30 V, min. 60 degree C, max. 3.05 m, jacketed, marked VW-1 or FT-1.	UL 758	UL, --	
03. AC Mains Input Wires	Various	Various	Min. 20 AWG, 300 V, 80 degree C, marked VW-1.	UL 758	UL, --	
04. Internal Wiring (Primary)	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min 300 V, 80 degree C.	UL758	UL, --	
04-1. Internal Wiring (Secondary)	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min 30 V, 60 degree C.	UL758	UL, --	
05. Earthing and Bonding	Various	Various	Min. No. 16 AWG (1.25 mm ²), insulated with green/yellow color, one end mechanically secured and soldered to the ground pin of the appliance inlet, the other end terminated in a double-crimped closed-loop or spade type terminal and secured to metal chassis/frame by a screw and a star or lock	UL 758	UL, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
			washer with engaged min. two complete threads.			
06. Insulating Tubing/Sleeving	Various	Various	Min. 300 V, 105 degree C, FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1.	UL 1441, UL 224	UL, --	
07. Insulating Tubing on the wires between power board and ballast board	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-X	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
07a. Alternate - Insulating Tubing on the wires between power board and ballast board	Dongguan SALIPT CO LTD	SALIPT S-901-300, SALIPT S-901-600	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
07b. Alternate - Insulating Tubing on the wires between power board and ballast board	CHANGYUAN ELECTRONICS(SHENZHEN)CO LTD	Changbao 102, CB-HFT	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
07c. Alternate - Insulating Tubing on the wires between power board and ballast board	HAMBURG INDUSTRIES CO LTD	H-2	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
07d. Alternate - Insulating Tubing on the wires between power board and ballast board	RAYCHEM PRODUTOS IRRADIADOS LTDA	VERSAFIT	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
07e. Alternate - Insulating Tubing on the wires between power board and ballast board	LONGWELL CO	LHS-125FR	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
07f. Alternate -	Sumitomo	SUMITUBE F32	Min. 600 V, 125	UL 1441, UL 224	UL, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
Insulating Tubing on the wires between power board and ballast board			degree C, Min. 0.4 mm thickness, marked VW-1			
07g. Alternate - Insulating Tubing on the wires between power board and ballast board	Tyco	ZH2 or Versafit V2	Min. 300 V, 125 degree C, min. 0.4 mm thickness, marked VW-1	UL 224	UL, --	
08. Connectors and Receptacles (secondary)	Various	Various	Min. V-2.	UL 498, UL1977, UL 94, UL 746C	UL, --	
09. Adhesive Glue	Various	Various	Min. V-2.	UL 94	UL, --	
10. Label	Various	Various	Min. 60 degree C.	UL 969	UL, --	
11. Enclosure	--	--	Metal (Aluminum), min. 1.5mm	--	--, --	
12. Plastic enclosure of lamp cover and the right side for inhaling openings	SABIC INNOVATIVE PLASTICS	945	5VA, 120 degree C, min. 3 mm thickness.	UL 94, UL 746C	UL, --	
12a. Plastic enclosure of lamp cover and the right side for inhaling openings (alternate)	TEIJIN CHEMICALS LTD RESEARCH & DEVELOPMENT DIV	MN-3600H##(: suffix optional)	5VB, 95 degree C, min. 2 mm thickness.	UL 94, UL 746C	UL, --	
13. Appliance Inlet	RONG FENG INDUSTRIAL CO LTD	SS-3B	250 V ac, 16 A, 70 degree C.	UL 498, IEC 60320-1, VDE 0625	UL, VDE, CSA, SEMKO	
13a. Appliance Inlet (alternate)	SOLTEAM ELECTRONICS CO LTD	ST-01	250 V ac, 15 A, 70 degree C.	UL 498, IEC 60320-1, VDE 0625	UL, VDE, CSA, SEMKO	
14. Power Switch	CANAL ELECTRONIC CO LTD	MR-2 series	250 V ac, 12 A, 10 K operating cycles evaluated.	IEC 61058-1, UL 1054	UL, CSA, VDE	
14a. Power Switch (alternate)	Solteam	MR28 series	Min.15A, 250V, 65 degree C	IEC 61058-1, UL 1054, EN61058-1	UL, ENEC	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
14b. Power Switch (alternate)	Solteam	MR-22 series	12A, 250V, 85 degree C	IEC 61058-1, UL 1054, EN61058-1	UL, VDE	
14c. Power Switch (alternate)	Omron	A8WD#(# can be followed by optional suffix(es), any letter(s) and/or any number(s))	16A, 250V, 55 degree C	IEC 61058-1, UL 1054, EN61058-1	UL, VDE	
14d. Power Switch (alternate)	SWANN INDUSTRIES PTE LTD	series 33	16A/125V, min. 65 degree C	IEC 61058-1, UL 1054, EN61058-1	UL, VDE	
15. Slide switch (Only for Model NP-PH1000yyyy)	Rong Feng	RF-1002	10 A or 12 A, 250Vac, 85 degree C	IEC 61058-1, UL 1054, EN61058-1	UL, VDE	
16. Ballasts (2 sets provided) (alternate)	Philips	EUC 400c E/X0X(X may be blanks or figures)	Two sets provided, I/P: 280-410 Vdc, max.2000 mA, Max. 450 W, O/P: Ignition voltage max. 3.5kVp, Max. normal output voltage 200 Vac	UL 60950-1, IEC 60950-1	UL, KEMA	
16a. Ballasts (2 sets provided) (alternate) (only for model NP-PH1400yyyy)	MINEBEA CO LTD	PHG451A2*** (* may be any alphanumeric character or blanks)	Two sets provided, I/P: 250-420 Vdc, 2.2 A, O/P: voltage max. 165 Vac, Max. 6.2 Arms, Max. 11.0 Apk, Max. 475W	UL 60950-1, IEC 60950-1	UL, DEMKO	
17. Lamp Wires	Various	Various	Min. 6 kV, min. 150 degree C, marked VW-1 or FT-1.	UL 758	UL, --	
18. Lamps (2 sets provided) with input rating	Philips	UHP 400-320W 1.3 E21.9	Two sets provided, ignition voltage 3 KV max.420W	--	--, --	
18a. Lamps (2 sets provided) with input rating (only for model	Ushio	NSHA465DE	Two sets provided, max. ignition voltage 4 KV, max.465W	--	--, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
NP-PH1400yyyy)						
19. Lamp Housings and holders	TORAY INDUSTRIES INC	AR10MB or AR04B	Min. V-2, 200 degree C.	UL 94, UL 746C	UL, --	
19a. Lamp Housings and holders (alternate)	VICTREX MFG LTD	150CA30, 150GL30	Min. V-2, min. 170 degree C.	UL 94, UL 746C	UL, --	
20. DC Fan 1, 2, 11, 15	Delta	NFB1212H	DC 12 V, 0.41 A, min. 83.234 CFM	UL 507, EN 60950-1	UL, VDE	
20a. DC Fan 1, 2, 11, 15 (alternate)	Delta	AFB1212H	DC 12 V, 0.35 A, min. 74.41 CFM	UL 507, EN 60950-1	UL, VDE	
21. DC Fan 3,4	Delta	AFB0912H-A(Y), Y may be XXXXX, where X may be A through Z, 0 through 9, "-" or blank	DC 12 V, 0.3 A, min. 53.90 CFM	UL 507, EN 60950-1	UL, VDE	
22. DC Fan 5	Delta	BFB0612HB	DC 12 V, 0.22 A, min. 4.21 CFM	UL 507, EN 60950-1	UL, VDE	
23. DC Fan 6, 7, 8, 9, 10	Delta	BFB0712HD	DC 12 V, 0.37 A, min. 6.388 CFM	UL 507, EN 60950-1	UL, VDE	
23a. DC Fan 6, 7, 8, 9,10 (alternate)	Delta	BFB0712HD-SP01	DC 12 V, 0.6 A, min. 8.707 CFM	--	--, --	
24. DC Fan 12, 16	Delta	AFB0812HD	DC 12 V, 0.27 A, min. 44.41 CFM	UL 507, EN 60950-1	UL, VDE	
25. DC Fan 13	Delta	BFB0612HB	DC 12 V, 0.22 A, min. 4.21 CFM	UL 507, EN 60950-1	UL, VDE	
26. DC Fan 14	Delta	AFB0912M-A(Y), Y may be XXXXX, where X may be A through Z, 0 through 9, "-" or blank	DC 12 V, 0.2 A, min. 44.56 CFM	UL 507, EN 60950-1	UL, VDE	
27. DC Fan 17	Delta	AFB0612HC	DC 12 V, 0.21 A, min. 19.11 CFM	UL 507, EN 60950-1	UL, VDE	
28. DC Motor for shutter (Optional)	Nakatsu Engineering Co., Ltd.	NS-16SG-250-12G162	12 Vdc, max. 200mA	Test with unit	--, --	
29. DC Motor for Lens (optional) (2sets)	Hsiang Neng	HN-50GWD	12 Vdc, max. 210mA	Test with unit	--, --	

IEC 60950-1			
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1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
30. Accessory - Remote controller (optional)	Various	Various	Infrared type, contains with two AA type batteries	--	--, --	
31. Fuse (F1305) on mainboard for L.P.S.	COOPER BUSSMANN INC	S506	250Vac, 5 A	UL 248, EN60127-1/2, IEC60127	UL, VDE	
32. Control Box (Optional)	--	SB-01HC	PWB: min. V-1, connector: SDI input and SDI output	--	--, --	
33. DC Fan 18 (Optional)	Delta	BFB0712HD	DC 12 V, 0.37 A, min. 6.388 CFM	UL 507, EN 60950-1	UL, VDE	
33a. DC Fan 18 (alternate) (Optional)	Delta	BFB0712HD-SP01	DC 12 V, 0.6 A, min. 8.707 CFM	--	--, --	
- Filter Board	--	--	--	--	--, --	
01. Fuse (F101)	Littelfuse	314 or 324	F20AH/250V	UL 248-14	UL, --	
02. Fuse (F103)	Littelfuse	314 or 324	F12AH/250V	UL 248-14	UL, --	
03. X-Capacitors (CX101, CX103) (Optional)	Okaya Electric Industries Co., Ltd.	RE or LE	Min. 250 V ac, max. 1uF, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03a. X-Capacitors (CX101, CX103) (Optional)(alternate)	ARCOTRONICS SPA	R.46	Min. 250 V ac, max. 1uF, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03b. X-Capacitors (CX101, CX103) (Optional) (alternate)	VISHAY CAPACITORS BELGIUM N V	MKP 336 2, MKP 338 2, 336 2 or 338 2	Min. 250 V ac, max. 1uF, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03c. X-Capacitors (CX101, CX103) (alternate) (Optional)	Hua Jung Components Co., Ltd.	MKP	Min. 250 V ac, max. 1uF, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03d. X-Capacitors (CX101, CX103) (Optional) (alternate)	ISKRA KONDENZATO RJ I D D	KNB 1530 or KNB 1560	Min. 250 V ac, max. 1uF, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03e. X-Capacitors	MATSUSHITA ELECTRIC	ECQ-UL	Min. 250 V ac, max. 1uF,	UL 1414, IEC 60384-14:93,	UL, VDE, ENEC, CCEE, FIMKO,	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
(CX101, CX103) (Optional) (alternate)	INDUSTRIAL CO LTD PANASONIC CORP OF NORTH AMERICA		subclass X2 min., comply with IEC 60384-14.	VDE 0565, EN132400:1994 +A2+A3	SEMKO	
04. Line Filters (FL101, FL102)	--	--	Min. 130 degree C.	--	--, --	
04-1. Core	--	--	For dimension, see enclosure 4-04 for details.	--	--, --	
04-2. Coils	--	--	Min. 130 degree C.	UL1446	UL, --	
05. Y-Capacitors (CY101, CY102, CY103, CY104, CY105, CY106) (Optional)	Murata MFG Co Ltd	KX, KH	CY101=CY102= Min. 250 V ac, max. 2200 pF; CY103=CY104= CY105=CY106= Min. 250 V ac, max. 1000 pF, subclass Y1 or Y2. , comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
05a. Y-Capacitors (CY101, CY102, CY103, CY104, CY105, CY106) (Optional)(alternate)	MATSUSHITA ELECTRIC INDUSTRIAL CO LTD PANASONIC CORP OF NORTH AMERICA	NS-A	CY101=CY102= Min. 250 V ac, max. 2200 pF; CY103=CY104= CY105=CY106= Min. 250 V ac, max. 1000 pF, subclass Y1 or Y2. , comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
05b. Y-Capacitors (CY101, CY102, CY103, CY104, CY105, CY106) (Optional)(alternate)	TDK CORP	CD or CS	CY101=CY102= Min. 250 V ac, max. 2200 pF; CY103=CY104= CY105=CY106= Min. 250 V ac, max. 1000 pF, subclass Y1 or Y2. , comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
06. Varistor (TVR101, TVR102)	THINKING ELECTRONIC INDUSTRIAL	TVR14471, TVR14621, TVR14511,	Min. 250 V, (line-to-line)	UL 1449, IEC 61051-1, IEC61051-2	UL, VDE, VDE	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
(Optional)	CO LTD	TVR14561, TVR14681				
06a. Varistor (TVR101, TVR102) (Optional)(alternate)	EPCOS OHG	SIOVS14K420, SIOVS14K420E 2K1	Min. 250 V, (line-to-line)	UL 1449, IEC 61051-1, IEC61051-2	UL, VDE	
06b. Varistor (TVR101, TVR102) (Optional)(alternate)	EPCOS OHG	S14K420, S14K420E2	Min. 250 V, (line-to-line)	UL 1449, IEC 61051-1, IEC61051-2	UL, VDE	
07. Bleeder Resistors (R101, R102)	--	--	Series connected, each rated max. 392 K Ohms, 1/4 W.	--	--, --	
08. IC (U101)	--	--	0.25~2.5 A, min. 825 V	--	--, --	
09. Primary connector (CN101, CN102, CN103)	Various	Various	Min. 250Vac	UL 1977	UL, --	
10. Gas-tube Suppressor (G100) (Optional)	Okaya	RA-302\$ (\$:Followed by suffix M-C6 and one or two characters)	Min. 250 V(line-to- Ground)	UL 1414, UL 60384-14	UL, --	
- Power supply	--	--	--	--	--, --	
01. Line Filters (FL103)	--	--	Min. 130 degree C.	--	--, --	
01-1. Core	--	--	For dimension, see enclosure 4-04 for details.	--	--, --	
01-2. Coils	--	--	Min. 130 degree C.	--	UL, --	
02. Bleeder Resistors (R135, R137)	--	--	Series connected, each rated max. 392 K Ohms, 1/4 W.	--	--, --	
03. X-Capacitors (CX104) (Optional)	Okaya Electric Industries Co., Ltd.	RE or LE	Min. 250 V ac, 0.47 uF max, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03a. X-Capacitors	ARCOTRONICS SPA	R.46	Min. 250 V ac, 0.47 uF max,	UL 1414, IEC 60384-14:93,	UL, VDE, ENEC, CCEE, FIMKO,	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
(CX104) (Optional)(alternate)			subclass X2 min., comply with IEC 60384-14.	VDE 0565, EN132400:1994 +A2+A3	SEMKO	
03b. X- Capacitors (CX104) (Optional)(alternate)	VISHAY CAPACITORS BELGIUM N V	MKP 336 2, MKP 338 2, 336 2 or 338 2	Min. 250 V ac, 0.47 uF max, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03c. X- Capacitors (CX104) (Optional)(alternate)	Hua Jung Components Co., Ltd.	MKP	Min. 250 V ac, 0.47 uF max, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03d. X- Capacitors (CX104) (Optional)(alternate)	ISKRA KONDENZATO RJI D D	KNB 1530 or KNB 1560	Min. 250 V ac, 0.47 uF max, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
03e. X- Capacitors (CX104) (Optional)(alternate)	MATSUSHITA ELECTRIC INDUSTRIAL CO LTD PANASONIC CORP OF NORTH AMERICA	ECQ-UL	Min. 250 V ac, 0.47 uF max, subclass X2 min., comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, VDE 0565, EN132400:1994 +A2+A3	UL, VDE, ENEC, CCEE, FIMKO, SEMKO	
4. Thermistors (NTC101)	--	--	10 Ohms at 25 degree C, 8 A or 6A	--	--, --	
5. Thermistors (NTC102)	--	--	15 Ohms at 25 degree C, 2 A	--	--, --	
6. Relay (RL101, RL102, RL103)	SONG CHUAN PRECISION CO LTD	888HN series	Min. 250 V ac, 17 A,	UL 1054, IEC 61058-1	UL, --	
06a. Relay (RL101, RL102, RL103)(alternate)	SONG CHUAN PRECISION CO LTD	894H-2AH1-F-C	Min. 250 V ac, 10~12 A,	UL 1054, IEC 61058-1	UL, TUV	
06b. Relay (RL101, RL102, RL103)(alternate)	TAKAMISAWA ELECTRIC CO LTD	VS-12MBU-NR	Min. 240 V ac, 10~15 A,	UL 1054, IEC 61058-1	UL, SEMKO	
06c. Relay (RL101, RL102, RL103) (Alternate)	Song Chuan Precision Co., Ltd.	507HN series	Min. 240 V ac, 17 A. (85 degree C min.)	UL 508, IEC 61810-1	UL, VDE	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
07. Y-Capacitors (CY107, CY109) (Optional)	Murata MFG Co Ltd	KX, KH	Min. 250 V ac, max. 2200 pF, subclass Y1 or Y2. , comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
07a. Y-Capacitors (CY107, CY109) (Optional)	MATSUSHITA ELECTRIC INDUSTRIAL CO LTD PANASONIC CORP OF NORTH AMERICA	NS-A	Min. 250 V ac, max. 2200 pF, subclass Y1 or Y2. , comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
07b. Y-Capacitors (CY107, CY109) (Optional)	TDK CORP	CD or CS	Min. 250 V ac, max. 2200 pF, subclass Y1 or Y2. , comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
08. Bridge Diode (CR101)	--	--	23~25 A, min. 600 V.	--	--, --	
09. Bridge Diode (CR102)	--	--	1.5~2 A, min. 800 V.	--	--, --	
10. Bulk Capacitor (C107, C108, C109, C124)	--	--	C107=C108=C109=330~470 uF, min. 400 V ac, 105 degree C; C124=68~100 uF, min. 400 V ac, 105 degree C with integral pressure relief	--	--, --	
11. Transistors (Q120, Q121)	--	--	12~15 A, min. 600 V	--	--, --	
12. TOP Switch (U104)	--	--	1~2 A, 650 V	--	--, --	
13. Optical Isolators (U103, U105, U107)	TOSHIBA CORP, SEMICONDUCT OR CO DISCRETE SEMICONDUCT OR DIV	TLP781, TLP781F	3000 Vac isolation; di = 0.6 mm min. min. 100 degree C. Distance between input and output = min. 7 mm	UL 1577, IEC 60950, VDE 0884	UL, VDE, FIMKO, SEMKO	
13a. Optical Isolators (U103, U105,	VISHAY INFRARED COMPONENTS	TCET1104G, SFH617A or TCET1103(G)D	3000 Vac isolation; di = 0.4 mm min. min.	UL 1577, IEC 60950, VDE 0884	UL, VDE, FIMKO, SEMKO	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
U107)(alternate)	INC		100 degree C. Distance between input and output = min. 6.4 mm			
13b. Optical Isolators (U103, U105, U107)(alternate)	Sharp Corporation	PC123	3000 Vac isolation; di = 0.4 mm min., min. 100 degree C. Distance between input and output = min. 5 mm	UL 1577, IEC 60950, VDE 0884	UL, VDE, FIMKO, SEMKO	
14. Bridge Capacitors (CY108) (Optional)	TDK Corp	CD	Min. 250 V ac, max. 2200 pF, marked with Y1, Comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
14a. Bridge Capacitor (CY108) (Optional)(alternate)	MURATA MFG CO LTD	KX	Min. 250 V ac, max. 2200 pF, marked with Y1, Comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
14b. Bridge Capacitors (CY108) (Optional)(alternate)	Matsushita Electric Industrial Co Ltd	NS-A	Min. 250 V ac, max. 2200 pF, marked with Y1, Comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
14c. Bridge Capacitors (CY108) (Optional)(alternate)	WALSIN TECHNOLOGY CORP	AH	Min. 250 V ac, max. 2200 pF, marked with Y1, Comply with IEC 60384-14.	UL 1414, IEC 60384-14:93, EN 132400	UL, VDE, FIMKO, SEMKO	
15. Isolation Transformer (T101)	Delta Electronics, Inc.	P/N: DV-DS10056	Class B.	Evaluated within EUT.	--, --	
15-1. Insulation system	Delta	MP-130I	Class B	UL1446	UL, --	
15-2. Core	--	--	Ferrite, overall 27.4 by 20 by 5 mm	--	--, --	
15-3. Coil	--	--	Rated min 130 degree C	UL1446	UL, --	
15-4. Bobbin	Sumitomo Bakelite Co. Ltd.	PM-9630 or PM-9820	Rated 150 degree C, V-0, thickness: Min.	UL94, UL746C	UL, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
			0.4mm.			
15-5. Insulation Tape	3M Company	1350F-1or 1350T-3, 1351-1	Rated 130 degree C	UL510	UL, --	
15-5a. Insulation Tape (Alternate)	Symbio Inc.	35660Y	Rated 130 degree C	UL510	UL, --	
15-5b. Insulation Tape (Alternate)	Jingjiang Yahua Pressure Sensitive Glue co., Ltd	CT	Rated 130 degree C	UL510	UL, --	
15-6. Varnish (optional)	John C. Dolph Co.	BC-346A or BC-346-A	Rated 200 degree C	UL1446	UL, --	
15-6a. Varnish (optional)	Kyocera Chemical Corp.	TVB2180T	Rated 155 degree C	UL1446	UL, --	
15-6b. Varnish (optional)	Hitachi Chemical Co., Ltd.	WP-2952F-2G	Rated 130 degree C	UL1446	UL, --	
15-6c. Varnish (optional)	Elantas Electrical Insulation Elantas PDG INC	V1380FC	Rated 130 degree C	UL1446	UL, --	
15-7. Margin Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	WF	Rated 130 degree C	UL510	UL, --	
15-7a. Margin Tape (Alternate)	3M Company	44, 44D-A, 44T-A	Rated 130 degree C	UL510	UL, --	
15-7b. Margin Tape (Alternate)	Symbio Inc.	35661	Rated 130 degree C	UL510	UL, --	
15-8. Tubing	Great Holding Industrial Co., Ltd.	TFT, TFS, TFL	200 degree C, VW-1	UL 224	UL, --	
15-8a Tubing (Alternate)	Zeus Industrial Products Inc.	TFE-TW-300, TFE-SW-600, TFE-LW-150	200 degree C, VW-1	UL 224	UL, --	
15-8b Tubing (Alternate)	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-L, CB-TT-T, CB-TT-S	200 degree C, VW-1	UL 224	UL, --	
16. Isolation Transformer (T102)	Delta Electronics, Inc.	P/N: MV-DS10290	Class B	Evaluated within EUT.	--, --	
16-1. Insulation system	Delta	MP-130I	Class B	UL1446	UL, --	
16-2. Margin Tape	JINGJIANG YAHUA PRESSURE	WF	Rated 130 degree C	UL510	UL, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
	SENSITIVE GLUE CO LTD					
16-2a. Margin Tape (Alternate)	3M Company	44, 44D-A, 44T-A	Rated 130 degree C	UL510	UL, --	
16-2b. margin Tape (Alternate)	Symbio Inc.	35661	Rated 130 degree C	UL510	UL, --	
16-3. Core	--	--	Ferrite, overall 39.3 by 44.6 by 12.8 mm	--	--, --	
16-4. Coil	--	--	Rated min 130 degree C	UL1446	UL, --	
16-5. Bobbin	Sumitomo	PM-9630, PM-9820	Rated 150 degree C, V-0, thickness: Min. 0.4mm.	UL94, UL746C	UL, --	
16-6. Insulation Tape	3M Company	1350F-1, 1351-1 or 1350T-3	Rated 130 degree C	UL510	UL, --	
16-6a. Insulation Tape (Alternate)	Symbio Inc.	35660Y	Rated 130 degree C	UL510	UL, --	
16-6b. Insulation Tape (Alternate)	Jingjiang Yahua Pressure Sensitive Glue co., Ltd	CT	Rated 130 degree C	UL510	UL, --	
16-7. Varnish	John C. Dolph Co.	BC-346-A or BC-346A	Rated 200 degree C	UL1446	UL, --	
16-7a. Varnish (Alternate)	Elantas Electrical Insulation Elantas PDG INC	V1380FC	Rated 130 degree C	UL1446	UL, --	
16-7b. Varnish (Alternate)	HITACHI CHEMICAL CO LTD	WP-2952F-2G	Rated 130 degree C	UL1446	UL, --	
16-7c. Varnish (optional)	Kyocera Chemical Corp.	TVB2180T	Rated 155 degree C	UL1446	UL, --	
16-8. Tubing	Great Holding Industrial Co., Ltd.	TFT, TFL, TFS	200 degree C, VW-1	UL 224	UL, --	
16-8a Tubing (Alternate)	Zeus Industrial Products Inc.	TFE-TW-300, TFE-LW-150, TFE-SW-600	200 degree C, VW-1	UL 224	UL, --	
16-8b Tubing (Alternate)	Changyuan Electronics(Shenzhen)CO LTD	CB-TT-L, CB-TT-T, CB-TT-S	200 degree C, VW-1	UL 224	UL, --	
17. Heat Sink (HS101, HS102, HS202)	Various	Various	Material: Aluminum, see Enclosure 4-06	--	--, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
			For detail.			
18. Heat Sink fixed on HS101 and HS102	Various	Various	Material: Aluminum, see Enclosure 4-08 For detail.	--	--, --	
19. Heat Sink (HS103)	Various	Various	Material: Aluminum, see Enclosure 4-07 For detail.	--	--, --	
20. Inductor (L101)	Various	Various	Min. 130 degree C.	Evaluated within EUT.	--, --	
20-1. Core	--	--	For dimension, see enclosure 4-05 for details.	--	--, --	
20-2. Coils	--	--	Min. 130 degree C.	--	UL, --	
21. PWB	Various	Various	V-1 or better, minimum 130 degree C.	UL 796	--, --	
22. Primary connector (CN101)	Various	Various	Min. 250Vac	UL 1977	UL, --	
23. Primary connector (CN102)	Various	Various	Min. 380Vdc	UL 1977	UL, --	
23a. Alternate - Primary connector (CN102)	JOWLE TECHNOLOGY CO LTD	C4201, C4202	Min. 250Vac	UL 1977	UL, --	
24. Foamed material for air filter	Various	Various	Rated HBF or better	UL 94	UL, --	
25. Handling fixed on the bottom case(2 sets) (optional)	Various	Various	Metal (Aluminum)	--	--, --	
26. Handling fixed on the sides of enclosure (4 sets)(Optional)	Various	Various	Metal (Aluminum)	--	--, --	
27. Plastic around lens	Various	Various	Rated HB or better	UL 94	UL, --	
28. Plastic under power board	MIANYANG LONGHUA FILM CO LTD	PC-870	Rated V-2 or better	UL 94	UL, --	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾	
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)						Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status	
--	--	--	--	--	--	For project 13CA13443	
180/50	6.71	--	1199	F103	6.71	Max. Normal Load with HDMI signal input.	
180/60	6.70	--	1198	F103	6.70	Max. Normal Load with HDMI signal input.	
200/50	6.03	6.2	1193	F103	6.03	Max. Normal Load with HDMI signal input.	
200/60	6.02	6.2	1192	F103	6.02	Max. Normal Load with HDMI signal input.	
240/50	4.99	6.2	1187	F103	4.99	Max. Normal Load with HDMI signal input.	
240/60	4.98	6.2	1186	F103	4.98	Max. Normal Load with HDMI signal input.	
264/50	4.59	--	1181	F103	4.59	Max. Normal Load with HDMI signal input.	
264/60	4.58	--	1180	F103	4.58	Max. Normal Load with HDMI signal input.	
180/50	6.69	--	1197	F103	6.69	Max. Normal Load with DVI signal input.	
180/60	6.68	--	1197	F103	6.68	Max. Normal Load with DVI signal input.	
200/50	6.02	6.2	1191	F103	6.02	Max. Normal Load with DVI signal input.	
200/60	6.01	6.2	1190	F103	6.01	Max. Normal Load with DVI signal input.	
240/50	4.97	6.2	1185	F103	4.97	Max. Normal Load with DVI signal input.	
240/60	4.97	6.2	1184	F103	4.97	Max. Normal Load with DVI signal input.	
264/50	4.57	--	1179	F103	4.57	Max. Normal Load with DVI signal input.	
264/60	4.56	--	1178	F103	4.56	Max. Normal Load with DVI signal input.	
180/50	6.69	--	1198	F103	6.69	Max. Normal Load with Sync signal input	
180/60	6.68	--	1197	F103	6.68	Max. Normal Load with Sync signal input	
200/50	6.01	6.2	1191	F103	6.01	Max. Normal Load with Sync signal input	
200/60	6.01	6.2	1191	F103	6.01	Max. Normal Load with Sync signal input	
240/50	4.97	6.2	1185	F103	4.97	Max. Normal Load with Sync signal input	
240/60	4.97	6.2	1184	F103	4.97	Max. Normal Load with Sync signal input	
264/50	4.56	--	1179	F103	4.56	Max. Normal Load with Sync	

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Clause	Requirement + Test	Result - Remark	Verdict

264/60	4.55	--	1178	F103	4.55	signal input Max. Normal Load with Sync signal input
supplementary information:						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements						Pass
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
For project 13CA13443	--	--	--	--	--	--	
Ballast output / GND	2280	330	5	6	5	6	
Functional:							
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Basic/supplementary:							
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Reinforced:							
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
supplementary information:							

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available.									
Is it possible to install the battery in a reverse polarity position?									
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. specs.		Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	Meas. current	Manuf. specs.
Max. current during normal condition									
Max. current during fault condition									

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Clause	Requirement + Test	Result - Remark	Verdict

Test results:		Verdict
- Chemical leaks		
- Explosion of the battery		
- Emission of flame or expulsion of molten metal		
- Electric strength tests of equipment after completion of tests		
supplementary information:		

4.5	TABLE: Thermal requirements					Pass
	Supply voltage (V)	--	--	--	--	—
	Ambient Tmin (°C)	--	--	--	--	—
	Ambient Tmax (°C)	--	--	--	--	—
Maximum measured temperature T of part/at:		T (°C)				allowed Tmax (°C)
For project 13CA13443		--	--	--	--	--
Test Voltage (V/Hz)		180/60	264/50	--	--	--
Power board		--	--	--	--	--
T102 coil		54.4	54.7	--	--	110
T102 core		48.1	48.5	--	--	110
T101 coil		41.6	42.1	--	--	110
T101 core		42.6	43.3	--	--	110
U107		40.5	41.1	--	--	100
U105		44.1	45.1	--	--	100
U103		45.9	46.7	--	--	100
CY108		44.7	45.4	--	--	85
FL103		50.6	46.2	--	--	105
L101		56.4	50.3	--	--	105
L201		46	46.6	--	--	105
L202		45.4	45.9	--	--	105
CX104		46.5	44.6	--	--	85
RL103		47.6	47.2	--	--	105
PCB under NTC101		47.6	45.8	--	--	105
T103		40.5	40.8	--	--	105
D104		56.4	53.1	--	--	105
Q102		51.8	48.8	--	--	105
Q101		50.1	47.7	--	--	105
CR101		67.6	59.5	--	--	105
CN102		48.6	47.2	--	--	105
C108		44.2	43.6	--	--	105
L102		50.9	48.8	--	--	105
Q120		42.6	43.1	--	--	105
Filter board		--	--	--	--	--
FL102		42.2	45.6	--	--	85
28. F101		49.6	48.2	--	--	105
29. CY104		47.8	47.3	--	--	85
30. FL101		51.4	49.2	--	--	105
31. FL102		48.1	47.3	--	--	105

IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict
32. TVR102	47.7	47.0	--	--	--		105
G100	46.0	46.0	--	--	--		105
PCB near FL101	48.7	47.7	--	--	--		105
Ballast 1	--	--	--	--	--		--
L2	76.1	74.8	--	--	--		130
D1	71.0	70.1	--	--	--		130
L3	68.4	67.3	--	--	--		150
T4	68.9	67.9	--	--	--		150
C5	59.4	58.5	--	--	--		105
L1	49.7	48.8	--	--	--		130
Others	--	--	--	--	--		--
Lamp holder 1	106.0	106.7	--	--	--		170
AC inlet	45.5	45.6	--	--	--		70
Internal enclosure (Openings on rear side)	70.7	71.6	--	--	--		95
External Enclosure	49.4	48.8	--	--	--		70
Label	43.3	43.9	--	--	--		60
VGA connector	42.2	42.7	--	--	--		70
Ambient	Shift to 40	Shift to 40	--	--	--		--
Test time	1H	1.3H	--	--	--		--
temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	allowed T _{max} (°C)	insulation class
supplementary information:							

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests			Pass
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Basic/supplementary:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Lamp connector / Outer metal case		AC	3420	No
Reinforced:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
supplementary information:				

5.3	TABLE: fault condition tests			Pass
	ambient temperature (°C)	--		—
	Power source for EUT: Manufacturer, model/type,	--		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

output rating						
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
5.3.1-5.3.9 Abnormal Operation Tests	--	--	--	--	--	For project 13CA13443
Openings on rear side (air flow out)	blocked	240/60	1.7H	F103	0.51	Max. temperature of T102 coil: 45.4 degree C; T102 core: 41.0 degree C; T101 coil: 38.5 degree C; T101 core: 38.2 degree C; U107: 38.1 degree C; U105: 40.2 degree C; U103: 41.4 degree C; CY108: 39.5 degree C; Ambient: 25.5 degree C. Unit shut down ten minutes later after the fault condition. NC, NB, NT
Openings on front and right side (air flow in)	blocked	240/60	2H	F103	1.86	Max. temperature of T102 coil: 38.6 degree C; T102 core: 36.7 degree C; T101 coil: 34.0 degree C; T101 core: 35.7 degree C; U107: 31.4 degree C; U105: 38.3 degree C; U103: 39.6 degree C; CY108: 38.7 degree C; Ambient: 24.6 degree C. Unit operated normally. NC, NB, NT
DC Fan 18	stalled	240/60	2H	F103	0.45	Max. temperature of T102 coil: 31.1 degree C; T102 core: 31.4 degree C; T101 coil: 29.0 degree C; T101 core: 30.5 degree C; U107: 27.1 degree C; U105: 32.4 degree C; U103: 33.5 degree C; CY108: 32.2 degree C; Ambient: 23.9 degree C. Unit shut down immediately. NC, NB, NT
5.3.7 Overload of Operator Accessible Connector Test	--	--	--	--	--	--
DVI in, pin	Overload	240/60Hz	1H	--	0.005	Voc=0.8, NB, NC, NT

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
11, 2, 4, 5, 9, 10, 12, 13, 14, 16, 17, 18, 20, 21						
DVI in, pin 6, 7	Overload	240/60Hz	1H	--	0.005	Voc=4.7, NB, NC, NT
DVI in, pin 3, 8, 11, 15, 19, 22~24	Overload	240/60Hz	--	--	--	Voc=0, B
Sync in, pin 1	Overload	240/60Hz	--	--	--	Voc=0, B
Sync out, pin 1	Overload	240/60Hz	--	--	--	Voc=0, B
supplementary information:						

Enclosure

National Differences

Austria**
Belgium**
Brazil*
Bulgaria**
China*
Czech Republic**
Denmark
Finland
France**
Germany
Greece**
Group
Hungary**
Israel*
Italy**
Japan*
Korea
Netherlands**
Norway
Poland**
Romania**
Singapore*
Slovakia**
Slovenia**
Spain
Sweden
Switzerland
USA / Canada
Ukraine*
United Kingdom

* No National Differences Declared
** Only Group Differences

Issue Date: 2011-08-09
Amendment 1 2013-03-19

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Report Reference #

E134786-A77-CB-1

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

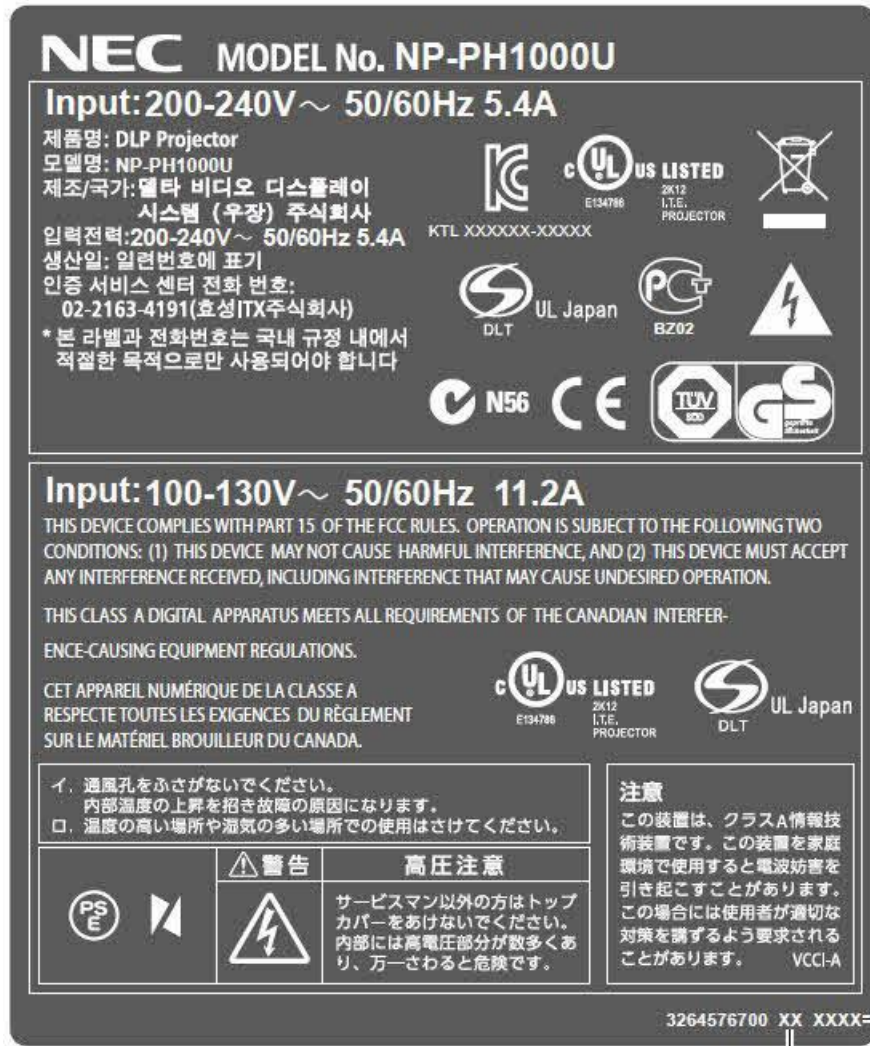
United Kingdom - Differences to IEC 60950-1:2005 (Second Edition)			
4.3.6	Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A

Enclosures

Type	Supplement Id	Description
Photographs	3-01	External View - 1 of 4
Photographs	3-02	External View - 2 of 4
Photographs	3-03	External View - 3 of 4
Photographs	3-04	External View - 4 of 4
Photographs	3-05	Internal View - 1 of 15
Photographs	3-06	Internal View - 2 of 15
Photographs	3-07	Internal View - 3 of 15
Photographs	3-08	Internal View - 4 of 15
Photographs	3-09	Internal View - 5 of 15
Photographs	3-10	Internal View - 6 of 15
Photographs	3-11	Internal View - 7 of 15
Photographs	3-12	Internal View - 8 of 15
Photographs	3-13	Internal View - 9 of 15
Photographs	3-14	Internal View - 10 of 15
Photographs	3-15	Internal View - 11 of 15
Photographs	3-16	Internal View - 12 of 15
Photographs	3-17	Internal View - 13 of 15
Photographs	3-18	Internal View - 14 of 15
Photographs	3-19	Internal View - 15 of 15
Photographs	3-23	Rear side of unit
Photographs	3-24	Internal view of unit - 1
Photographs	3-25	Internal view of unit - 2
Photographs	3-26	Lamp view - 1
Photographs	3-27	Lamp view - 2
Photographs	3-28	Component side of ballast (MINEBEA CO LTD, PHG451A2***)
Photographs	3-29	Solder side of ballast (MINEBEA CO LTD, PHG451A2***)
Photographs	3-30	Component side of filter board
Photographs	3-31	Solder side of filter board
Photographs	3-32	Component side of I/O board
Photographs	3-33	Solder side of I/O board
Photographs	3-34	Connector view without slide switch
Diagrams	4-01	Overall Diagram

Diagrams	4-02	Transformer T101
Diagrams	4-03	Transformer T102
Diagrams	4-04	Inductor (FL101, FL102, FL103)
Diagrams	4-05	Inductor (L101)
Diagrams	4-06	Heatsink (HS101, HS102, HS202)
Diagrams	4-07	Heatsink (HS103)
Diagrams	4-08	Heatsink (On the top side of HS101 and HS102)
Diagrams	4-09	Insulator between Power and Bottom Enclosure
Diagrams	4-20	Fan location
Diagrams	4-21	Fan location (Alternate)
Schematics + PWB	5-01	Power Board Layout
Schematics + PWB	5-02	EMI Filter Board Layout
Manuals	6-01	Manual
Miscellaneous	7-01	Test Form Tables
Miscellaneous	7-02	Manufacturer Declaration Letter
Miscellaneous	7-03	J3000(H21)
Miscellaneous	7-04	Japan National Deviation
Miscellaneous	7-05	WMP list of test equipment
Miscellaneous	7-07	EN National Deviation
Licenses		
Marking Plate	13-01	Label for Model NP-PH1000yyyy
Marking Plate	13-02	Label for Model NP-PH1400yyyy

MarkingPlate ID 13-01



MarkingPlate ID 13-02

NEC MODEL No. NP-PH1400U
Input: 200-240V ~ 50/60Hz 6.2A

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

THIS CLASS A DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A RESPECTE TOUTES LES EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLEUR DU CANADA.

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

イ、通風孔をふさがらないでください。
内部温度の上昇を招き故障の原因になります。
ロ、温度の高い場所や湿気の多い場所での使用はさけてください。

			警告
		高圧注意	

サービスマン以外の方はトップカバーをあけないでください。
内部には高電圧部分が数多くあり、万一さわると危険です。

注意
この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

Photographs ID 3-23



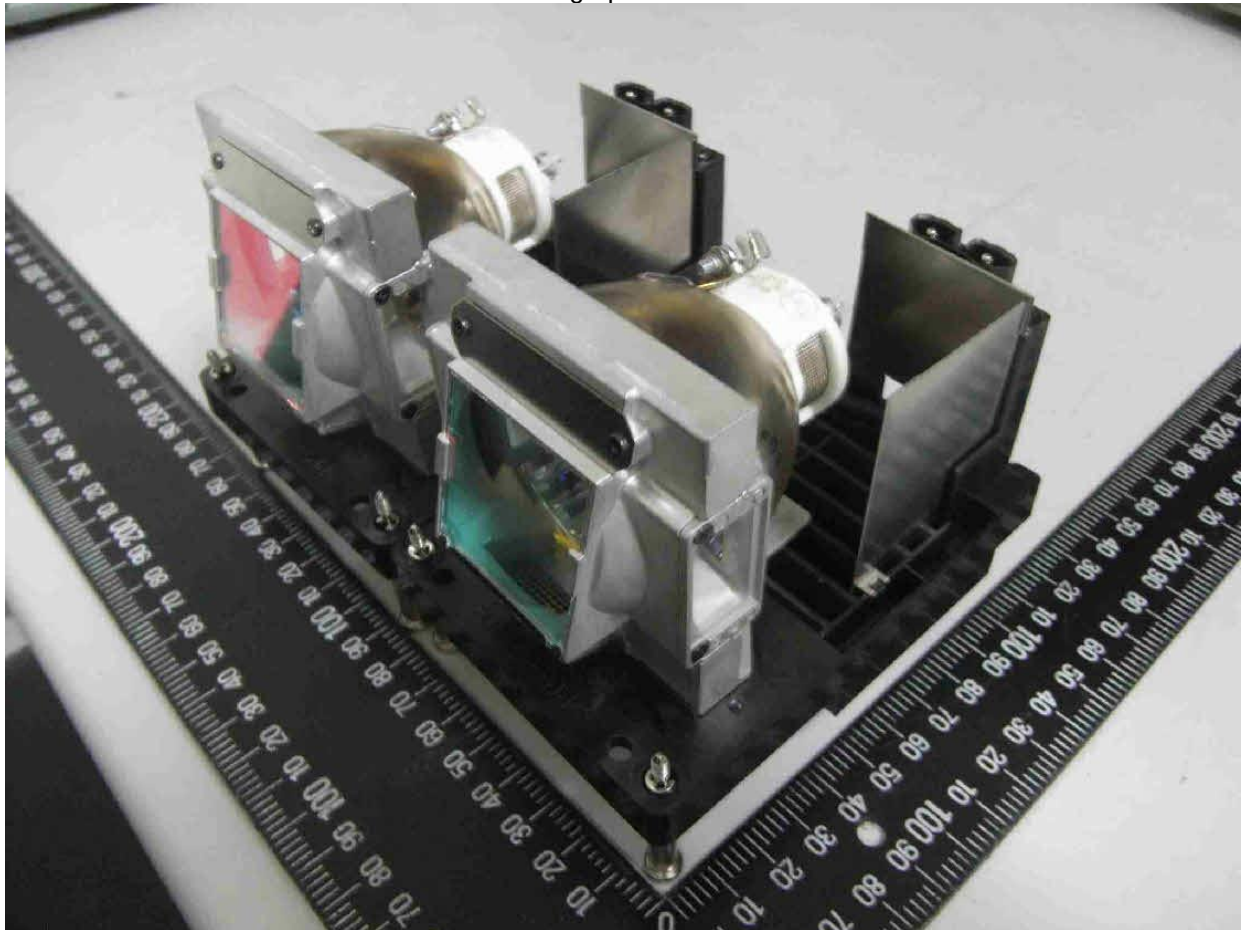
Photographs ID 3-24



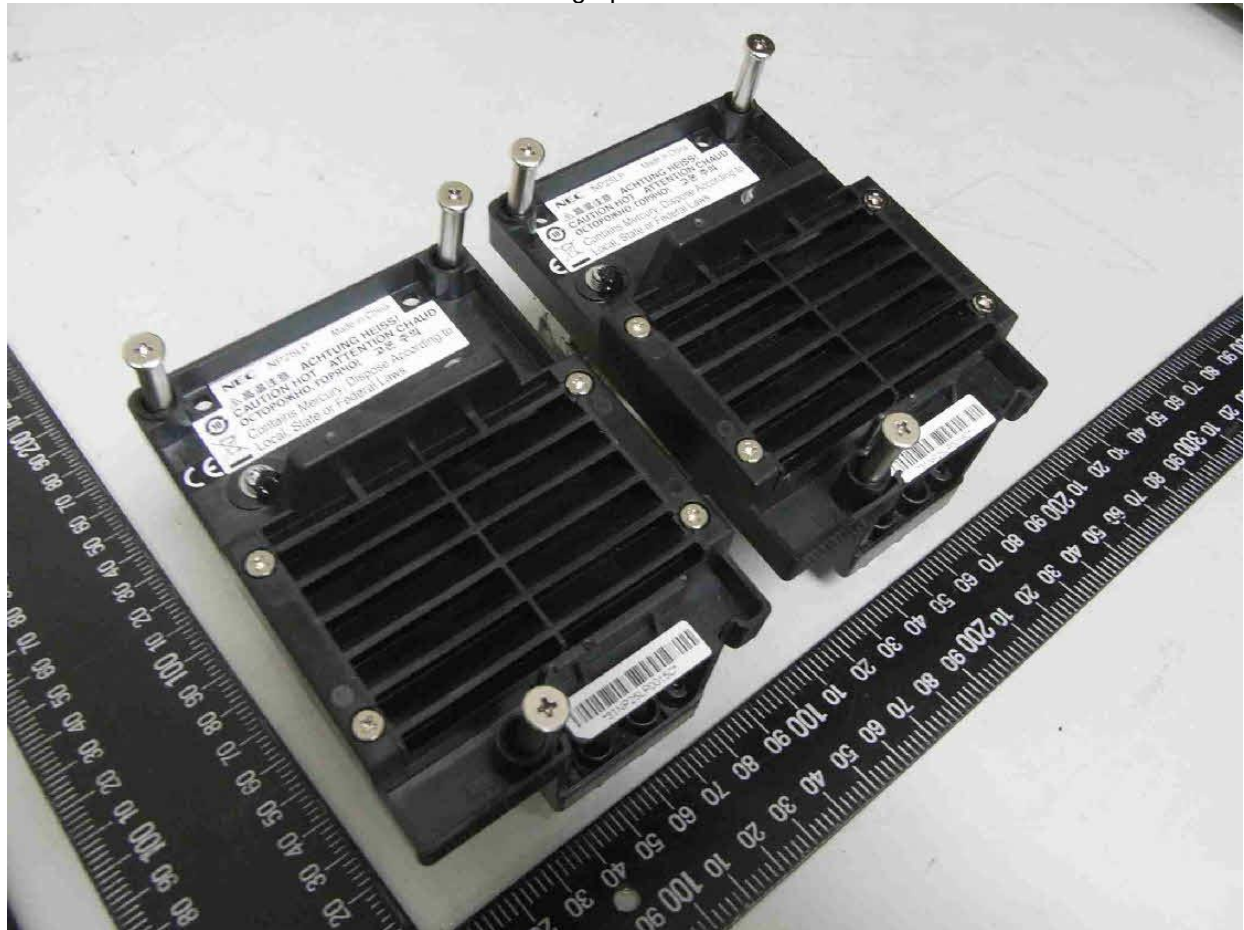
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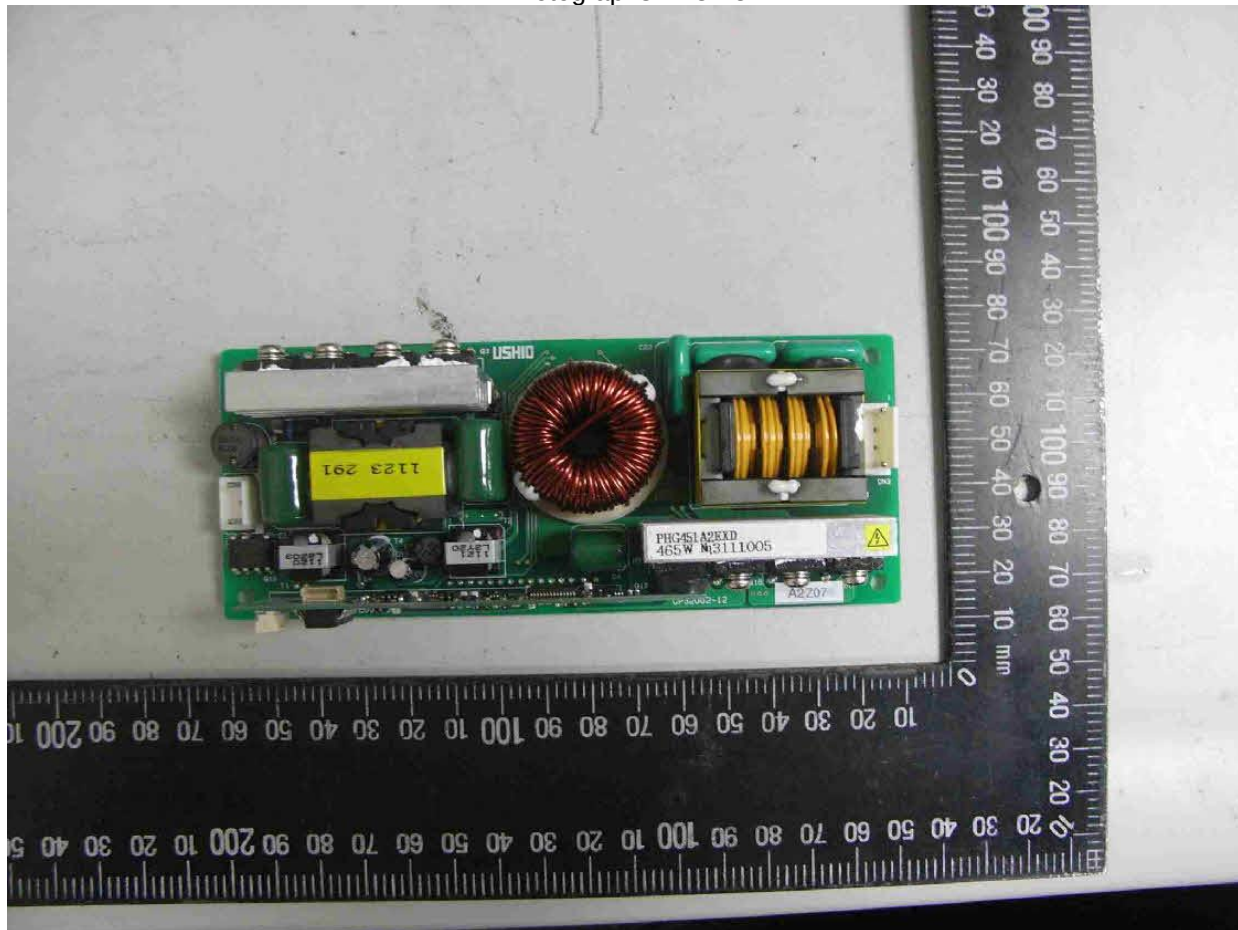
Photographs ID 3-26



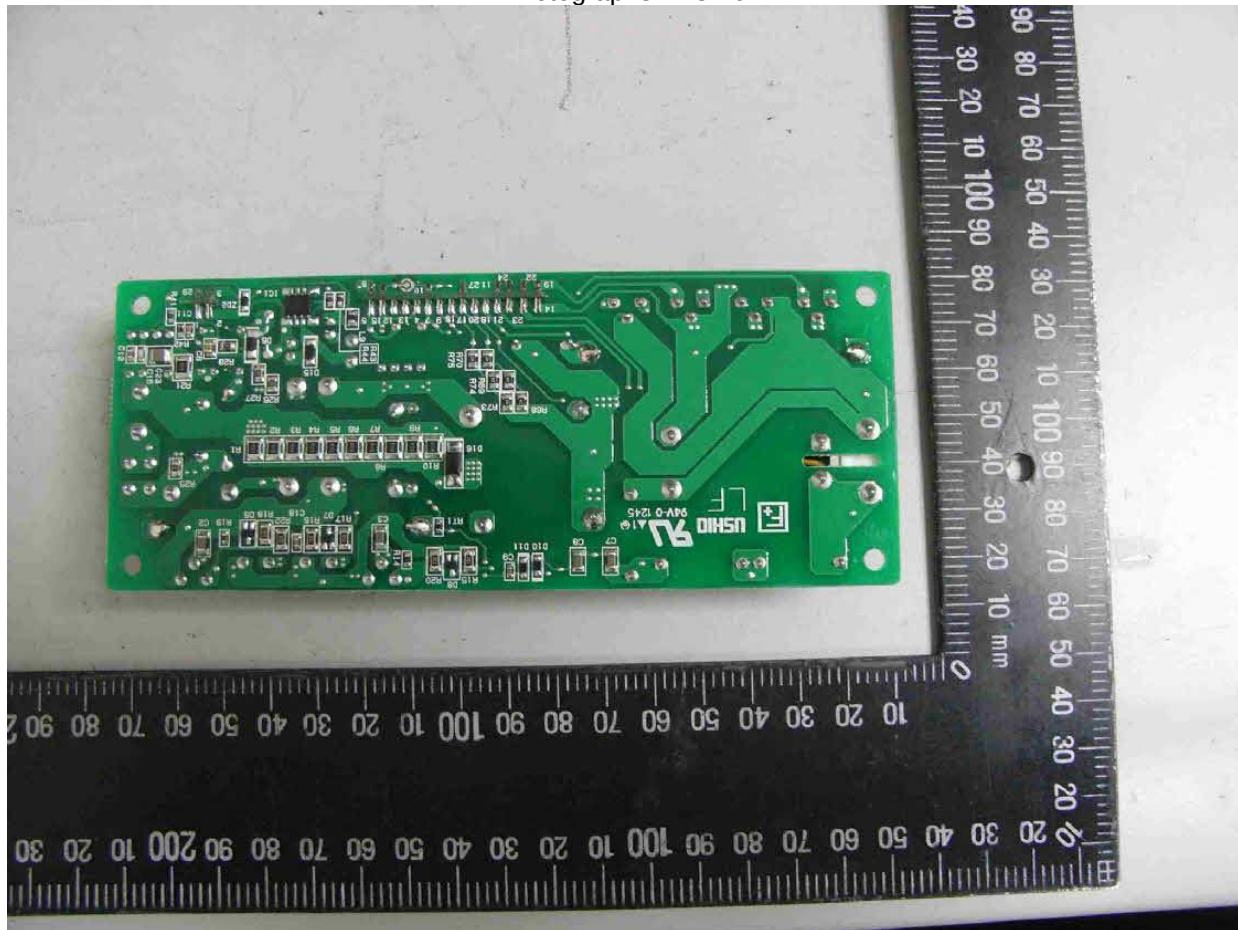
Photographs ID 3-27



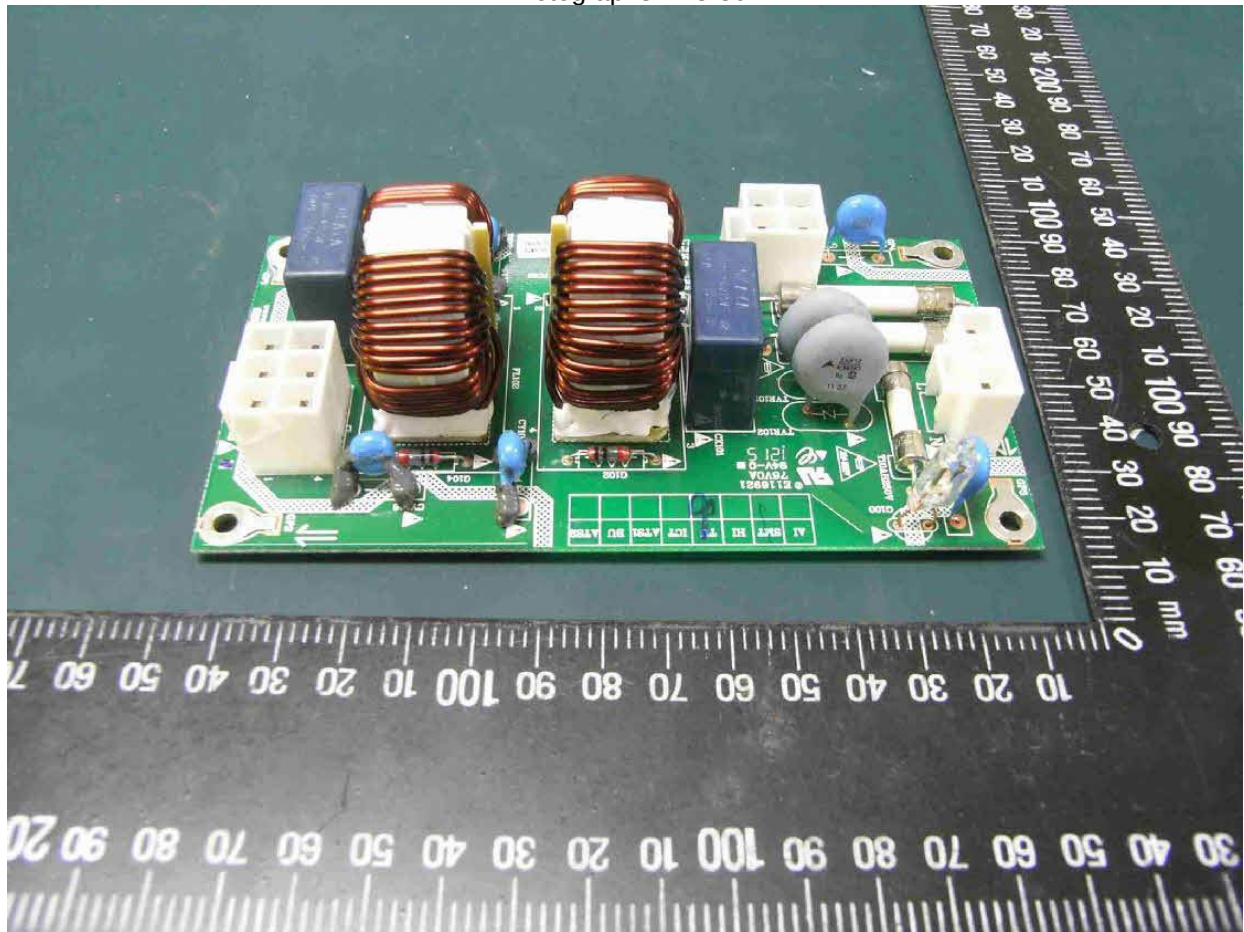
Photographs ID 3-28



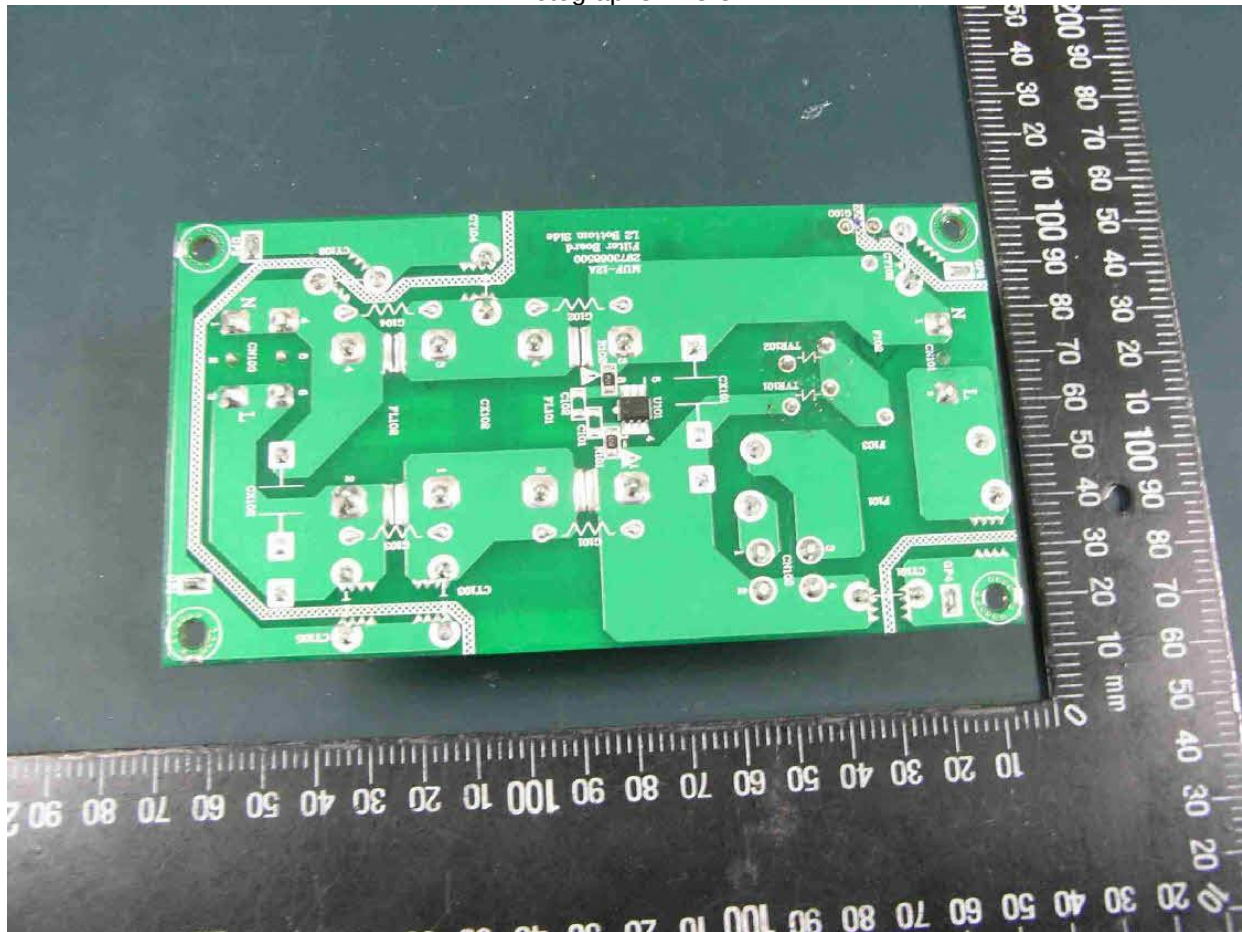
Photographs ID 3-29



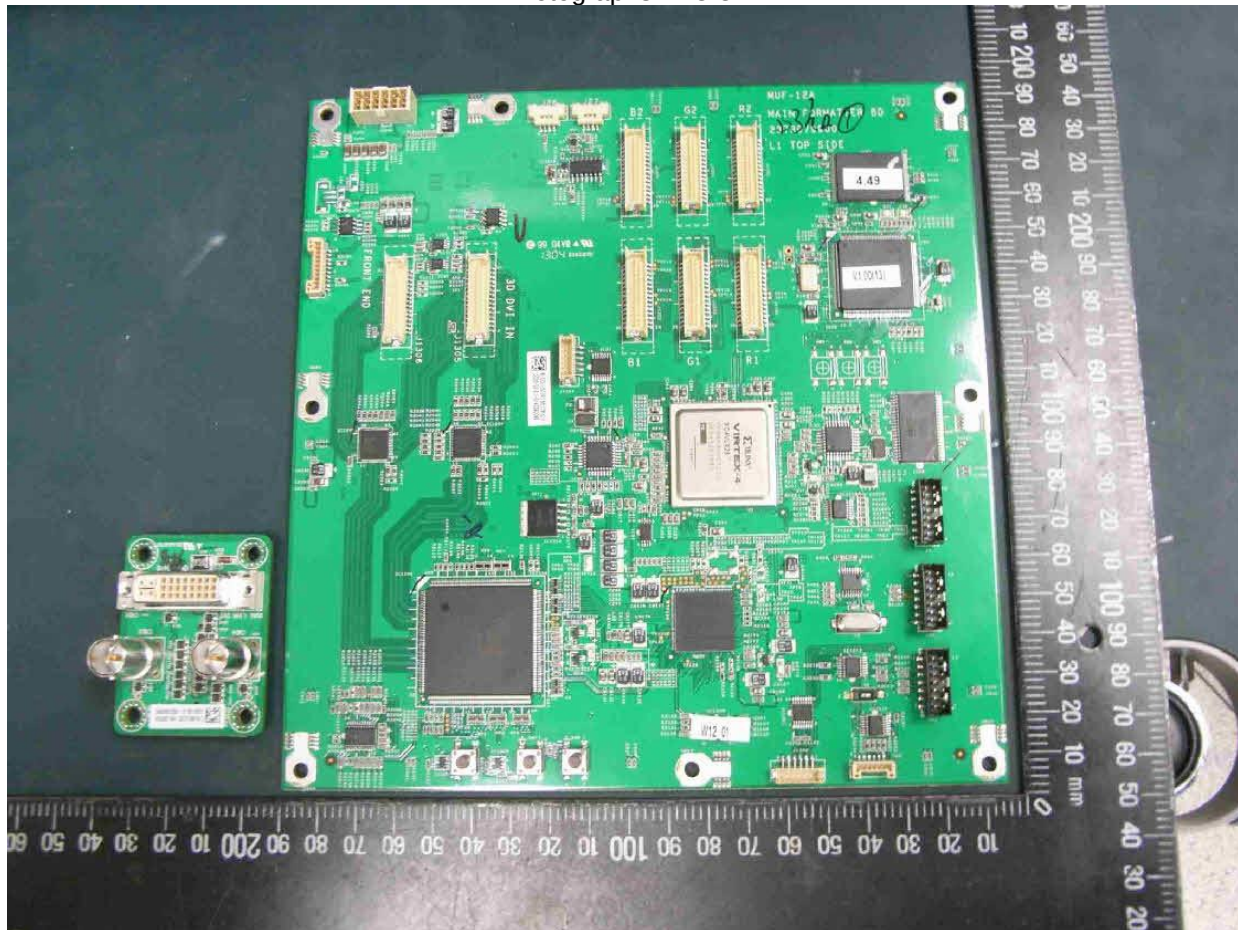
Photographs ID 3-30



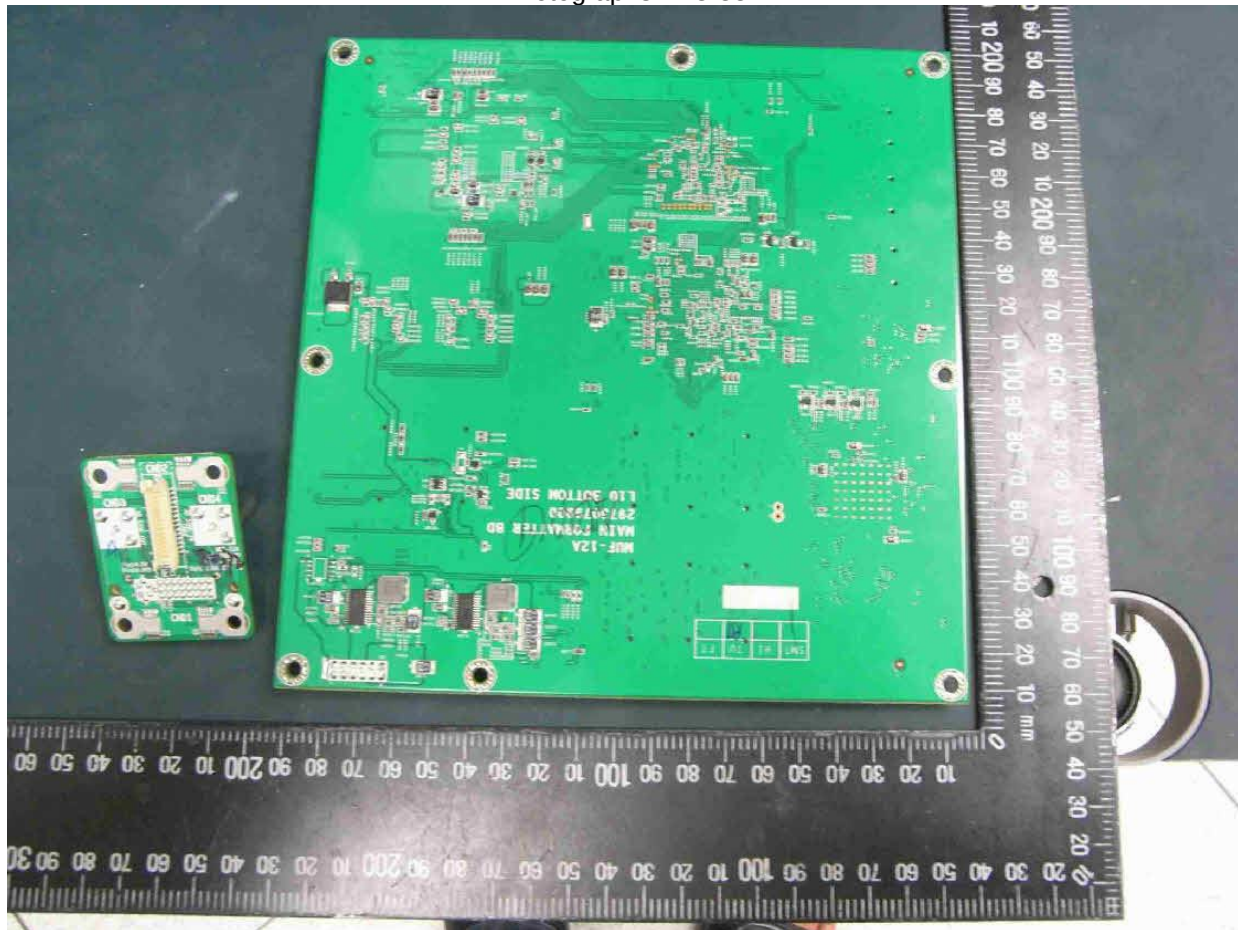
Photographs ID 3-31



Photographs ID 3-32



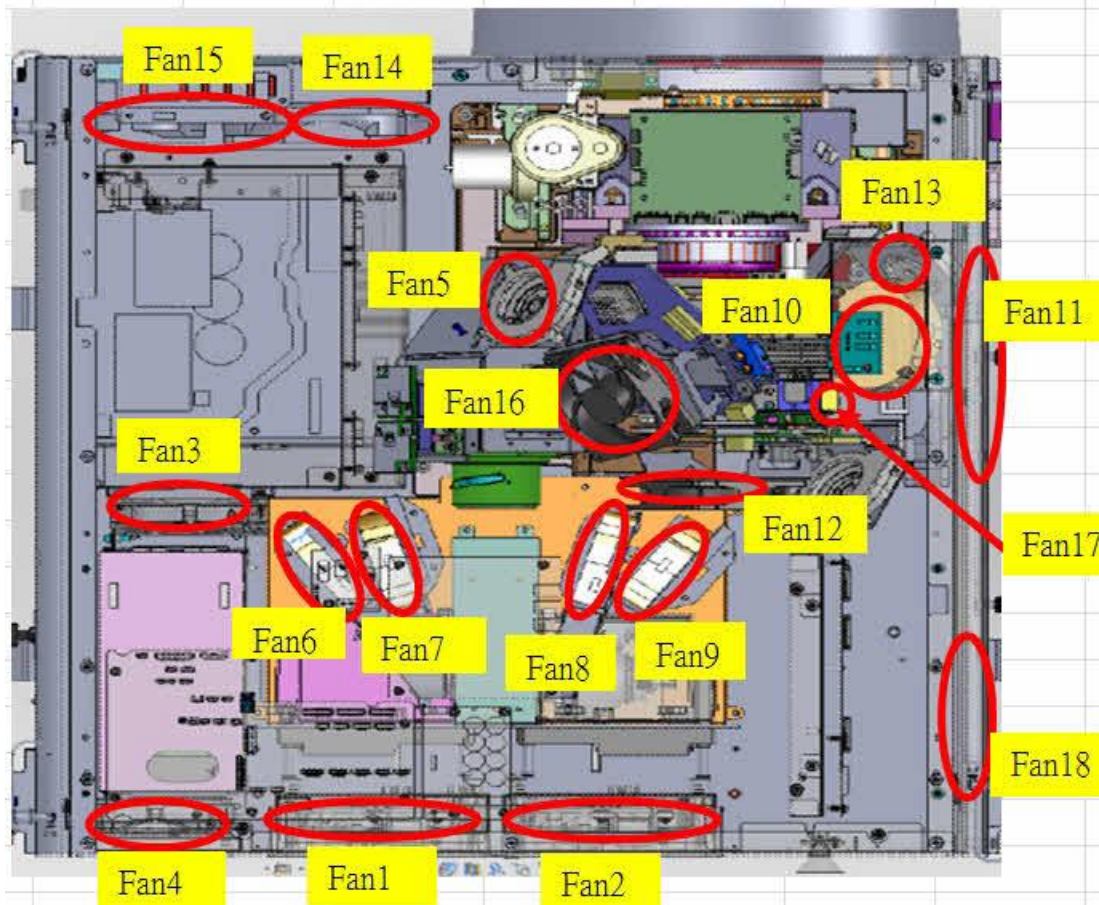
Photographs ID 3-33



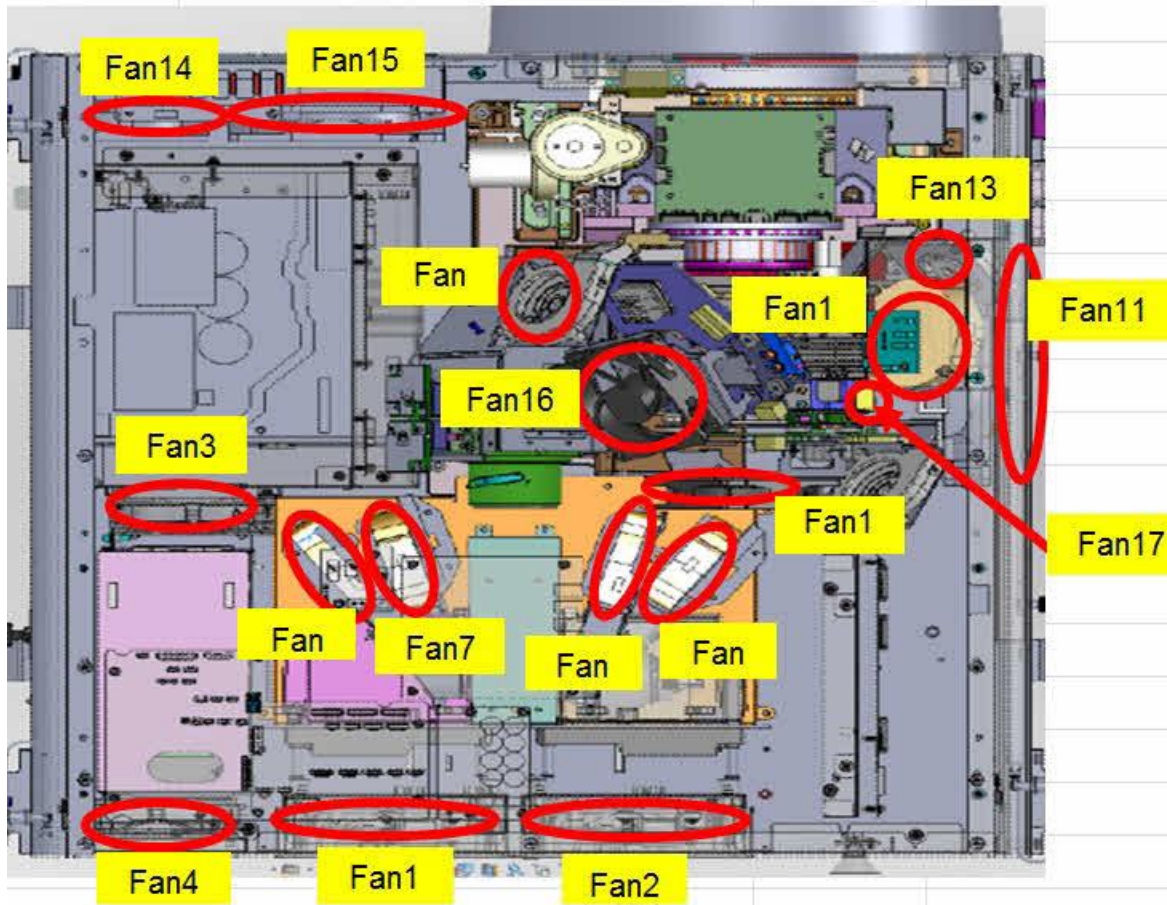
Photographs ID 3-34



Diagrams ID 4-20



Diagrams ID 4-21



Misc ID 7-02

DRAFT CB TEST CERTIFICATE INFORMATION

Generated by ULtraLink on: 2013/03/11

Product	DLP Projector
Name and address of the Applicant	DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY 32063 TAIWAN
Name and address of the Manufacturer	SAME AS APPLICANT
Name and address of the Factory(ies)	1). DELTA VIDEO DISPLAY SYSTEM (WUJIANG) LTD WUJIANG ECONOMIC DEVELOPMENT ZONE, 1688 JIANGXING EAST RD, WUJIANG JIANGSU, CHINA 2). DELTA ELECTRONICS, INC. 3, TUNG YUAN RD CHUNG LI INDUSTRIAL ZONE TAOYUAN COUNTY 32063, TAIWAN
Rating and principal characteristics	For NP-PH1000yyyy: 100-130 Vac, 11.2A, 50/60 Hz; 200-240 Vac, 5.4 A, 50/60 Hz For NP-PH1400yyyy: 200-240 Vac, 6.2 A, 50/60 Hz
Trademarks (if any)	NEC 
Model / Type ref.	NP-PH1000yyyy, NP-PH1400yyyy (y can be any character or blank for marketing purpose and no impact safety related critical components and constructions.)
Additional information (if necessary)	
A sample of the product was tested and found to be in conformity with	IEC 60950-1:2005 (Second Edition) inclusive of CENELEC Common Modifications. See Test Report for National Differences.
As shown in the Test Report Ref. No. which forms part of this Certificate	E134786-A77

Client Representative	Ms. Bonnie Liu
Client email (or fax)	+886 03 452-6107#8708

Issue Date: 2011-08-09
Amendment 1 2013-03-19

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Enclosures

Report Reference #

E134786-A77-CB-1

Misc ID 7-02

This form is to acknowledge that the above information has been reviewed and the material has been found to be accurate as stated. This is also to record client's confirmation that above factories manufacture product(s) that are equal to those submitted for testing and certification. (Refer to IECEE 02, Sub-clause 6.2.5: "When the application covers more than one factory, the address of each factory shall be stated in the CB Test Certificate and the NCB shall take steps to ensure that the products from all the factories are equal. That shall be confirmed in the Test Report.")

Signed: Bonnie LTA

Dated: 2013/03/12

*Definitions per IECEE 02 (<http://www.iecee.com/cbscheme/pdf/IECEE02.pdf>):

Applicant: A firm or a person who applies to an NCB for obtaining a CB Test Certificate.

Manufacturer: An organization, situated at a stated location or locations, that carries out or controls such stages in the manufacture, assessment, handling and storage of a product that enables it to accept responsibility for continued compliance of the product with the relevant requirements and undertakes all obligations in that connection.

Factory: The location(s) at which the product is produced or assembled and follow-up service is established by the NCB.