

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

\*2276\*\*\*\*\*, 215LM000\*\*, 236LM000\*\*, \*2476\*\*\*\*  
(\* = 0-9, A-Z, a-z, +, -, /, \ or blank)

Additional information (if necessary may also be  
reported on page 2)  
Les informations complémentaires (si nécessaire,  
peuvent être indiqués sur la 2<sup>ème</sup> page)

For model differences, refer to the test report.  
Re-issue of JPTUV-054788-M2 dated 06.03.2014,  
due to third 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+A2  
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

17036270 004

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



TÜV Rheinland Japan Ltd.  
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: 06.06.2014

Signature:

Ing. M. Eichenseder

1. TPV Display Technology (Wuhan) Co., Ltd.  
Unique No. 11, Zhuankou Development District of Economic Technological Development Zone, Wuhan City 430056, P.R. China
2. TPV Electronics (Fujian) Co., Ltd.  
Shangzheng, Yuan Hong Road  
Fuqing City, Fujian Province  
P.R. China
3. Envision Industry of Electronic Products Ltd.  
Rodovia Anhanguera S/N-KM 49  
13.205-700 Tijuco Preto-Jundiá-SP-  
Brazil
4. L&T Display Technology (Fujian) Ltd.  
Optoelectronic Park, Rongqiao Economic and Technological Development Zone  
Fuqing, Fujian 350301, P.R. China
5. TPV Electronics (Fujian) Co., Ltd.  
Rongqiao Economic and Technological Development Zone  
Fuqing City, Fujian Province  
P.R. China
6. Trend Smart CE Mexico S de RL de CV  
Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana,  
22435 Tijuana Baja California  
MEXICO
7. 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
8. TPV Technology (Qingdao) Co., Ltd.  
No.99 Huoju Road, High-tech Industrial Development Zone  
Qingdao City, Shandong Province, P.R. China
9. 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.: 17036270 004

Date: 06.06.2014

Signature:

  
Ing. M. Eichenseder

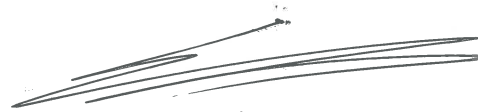
10. Hefei Huntkey Display Technology  
Co., Ltd.  
South Jinxiu Road, East Qingtan Road  
Economic And Technological  
Development Zone, Hefei, Anhui 230601, P.R. China

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

Report Ref. No.: 17036270 004

Date: 06.06.2014

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** ..... : 17036270 004  
**Date of issue** ..... : 06 June, 2014  
**Total number of pages** ..... : 8

**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 China

**Applicant's name** ..... : TPV Electronics (Fujian) Co., Ltd  
**Address** ..... : Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R.  
China

**Manufacturer's name** ..... : Same as applicant  
**Address** ..... : Same as applicant

**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

**Test Report Form No.** ..... : IEC60950\_1E  
**Test Report Form(s) Originator**..... : SGS Fimko Ltd  
**Master TRF** ..... : Dated 2013-07

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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** ..... : Same as applicant  
**Model/Type reference** ..... : \*2276\*\*\*\*\*, 215LM000\*\*, 236LM000\*\*, \*2476\*\*\*\*\*  
(\* can be 0-9, A-Z, a-z, "+", "-", "/", "\" or blank)  
**Ratings** ..... : 100-240V~, 50/60Hz, 1.5A

<b>Testing procedure and testing location:</b>		
<input checked="" type="checkbox"/>	<b>CB Testing Laboratory:</b>	TÜV Rheinland (Shenzhen) Co., Ltd.
<b>Testing location/ address.....:</b>		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 China
<input type="checkbox"/>	<b>Associated CB Testing Laboratory:</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name + signature) .....</b>		Sherry Chen <i>Sherry Chen</i>
<b>Approved by (name + signature) .....</b>		Iris Du <i>Iris Du</i>
<input type="checkbox"/>	<b>Testing procedure: TMP</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name + signature) .....</b>		
<b>Approved by (name + signature) .....</b>		
<input type="checkbox"/>	<b>Testing procedure: WMT</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name + signature) .....</b>		
<b>Witnessed by (name + signature) .....</b>		
<b>Approved by (name + signature) .....</b>		
<input type="checkbox"/>	<b>Testing procedure: SMT</b>	
<b>Testing location/ address.....:</b>		
<b>Tested by (name + signature) .....</b>		
<b>Approved by (name + signature) .....</b>		
<b>Supervised by (name + signature)...</b>		

<b>List of Attachments (including a total number of pages in each attachment):</b> N/A	
<b>Summary of testing:</b>	
<b>Tests performed (name of test and test clause):</b> N/A	<b>Testing location:</b> N/A
<b>Summary of compliance with National Differences</b> Refer to original reports No. 17036270 001 and 17036270 002	
<b>Copy of marking plate</b> The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBS that own these marks. (Additional requirements for markings. See 1.7 NOTE)  Refer to original report No. 17036270 001 and 17036270 002	

<b>Test item particulars</b> .....	
Equipment mobility .....	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input checked="" 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 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) .....	Up to 5000
Altitude of test laboratory (m) .....	Less than 2000
Mass of equipment (kg) .....	Unit with base1: 3.07kg, base1:0.39kg for model *2276*****, 215LM000**; Unit with base1: 4.12kg, base1:0.39kg for model 236LM000**, *2476*****, Unit with base2: 3.85kg, base2:0.12kg for model 236LM000**, *2476*****.
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing</b> .....	
Date of receipt of test item .....	30 May, 2014
Date(s) of performance of tests .....	N/A
<b>General remarks:</b>	
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 IEC60950\_1E:**

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.

<b>Name and address of factory (ies)..... :</b>	1	TPV Display Technology (Wuhan) Co., Ltd. Unique No. 11, Zhuankou Development, District of Economic Technological Development Zone, Wuhan City 430056, P.R. China
	2	TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road, Fuqing City, Fujian Province, P.R. China
	3	Envision Industry of Electronic Products Ltd. Rodovia Anhanguera S/N-KM 49, 13.205-700 Tijuco Preto-Jundiaí-SP-Brazil
	4	L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing, Fujian 350301, P. R. China
	5	TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
	6	Trend Smart CE Mexico S de RL de CV Avenida Sor Juana Ines de la Cruz de 19602 Nueva Tijuana, 22435 Tijuans Baja California. MEXICO
	7	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
	8	TPV Technology (Qingdao) Co.,Ltd. No.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong Province, P.R. China
	9	TPV Display Technology (China) Co.,Ltd No.106 Jinghai 3 Rd., BDA, Beijing City 100176 P.R. China
	10	Hefei Huntkey Display Technology Co.,Ltd. South Jinxiu Road, East Qingtan Road, Economic And Technological Development Zone, Hefei, Anhui 230601, P.R. China



**General product information:**

Description of change(s):

1. Add one alternative source of panel TPM236\*\*\*-\*\*\*\*\* (TPV) for models 236LM000\*\* and \*2476\*\*\*\*\*.

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

Change	Testing	Comments
1	No test required.	<p>The new component is highlighted in <b>bold</b> font in appended table 1.5.1.</p> <p>As the power consumption declared on the specification for the panel with LED backlight TPM236***-***** (TPV) is 16.99W, which is lower than that of original panel M240HVN**(AUO) listed on original CB report 17036270 002, which is 20.62W, it is not necessary to perform input current test and heating test for these new added panels.</p> <p>And the LED Array Voltage declared on the specification for the panel TPM236***-***** (TPV) is 41.6Vdc, which is SELV.</p>

Definition of variable(s):

Variable:	Range of variable:	Content:
*	0-9, A-Z, a-z, "+", "-", "/", "\" or blank	Represent different enclosure color and sales region for marketing purpose. No technology concerned.

History of amendments and modifications:

Ref. No. 17036270 001, dated 13 Jan., 2014 (original test report)  
 Ref. No. 17036270 002, dated 10 Feb., 2014 (1<sup>st</sup> modification)  
 Ref. No. 17036270 003, dated 05 Mar., 2014 (2<sup>nd</sup> modification)  
 Ref. No. 17036270 004, dated 06 June, 2014 (3<sup>rd</sup> 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)

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity <sup>1)</sup>	
LCD Panel with LED backlight (for models 236LM000** , *2476*****)	TPV	TPM236***_*****	23.6 inch TFT type, with LED back light, power consumption: 16.99W	--	Tested in equipment	
	BOE	HM236W**_*** (* can be 0-9, A-Z and blank, for marketing purpose only)	23.6 inch TFT type, with LED back light, power consumption: 18.6W	--	Tested in equipment	
	BOE	HR236WU*_* (** can be 0-9, A-Z and blank, for marketing purpose only)	23.6 inch TFT type, with LED back light, power consumption: 20.2W	--	Tested in equipment	
	AUO	M240HW** (*can be 0-9, A-Z and blank for marketing purpose only)	24.0 inch TFT type, with LED back light, power consumption: 20.2W	--	Tested in equipment	
	CHI MEI	M236H*_*_* (**can be 0-9, A-Z and blank for marketing purpose only)	24.0 inch TFT type, with LED back light, power consumption: 19.8W	--	Tested in equipment	
	IVO	M236MWF* (**can be 0-9, A-Z and blank for marketing purpose only)	23.6 inch TFT type, with LED back light, power consumption: 17.7W	--	Tested in equipment	
	TPV	TPM236** (*can be 0-9, A-Z and blank for marketing purpose only)	23.6 inch TFT type, with LED back light, power consumption: 19.4W	--	Tested in equipment	
	CHI MEI	M236H**_*** (*can be 0-9, A-Z and blank for marketing purpose only)	23.6 inch TFT type, with LED back light, power consumption: 18.9W	--	Tested in equipment	
	AUO	M240HTN** (*can be 0-9, A-Z and blank for marketing purpose only)	24.0 inch TFT type, with LED back light, power consumption: 17.55W	--	Tested in equipment	

	AUO	M240HVN**(*can be 0-9, A-Z and blank for marketing purpose only)	24.0 inch TFT type, with LED back light, power consumption: 20.62W	--	Tested in equipment
	TPV	TPM240***(*can be 0-9, A-Z and blank for marketing purpose only)	24.0 inch TFT type, with LED back light, power consumption: 16.65W	--	Tested in equipment
	LG Display	LM240WU*(can be 0-9, A-Z and blank for marketing purpose only)	24.1 inch TFT type, with LED back light, power consumption: 16.06W	--	Tested in equipment
	Samsung	LTM240CL **-***(*can be 0-9, A-Z and blank for marketing purpose only)	24.0 inch TFT type, with LED back light, power consumption: 19.48W	--	Tested in equipment
	Innolux	M236H**-*can be 0-9, A-Z and blank for marketing purpose only)	23.6 inch TFT type, with LED back light, power consumption: 18.012W	--	Tested in equipment

## Note(s):

1. An asterisk indicates a mark that assures the agreed level of surveillance.