

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OCProduct
Produit

LCD Monitor

Name and address of the applicant
Nom et adresse du demandeurTPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and Technological Development
Zone, Fuqing City, Fujian Province
ChinaName and address of the manufacturer
Nom et adresse du fabricantTPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and Technological Development
Zone, Fuqing City, Fujian Province
ChinaName and address of the factory
Nom et adresse de l'usineNote: When more than one factory, please report on page 2
Note: Lorsque il y plus d'une usine, veuillez utiliser la deuxième page Additional information on page 2Ratings and principal characteristics
Valeurs nominales et caractéristiques principales4.5A or 3.25A, DC 20
Cl. III
AOCTrademark (if any)
Marque de fabrique (si elle existe)Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeurModel / Type Ref.
Ref. De type

251**; 250LM000**

Additional information (if necessary may also be reported on page 2)

The * in the model name can be 0 to 9, A to Z or blank for marketing use only.

Les informations complémentaires (si nécessaire, peuvent être indiqués sur la deuxième page)

 Additional information on page 2

A sample of the product was tested and found to be in conformity with

IEC 60950-1:2005, IEC 60950-1:2005/AMD1:2009, IEC 60950-1:2005/AMD2:2013

Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No. which forms part of this Certificate

333948

Comme indiqué dans le Rapport de tests numéro de référence qui constitue partie de ce Certificat

This certificate replaces the certificate NO94440/M1, due to technical modification.

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

TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuanhong Road, Fuqing City, Fujian
Province
China

Envision Industry of Electronic Products Ltd.
Rodovia Anhanguera S/N-KM 49, Tijuco Preto-Jundiáí-
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Brazil

TREND SMART CE MEXICO S. DE R.L. DE C.V.
Avenida Sor Juana Ines de la Cruz No. 19602 Parque
Industrial la Frontera Fracc. CP. 22500, Nueva Tijuana
(Otay) Tijuana, B.C.
Mexico

Envision Industry of Electronic Products Ltd.
Av Torquato Tapajós 7503, Galpão : II Bloco: B-
Condomínio de Galpões-Tarumã-Manaus AM
Brazil

TPV Display Technology (China) Co., Ltd.
No.106 Jinghai 3 Rd., BDA, Beijing City, 100176
China

TPV Electronics (Fujian) Co., Ltd.
Rongqiao Economic and Technological Development
Zone, Fuqing City, Fujian Province
China

TPV Display Technology (Wuhan) Co. Ltd.
Unique No. 11, Zhuankou Development, District of
Economic Technological Development Zone, Wuhan
City, 430056
China

L&T Display Technology (Fujian) Ltd.
Optoelectronic Park, Rongqiao Economic and
Technological, Development Zone, Fuqing City, Fujian
350301
China

TPV Display Technology (Beihai) Co., Ltd.
China Electronic Beihai Industry Park, Northeast of the
Crossing, Between Taiwan Road and Jilin Road, Beihai
City, Guangxi
China

TPV Technology (Qingdao) Co., Ltd.
NO.99 Huoju Road, High-tech Industrial Development
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Hefei Huntkey Display Technology Co., Ltd.
South Jinxiu Road, East Qingtan Road, Economic And
Technological Development Zone, Hefei, Anhui, 230601
China

TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park, Rongqiao Economic and
Technological Development Zone, Fuqing City, Fujian
Province
China



Amendment to Test Report	
This Amendment is valid only together with the main Test Report	
Report No.	333948
Main Report No.	317933
Date of issue	2017-06-20
Total number of pages	Refer to page 4
Name of Testing Laboratory preparing the Report	Nemko Shanghai Ltd. Shenzhen Branch Unit C & D, Floor 2&Floor 10, Tower 2, Kefa Road #8, Hi-Technology Park, Nanshan District, 518057 Shenzhen, CHINA
Applicant's Name	TPV Electronics (Fujian) Co., Ltd.
Address	Rongqiao Economic and Technological Development Zone, FUQING CITY FUJIAN PROVINCE, CHINA
Test specification:	
Standard	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure	CB Scheme
Non-standard test method	N/A
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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.	
General disclaimer:	
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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test item description	: LCD Monitor
Trade Mark	: AOC
Manufacturer	: Same as applicant
Model/Type reference	: **251*****;250LM000** (The * in the model name can be 0 to 9, A to Z or blank for marketing use only.)
Ratings	: 4.5A or 3.25A, 20 V DC

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	Nemko Shanghai Ltd. Shenzhen Branch
Testing location/ address :		Unit C & D, Floor 2 & Floor 10, Tower 2, Kefa Road #8 Hi-Technology Park Nanshan District 518057 Shenzhen CHINA
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address :		
Tested by (name + function + signature) :		Bill Yang (Project handler) <i>Bill</i>
Approved by (name + function + signature) :		Jane Sun (Verifier) <i>Jane Sun</i>
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 1:	
Testing location/ address :		
Tested by (name, function, signature) :		
Approved by (name, function, signature) .. :		
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	
Testing location/ address :		
Tested by (name + signature)..... :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
<hr/>		
<input type="checkbox"/>	Testing procedure: CTF Stage 3:	
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	
Testing location/ address :		
Tested by (name, function, signature) :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		
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List of Attachments (including a total number of pages in each attachment):

- Main report (11 pages)
- Photos (2 pages)

Summary of testing:

Tests performed (name of test and test clause):

Clause	Test(s)
1.6	Input Current Test
4.5	Thermal requirements
5.3	Abnormal operating and fault conditions

Load condition: Refer to general product information.

Testing location:

See page 3

Summary of compliance with National Differences

List of countries addressed:

Modified products still complies with previously evaluated National Differences.

The product fulfils the requirements of IEC 60950-1: 2005 (2nd Edition); Am1: 2009; Am2: 2013 and all CENELEC members as listed in EN 60950-1: 2006 +A11: 2009+A1: 2010+A12: 2011+ A2: 2013.

Calibration:	All instruments used in the tests given in this test report are calibrated and traceable to national or international standards. Further information about traceability will be given on request.
Measurement uncertainty:	Measurement uncertainties are calculated for all instruments and instrument set-ups given in this report. Calculations are based on the principles given in the standard EA-4/02 (Dec. 1999), IEC Guide 115:2007, Nemko routine L227 and other relevant internal Nemko-procedures. Further information about measurement uncertainties will be given on request.
Evaluation of results:	If not explicitly stated otherwise in the standard, the test is passed if the measured value is equal to or below (above) the limit line, regardless of the measurement uncertainty. If the measured value is above (below) the limit line, the test is not passed – ref IEC Guide 115:2007, and Nemko routine L220. The instrumentation accuracy is within limits agreed by IECCE-CTL (ref. Nemko routine L227).

Test item particulars :	
Classification of installation and use :	Movable
Supply Connection	Cl. III, not direct plug-in the equipment.
..... :	
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	2017-05-30
Date(s) of performance of tests	2017-05-30 to 2017-06-13
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 <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	

Manufacturer's Declaration per sub-clause 4.2.5 of IEC60950-1:	
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	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies) :	1. TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R.China 2. TPV Display Technology (China) Co., Ltd. No.106 Jinghai 3 Rd., BDA, BEIJING CITY 100176, CHINA 3. L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological, Development Zone, Fuqing City, Fujian 350301, CHINA 4. TPV Display Technology (Wuhan) Co. Ltd. Unique No. 11, Zhuankou Development, District of Economic Technological Development Zone, WUHAN CITY 430056, CHINA 5. Hefei Huntkey Display Technology Co., Ltd. South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, HEFEI ANHUI 230601, CHINA
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6. TREND SMART CE MEXICO S. DE R.L. DE C.V.
Avenida Sor Juana Ines de la Cruz No. 19602
Parque Industrial la Frontera Fracc. CP. 22500,
NUEVA TIJUANA (OTAY) TIJUANA B.C., MEXICO

7. Envision Industry of Electronic Products Ltd.
Rodovia Anhanguera S/N-KM 49, Tijuco Preto-
Jundiaí-SP- 13.205-700, BRAZIL

8. Envision Industry of Electronic Products Ltd.
Av Torquato Tapajós 7503, Galpão : II Bloco: B-
Condomínio de Galpões-Tarumã-Manaus AM,
BRAZIL

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, CHINA

10. TPV Technology (Qingdao) Co., Ltd.
NO.99 Huoju Road, High-tech Industrial
Development Zone, QINGDAO CITY SHANDONG
PROVINCE, CHINA

11. TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuanhong Road, FUQING CITY
FUJIAN PROVINCE, CHINA

12. TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park, Rongqiao Economic and
Technological Development Zone, FUQING CITY
FUJIAN 350301, CHINA

General product information:

This Amendment report No. 333948 always be enclosed with main Test Report No. 317933 and amendment test report No.326961.

The updates concerned in this test report are as follows:

-.Add one alternative mainboard (type C) .

Model difference:

All models are the same, except model name.

Model name	Adapter	Mainboard
251***, 250LM000**	ADPC2090	Type A,
	ADPC2065**** (*=0-9,A-Z,a-z,-,\,/,+ or blank)	Type A, Type B Type C

Load condition: Full white display with Max. Brightness and contrast, picture provided from a computer. Maximum volume with a 1KHz sinusoidal input signal (optional),and load 0.9A for each USB 3.0.

With adapter ADPC2065**** and mainboard type C, under DP mode represent the worst condition for all tests.

Project history:

Nemko Report / Order No.:	Modification to the appliances:	Changes/ Modifications in clause(s):
317933	Main Test Report	N/A
326961	-.Add one alternative mainboard (type B) . -.Add one alternative adapter.	General product information cl.1.5,1.6,1.7and photos
333948	-.Add one alternative mainboard (type C) .	General product information cl.1.5,1.6,4.5,5.3and photos

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

1	GENERAL		—
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1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	<p>Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard.</p> <p>Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component standard.</p> <p>Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.</p>	P

1.6	Power interface		P
1.6.1	AC power distribution systems	DC supplied	—
1.6.2	Input current	(see appended table 1.6.2)	P

4.5	Thermal requirements		P
4.5.1	General	See below.	P
4.5.2	Temperature tests	(see appended table 4.5)	—
	Normal load condition per Annex L		P
4.5.3	Temperature limits for materials	(see appended table 4.5)	—
4.5.4	Touch temperature limits	(see appended table 4.5)	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation		P
5.3.6	Audio amplifiers in ITE		P
5.3.9	Compliance criteria for abnormal operating and fault conditions	Refer below:	P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.2	After the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P

1.6.2	TABLE: electrical data (in normal conditions)					P
fuse #	Irated (A)	U (V / Hz)	P (W)	I (A)	Ifuse (A)	condition/status
--	3.25	20V dc	45.8	2.29	--	Normal load
Supplementary information:						
Maximum normal load refer to general product information.						

4.5	TABLE: maximum temperatures		P
	test voltage (V) :	20Vd.c.	—
maximum temperature T of part/at:		T (°C)	allowed Tmax (°C)
DC inlet body (on convertor board)		39.4	53.1
C801 (on convertor board)		42.6	68.1
C983 (on convertor board)		42.7	68.1
L981 (on convertor board)		45.3	78.1 *)
L801 coil (on convertor board)		49.8	78.1 *)
L801 core (on convertor board)		46.3	78.1 *)
PCB near U801 (on convertor board)		49.4	88.1
PCB near Q801 (on convertor board)		56.5	88.1
C809 (on convertor board)		46.3	68.1
Plastic enclosure inside		34.6	--
Plastic enclosure outside		30.3	78.1
panel		31.7	63.1
Ambient		23.1	--
supplementary information:			
Tmra = 40°C. The maximum allowed temperatures are calculated based upon a (minimum) ambient temperature of 23.1°C. Temp. limits are adjusted according to Cl. 1.4.12.3. If no limit is stated, temperature is for reference only			
*)Temperature limits include less 10K for thermocouple measurement method.			

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)					—
	Power source for EUT: Manufacturer, model/type, output rating					—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Speaker	s-c	20 dc	5 min	--	--	Unit operated normally, no damaged, no hazard.
C983	s-c	20 dc	5 min	--	--	Unit shut down, no hazard.
C991	s-c	20 dc	5 min	--	--	Unit shut down, no hazard.
L981 pin 4-5	s-c	20 dc	5 min	--	--	Unit shut down, no hazard.
USB 3.0 (Blue)	o-l	20 dc	3.5hrs	--	--	USB 3.0 loaded to 2.55A, max. temp in: L981=45.4°C L801 coil=49.2 °C L801 core=47.6°C Ambient= 24.3°C
USB 3.0 (Yellow)	o-l	20 dc	3.3hrs	--	--	USB 3.0 loaded to 2.53A, max. temp in: L981=44.3°C L801 coil=48.3 °C L801 core=46.8°C Ambient= 24.1°C
Openings	Blocked	20 dc	3.2hrs	--	--	Normal operation max. temp in: L981=47.5°C L801 coil=50.3 °C L801 core=48.9°C Ambient= 24.5°C
Supplementary information:						
s-c: short circuit; o-l: over load						

Photos

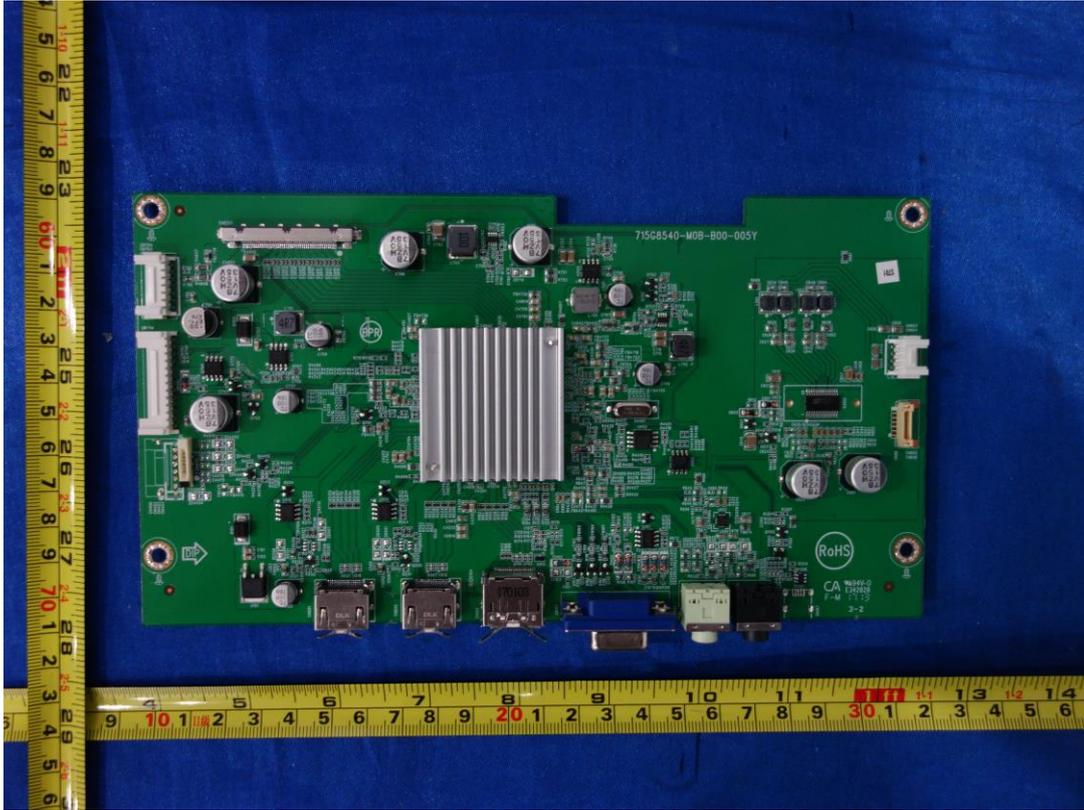


The internal view with mainboard type C

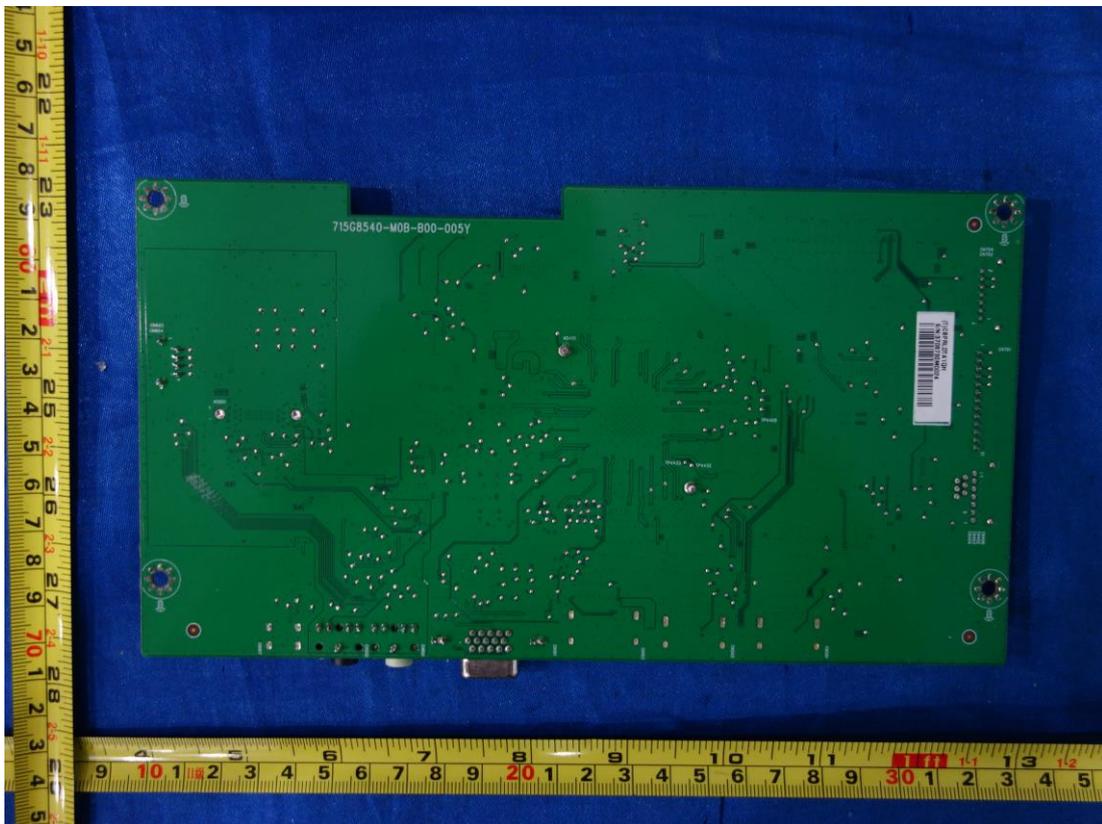
Note: The mylar sheet was used for preventing the internal wire to be scratched



The internal view with mainboard type C



The components side of mainboard type C



The solder side of mainboard type C

-- End of report --