



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 : CN22JQ06 001

Date of issue : 2022-Apr-28

Total number of pages : 78

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 62368-1:2014

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_1D

Test Report Form(s) Originator .. : UL(US)

Master TRF : Dated 2021-02-04

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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 (LED backlight)	
Trade Mark(s)	AOC	
Manufacturer	Same as applicant	
Model/Type reference	24B3HM, Q24*****, 24***** (* can be 0-9, A-Z, a-z, -, \, /, + or blank for marketing purpose only, no technical difference.)	
Ratings	I/P: 100-240V~, 50/60Hz, 1.5A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" 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)	See below	
Approved by (name, function, signature)	See below	
Testing procedure: CTF Stage 1:		
<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)	Crystal Xu Project Engineer	
Approved by (name, function, signature)	Anderson Wang Technical Reviewer	
Testing procedure: CTF Stage 2:		
<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)		
Testing procedure: CTF Stage 3 :		
<input type="checkbox"/> Testing procedure: CTF Stage 3 :		
Testing procedure: CTF Stage 4:		
<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 (6 Pages)
- National Differences (33 Pages)
- Other National Requirements (2 Pages)
- Measurement Section (5 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, 6.3.2, 9.0, B.2.6
Determination of working voltage	5.4.1.8
Ball pressure test	5.4.1.10.3
Minimum Clearances/Creepage distance	5.4.2.2, 5.4.2.4 and 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
Earthed accessible conductive part test	5.7.2.2, 5.7.4
Electrical Power Source (PS) measurements for classification	6.2.2
Top Openings in Fire Enclosure	6.4.8.3.3
Bottom Openings in Fire Enclosure	6.4.8.3.4
Wall or ceiling mount loading test	8.7
Input test	Annex B.2.5
Simulated abnormal operating and single fault conditions	Annex B.3, B.4
Test for permanence of markings	Annex F.3.10
Safeguards against entry of foreign object	Annex P.2.2
Adhesive test	Annex P.4
Limited power source test (LPS)	Annex Q.1
Steady force test, 10N, 30N, 250N	Annex T.2, T.3, T.5
Enclosure impact test	Annex T.6
Stress relief test	Annex T.8

The EUT passed the test.

Testing location:

1) All tests except Ball pressure test and Wall mounting test as described in Test Case and Measurement Sections were performed at the CTF stage 1 described on page 2.

2) Ball pressure test and Wall mounting test was performed at [CB Testing Laboratory](#) described on page 2.

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

EU Group Differences, EU Special National Conditions, CA, DK, IT, JP, US

Explanation of used codes: CA=Canada, DK=Denmark, IT=Italy, JP=Japan, US=United States of America

The product fulfils the requirements of EN 62368-1:2014+ A11:2017 and BS EN 62368-1:2014+ A11:2017

For National Differences see corresponding Attachment.

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:

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.



Note: All models rating label are similar except for type designation. Above labels are representing the other models.

TEST ITEM PARTICULARS:	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input checked="" type="checkbox"/> Children likely to be present
Supply Connection	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - 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"/> mating connector <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 as part of building or equipment installation	<u>20</u> A; Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
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 <input type="checkbox"/> rack-mounting <input checked="" type="checkbox"/> wall-mounted
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: _____
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Class II with functional earthing <input type="checkbox"/> Not classified
Access location	<input type="checkbox"/> restricted access area <input checked="" type="checkbox"/> N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient	<u>40</u> °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"/> dc mains <input type="checkbox"/> N/A
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> <u>5000</u> m
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> ____ m
Mass of equipment (kg)	<input checked="" type="checkbox"/> Approx. 3.01kg (with base) Base weight: 0.40kg

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: 08.Mar.2022	
Date (s) of performance of tests: 10.Apr.2022 - 24.Apr.2022	
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(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 IEC60068-2-1:	
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