

LVD TEST REPORT

For

15.6" HD LED TV

Prepared for: RADIO PARTS PTY.LTD

562 Spencer Street WEST MELBOURNE, VIC 3003

Prepared By: JUNHAICHENG Technology Co., Ltd.

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TEST REPORT EN 60065 Audio, video and similar electronic apparatus Safety requirements	
Report Reference No.....	: JHC170420101S
Tested by (+ signature).....	: Hiber Jia <i>Hiber Jia</i>
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Testing Laboratory Name	: Shenzhen Junhaicheng Technology Co., Ltd
Address	: 6/F, Liuxiandong Bldg., Tongle Rd., Xili, Nanshan, Shenzhen, Guangdong, China
Client Name	: RADIO PARTS PTY.LTD
Address	: 562 Spencer Street WEST MELBOURNE, VIC 3003
Standard.....	: EN 60065: 2014
Non-standard test method.....	: N/A
Test Report Form/blank test report	
Test Report Form No.....	: EN60065F
TRF originator.....	: BEAB
Master TRF.....	: Dated 2012-02
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Test item Description	: 15.6" HD LED TV
Trademark.....	: <i>Wintal</i>
Model and/or type reference	: 15LED17HD
Manufacturer Name	: RADIO PARTS PTY.LTD
Address	: 562 Spencer Street WEST MELBOURNE, VIC 3003
Rating(s).....	: 100-240V, 50/60Hz, 20W
Mass of EUT	: 1.50kg
Test case verdicts	
Test case does not apply to the test object.....	: N(.A.)
Test item does meet the requirement	: P(ass)
Test item does not meet the requirement	: F(ail)

Testing

Date of receipt of test item : Apr. 20, 2017

Date(s) of performance of test..... : Apr. 2017

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see appended table)" refers to a table appended to the report.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Throughout this report a point is used as the decimal separator.

Brief of the description of the test sample:

The EUT is a class I LED TV, rated 100-240Vac, 50/60Hz, 20W. It's powered by a built in switching mode power supply.

Max. operation temperature: 35°C

Summary of Testing

The tests were carried out under TV mode with signal input (Audio: 1kHz sine wave signal input; Video: Three vertical bar signal input with max. brightness and max. contrast.). The tests were performed on the model 15LED17HD.

Copy of marking plate:

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
3	GENERAL REQUIREMENTS		P
	Safety class of the apparatus	Class I apparatus	P

4	GENERAL CONDITIONS OF TESTS		--
4.1.4	Ventilation instructions require the use of the test box	No	N

5	MARKING		P
	Comprehensible and easily discernible	All the critical information provided in the user's manual.	P
	Permanent durability against water and petroleum spirit		P
5.1	Identification, maker, model		P
	Class II symbol if applicable		N
	Rated supply voltage and symbol	(see copy of marking plate)	P
	Frequency if safety dependant		N
	Rated current or power consumption	(see copy of marking plate)	P
5.2	Earth terminal		P
	Hazardous live terminals	No secondary terminals are live	N
	Supply output terminals (other than mains)	No terminal which is hazardous live under normal operating conditions.	N
5.3	Use of triangle with exclamation mark		N
5.4	Instructions for use	Priveded	P
5.4.1	Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.		P
	Hazardous live terminals, instructions for wiring	No hazardous live terminal.	N
	Instructions for replacing lithium battery	No lithium batteries used	N
	Instructions for modem if fitted	No modem	N
	Class I earth connection warning		N
	Instructions for multimedia system connection		N
	Special stability warning for fixed installation	No fixed insulation required.	N
5.4.2	Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	Power supply cord with nonrewireable plug.	P
	Instructions for permanently connected equipment		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict

6	HAZARDOUS RADIATION		N
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No radiation	N
	European Council Directive 96/29/Euratom of 13 May 1996 10cm from outer surface of apparatus <1μSv/h (0,1mR/h)	No radiation	N
6.2	Laser radiation, emission limits to IEC 60825-1:	No radiation	N
	Emission limits under fault conditions	No radiation	N

7	HEATING UNDER NORMAL OPERATING CONDITIONS		P
7.1	Temperature rises not exceeding specified values, no operation of fuse links	(see appended table)	P
7.1.1	Temperature rise of accessible parts	(see appended table)	P
7.1.2	Temperature rise of parts providing electrical insulation	(see appended table)	P
7.1.3	Temperature rise of parts acting as a support or as a mechanical barrier	(see appended table)	P
7.1.4	Temperature rise of windings	(see appended table)	P
7.1.5	Parts not subject to a limit under 7.1.1 to 7.1.4	(see appended table)	P
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C		N

8	CONSTRUCTIONAL REQUIREMENTS WITH REGARD TO THE PROTECTION AGAINST ELECTRIC SHOCK		P
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare		N
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	No necessary adjustment and no replaceable fuse link or drawers.	N
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscope material is used.	P
8.4	No risk of electric shock following the removal of a cover which can be removed by hand	No cover removable barely by hand. Tools are required.	N
8.5	Class I equipment		P
	Basic insulation between hazardous live parts and earthed accessible parts		P
	Resistors bridging basic insulation complying with 14.2.1 a)		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
8.6	Class II equipment and Class II constructions within Class I equipment	Class II constructions used between primary circuit and secondary circuit.	P
	Reinforced or double insulation between hazardous live parts and accessible parts		P
	Components bridging reinforced or double insulation complying with 14.1 a) or 14.3		P
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.2.1 a)		P
	Reinforced or double insulation being bridged with 2 capacitors in series complying with 14.2.1 a)		N
	Reinforced or double insulation being bridged with a single capacitor complying with 14.2.1 b)		P
	Basic insulation bridged by components complying with 14.3.4.3		N
8.7	Basic insulation between parts at 35 V to 71 V (peak) a.c. or 60 V to 120 V d.c. and accessible parts	No such circuits.	N
	Reinforced or double insulation between circuits operating at voltages between 35 V and 71 V (peak) a.c. or between 60 V and 120 V d.c. and hazardous live parts at higher voltage		N
	Separation by Class II isolating transformer		P
	Separation by Class I transformer		N
	Separation by earthed conductive part		N
8.8	Basic or supplementary insulation > 0,4 mm (mm) :		P
	Reinforced insulation > 0,4 mm (mm)		P
	Thin sheet insulation		P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		P
	Basic or supplementary insulation, three layers any two of which meet 10.3		P
	Reinforced insulation, two layers each of which meet 10.3		N
	Reinforced insulation, three layers any two which meet 10.3		N
8.9	Adequate insulation between internal hazardous live conductors and accessible parts		N
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts		N
8.10	Double insulation between conductors connected to the mains and accessible parts		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
8.11	Detaching of wires	No risk of any wire becoming detached.	P
	No undue reduction of creepages or clearance distances if wires become detached		P
	Vibration test carried out	Considered	N
8.12	Adequate cross-sectional area of internal wiring to mains socket-outlets		N
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)		N
8.14	Adequate fastening of covers (pull test 50 N for 10 s)	No such cover	N
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	All the wires are fixed with enclosure.	P
8.16	Only special supply equipment can be used	Not used	N
8.17	Insulated winding wire without additional interleaved insulation		N
8.18	Endurance test as required by 8.17	No such insulation winding is used.	N
8.19	Disconnection from the mains	See below	P
8.19.1	Disconnect device	Approved power supply cord with nonrewireable plug as mains disconnect devices.	P
	All-pole switch or circuit breaker with >3mm contact separation		N
8.19.2	Mains switch ON indication		N
8.20	Switch not fitted in the mains cord		N
8.21	Bridging components comply with clause 14	No such components used.	N
8.22	Non-separable thin sheet material		N

9	ELECTRIC SHOCK HAZARD UNDER NORMAL OPERATING CONDITIONS		P
9.1	Testing on the outside		P
9.1.1	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation	<1000Vac or <1500Vdc	N
9.1.1.1	Touch current measured from terminal devices using the network in annex D	U1: <35Vpeak; U2: <0.35Vpeak	P
	Discharge not exceeding 45 µC		N
	Energy of discharge not exceeding 350 mJ	No part or contact of a terminal with stored voltages exceeding 15kV d.c.	N
9.1.1.2	Test with test finger and test probe		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
9.1.2	No hazardous live shafts of knobs, handles or levers	No live shafts, handles or levers.	N
9.1.3	Ventilation holes tested by means of 4 mm x 100 mm test pin		N
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032		N
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032		N
9.1.5	Pre-set controls tested with 2 mm x 100 mm test pin (10 N); test probe C of IEC 61032	No preset controls	N
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s :		N
	If C is not greater than 0,1 μ F no test needed		N/A
9.1.7	Enclosure sufficiently resistant to external force		P
	Test probe 11 of IEC 61032 for 10 s (50 N)		P
	Test hook of fig. 4 for 10 s (20 N)		P
	30 mm diameter test tool for 5 s (100 or 250 N):		P
9.2	No hazard after removing a cover by hand		N

10	INSULATION REQUIREMENTS		P
10.1	Insulation resistance ($M\Omega$) at least 2 $M\Omega$ min. after surge test for basic and 4 $M\Omega$ min. for reinforced insulation		P
10.2	Humidity treatment 48 h or 120 h	48h, 93%, 25°C No impairment	P
10.3	Insulation resistance and dielectric strength	(see appended table)	P

11	FAULT CONDITIONS		P
11.1	No shock hazard under fault condition	No electric shock hazard under fault conditions	P
11.2	Heating under fault condition	See appended table, fault condition tests	P
	No hazard from softening solder	Soldering does not become soft or fluid.	P
11.2.1	Measurement of temperature rises	(see appended table)	P
11.2.2	Temperature rise of accessible parts	(see appended table)	P
11.2.3	Temperature rise of parts, other than windings, providing electrical insulation	(see appended table)	P
	Temperature rise of printed circuit boards (PCB) exceeding the limits of table 3 by max. 100 K for max. 5 min	No temperature exceeding the limits of table 3. See appended table, fault condition tests	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	a) Temperature rise of printed circuit boards (PCB) to 20.1.3, exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm ²	No area where temperature exceeds 100K above limits	N
	b) Temperature rise of printed circuit boards (PCB) to 20.1.3 up to 300 K for an area not greater than 2 cm ² for a maximum of 5 min	No area where temperature exceeds 300K above limits	N
	Meets all the special conditions if conductors on printed circuit boards are interrupted	No conductors on PCB is interrupted.	N
	Class I protective earthing maintained		N
11.2.4	Temperature rise of parts acting as a support or mechanical barrier	No temperature exceeding the limits of table 3. See appended table, fault condition tests	P
11.2.5	Temperature rise of windings	(see appended table)	P
11.2.6	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.5	(see appended table)	P

12	MECHANICAL STRENGTH		P
12.1.1	Bump test where mass >7 kg	<7kg	N
12.1.2	Vibration test	Compliance	N
12.1.3	Impact hammer test		P
	Steel ball test		P
12.1.4	Drop test for portable apparatus where mass < 7 kg		N
12.1.5	Thermoplastic enclosures strain relief test	70°C, 7h (After tested, the hazardous live parts can not be touched.)	P
12.2	Fixing of knobs, push buttons, keys and levers		P
12.3	Remote controls with hazardous live parts	No remote control with hazardous live parts	N
12.4	Drawers (pull test 50 N, 10 s)	No drawer	N
12.5	Antenna coaxial sockets providing isolation	No antenna socket which insolate hazardous live parts from accessible parts.	N
12.6	Telescoping or rod antennas construction	No such antenna	N
12.6.1	Telescoping or rod antennas securement	No such antenna	N

13	CLEARANCE AND CREEPAGE DISTANCES		P
13.1	Clearances in accordance with 13.3		P
	Creepage distances in accordance with 13.4		P
13.2	Determination of operating voltage		P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
13.3	Clearances		P
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9		P
13.3.3	Circuits not conductively connected to the mains comply with table 10		P
13.4	Creepage distances		P
	Creepage distances greater than table 11 minima		P
13.5	Printed boards		P
13.5.1	Clearances and creepage distances between conductors on printed circuit boards, one of which may be conductively connected to the mains, as in fig. 10		P
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)		N
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4		N
	Conductive parts along reliably cemented joints comply with 8.8		N
13.7	Enclosed, enveloped or hermetically sealed parts: not conductively connected to the mains: clearances and creepage distances as in table 12		N
13.8	Parts filled with insulating compound, meeting the requirements of 8.8		N

14	COMPONENTS		P
14.1	Resistors		N
	a) Resistors between hazardous live parts and accessible metal parts	No resistors between hazardous live parts and accessible metal parts.	N
	b) Resistors, other than between hazardous live parts and accessible parts	Not used.	N
	b) Resistors separately approved		N
14.2	Capacitors and RC units		N
	Capacitors separately approved		N
14.2.1	Y capacitors tested to IEC 60384-14, 2 nd edition ...:		N
14.2.2	X capacitors tested to IEC 60384-14, 2 nd edition ...:		N
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2		N
14.2.5	Capacitors with volume exceeding 1750 mm ³ , where short-circuit current exceeds 0,2 A: compliance with IEC60384-1, 4.38 category B or better	Only metal-cased electrolytic capacitors that is exempted from this requirement.	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Capacitors with volume exceeding 1750 mm ³ , mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60 384-1, 4.38 category B or better	No such capacitor	N
	Shielded by a barrier to V-0 or metal		N
14.3	Inductors and windings		P
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4		P
14.3.1	Transformers and inductors marked with manufacturer's name and type		P
	Transformers and inductors separately approved ..		N
14.3.2	General		P
14.3.3	Constructional requirements		P
14.3.3.1	Clearances and creepage distances comply with clause 13		P
14.3.3.2	Transformers meet the constructional requirements		P
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation)		P
	Coil formers and partition walls > 0,4 mm		P
14.3.4.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions of 14.3.4.2 are met		N
14.3.4.3	Separating transformers with at least basic insulation		N
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)		P
	Coil formers and partition walls > 0,4 mm		P
14.3.5.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal		N
	Winding wires connected to protective earth have adequate current-carrying capacity		N
14.4	High voltage components		N
	High-voltage components and assemblies: U > 4 kV (peak) separately approved	No high voltage components used	N
	Component meets category V-1 of IEC 60707		N
14.4.1	High voltage transformers and multipliers tested as part of the submission		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
14.4.2	High voltage assemblies and other parts tested as part of the submission		N
14.5	Protective devices	Current fuse on main board	P
	Protective devices used within their ratings		P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened		P
14.5.1.1	a) Thermal cut-outs separately approved		N
	b) Thermal cut-outs tested as part of the submission		N
14.5.1.2	a) Thermal links separately approved	No such thermal device	N
	b) Thermal links tested as part of the submission		N
14.5.1.3	Thermal devices re-settable by soldering	No such thermal device	N
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127		P
14.5.2.2	Correct marking of fuse-links adjacent to holder ...:		P
14.5.2.3	Not possible to connect fuses in parallel	No fuse holder so designed that fuse-links can be connected in parallel	N
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool	No such replaceable fuse without the used of a tool provided.	N
14.5.3	PTC-S thermistors comply with IEC 60730-1	No PTC's thermistors	N
	PTC-S devices (15 W) category V-1 or better		N
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked		P
14.6	Switches	No switch provided for the apparatus.	N
14.6.1 a)	Separate testing to IEC 61058 including: 10 000 operations Normal pollution suitability Resistance to heat and fire level 3 and V-0 compliance with annex G, G.1.1		N
14.6.1 b)	Tested in the apparatus:		N
	Switch controlling > 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.3, 14.6.4 and V-0 in annex G, G.1.1		N
	Switch controlling > 0.2A with open contact voltage < 35 V (peak)/24 V dc complying with 14.6.3 and V-0 in annex G, G.1.1		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Switch controlling < 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 in annex G, G.1.1		N
14.6.2	Switch tested to 14.6.1 b) constructed to IEC 61058-1 subclause 13.1 and has making/breaking action independent of speed of actuation		N
14.6.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use		N
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 60058-1		N
	Socket outlet current marking correct		N
14.7	Safety interlocks		N
	Safety interlocks to 2.8 of IEC 60950		N
14.8	Voltage setting devices		N
	Voltage setting device not likely to be changed accidentally		N
14.9	Motors		N
14.9.1	Endurance test on motors		N
	Motor start test		N
	Dielectric strength test		N
14.9.2	Not adversely affected by oil or grease etc.		N
14.9.3	Protection against moving parts	No hazardous moving parts.	N
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950, Annex B		N
14.10	Batteries	No batteries used	N
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		N
14.10.2	No possibility of recharging non-rechargeable batteries		N
14.10.3	Recharging currents and times within manufacturers limits		N
	Lithium batteries discharge and reverse currents within the manufacturers limits		N
14.10.4	Battery mould stress relief	Not a special battery.	N
14.10.5	Battery drop test		N
14.11	Optocouplers	No optocouplers used	N
	Optocouplers comply with Cl. 8		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Internal and external dimensions to 13.1. or alternatively 13.6 (jointed insulation)		N
14.12	Surge suppression varistors	No varistors used	N
	Comply with IEC 61051-2		N
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus		N
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12		N

15	TERMINALS		P
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard		N
15.1.2	Connectors for antenna, earth, audio, video or data:		P
	No risk of insertion in mains socket-outlets	No such connectors provided.	P
	No risk of insertion into audio or video: outlets marked with the symbol of 5.2	No outlets marked with the symbol of 5.2	P
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets	No such adaptors or similar devices.	N
15.2	Provision for protective earthing		N
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment		N
	Class I supply equipment with non-hazardous live output voltage: output circuit not connected to earth		N
	Protective earth conductors correctly coloured		N
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input		N
	Protective earth terminal resistant to corrosion		N
	Earth resistance test: $< 0,1 \Omega$ at 25 A		N
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		N
15.3.1	Adequate terminals for connection of permanent wiring		N
15.3.2	Reliable connection of non-detachable cords:		N
	Not soldered to conductors of a printed circuit board		N
	Adequate clearances and creepage distances between connections should a wire break away		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
	Wire secured by additional means to the conductor		N
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar		N
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		N
	Clamping of conductor and insulation if not soldered or held by screws		N
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N
15.3.6	Terminals to 15.3.3 have sizes required by table 16		N
15.3.7	Terminals clamp conductors between metal and have adequate pressure		N
	Terminals designed to avoid conductor slipping out when tightened or loosened		N
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		N
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic		N
15.3.9	Termination of non-detachable cords: wires terminated near to each other		N
	Terminals located and shielded: test with 8 mm strand		N
15.4	Devices forming a part of the mains plug		N
15.4.1	No undue strain on mains socket-outlets		N
15.4.2	Device complies with standard for dimensions of mains plugs		N
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N

16	EXTERNAL FLEXIBLE CORDS		P
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords	Approved power supply cord used.	P
	Non-detachable cords for Class I have green/yellow core for protective earth		P
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		P

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
16.3	a) Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages, have adequate dielectric strength		N
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60227-2)		N
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		N
16.5	Adequate strain relief on external flexible cords		N
	Not possible to push cord back into equipment		N
	Strain relief device unlikely to damage flexible cord		N
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		N
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use	No assembly or movement in use	N
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1	No such apparatus	N
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord	No such apparatus	N

17	ELECTRICAL CONNECTIONS AND MECHANICAL FIXINGS		P
17.1	Torque test to table 20:		P
	- screws into metal: 5 times		P
	- screws into non-metallic material: 10 times		P
17.2	Correct introduction into female threads in non-metallic material		N
17.3	Cover fixing screws: captive		N
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter		N
17.4	No loosening of conductive parts carrying a current > 0,2 A		N
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A	No contact pressure transmitted through insulating material.	N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder	No screw terminals	N
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous	No cover fixing device that will impair safety if operated inadvertently.	N
17.8	Fixing devices for detachable legs or stands provided	No detachable legs or stands provided.	N
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected		N

18	MECHANICAL STRENGTH OF PICTURE TUBES AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N
	Picture tube separately approved to IEC 61965:	No picture tube used for the apparatus.	N
	Picture tube separately approved to 18.1		N
18.1	Picture tubes > 16 cm intrinsically protected		N
	Non-intrinsically protected tubes > 16 cm used with protective screen		N
18.2	Intrinsically protected tubes: tests on 12 samples		N
18.2.1	Samples subject to ageing: 6		N
18.2.2	Samples subject to implosion test: 6		N
18.2.3	Samples subject to mechanical strength test (steel ball): 6		N
18.3	Non-intrinsically protected tubes tested to 18.3		N

19	STABILITY AND MECHANICAL HAZARDS		P
	Mass of the equipment exceeding 7 kg	Less than 7Kg.	N
	Apparatus intended to be fastened in place – suitable instructions		N
19.1	Test on a plane, inclined at 10° to the horizontal		N
19.2	100 N force applied vertically downwards		N
19.3	Apparatus mass > 25 kg or height > 1 M or supplied with cart or stand		N
19.4	Edges or corners not hazardous		P
19.5	Glass surfaces with an area exceeding 0,1 m ² or maximum dimension > 450 mm, pass the test of 19.5.1		N
19.6	Wall or ceiling mountings adequate		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
20	RESISTANCE TO FIRE		P
20.1	Electrical components and mechanical parts		P
	a) Exemption for components contained in an enclosure of material V-0 to IEC 60707 with openings not exceeding 1 mm in width		N
	b) Exemption for small components as defined in 20.1	PCB is of flammability class V-1 or better, exception is made for small components.	P
20.1.1	Electrical components meet the requirements of Clause 14 or 20.1.4	Electrical components comply with flammability requirements in clause 14.	P
20.1.2	Insulation of internal wiring working at voltages > 4 Kv or leaving an internal fire enclosure, not contributing to the spread of fire		N
20.1.3	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC60707, unless used in a fire enclosure	PCB is of base material with flammability category V-0. See List of Critical Components	P
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60707		N
20.1.4	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21	(see appended table)	P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N
20.2	Fire enclosure		N
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1		N
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled		N
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N
A	APPENDIX A, ADDITIONAL REQUIREMENTS FOR APPARATUS WITH PROTECTION AGAINST SPLASHING WATER		N
A.5.1	j) Marked with IPX4 (IEC 60529), 5.4.1 a) does not apply		N

EN 60065			
Clause	Requirement – Test	Result - Remark	Verdict
A.10.2.1	Enclosure provides protection against splashing water		N
A.10.2.2	Humidity treatment carried out for 7 days		N

B	APPENDIX B, APPARATUS TO BE CONNECTED TO THE TELECOMMUNICATION NETWORKS		N
	Complies with IEC 62151 clause 1		N
	Complies with IEC 62151 clause 2		N
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N
	Complies with IEC 62151 clause 4 but with 4.1.2, 4.1.3 and 4.2.1.2 modified in accordance with annex B of this standard		N
	Complies with IEC 62151 cause 5 but with 5.3.1 modified in accordance with annex B of this standard		N
	Complies with IEC 62151 clause 6		N
	Complies with IEC 62151 clause 7		N
	Complies with IEC 62151 annex A, B and C		N

7.1	TABLE: temperature rise measurements				P
	Power consumption in the OFF/Stand-by		--		--
	Position of the functional switch (W).....		--		
Un (V)	F(Hz)	In (A)	Pn (w)	Fuse in (A)	Operating condition/status
90	60	0.204	10.1	0.204	HDMI, Audio: 1kHz sine wave signal input to reach 1/8 non-clipped power output; Video: Three vertical bar signal input with max. brightness and max. contrast, max.power consumption.
100	60	0.187	10.9	0.187	
240	50	0.100	10.0	0.100	
264	50	0.095	10.0	0.095	
Un(V)	In(A)	Pn(W)	Pout(W)		—
					—
	Loudspeaker impedance (Ω)		4Ω X2		—
	Several loudspeaker systems				N
	Marking of loudspeaker terminals				N
Monitored point:		dT (K)		Limit dT (K)	
-		264V/50Hz	90V/60Hz	-	
Outer enclosure (non-metal)		11.2	13.5	60	
CON 1		6.4	7.8	50	

CX1	12.8	14.7	50		
Common choke	17.1	22.8	95		
e-capacitor	22.9	24.7	80		
Transformer coil	29.8	27.5	75		
Transformer core	28.0	26.9	-		
SMPS PCB	26.3	25.9	95		
Internal wire	15.0	16.5	50		
Ambient	25.0		--		
Winding temperature rise measurements					
Ambient temperature t1 (°C)			—		
Ambient temperature t2 (°C)			—		
Temperature rise dT of winding:	R ₁ (Ω)	R ₂ (Ω)	dT (K)	Limit dT (K)	Insulation class

7.2	TABLE: softening temperature of thermoplastics			N
Temperature T of part	T - normal conditions (°C)	T - fault conditions (°C)	T softening (°C)	

10.3	TABLE: insulation resistance measurements		P
Insulation resistance R between:	R (MΩ)	Required R (MΩ)	
Line, neuter and enclosure	>20	4	
Line, neuter and signal terminals	>20	4	
Line and neuter (with fuse moved away)	>20	2	

10.3	TABLE: electric strength measurements		P
Test voltage applied between:	Test voltage (V)	Breakdown	
Line, neuter and enclosure	3000	No	
Line, neuter and signal terminals	3000	No	
Line and neuter (with fuse moved away)	1500	No	

11.2	TABLE: summary of fault condition tests		P
Voltage (V) 0,9 or 1,1 times rated voltage	--	—	

Ambient temperature (°C)			25				-
Test No.	Component No.	fault	Test voltage (V)	Test time	Fuse No.	Fuse current (A)	Result
1	Ventilation	Blocked	264	2h 30min	F1	0.095	Max. Temperature rise measured: PCB: 28.5K; Transformer coil 32.6K, No damage, no hazards.
2	12Vdc	s-c	264	10min	F1	0.036	Unit shut down immediately and no hazards observed.
3	12Vdc	o-l	264	3h	F1	0.484	Loaded max. 4A and input 64.3W, temperature rise measured transformer coil 94K, PCB 72K, no hazards observed.
4	C8	s-c	264	5min.	F1	0.039	The unit shut down immediately, no components damages, no hazards, recoverable.
5	C4	s-c	264	0	F1	0	Unit shut down, F1 opened and no hazards observed.
6	D8	s-c	264	0	F1	0.039	The unit shut down immediately, no components damages, no hazards, recoverable.
7	D1	s-c	264	0	F1	0	Unit shut down, F1 opened and no hazards observed.
Supplementary information							
s-c=short circuit, o-c=open circuit, o-l=overload							

9.1.1.1	Touch current expressed as voltages U1 and U2 in Annex D				N
Location	Measured U1 V (peak)	Measured U1 V (DC)	Measured U2 V (peak)	Limits : U1 Max 35V (peak) U1 Max 1.0V (DC) U2 Max 0.35V (peak)	
Comments: No other part exceeds 35V peak or 60V dc					

13.3 - 13.4 Clearances and Creepage distances									P
Type of Insulation	Position/ Location	Position/ Location	Working Voltage		Clearance 13.3.2		Creepage dist. 13.4		Comm.
--	1	2	Up	Urms	Req.	Measu.	Req.	Measu.	--
Basic	Line, neuter	Earthed part	340	240	2.0mm	7.0	2.5mm	7.0	--
Function	Fuse in	Fuse out	340	240	2.0mm	3.0	2.5mm	3.0	--
Reinforce	Line, neuter	Enclosure	340	240	4.0mm	>10	5.0mm	>10	--
Reinforce	T1 pri.	T1 sec.	496	250	4.2mm	6.0	5.0mm	6.0	--

Reinforce	PCB Pri.	PCB Sec.	496	250	4.2mm	7.1	5.0mm	7.1	--
Note: U in Volt, Clearances/Creepage Distances in mm, Comm. = Comment									
Comments:									

14 Table: Critical Components and materials					
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	standard	Mark(s) of conformity ¹⁾
Power supply cord	Yuyao City Fengsheng Electronics Co., Ltd	4V-75	250V/440V, 3X0.75mm ²	AS/NZS 3191	SAA
Non- rewireable plug	Yuyao City Fengsheng Electronics Co., Ltd	FS-3D	250VAC, 10A, 3PIN		SAA
LCD panel	Au Optonics Corporation	B156XTN07.0	15.6" (15.55) HD 16:9 Color TFT-LCD with LED Backlight	--	UL
PCB	Various	Various	V-0 or better, 130°C,	UL 94 UL 796	UL
Speakers (2 incorporated)	Shenzhen-Hong Electronic Co., Ltd	YDT3070-12C	4Ω, 3W /each	--	--
Alternative	Various	Various	4Ω, 3W /each	--	--
Enclosure	Guangzhou Kingfa Science&Technolo gy Co., Ltd.	FRHIPS-960	V-0, Min. thickness= 1.7mm	UL 94	UL
Main board	Shenzhen Cultraview Digital Technology Co., Ltd	CV9203L-A	--	EN 60065	Tested in appliance
Y-Capacitor (CY1,CY2)	Yinan Don's Electronic Component Co.,Ltd	CT81	470pF/250Vac	--	VDE:13525 6
-Alt.	Haohua ELECTRONIC CO.,LTD	CT7	470pF/250Vac	--	VDE:40003 902
-Alt.	Dongguan Easy- Gather Electronic Co., Ltd.	DCF	470pF/250Vac	--	VDE 40022942
Y-Capacitor (CY3)	Yinan Don's Electronic Component Co.,Ltd	CT81	1000pF/250Vac	--	VDE:13525 6
-Alt.	Haohua ELECTRONIC CO.,LTD	CT7	1000pF/250Vac	--	VDE:40003 902
-Alt.	Dongguan Easy- Gather Electronic Co., Ltd.	DCF	1000pF/250Vac	--	VDE 40022942
X-Capacitor (CX1)	Ultra Tech Xiphi Enterprise Co.Ltd	HQX	0.33uF/275Vac	--	VDE 40024534

-Alt.	Dongguan Easy-Gather Electronic Co., Ltd.	MKP-X2	0.33uF/275Vac	--	VDE 40022258
-Alt.	Winday Electronic Industrial Co., Ltd	MPX	0.33uF/275Vac	--	VDE 40030283
-Alt.	Dain Electronics Co., Ltd.	MPX	0.33uF/275Vac	--	VDE 40018798
FUSE (F1)	Ever Island Electric Co., Ltd.And Walter Electric	2010	T2A/250V	--	VDE 40018781
-Alt.	Conquer Electronics Co., Ltd	MST	T2A/250V	--	VDE 40017118
-Alt.	Xc Electronics (Shen Zhen) Corp. Ltd.	5TE	T2A/250V	--	VDE: 40029550
Ac Inlet (Con1)	Zhe Jiang Deli Connectors Co Ltd	VH-3A	7A,250Vac	--	UL
-Alt.	Zhejiang Jieshitai Electronics Co Ltd	VH-3A	7A,250Vac	--	VDE : 40025278
Optocoupler (PC1)	Lite-On Technology Corp	LTV-817	Cr.=min. 5.2mm; Dti. = 0.8mm	--	VDE:40015 248
-Alt.	Everlight Electronics Co., Ltd.	EL817	Cr=min.5.0mm; Dti. > 0.4mm	--	VDE:13224 9
Pcb	Shunde Junda Electronic Co.,Ltd.	JD-D,JD-B1	1.6mm V-0	--	UL
-Alt.	Hung Hing Electronics Co Ltd	HH-03,HH-02	1.6mm V-0	--	UL
-Alt.	Skytec (Hong Kong) Ltd	SK-3	1.6mm V-0	--	UL
-Alt.	Shandong Jinbao Electronics Co Ltd	ZD-95(G)F	1.6mm V-0	--	UL
-Alt.	Kingboard Laminates Holdings Ltd	KB-5150	1.6mm V-0	--	UL
Mylar Film	Mianyang Longhua Film Co Ltd	PC-870-A	V-0,80℃,	--	UL
-Alt.	Chengdu Kanglongxin Plastics Co Ltd	KLX FRPC-870B	V-0,80℃	--	UL
Inductor (L1)	Leke Technology Co.,Ltd	LKL-013	17-35mH	--	/
Bobbin	Chang Chun Plastics Co.,Ltd.	T375J	150℃	--	UL
Wire	Shen Zhen Chengwei Industry Co Ltd	2UEW	130℃	---	UL
Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT-280	130℃	--	UL
Varnish	Hang Cheung Petrochemical Ltd	8562(a)	155℃	--	UL
Transformer (T2)	Leke Technology Co.,Ltd	LKT-902	Class B 130℃	--	/

Bobbin	Chang Chun Plastics Co.,Ltd.	T375J	150 °C	--	UL
Wire	Shen Zhen Chengwei Industry Co Ltd	2UEW	130 °C	--	UL
Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	CT-280	130 °C	--	UL
Margin Tape	Jingjiang Yahua Pressure Sensitive Glue Co Ltd	WF2902	130 °C	--	UL
Varnish	Hang Cheung Petrochemical Ltd	8562(a)	155 °C	--	UL
Tube	Changyuan Electronics Group Co Ltd	CB-TT-T	200 °C	--	UL
R8,R9,R10,R 11	Various	Various	1.5MΩ, 1/4W	--	/

Note(s):

1. An asterisk indicates a mark that assures the agreed level of surveillance.
2. In Optocoupler technical data column, where "DI" means distance through insulation, "Int." means internal creepage distance, "Ext." means external creepage distance.

Attachment I Product photos

Photo 1 overall view of EUT



Photo 2 rear view

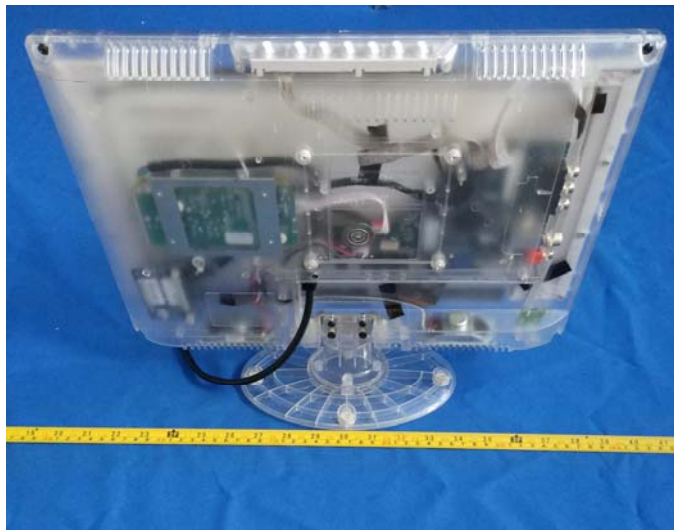


Photo 3 inside view

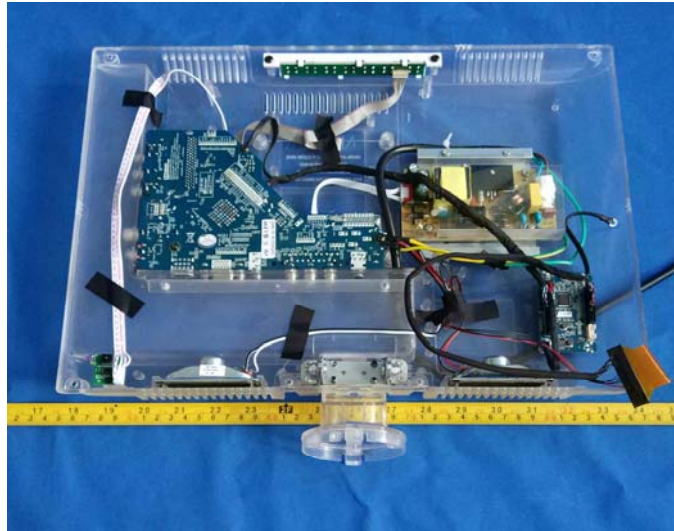


Photo 4 inside view (main board)

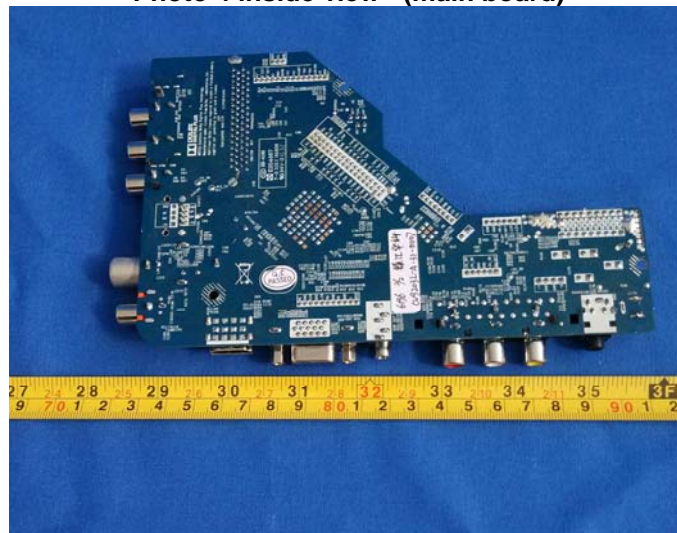


Photo 5 inside view (main board)

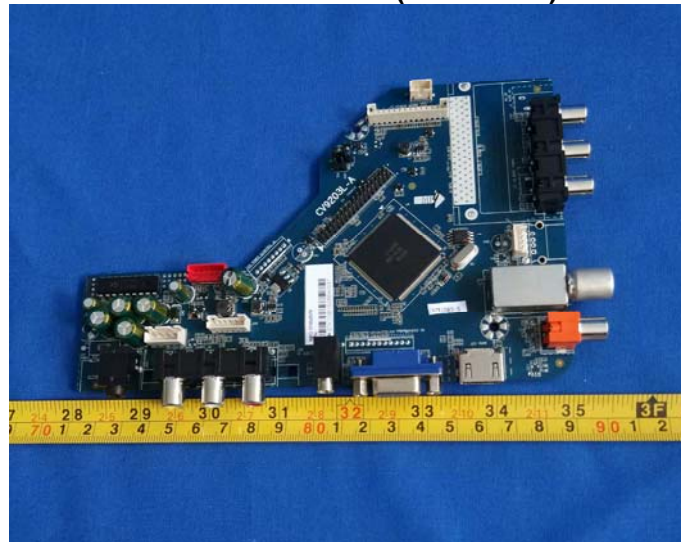


Photo 6 built-in power supply

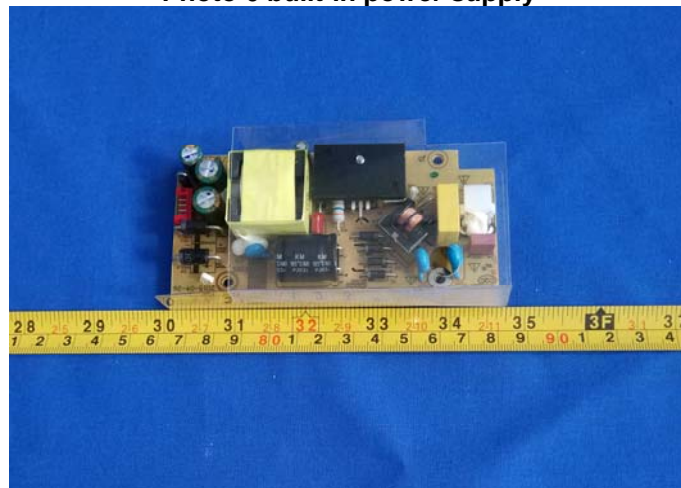


Photo 7 built-in power supply

