



Ref. Certif. No.

JPTUV-043190-M2

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

TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road
Fuqing City, Fujian Province, P.R. China

Name and address of the manufacturer
Nom et adresse du fabricant

TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road
Fuqing City, Fujian Province, P.R. China

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

See additional page(s)

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

AC 100-240V; 50/60Hz; 1.5A; Class I

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

AOC

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

N/A

Model / Type Ref.
Ref. de type

220LM00010, 220LM****, *2260****
(* definition refer to test report)

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

For model differences, refer to the test report.
Re-issue of JPTUV-043190-M1 dated 10.01.2013, due to second 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

17024725 003

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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Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web: www.tuv.com

Date: 18.11.2013

Signature:

Ing. M. Eichenseder

1. TPV Technology (Beijing) Co., Ltd.
No. 10, Jiu Xian Qiao Rd.
Chao Yang District, Beijing 100016
P.R. China
2. Tatung Mexico S.A. de. C.V.
Ave. Rosa Ma. Fuentes #7050
Complejo Industrial Fuentes
C.P. 32320, Cd. Juarez. Chih,
MEXICO
3. TPV Display Technology (Wuhan)
Co., Ltd.
Unique No. 11, Zhuankou Development
District of Economic Technological
Development Zone, Wuhan City 430056, P.R. China
4. TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road
Fuqing City, Fujian Province
P.R. China
5. Tatung Czech s.r.o
U Nove Hospody 4
30100 Plzen
Czech Republic
6. Envision Industry of Electronic
Products Ltd.
Rodovia Anhanguera S/N-KM 49
Tijuco Preto-Jundiaí-SP
Brazil
7. TPV Displays Polska Sp. z o.o.
ul. Zlotego Smoka 9
66-400 Gorzów Wlkp.
Poland
8. L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao
Economic and Technological
Development Zone
Fuqing, Fujian 350301, P.R. China
9. TPV Display Technology (Beihai)
Co., Ltd.
China Electronic Beihai Industry
Park, Northeast of the Crossing
Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 17024725 003

Date: 18.11.2013

Signature:



Ing. M. Eichenseder

10. Envision Industry of Electronic Products Ltd.
Av Torquato Tapajós 7503,
Galpão : II Bloco: B-Condomínio
de Galpões-Tarumã-Manaus, AM, Brazil
11. TPV Technology (Qingdao) Co., Ltd.
No.99 Huoju Road, High-tech
Industrial Development Zone
Qingdao City, Shandong Province, P.R. China
12. TPV Display Technology (China) Co., Ltd.
No. 106 Jinghai 3 Rd., BDA
Beijing City 100176
P.R. China

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 17024725 003

Date: 18.11.2013

Signature:





Ing. M. Eichenseder



Test Report issued under the responsibility of:



TEST REPORT IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report Number	17024725 003
Date of issue	Nov.18. 2013
Total number of pages	9 pages
CB Testing Laboratory	TÜV Rheinland (Shenzhen) Co., Ltd.
Address	3 & 4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057, Shenzhen, P.R. China
Applicant's name	TPV Electronics (Fujian) Co., Ltd.
Address	Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, China
Manufacturer's name	TPV Electronics (Fujian) Co., Ltd.
Address	Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, China
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	AOC
Manufacturer	See above
Model/Type reference	220LM00010, 220LM****, *2260**** (see page 6 for the definition of *)
Ratings	I/P: 100-240V~, 50/60Hz, 1.5A

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address		3 & 4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057, Shenzhen, P.R. China
<input type="checkbox"/>	Associated CB Laboratory:	
Testing location/ address		
Tested by (name + signature)		Jerry Zheng 
Approved by (name + signature)		Aegean Li 
<input type="checkbox"/>	Testing procedure: TMP	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: WMT	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: SMT	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature)		
<input type="checkbox"/>	Testing procedure: RMT	
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 document (1 page)

Summary of testing:

Tests performed (name of test and test clause):

The critical tests were performed for this equipment included clauses:

name of test	test clause number
Input Current Test	1.6.2

The EUT passed the test.

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2

Summary of compliance with National Differences

See original CB report 17024725 001.

Copy of marking plate

See original CB report 17024725 001.

Test item particulars:	
Equipment mobility.....:	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains	<input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input checked="" type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition.....:	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	±10% (According to the client's request)
Tested for IT power systems	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16A (20A for North America)
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	≤3658m
Altitude of test laboratory (m)	<2000m
Mass of equipment (kg)	whole unit without base: 5.66; base type A: 2.26, base type B: 0.35
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	Nov. 2013
Date(s) of performance of tests.....	Nov. 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 <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	

Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:

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)		
	1	TPV Technology (Beijing) Co., Ltd. No.10, Jiu Xian Qiao Rd., Chao Yang District, Beijing 100016 P.R. China
	2	Tatung Mexico S.A. de. C.V. Ave. Rosa Ma. Fuentes #7050 Complejo Industrial Fuentes C.P. 32320, Cd. Juarez. Chih, MEXICO
	3	TPV Display Technology (Wuhan) Co., Ltd. Unique No. 11, Zhuankou Development District of Economic Technological Development Zone, Wuhan City 430056, P.R. China
	4	TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R. China
	5	Tatung Czech s.r.o. U Nove Hospody 4 30100 Plzen Czech Republic
	6	Envision Industry of Electronic Products Ltd. Rodovia Anhanguera S/N-KM 49, 13.205-700 Tijuco Preto-Jundiaí-SP-Brazil
	7	TPV Displays Polska Sp. z o.o. ul. Zlotego Smoka 9 66-400 Gorzów Wlkp. Poland
	8	L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological, Development Zone, Fuqing, Fujian 350301, P.R. China
	9	TPV Display Technology (Beihai) Co., Ltd. China Electronic Beihai Industry Park, Northeast of the Crossing Between Taiwan Road and Jilin Road, Beihai City, Guangxi, P.R. China
	10	Envision Industry of Electronic Products Ltd. Av Torquato Tapajós 7503, Galpão : II Bloco: B – Condomínio de Galpões – Tatumã - Manaus, AM, Brazil
	11	TPV Technology (Qingdao) Co., Ltd. No.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong Province, P.R. China
	12	TPV Display Technology (China) Co.,Ltd No.106 Jinghai 3 Rd., BDA, Beijing City 100176 P.R. China

General product information:

Description of change(s):

1. Change the address of applicant and manufacturer to “Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, China”;
2. Change the address of factory “TPV Electronics (Fujian) Co., Ltd.” to “Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, China”;
3. Change the address of factory “TPV Technology (Beijing) Co., Ltd.” to “No.10, Jiu Xian Qiao Rd., Chao Yang District, Beijing 100016 P.R. China” in test report;
4. Add one factory:
“TPV Display Technology (China) Co.,Ltd
No.106 Jinghai 3 Rd., BDA, Beijing City 100176 P.R. China”
5. Add one alternative main board 715G6605 with VGA, Display port, DVI, audio-in and audio out ports.

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

Change	Testing	Comments
1.	-N/A	N-/A
2. – 4.	-N/A	See page 5 for updated factories list.
5.	1.6.2 Input Current Test	As the power consumption of the product performed with main board 715G6605 is not higher than that performed with main board 715G5361, heating test was not considered necessary. See also photo document for details.

Definition of variable(s)

Variable:	Range of variable:	Content:
220LM*****		
*	can be any combination of 0-9, a-z, A-Z, “+”, “-”, “/”, “\” except for 00010	for marketing use only; No constructional differences. Models differ only in model name and marking label
*2260****		
*	can be A-Z, a-z, 0-9, +, -, /, \ or blank	for marketing use only; No constructional differences. Models differ only in model name and marking label

History of amendments and modifications:

- Ref. No. 17024725 001, dated Apr. 10. 2012 (Original report)
 Ref. No. 17024725 002, dated Jan. 08. 2013 (1st modification)
 Ref. No. 17024725 003, dated Nov. 18. 2013 (2nd 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
1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status
Tested with Panel LTM220MT** (SAMSUNG), power board: 715G6605, main board: 715G5436, VGA mode						
F901	90V/50Hz	--	18.1	0.34	0.34	Normal load condition
F901	90V/60Hz	--	18.1	0.34	0.34	Normal load condition
F901	100V/50Hz	1.5	18.0	0.32	0.32	Normal load condition
F901	100V/60Hz	1.5	18.0	0.32	0.32	Normal load condition
F901	240V/50Hz	1.5	17.8	0.19	0.19	Normal load condition
F901	240V/60Hz	1.5	17.8	0.19	0.19	Normal load condition
F901	264V/50Hz	--	17.9	0.17	0.17	Normal load condition
F901	264V/60Hz	--	17.9	0.17	0.17	Normal load condition
Tested with Panel LTM220MT** (SAMSUNG), power board: 715G6605, main board: 715G5436, DVI mode						
F901	90V/50Hz	--	18.2	0.35	0.35	Normal load condition
F901	90V/60Hz	--	18.2	0.35	0.35	Normal load condition
F901	100V/50Hz	1.5	18.0	0.32	0.32	Normal load condition
F901	100V/60Hz	1.5	18.0	0.32	0.32	Normal load condition
F901	240V/50Hz	1.5	18.1	0.18	0.18	Normal load condition
F901	240V/60Hz	1.5	18.1	0.18	0.18	Normal load condition
F901	264V/50Hz	--	17.9	0.17	0.17	Normal load condition
F901	264V/60Hz	--	17.9	0.17	0.17	Normal load condition
Tested with Panel LTM220MT** (SAMSUNG), power board: 715G6605, main board: 715G5436, Display port mode						
F901	90V/50Hz	--	18.1	0.34	0.34	Normal load condition
F901	90V/60Hz	--	18.1	0.34	0.34	Normal load condition
F901	100V/50Hz	1.5	17.9	0.31	0.31	Normal load condition
F901	100V/60Hz	1.5	17.9	0.31	0.31	Normal load condition
F901	240V/50Hz	1.5	17.7	0.18	0.18	Normal load condition
F901	240V/60Hz	1.5	17.7	0.18	0.18	Normal load condition
F901	264V/50Hz	--	18.1	0.17	0.17	Normal load condition
F901	264V/60Hz	--	18.1	0.17	0.17	Normal load condition
Note(s):						
1. Operated under 100% brightness, 100% contrast, full white screen, resolution: 1680x1050@60Hz, 2 pieces of speakers were loaded with 1 KHz noise and turned to maximum volume, each USB port loaded						

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

with 5V/0.5A, which consumed maximum output power.

2. Tested with panel LTM220MT** (SAMSUNG), due to it has the highest power consumption specified in specification.

Type Designation: 220LM00010, 220LM****, *2260****
Report Number: 17024753 003



Figure 1. Main board 715G6605

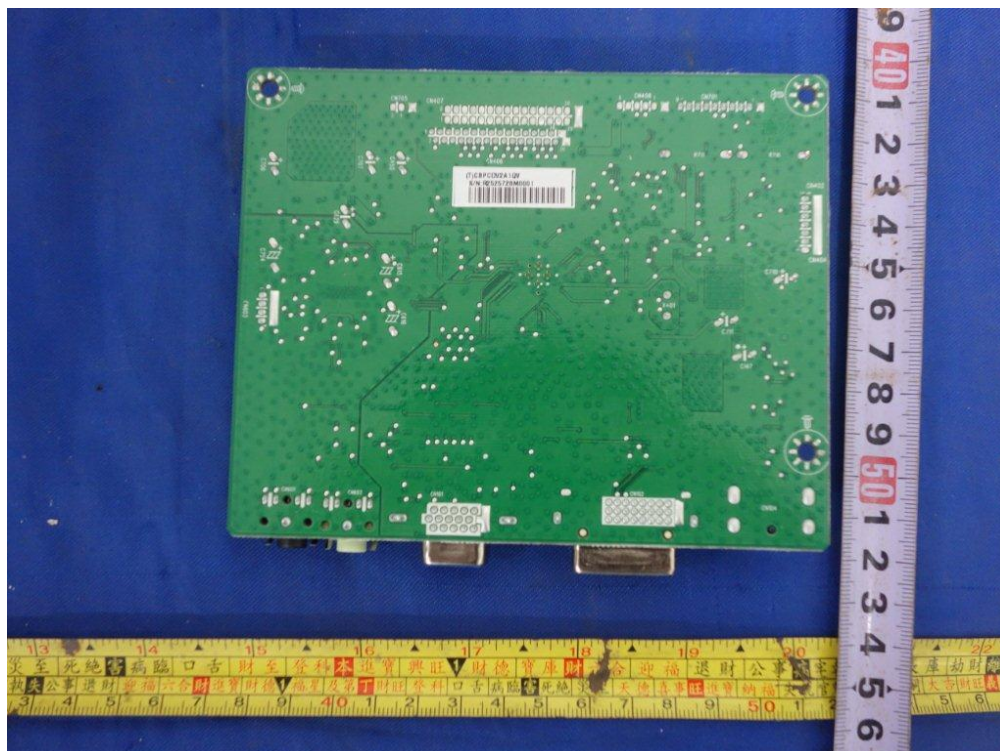


Figure 2. Main board 715G6605