



# TEST REPORT IEC 62368-1

# Audio/video, information and communication technology equipment Part 1: Safety requirements

**Report Number.....:** CN212AAA 001 **Date of issue ......:** 29. Dec. 2021

Total number of pages.....: 66

Name of Testing Laboratory

preparing the Report...... TÜV Rheinland (Shenzhen) Co., Ltd.

Applicant's name ...... TPV Electronics (Fujian) Co., Ltd.

Fuging 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:

The test results presented in this report relate only to the object tested.

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Test item description::	LCD MONITOR(LED backlight)				
Trade Mark(s):	AOC				
Manufacturer:	Same	as applicant			
Model/Type reference:		M, PD32******* (* can be 0-9, A-Z, a-z, –,  /, + or blank, ent different enclosure colour for marketing purpose)			
Ratings::	I/P:19.	5Vdc, 16.9A			
Responsible Testing Laboratory (as applicable and a second a second and a second and a second and a second and a second an		<u> </u>			
TÜV Rheinland (Shenzhen) Co., Ltd.		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):		Mino Yu Project Handler	Mino Yu San Co		
Approved by (name, function, signature):		Steven Lin Technical Reviewer	Sac		
Testing procedure: CTF Stage 1:					
Testing location/ address					
resumg location/ address	••••••				
Tested by (name, function, signature)	:				
Approved by (name, function, signatu	ıre) :				
Tasting procedure CTF Store 2					
Testing procedure: CTF Stage 2					
Testing location/ address:					
Tested by (name, function, signature)					
Witnessed by (name, function, signat	ure).:				
Approved by (name, function, signature):					
Testing procedure: CTF Stage 3	:				
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 (8 Pages)
- National Differences (30 Pages)
- Measurement Section (1 page)

## Summary of testing:

## Tests performed (name of test and test clause):

The tests were carried out under the most unfavourable combination within the manufacturer's operating specifications of the following parameters:

- -supply voltage 19.5Vdc
- -operating temperature, Max. ambient temperature 35°C declared by the client
- -operating mode: continuous

The critical tests were performed for this equipment included clauses:

name of test	test clause number
Classification of electrical energy sources	5.2
Maximum operating temperature test (Heating test)	5.4.1.4, 6.3.2, 9.0, B.2.6
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
Stability test	8.6
Wall or ceiling mount loading test	8.7
Input test	Annex B.2.5
Simulated abnormal operating and single fault conditions	B.3, B.4
Test for permanence of markings	Annex F.3.10
Limited power source test (LPS)	Annex Q.1
Safeguards against entry of foreign object	Annex P.2.2
Adhesive test	Annex P.4
Steady force test, 30N , 250N	Annex T.3 , T.5
Enclosure impact test	Annex T.6
Stress relief test	Annex T.8

## 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 (List of countries addressed):

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

Explanation of used codes: CA=Canada, DK=Demark, US=United States of America

☑ The product fulfils the requirements of <u>EN IEC 62368-1:2020+ A11:2020</u> and <u>BS EN IEC 62368-1:</u> 2020+ A11:2020

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 labels are in the same design except for type designation. Above labels are representing the other models.

Test item particulars:	
Product group:	
Classification of use by:	
	☐ Instructed person
	Skilled person
Supply connection:	
	<ul><li>✓ not mains connected:</li><li>✓ ES1 ☐ ES2 ☐ ES3</li></ul>
Supply tolerance:	
Outply tolerance	+20%/-15%
	+ %/- %
	None     Non
Supply connection – type:	pluggable equipment type A -
	non-detachable supply cord
	appliance coupler
	☐ direct plug-in ☐ pluggable equipment type B -
	non-detachable supply cord
	appliance coupler
	permanent connection
	mating connector
	other: not directly connected to the mains
Considered current rating of protective device:	☐ A; Location: ☐ building ☐ equipment
	Location: ☐ building ☐ equipment ☐ N/A
Equipment mobility:	☐ movable ☐ hand-held ☐ transportable
, ,	☐ direct plug-in ☐ stationary ☐ for building-in
	other:
Overvoltage category (OVC):	
	☐ OVC IV ☐ other: not directly connected to the mains
Class of equipment:	
	☐ Not classified ☐
Special installation location:	
D II (1	outdoor location
Pollution degree (PD):	_
Manufacturer's specified T <sub>ma</sub> :	35 °C  Outdoor: minimum °C
IP protection class:	☐ IP
Power systems:	
	☐ not AC mains
Altitude during operation (m):	☐ 2000 m or less ☐ 5000 m
Altitude of test laboratory (m):	
Mass of equipment (kg):	Total with base: 11.26kg Base: 3.24kg

Possible test case verdicts:		
- test case does not apply to the test object $\ldots$ :	N/A	
- test object does meet the requirement:	P (Pa	ss)
- test object does not meet the requirement $\ldots$ :	F (Fa	il)
Testing:		
Date of receipt of test item:	12.Au	ıg.2021
Date (s) of performance of tests:	15.Oc	ct.2021 to 23.Oct.2021
General remarks:		
"(See Enclosure #)" refers to additional informatio "(See appended table)" refers to a table appended		
Throughout this report a ☐ comma / ☒ point	is use	d as the decimal separator.
Manufacturer's Declaration per sub-clause 4.2.9	of IE	CEE 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	⊠ Ye	es ot applicable
When differences exist; they shall be identified	in the	General product information section.
Name and address of factory (ies)::	1	TPV Display Technology (Wuhan) Co., Ltd Unique No.11 Zhuankou Development District of Economic Technological Development Zone , 430056 Wuhan City, P. R. China
	2	TPV Electronics (Fujian) Co., Ltd. Shangzheng, Yuan Hong Road Fuqing City, Fujian, P.R.China
	3	L&T Display Technology (Fujian) Ltd Optoelectronic Park, Rongqiao Economic and Technological Development Zone Fuqing, 350301 Fujian, P.R. China
	4	TPV Electronics (Fujian) Co., Ltd. Rongqiao Economic and Technological Development Zone Fuqing City, Fujian, P.R.China
	5	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
	6	TPV Display Technology (China) Co., Ltd No.106 Jinghai 3 Rd., BDA, 100176 Beijing, P. R. China
	7	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

- 8 TPV Technology(Qingdao) Co.,Ltd. NO.99 Huoju Road, High-tech Industrial Development Zone, Qingdao City, Shandong, P. R. China
- 9 Envision Indústria de Produtos Eletrônicos Ltda. Av. Torquato Tapajós, 2236, Flores - CEP 69058-830 - Manaus/AM Brasil
- 10 Pro Concept Manufacturer Co., Ltd. 88/1 Moo 12, Soi Phetkasem 120, Phetkasem Road, Omnoi, Krathumbaen, Samutsakhon 74130, Thailand
- 11 TPV Technology (Thailand) Co., Ltd. No.267 Mu7, Tha Tum Sub- District, Si Maha Pho District, Prachin Buri Province, Thailand
- 12 TPV Electronics (Fujian) Co., Ltd.
  Optoelectronic Park, Rongqiao Economic and
  Technological Development Zone, Fuqing City,
  350301, Fujian, P. R. China
- 13 GeneTouch Corp.
  - No. 9 Neixi Rd., Luzhu Dist., Taoyuan City, 33852 Taiwan
- 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
- 15 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 –**

The models are LCD Monitor intended for general office use and information technology equipment with following features:

- 1. LCD Type: TFT LCD with LED backlight.
- 2. External approved adapter ADP-330CB B and PA-1331-99XX, which complies with ES1.
- 3. Main board 715GC316 with HDMI x2, DP and Microphone out (Connect to PC).
- 4. Main board 715GC319 with Microphone in, Earphone, USB type C, USB upstream, USB3.2 Gen1(x3) and USB3.2 Gen1+fast charging(x1).
- 5. All data ports on main board are optional use, and at least one of HDMI or DP was used.
- 6. The internal metal chassis is considered as fire enclosure and mechanical enclosure, and the external plastic enclosure is regarded as decorative enclosure, made of min. HB material.
- 7. Base stand, made of metal and plastic (min. HB material).
- 8. Maximum declared ambient: 35°C.

# Model Differences -

All models are identical except for different enclosure colour for marketing purpose only, no technical difference.

# **Definition of variable(s) on model name:**

Variable:	Range of variable:	Content:
ú****	0-9, A-Z, a-z, - , \ , / , + or blank	Represent different enclosure colour for marketing purpose only, no technical difference.