




Test Report issued under the responsibility of:



TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number	60436687 002
Date of issue	05.May.2022
Total number of pages	64
Name of Testing Laboratory preparing the Report	TÜV Rheinland (Shenzhen) Co., Ltd.
Applicant's name	TPV Electronics (Fujian) Co., Ltd.
Address	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian, P.R.China
Test specification:	
Standard	IEC 62368-1:2018
Test procedure	CB Scheme
Non-standard test method	N/A
TRF template used	IECEE OD-2020-F1:2020, Ed.1.3
Test Report Form No.	IEC62368_1E
Test Report Form(s) Originator	UL(US)
Master TRF	Dated 2021-02-04
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General disclaimer:	
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Test item description	LCD MONITOR (LED backlight)	
Trade Mark(s)	AOC	
Manufacturer	Same as applicant	
Model/Type reference	24G1*****, C24G1*****, C*24G1*****, Q24G1*****, U24G1*****, 24G2*****, C24G2*****, C*24G2*****, Q24G2*****, U24G2*****, 27G1*****, C27G1*****, C*27G1*****, Q27G1*****, U27G1*****, 27G2*****, C27G2*****, C*27G2*****, Q27G2*****, U27G2*****, (* can be 0-9, A-Z, a-z, "+", "-", "/", "\" or blank, Represent different enclosure colour and sales region for marketing purpose. No technology differences)	
Ratings	I/P: 100-240V~, 50/60Hz, 1.5A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input type="checkbox"/>	CB Testing Laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address		1601-1604, 17-18F, Tower A Building 2, Shenzhen International Innovation Valley, Dashi 1st Road, Xili Street, Xili Community, Shenzhen 518052 Nanshan District, China
Tested by (name, function, signature)		
Approved by (name, function, signature) ..		
<input checked="" type="checkbox"/>	Testing procedure: CTF Stage 1:	TPV Electronics (Fujian) Co., Ltd.
Testing location/ address		Shangzheng, Yuan Hong Road Fuqing City, Fujian, P.R.China
Tested by (name, function, signature)		Solina Zhao Project Engineer 
Approved by (name, function, signature) ..		Anderson Wang Technical Reviewer 
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) ..		
Approved by (name, function, signature) ..		
<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) :		

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

- Photo documentation (3 Pages)
- Measurement Section (4 Pages)

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

name of test	test clause number
Classification of electrical energy sources	5.2
Accessibility to electrical energy sources and safeguards (Accessibility test)	5.3.2
Maximum operating temperature test (Heating test)	5.4.1.4, 9.3, B.1.5, B.2.6
Determination of working voltage	5.4.1.8
Minimum Clearances/Creepage distance	5.4.2, 5.4.3
Humidity test	5.4.8
Electric strength test	5.4.9
Safeguards against capacitance discharge test	5.5.2.2
Resistance of the protective bonding system (Ground continuity test)	5.6.6.2
Unearthed accessible conductive part test	5.7.4
Earthed accessible conductive part test	5.7.5
Electrical Power Source (PS) measurements for classification	6.2.2
Input test	Annex B.2.5
Abnormal operating and fault condition tests	Annex B.3, B.4
Adhesive test	Annex P.4
Limited short circuit test	Annex R
Limited power source test (LPS)	Annex Q.1
Steady force test, 10N	Annex T.2

Testing location:

All tests as described in Test Case and Measurement Sections were performed at the CTF stage 1 described on page 2.

The EUT passed the test.

Summary of compliance with National Differences (List of countries addressed):

EU Group Differences, EU Special National Conditions, CA, DK, SG, US

Explanation of used codes: CA=Canada, DK=Denmark, SG=Singapore, US=United States of America

The product fulfils the requirements of EN IEC 62368-1:2020+ A11:2020 and BS EN IEC 62368-1:2020+ A11:2020

For National Differences see corresponding Attachment of original report 60436687 001.

Statement concerning the uncertainty of the measurement systems used for the tests

Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Statement not required by the standard used for type testing

Copy of marking plate:

- See original report 60436687 001 for the details.

Test item particulars:	
Product group	<input checked="" type="checkbox"/> end product <input type="checkbox"/> built-in component
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input checked="" type="checkbox"/> Children likely present <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person
Supply connection	<input checked="" type="checkbox"/> AC mains <input type="checkbox"/> DC mains <input type="checkbox"/> not mains connected: <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply tolerance	<input checked="" type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + %/ - % <input type="checkbox"/> None
Supply connection – type	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input checked="" type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other:
Considered current rating of protective device	<input checked="" type="checkbox"/> 20 A; Location: <input checked="" type="checkbox"/> building <input type="checkbox"/> equipment <input type="checkbox"/> N/A
Equipment mobility	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> direct plug-in <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input checked="" type="checkbox"/> wall/ceiling-mounted <input type="checkbox"/> SRME/rack-mounted <input type="checkbox"/> other:
Overvoltage 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:
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified <input type="checkbox"/>
Special installation location	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> restricted access area <input type="checkbox"/> outdoor location
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified T_{ma}	40 °C <input type="checkbox"/> Outdoor: minimum °C
IP protection class	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP__
Power systems	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - V _{L-L} <input type="checkbox"/> not AC mains
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> 5000 m
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> m
Mass of equipment (kg)	For 23.6 inch models: 4.47kg (with base stand type A); For 23.8 inch models: 4.47kg (with base stand type A); For 27.0 inch models: 6.15kg (with base stand type A); For base stand type A: approx. 1.51kg; For base stand type B: approx. 1.35kg

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: 18.Jan.2022	
Date (s) of performance of tests: 03.Mar.2022 - 25.Apr.2022	
General remarks:	
"(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 4.2.5 of IEC62368-1:	
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)	<ol style="list-style-type: none"> 1 TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian, P.R. China 2 TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road, Fuqing City, Fujian, P.R. China 3 TPV Electronics (Fujian) Co., Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, 350301, Fujian, P.R. China 4 L&T Display Technology (Fujian) Ltd. Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing, 350301, Fujian, P.R. China 5 TPV Display Technology (China) Co., Ltd. No. 106 Jinghai 3 Rd., BDA, 100176, Beijing, P.R. China 6 TPV Display Technology (Wuhan) Co., Ltd. Unique No. 11, Zhuankou Development District of Economic Technological Development Zone, 430056, Wuhan City, P.R. China 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	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
9	Envision Indústria de Produtos Eletrônicos Ltda. Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM, Brazil
10	TPV Technology (Thailand) Co., Ltd. No.267 Mu7, Tha Tum Sub- District, Si Maha Pho District, Prachin Buri Province, Thailand
11	GeneTouch Corp. No. 9 Neixi Rd., Luzhu Dist., Taoyuan City, 33852, Taiwan
12	Dixon Technologies (India) Ltd. EMC-2, Shed No. 2,4,5,6 & 7, Near Tirupati Airport, Village Govindhavaram, Munagalapalem Post, Revenue Vikruthamala, Yerpedu Mandelam, District-Chittoor, Andhra Pradesh, 517526, India
13	Fábrica Austral de Productos Eléctricos S.A. Islas Malvinas 1180, Rio Grande (9420), Provincia de Tierra del Fuego, Antártida e Islas del Atlántico Sur, Argentina

General product information and other remarks:

Product Description –

Description of change(s):

1. Add two alternative main boards 715GD052 and 715GD061 for 23.6 inch and 23.8 inch models, which are used with power board 715G9611 only.
2. Add alternative main board 715G9500 for 27.0 inch flat models, which is used with power board 715G9611 only.
3. Add alternative power board 715GC023 which is used with 27.0 inch models.
Add new main boards 715GD052 and 715GD061, which are used with new power board 715GC023 only.
Original main boards 715GA531 and 715GB201 can be also used with power board 715GC023.
4. Update factories list due to the client's request.

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

Change	Testing	Comments
1.	- Annex B.2.5 Input Test	Due to the power consumption is not higher than that list in original report 60436687 001, no heating test is required.
2.	- Annex B.2.5 Input Test	Due to the power consumption is not higher than that list in original report 60436687 001, no heating test is required.
3.	- See page 3 "Summary of testing"	See following pages for details.
4.	- N/A	See page 6-7 for the details.