



Ref. Certif. No.

JPTUV-052461-M1

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product
Produit

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeur

NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku
Tokyo, 108-0073 JAPAN

Name and address of the manufacturer
Nom et adresse du fabricant

NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku
Tokyo, 108-0073 JAPAN

Name and address of the factory
Nom et adresse de l'usine

Compal Electronics (China) Co., Ltd.
No. 988, TongFeng East Road,
Kunshan Development Zone, KunShan, JiangSu 215335, P.R. China

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

AC 100-240V; 50/60Hz, 1.0-0.45A; Class I

Trademark (if any)
Marque de fabrique (si elle existe)

NEC

Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

N/A

Model / Type Ref.
Ref. de type

L272Q3, PA272W, PA272W-BK, PA272W(C), PA272W-BK(C)

Additional information (if necessary may also be
reported on page 2)
Les informations complémentaires (si nécessaire,
peuvent être indiqués sur la 2^{ème} page)

For model differences, refer to the test report.
Re-issue of JPTUV-052461 dated 31.07.2013,
due to first modification.

A sample of the product was tested and found
to be in conformity with
Un échantillon de ce produit a été essayé et a été
considéré conforme à la

IEC 60950-1:2005+A1
National differences see test report

As shown in the Test Report Ref. No. which forms part
of this Certificate
Comme indiqué dans le Rapport d'essais numéro de
référence qui constitue partie de ce Certificat

11033652 002

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

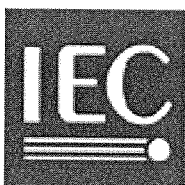


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Signature:

Dipl.-Ing. A. Engelzel

Date: 26.08.2013



Test Report issued under the responsibility of:



TEST REPORT IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report Number	11033652 002
Date of issue	Aug. 23, 2013
Total number of pages	10
CB Testing Laboratory	TÜV Rheinland Taiwan Ltd., Taichung Laboratory
Address	No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City 428, Taiwan
Applicant's name	NEC Display Solutions, Ltd.
Address	4-28, Mita 1-chome, Minato-ku, Tokyo, JAPAN
Manufacturer's name	Same as applicant
Address	Same as applicant
Test specification:	
Standard	IEC 60950-1:2005 (Second Edition); Am 1:2009
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC60950_1C
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2012-08
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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.	
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	LCD Monitor
Trade Mark	NEC
Manufacturer	Same as applicant
Model/Type reference	L272Q3, PA272W, PA272W-BK, PA272W(C), PA272W-BK(C)
Ratings	100-240V~, 50/60Hz, 1.0-0.45A

Testing procedure and testing location:		
☒	CB Testing Laboratory:	Refer to cover page
Testing location/ address..... :		Refer to cover page
☐	Associated CB Laboratory:	
Testing location/ address..... :		
Tested by (name + signature).....:		John W.H. Chuang
Approved by (name + signature)		<i>Dennis Chin</i>
☐	Testing procedure: TMP	N/A
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature)		
☐	Testing procedure: WMT	N/A
Testing location/ address..... :		
Tested by (name + signature).....:		
Witnessed by (name + signature).....:		
Approved by (name + signature)		
☐	Testing procedure: SMT	N/A
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature)		
Supervised by (name + signature).....:		
☐	Testing procedure: RMT	N/A
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature)		
Supervised by (name + signature).....:		

List of Attachments (including a total number of pages in each attachment):

- Photo Documentation

Total number of pages in each attachment is indicated in each individual attachment.

Summary of testing:**Tests performed (name of test and test clause):**

All applicable tests were performed. Details see attached clauses and tables.

Testing location:

All applicable tests were performed at the laboratory described on cover page.

Summary of compliance with National Differences

List of countries addressed:

EU Group Differences, EU Special National Conditions, CA, DE, FI, IL, KR, US.

Explanation of used codes: CA = Canada, DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea, US = United States of America.

☒ The product fulfills the requirements of EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011

Copy of marking plate

N/A

Test item particulars:	
Equipment mobility.....:	☒ movable ☐ hand-held ☐ transportable ☒ stationary (for unit with wall mounting function) ☐ for building-in ☐ direct plug-in
Connection to the mains	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition.....:	☒ continuous ☐ rated operating / resting time:
Access location	☒ operator accessible ☐ restricted access location
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values	±10
Tested for IT power systems	☒ Yes (for Norway) ☐ No
IT testing, phase-phase voltage (V)	230 (for Norway)
Class of equipment	☒ Class I ☐ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as part of the building installation (A)	16 (20 for CA, US)
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IPX0
Altitude during operation (m)	Up to 5000m
Altitude of test laboratory (m)	Less than 2000m
Mass of equipment (kg)	Approx. 12.9 (with Base), 4.0 (Base only), 0.9 (plastic hood only)
Possible test case verdicts:	
- test case does not apply to the test object..... : N/A (or N)	
- test object does meet the requirement..... : P (Pass)	
- test object does not meet the requirement..... : F (Fail)	
Testing	
Date of receipt of test item..... : Aug., 2013	
Date(s) of performance of tests..... : Aug., 2013	
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 Issuing 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 ☐ comma / ☒ point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 6.2.5 of IEC 60950-1:	

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided: ☐ Yes ☒ Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) :

Compal Electronics (China) Co., Ltd.
No. 988, TongFeng East Road, Kunshan Development Zone, KunShan, JiangSu 215335, P.R. China

General product information:

Description of change(s):

1. Cancel original source of switching power supply board as below shown:
mfg.: Huntkey, type: HKM1102SL32-3A
2. Add an approved new source of switching power supply board as below shown:
mfg.: Shenzhen Huntkey, type: HKM1102SL32-3A
3. Add additional details description in model name suffix for below source of Plastic enclosure:
mfg.: TEIJIN CHEMICALS LTD RESEARCH & DEVELOPMENT DIV, type: TN-7500(c)
4. Change photo of main board by client's request.
5. Correct typo for input result and SELV measurement in report 11033652 001.

For the above described change(s) the following was considered to be necessary:

Change	Testing	Comments
1., 2.	Input test	The approved source of switching power supply board is similar to original one used, except for minor difference in SPS mfg. name, source of choke L102, location of CX101 and electrical rating of R108/R145 (not critical parts) in primary location. The power consumption of input test result is less than original test result, therefore, no further tests considered necessary. See table 1.5.1 for re-listed components, bold type for SPS and photo as illustration for details.
3.	N/A	No safety impact and no further test items considered necessary. See table 1.5.1 in bold type for details.
4.	N/A	The revised photo is identical to previous used except added additional metal chassis on mini display port for EMI purpose. No safety impact and no further test items considered necessary. See photo as illustration for details.
5.	N/A	No safety impact and no further test items considered necessary. See bold type in appended table 1.6.2 and 2.2 for correction details.

History of amendments and modifications:

Ref. No. 11033652 001, dated Jul. 31, 2013 (original test report)

Ref. No. 11033652 002, dated Aug. 23, 2013 (modification)

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	OP	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI

Indicate used abbreviations (if any)

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

1.5.1	TABLE: List of critical components					P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Plastic Enclosure	TEIJIN CHEMICALS LTD RESEARCH & DEVELOPMENT DIV	TN-7500(c) ((c) - May be suffixed with any one or two letters except F, M and T)	5VB, 2.0 mm thickness, minimum 60 °C	UL 94, UL 746C	UL	
	CHEIL INDUSTRIES INC CHEMICALS DIV	GC-1017(+) ((+)-May be replaced by one, two, or three numbers and/or letter(s).)	5VB, 2.0 mm thickness, minimum 85 °C	UL 94, UL 746C	UL	
Base Stand	Various	Various	Plastic HB min., cover with metal weight 4 kg,	UL 94, UL 746C	UL	
Metallic Chassis	--	--	Minimum 1.0 mm thickness	--	--	
PWB	Various	Various	V-1 minimum, 105 °C minimum	UL 796	UL	
LCD Panel	LG DISPLAY CO LTD	LM270WQ3	27 inch, TFT- LCD, LED backlight	--	--	
Mylar Sheet between power board trace side, component side and metal enclosure	Various	Various	V-2 minimum.	UL 94, UL 746C	UL	
Switching mode power supply	Shenzhen Huntkey	HKM1102SL32- 3A	I/P: AC 100- 240V, 50/60Hz, 2.0A; O/P: DC +24V/2.4A, +12V/2.1A, +5.2V/4.5A Class I, 60°C	IEC 60950-1/A1 EN 60950-1/A12	TÜV/SÜD, CB by TÜV/SÜD	

Supplementary information:

¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V) / F (Hz)	I (mA)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (mA)	Condition/status
For HDMI mode (with non-approved SPS of report 11033652 001)						
90/50	671	--	59.9	F101/F102	671	Maximum normal load
90/60	672	--	59.8	F101/F102	672	Maximum normal load
100/50	606	1.0	60.6	F101/F102	606	Maximum normal load
100/60	608	1.0	60.8	F101/F102	608	Maximum normal load
240/50	266	0.45	63.8	F101/F102	266	Maximum normal load
240/60	272	0.45	65.3	F101/F102	272	Maximum normal load
254/50	255	--	58.3	F101/F102	255	Maximum normal load
254/60	262	--	58.3	F101/F102	262	Maximum normal load
264/50	246	--	58.1	F101/F102	246	Maximum normal load
264/60	254	--	58.3	F101/F102	254	Maximum normal load
For DVI mode (with non-approved SPS of report 11033652 001)						
90/50	672	--	59.5	F101/F102	672	Maximum normal load
90/60	673	--	59.6	F101/F102	673	Maximum normal load
100/50	606	1.0	60.6	F101/F102	606	Maximum normal load
100/60	608	1.0	60.8	F101/F102	608	Maximum normal load
240/50	266	0.45	63.8	F101/F102	266	Maximum normal load
240/60	272	0.45	65.3	F101/F102	272	Maximum normal load
254/50	255	--	58.5	F101/F102	255	Maximum normal load
254/60	262	--	58.5	F101/F102	262	Maximum normal load
264/50	247	--	58.3	F101/F102	247	Maximum normal load
264/60	255	--	58.2	F101/F102	255	Maximum normal load
For mini Display mode (with non-approved SPS of report 11033652 001)						
90/50	667	--	58.7	F101/F102	667	Maximum normal load
90/60	668	--	58.8	F101/F102	668	Maximum normal load
100/50	601	1.0	60.1	F101/F102	601	Maximum normal load
100/60	604	1.0	60.4	F101/F102	604	Maximum normal load
240/50	262	0.45	62.9	F101/F102	262	Maximum normal load
240/60	268	0.45	64.3	F101/F102	268	Maximum normal load
254/50	251	--	58.0	F101/F102	251	Maximum normal load
254/60	257	--	58.0	F101/F102	257	Maximum normal load

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
264/50	242	--	57.5	F101/F102	242	Maximum normal load
264/60	250	--	57.6	F101/F102	250	Maximum normal load
For Display mode (with non-approved SPS of report 11033652 001)						
90/50	670	--	58.9	F101/F102	670	Maximum normal load
90/60	671	--	59.0	F101/F102	671	Maximum normal load
100/50	604	1.0	60.4	F101/F102	604	Maximum normal load
100/60	606	1.0	60.6	F101/F102	606	Maximum normal load
240/50	264	0.45	63.4	F101/F102	264	Maximum normal load
240/60	270	0.45	64.8	F101/F102	270	Maximum normal load
254/50	253	--	58.1	F101/F102	253	Maximum normal load
254/60	260	--	58.1	F101/F102	260	Maximum normal load
264/50	244	--	57.8	F101/F102	244	Maximum normal load
264/60	252	--	57.9	F101/F102	252	Maximum normal load
U (V) / F (Hz)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status
For HDMI mode (with certified SPS)						
90/50	0.68	--	59.9	F101/F102	0.68	Maximum normal load
90/60	0.68	--	59.9	F101/F102	0.68	Maximum normal load
100/50	0.61	1.0	60.7	F101/F102	0.61	Maximum normal load
100/60	0.62	1.0	60.8	F101/F102	0.62	Maximum normal load
240/50	0.27	0.45	63.8	F101/F102	0.27	Maximum normal load
240/60	0.28	0.45	65.4	F101/F102	0.28	Maximum normal load
254/50	0.26	--	58.4	F101/F102	0.26	Maximum normal load
254/60	0.26	--	58.4	F101/F102	0.26	Maximum normal load
264/50	0.25	--	58.1	F101/F102	0.25	Maximum normal load
264/60	0.26	--	58.4	F101/F102	0.26	Maximum normal load
Supplementary information: Test was performed on HDMI mode (with certified SPS) as representative worst case to other operation modes base upon previous test result.						

IEC 60950-1				
Clause	Requirement + Test	Result - Remark		Verdict
2.2	TABLE: evaluation of voltage limiting components in SELV circuits			P
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
Unit with non-approved SPS of report 11033652 001				
For SPS board				
T101 Pin 1 to GND		35.2	--	--
T101 Pin 8 to GND		18.8	--	--
T102 Pin 10/11/12 to GND		35.2	--	--
For LED driver board				
Before L801		--	26.4	--
After L801		87.2	--	--
After D801		84.8	--	--
After J19		--	72.0	--
After L802		--	71.2	--
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
After L801 to metal enclosure shorted		Shut down (plastic enclosure: 0V)		
After L801 to metal enclosure shorted		Shut down (output connector: 0V)		
supplementary information:				
Supply voltage: 240V, 60Hz				