Ref. Certif. No.

JPTUV-131863-M1

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	LCD Monitor
Name and address of the applicant	Top Victory Electronics (Taiwan) Co., Ltd. 10F., No. 230, Liancheng Rd. Zhonghe Dist., New Taipei City, 23553 Taiwan
Name and address of the manufacturer	Sharp NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku Tokyo, 108-0073 Japan
Name and address of the factory	See additional page(s)
Ratings and principal characteristics	AC 100-240V; 50/60Hz; 1.40-0.70A (2.0A FOR MEXICO); Class I
Trademark (if any)	NEC
Customer's Testing Facility (CTF) Stage used	N/A
Model / Type Ref.	EA242WU, EA242WU-BK
Additional information (if necessary may also be reported on page 2)	For model differences, refer to the test report. Re-issue of JPTUV-131863 dated 2022-01-20, due to first modification.
A sample of the product was tested and found to be in conformity with	IEC 60950-1:2005+A1+A2 See Test Report for National Differences
As shown in the Test Report Ref. No. which forms part of this Certificate	CN225UEJ 002

This CB Test Certificate is issued by the National Certification Body

TÜVRheinland®

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: 2022-03-28

Signature:

Dipl.-Ing. F. Stoelzel

10/0861 CB 06/20v9 rk

1. 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

2. TPV Technology (Qingdao)
   Co., Ltd.
   No.99 Huoju Road, High-tech
   Industrial Development Zone
   Qingdao City, Shandong, P.R. China

3. 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

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

5. Envision Indústria de Produtos
   Eletrônicos Ltda.
   Av. Torquato Tapajós, 2236,
   Flores - CEP 69058-830 - Manaus/AM
   Brazil

6. Pro Concept Manufacturer Co., Ltd
   88/1 Moo 12, Soi
   Phetkasem 120, Phetkasem
   Road, Omnoi, Krathumbaen,
   Samutsakhon 74130, Thailand

7. TPV Technology (Thailand) Co., Ltd.
   No.267 Mu7,
   Tha Tum Sub- District,
   Si Maha Pho District,
   Prachin Buri Province, Thailand

Additional information (if necessary) Report Ref. No. : CN225UEJ 002

Date: 2022-03-28 Signature: Dipl.-Ing. F. Stoelzel

8. GeneTouch Corp.
No. 9 Neixi Rd.,
Luzhu Dist., Taoyuan City 33852
Taiwan

9. TPV Electronics (Fujian) Co., Ltd.
Optoelectronic Park,
Rongqiao Economic and
Technological Development Zone,
Fuqing City, 350301 Fujian, P.R. China

10. Treeview Co., Ltd.
106/29 Moo 8,
Sukhumvit Road, T.Banglamung,
A.Banglamung, Chonburi 20150
Thailand

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

12. TPV Electronics (Fujian) Co., Ltd.
Shangzheng, Yuan Hong Road
Fuqing City
Fujian
P.R. China

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

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

Additional information (if necessary) Report Ref. No. : CN225UEJ 002

Date: 2022-03-28 Signature: Dipl.-Ing. F. Stoelzel

15. 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

16. 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

Additional information (if necessary) Report Ref. No. : CN225UEJ 002

Date: 2022-03-28 Signature: Dipl.-Ing. F. Stoelzel

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 60950-1
Information technology equipment – Safety – Part 1: General requirements

Report Number. .....:	CN225UEJ 002
Date of issue .....:	2022-03-25
Total number of pages.....:	17
Name of Testing Laboratory preparing the Report.....:	Audix Technology Corporation
Applicant's name.....:	Top Victory Electronics (Taiwan) Co., Ltd.
Address .....:	10F., No. 230, Liancheng Rd., Zhonghe Dist., New Taipei City, 23553 Taiwan
Test specification:	
Standard.....:	IEC 60950-1:2005, AMD1:2009, AMD2:2013
Test procedure .....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60950_1G
Test Report Form(s) Originator.....:	SGS Fimko Ltd
Master TRF .....:	Dated 2019-07-02

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 ..... :	NEC
Manufacturer..... :	Sharp NEC Display Solutions, Ltd. 4-28, Mita 1-chome, Minato-ku, Tokyo, 108-0073 Japan
Model/Type reference ..... :	EA242WU, EA242WU-BK
Ratings ..... :	100-240V~, 50/60Hz, 1.40-0.70A (2.0A FOR MEXICO)

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	Audix Technology Corporation	
Testing location/ address ..... :		No. 53-11, Dingfu, Linkou Dist., New Taipei City, Taiwan, Chinese Taipei	
Tested by (name, function, signature) ..... :		Thomas Lin (Project handle)	Thomas Lin
Approved by (name, function, signature).. :		Ben Lu (Reviewer)	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature).. :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature). :			
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):

- Measurement Section (1 pages)
- Photo documentation (1 pages)

Total number of pages in each attachment is indicated in individual attachment.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
All applicable tests as described in Test Case and Measurement Sections were performed. • The maximum normal load condition used as below during testing: The equipment operated under maximum brightness, maximum contrast of LED backlight circuit and the volume with 1kHz sinusoidal waveform of unit adjusted to maximum attainable output, connected to internet via LAN port and transmission data and dummy load of 3.3V/0.5A for display port (two provided, when display mode one provided), 5V/0.9A for USB type A (two provided), 5V/3A or 9V/3A or 12V/3A or 15V/3A or 20V/3.25A for USB type C (except for USB type C mode). • The test samples are pre-production without serial numbers. • The equipment provided wall mounting function and complied with loading test mentioned at sub-clause 4.2.10. • The equipment has been evaluated according to the specified by the manufacturer maximum operating altitude of 5000m (correction factor for clearances according to IEC 60664:1992+A1:2000+A2:2002 of 1.48 is considered). • The manufacturer specified the maximum ambient temperature as +40°C. • The LCD Monitor can be adjustment monitor's height and operated in landscape mode(0°) to portrait mode (90°) when power board downward or upward and landscape mode (180°) (ac inlet upward).	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):

US, CA, JP, AU, NZ, SG.

Explanation of used codes: US = United States of America, CA = Canada, JP = Japan, AU= Australia, NZ= New Zealand, SG= Singapore.

☒ The product fulfils the requirements of UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014

☒ The product fulfils the requirements of CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014

☒ The product fulfils the requirements of J60950-1 (H29)

☒ The product fulfils the requirements of AS/NZS 60950.1:2015

☒ The product fulfils the requirements of Special National Conditions (for Singapore)

For National Differences see corresponding attachment in report no. CN225UEJ 001.

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.

Refer to Report No. CN225UEJ 001.

Test item particulars.....:	
Equipment mobility.....:	[X] movable [] hand-held [] transportable [X] stationary (when with mounting function) [] for building-in [] direct plug-in
Connection to the mains.....:	[X] pluggable equipment [X] type A [] type B [] permanent connection [X] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition.....:	[X] continuous [] rated operating / resting time:
Access location .....:	[X] operator accessible [] restricted access location
Over voltage category (OVC) .....:	[] OVC I [X] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values .....:	±10
Tested for IT power systems .....:	[] Yes [X] No
IT testing, phase-phase voltage (V) .....:	N/A
Class of equipment .....:	[X] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	16 (20 for North America)
Pollution degree (PD) .....:	[] PD 1 [X] PD 2 [] 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) .....:	Max. 6.41kg (with base stand) Max. 2.29kg (for base stand)

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 .....:	2022-03-16
Date (s) of performance of tests.....:	2022-03-21 to 2022-03-23

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 ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 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 ..... :	☒ **Yes** ☐ **Not 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 Brazil
10) Pro Concept Manufacturer Co., Ltd
    88/1 Moo 12, Soi Phetkasem 120, Phetkasem Road, Omnoi, Krathumbaen, Samutsakhon 74130, Thailand
11) Treeview Co., Ltd.
    106/29 Moo 8, Sukhumvit Road, T.Banglamung, A.Banglamung, Chonburi 20150 Thailand
12) TPV Electronics (Fujian) Co., Ltd.
    Optoelectronic Park, Rongqiao Economic and Technological Development Zone, Fuqing City, 350301 Fujian, P.R. China
13) TPV Technology (Thailand) Co., Ltd.
    No.267 Mu7, Tha Tum Sub- District, Si Maha Pho District, Prachin Buri Province Thailand
14) GeneTouch Corp.
    No. 9 Neixi Rd., Luzhu Dist., Taoyuan City 33852 Taiwan
15) 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
16) 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:

The equipment models which shown as page 2 are LCD Monitor intended for information technology equipment scope of this standard use.

The equipment consists of the following critical components:

- LCD panel;
- Building-in type non-approved switching power supply board;
- Main board (with HDMI port x1, Display port x2, USB type C port x1, LAN port x1, audio port x1 and USB type A x2);
- Key control board;
- IR board;
- Plastic Enclosure;
- Metal Enclosure and Metal Sheet;
- Speaker (two provided) (optional);
- Base stand (optional).

For Power board (Protective bonding conductors) type 715GC677 manufacturer by TOP VICTORY ELECTRONICS (TAIWAN) Co., Ltd. which tested according to CSA C22.2 No. 0.4-17 (tested by A Plus Safety Consulting Co., Ltd., report no. A08007-21).

The non-standard protective bonding constructions has been tested according to limited short circuit test of CSA C22.2 No. 0.4-04 (see attached CA and US National Differences).

The suitable power supply cord will be provided and evaluated during national approval.

This equipment is intended to be service by qualified service personnel.

For switching power supply board 715GC677.

All sources of T9101 are similar to each other except for type designation and manufacturer.

All sources of L9901 are similar to each other except for type designation and manufacturer.

All sources of L9902 are similar to each other except for type designation and manufacturer.

All sources of L9801 are similar to each other except for type designation and manufacturer.

All sources of L9802 are similar to each other except for type designation and manufacturer.

Model Differences

All models are identical except for model designation.

Additional Information

- The power supply unit used in the product is not a certified product. Hence, compliance has been evaluated in this report.
- The equipment contains with multimedia function ports, therefore the IEC Guide 112 for multimedia equipment has been considered.
- Special national conditions for J60950-1(H29)
  Per client's request, supplement the special national conditions for J60950-1(H29) and J3000 (H25) to present test report. Described as following items:
  a) Power cord set for Japanese market is added and AC plug adaptor is optional used and the equipment is consider as Class 0I or Class I equipment.
  b) Considered further Japanese technical requirements J60950-1 (H29)
- The manufacturer declared that the product also fulfilled of the requirements of SANS 60950-1: 2014 (Edition 2.2 / IEC 60950-1: 2013 (Edition 2.2).
- Special national conditions for AS/NZS 60950.1:2015
  Per client's request, supplement the special national conditions for AS/NZS 60950.1:2015 to present.
- Power cord set is replaced and AC plug adaptor is optional used for Japanese market. The equipment is regarded to be Class 0I or Class I equipment. Unit also complies with touch current requirements for Class 0I equipment: < 1.0mA.

Other National Requirements

Special national conditions for J3000 (H25)
Per client's request, supplement the special national conditions for J3000 (H25) to present test report.

Per client's request, attached special national conditions according to previous test report from as below:
For IEC 60950-1:2005 / EN 60950-1:2006+A11:2009+A1:2010+A12:2011 (per client request):
DE, FI, IL, KR.
Explanation of used codes: DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea.

For IEC 60950-1:2005 / EN 60950-1:2006+A11:2009 (per client request):
CN.
Explanation of used codes: CN = China.

For IEC 60950:1999 (3rd Edition) + Corr. Jan. 2000 (per client request):
UA.
Explanation of used codes: UA = Ukraine.

For Special National Conditions see corresponding Attachment.

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

(may be required by the product standard or client)

☐ **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**

MARKINGS AND INSTRUCTIONS

Fuse Identification (See sub-clause 1.7.6): F9901 T5AL/250V.

- ⏚ (IEC 60417-5019) for the terminal of protective earthing conductor (on AC Inlet) (See sub-clause 1.7.7.1)
- ⏻ or ⏻ (IEC 60417-5009) for the stand-by condition. (See subclause 1.7.8.3)

Description of change(s):

1. Add primary component (RV9901, SG9901 and SG9902) and modify relevant layout/circuit for original power board.

2. Correct typing error of model differences describe and table 5.3.

Change	Testing	Comment
1	1. Input test 2. Resistance of earthing 3. Heating test 4. Hi-pot test 5. Abnormal test	For test results, see appended tables. For new sources, see table 1.5.1 and photo documentation for details.
2	N/A	Refer to bold texts.

History of amendments and modifications:

Ref. No. CN225UEJ 001, dated 2022-01-18 (original test report)
Ref. No. CN225UEJ 002, dated 2022-03-25 (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)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		P
1.5	**Components**		P
1.5.1	General	See below.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General	See below.	P
1.5.9.2	Protection of VDRs	See Annex Q.	P
1.5.9.3	Bridging of functional insulation by a VDR	A fuse is connected in series with the VDR (RV9901).	P
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	**Power interface**		P
1.6.2	Input current	(see appended table 1.6.2)	P
2.6	**Provisions for earthing and bonding**		P
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)..... :	(see appended table 2.6.3.4).	P
2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.3	Clearances	See below	P
2.10.3.1	General	Annex F is considered.	P
2.10.3.2	Mains transient voltages	See below.	P
	a) AC mains supply ..... :	2500 Vpk considered.	P
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.4	Creepage distances	See below.	P
2.10.4.1	General	Considered.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb assumed.	P
	CTI tests..... :	See above.	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
4.5	**Thermal requirements**		P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	See appended table 4.5.	P
	Normal load condition per Annex L ..... :	(See Annex L)	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
5.2	**Electric strength**		P
5.2.1	General	See appended table 5.2.	P
5.2.2	Test procedure	Table 5B used.	P
5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	See appended table 5.3.	P
5.3.7	Simulation of faults	Complied.	P
5.3.9	Compliance criteria for abnormal operating and fault conditions	See appended table.	P
5.3.9.1	During the tests	Neither fire burns the equipment nor molten metal.	P
5.3.9.2	After the tests	Electric strength test made.	P
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	- Preferred climatic categories .....:	See appended table 1.5.1.	P
	- Maximum continuous voltage .....:	See appended table 1.5.1.	P
	- Combination pulse current .....:	See appended table 1.5.1.	P
	Body of the VDR. Flammability class of material (min V-1).....:	See appended table 1.5.1.	P

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

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[1])
Varistor (RV9901)	Thinking Electronic Industrial Co., Ltd.	TVR14681	Rated 420Vac, 560Vdc, 40/85/56, 6KV/3KA, pulse test passed V-0 coating.	IEC 61051-1:2007, IEC 61051-2:1991/AMD1:2009, IEC 61051-2-2:1991, UL 1449 Edition Number 4	VDE, UL
-alt.	Centra Science corp.	CNR-14D681K	Rated 420Vac, 560Vdc, 40/85/56, 6KV/3KA, pulse test passed V-0 coating.	IEC 61051-1:2007, IEC 61051-2:1991/AMD1:2009, IEC 61051-2-2:1991, UL 1449 Edition Number 4	VDE, UL
-alt.	TDK	SIOV-S14KV681	Rated 420Vac, 560Vdc, 40/105/56, 6KV/3KA, pulse test passed V-0 coating.	IEC 61051-1:2007, IEC 61051-2:1991/AMD1:2009, IEC 61051-2-2:1991, UL 1449 Edition Number 4	VDE, UL
-alt.	TDK	SIOV-SNF14K420	Rated 420Vac, 560Vdc, 40/125/56, 6KV/3KA, pulse test passed V-0 coating.	IEC 61051-1:2007, IEC 61051-2:1991/AMD1:2009, IEC 61051-2-2:1991, UL 1449 Edition Number 4	VDE, UL

Supplementary information:

1. Provided evidence ensures the agreed level of compliance. See OD-CB2039.
2. In Optocoupler technical data column, where “Di” means distance through insulation.
3. Interchangeable components are components that may be substituted by equivalent technical data and like approved/certified components which will not impact the safety and function of the particular end product.
4. License available upon request.

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

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
HDMI mode							
90V/50Hz	1.28	--	115.2	F9901	1.28	Maximum normal load	
90V/60Hz	1.28	--	115.2	F9901	1.28	Maximum normal load	
100V/50Hz	1.15	1.40	114.5	F9901	1.15	Maximum normal load	
100V/60Hz	1.15	1.40	114.5	F9901	1.15	Maximum normal load	
240V/50Hz	0.50	0.70	112.4	F9901	0.50	Maximum normal load	
240V/60Hz	0.50	0.70	112.4	F9901	0.50	Maximum normal load	
264V/50Hz	0.47	--	111.8	F9901	0.47	Maximum normal load	
264V/60Hz	0.47	--	111.8	F9901	0.47	Maximum normal load	
Supplementary information: 1. The measured input current at rated voltage shall be ≤ 110 % of rated current. 2. See summary of testing in the test report for the detail maximum normal condition. 3. Unless otherwise specified, all tests are performed with HDMI mode for worst case.							

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Basic/supplementary:						
Primary to earthed trace	420	250	3.0 (2.0 * 1.48)	3.0	3.0	3.0
Supplementary information: 1. Functional insulation shorted, see 5.3.4 c). 2. The required clearances multiplied by 1.48 considering that EUT operates up to 5000m. 3. For clearance and creepage did not describe above are far larger than limit above. 4. The measurement were conducted on both component side and trace layout side, only smaller value being recorded above.						

4.5	TABLE: Thermal requirements			P
	Supply voltage (V) .....:	See below	See below	—
	Ambient T_{min} (°C) .....:	--	--	—
	Ambient T_{max} (°C) .....:	--	--	—
Maximum measured temperature T of part/at.....:		T (°C)		Allowed T_{max} (°C)
Test condition (Under HDMI mode)		90V/60Hz	264V/60Hz	--

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Clause	Requirement + Test	Result - Remark	Verdict

Orientation	Horizontal (AC inlet downward)	Horizontal (AC inlet downward)	--
L9801 coil	76.6	65.7	130
L9802 coil	73.0	68.7	130
C9805 body	92.4	84.6	105
PCB near BD9801	74.1	63.3	130
PCB near SG9901	92.5	78.1	130
L9902 coil	97.7	69.9	130
L9901 coil	88.9	66.6	130
T9101 coil	102.7	96.9	110
RV9901 body	66.5	59.8	85
Plastic enclosure inside near T901	59.4	59.2	60
Plastic enclosure outside near T901	52.4	49.6	95
Ambient	40.0	40.0	--

Supplementary information:

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class

Supplementary information:

1. The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in 1.6.2 at voltages as described in above.
2. The instruction installation manual defines the Tma at of 40°C.

   Winding components (providing safety isolation):
   - Class 130 material (B) Tmax = 120°C – 10°C = 110°C
3. All values for T (°C) are re-calculated from actual ambient.
4. Unless otherwise specified, heating test are performed with Horizontal (AC inlet downward) for worst case.

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Basic/supplementary:				
Unit: primary to earth		DC	2857	No
Reinforced:				
Unit: primary and secondary		DC	4242	No
Unit: primary to plastic enclosure (with metal foil)		DC	4242	No

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) ..... :	40°C, if not otherwise specified	—
	Power source for EUT: Manufacturer, model/type, output rating ..... :	Refer to Report No. CN225UEJ 001	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
All openings (Horizontal) (AC inlet downward)	Blocked	90	1hr 23min	F9901	1.30	No hazards. No damage, T9101 coil =117.8°C, Ambient=40.0°C.
BD9801 pin 1-4	SC	264	1sec	F9901	--	F9901 open, No hazards. [2.]

Supplementary information:

1. In fault column, where SC= short-circuited, OC = open-circuited.

2. For fuse opened condition, same results were carried out for all sources fuses.

3. Maximum temperatures limitation of safety isolation transformers based on a test temperature of 40.0°C:
Class B T_{max} = 175°C.

List of test equipment used:
A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

Clause	Measurement / testing	Testing / measuring equipment / material used	Range used	Calibration date

Clause	Requirement + Test	Result - Remark	Verdict

2.6.3.4	TABLE: Resistance of earthing measurement		P
Location	Resistance measured (mΩ)	Comments	
AC inlet earth pin to panel chassis	8	Test current : 32A, duration: 2 min., Voltage drop: 0.256V	
AC inlet earth pin to panel chassis	10	Test current : 40A, duration: 2 min., Voltage drop: 0.400V	
C9905 secondary pin (trace) to earth	7	Test current : 32A, duration: 2 min., Voltage drop: 0.224V	
C9905 secondary pin (trace) to earth	8	Test current : 40A, duration: 2 min., Voltage drop: 0.320V	
C9904 secondary pin (trace) to earth	7	Test current : 32A, duration: 2 min., Voltage drop: 0.224V	
C9904 secondary pin (trace) to earth	8	Test current : 40A, duration: 2 min., Voltage drop: 0.320V	
Supplementary information:			

Product: LCD Monitor

Type Designation: EA242WU, EA242WU-BK