Test Report issued under the responsibility of:

TEST REPORT **IEC 60335-2-9** **Safety of household and similar electrical appliances** **Part 2: Particular requirements for grills, toasters and similar cooking appliances**	
Report Number. .....:	140300061HZH-001
Date of issue .....:	2014-04-23;Amendment 8: 2017-01-12
Total number of pages.....:	29 pages of test report(including 5 pages photograph)
Applicant's name.....:	NINGBO LONGLEAD ELECTRIC APPLIANCES CO.,LTD
Address .....:	NO.69,QIYEDONG ROAD, ZHOUXIANG TOWN,CIXI,NINGBO, China
Test specification:	
Standard .....:	IEC 60335-2-9:2002 (Fifth edition) + A1:2004 + A2:2006 in conjunction with IEC 60335-1:2010 (Fifth Edition) EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11+ EK1-AG2:2014-10 in conjunction with EN 60335-1:2012+AC: 2014+ A11: 2014 and EN 62233:2008
Test procedure .....:	--
Non-standard test method……..:	EK1-AG2:2014-10
Test Report Form No.....:	IEC60335_2_9K
Test Report Form(s) Originator.....:	LCIE
Master TRF.....:	Dated 2014-08
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Test item description .....:	Grill for Household use
Trade Mark .....:	--
Manufacturer.....:	Same as applicant
Model/Type reference .....:	LD-600, LD-601, LD-601A, LD-602, LD-602A, LD-603, LD-603A, LD-604, LD-604A, LD-605, LD-606, LD-607, LD-621, LD-800, LD-801, LD-888
Ratings .....:	220-240V~, 50Hz, class I for all models LD-621:1000W;LD-600:1500W;LD-601, LD-601A, LD-602, LD-602A, LD-605, LD-606, LD-800, LD-801, LD-607, LD-888:2000W LD-603, LD-603A, LD-604, LD-604A:1800W

Testing procedure and testing location:		
☒ Testing Laboratory:	Intertek Testing Services Hangzhou Ltd.	
Testing location/ address ..... :	16 No. 1 Ave., Xiasha Economic Development District, Hangzhou 310018, China	
☐ Associated CB Testing Laboratory:		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	Paul Tang	
Approved by (name + signature) ..... :	Navy Wang	
☐ Testing procedure: TMP		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	N/A	
Approved by (name + signature) ..... :	N/A	
☐ Testing procedure: WMT		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	N/A	
Witnessed by (name + signature).... :	N/A	
Approved by (name + signature) ..... :	N/A	
☐ Testing procedure: SMT		
Testing location/ address ..... :	N/A	
Tested by (name + signature) ..... :	N/A	
Approved by (name + signature) ..... :	N/A	
Supervised by (name + signature) .. :	N/A	

List of Attachments (including a total number of pages in each attachment): **Appendix: Constructional data form (CDF)**	
Summary of testing: From the result of our inspection and tests on the submitted samples, we conclude that they **comply** with the requirements of the standards.	
Tests performed (name of test and test clause): **Power Input Measurements: Cl.10.1** **Heating Test: Cl.11.Z102** **Ground Impedance Test:Cl.27.5**	**Testing location:** **16 No. 1 Ave., Xiasha Economic Development District, Hangzhou 310018, China**
Summary of compliance with National Differences **List of countries addressed:** **National differences for Germany has been checked** ☒ **The product fulfils the requirements of EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11 +EK1-AG2:2014-10 in conjunction with EN 60335-1:2012+AC: 2014+ A11: 2014 and EN 62233:2008**	

Copy of marking plate

(Representative)

Grillgerät
LD-600
220-240~ 50Hz 1500W

NINGBO LONGLEAD ELECTRIC
APPLIANCES CO.,LTD

When the equipment is vended to EU, then name and address of the importer or authorized representative within the EEA shall be added on the equipment.

Test item particulars ..... :	
Classification of installation and use ..... :	**Portable appliance for household indoor use only**
Supply Connection..... :	**Appliance inlet. Detachable cord with plug and connector is delivered together with the appliance.**
..... :	
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 .....:	2016-12-06
Date (s) of performance of tests.....:	2016-12-23

General remarks:

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 testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.
PAH test according to AfPS GS 2014:01 PAK is considered and passed, please refer to PAH test report 161200150HZH-001-PAH for detail

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).....:	NINGBO LONGLEAD ELECTRIC APPLIANCES CO.,LTD NO.69,QIYEDONG ROAD, ZHOUXIANG TOWN,CIXI,NINGBO, China

General product information:

The appliances covered by this report are grills for household indoor use. Thermostat and thermal link are incorporated in the appliance for safety purpose.
The design of the products has been assessed and all risks with respect of LVD 2014/35/EU are adequately covered by standard EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11+EK1-AG2:2014-10,EN 60335-1:2012+AC: 2014+ A11: 2014,EN 62233:2008

Model similarity:

1. All models have similar construction,the main difference among them are the shape and size of heating plate,heating element,material of handle and rated power input;
2. The only difference between LD-601 and LD-601A is that LD-601 has metal handle while LD-601A's is bakelite,so do LD-602 and LD-602A, LD-603 and LD-603A, LD-604 and LD-604A;
3. LD-607 is same with LD-601 except LD-607 has no oil container;
4. LD-800 and LD-801 are all the same except the difference of half shape of heating plate;
5. All models except LD-600,LD-607,LD-621 have oil container;
6. All models have two optional coatings:Teflon coating or ceramic coating;
7. LD-888 is all the same with LD-800 except the grill size is bigger and handle material is Bakelite;
8. Connector CTW-300H(Kaneta)is all the same with CTW-300(Kaneta)except CTW-300H(Kaneta)has no press board for cord.

There are six types of connector used for all models(Jinze CTW-300, Zhaotai CTW-300A, Zhaotai CTW-300, Kaikai CTW300C, Kaneta CTW-300, Jinheng CTW 300C, Kaneta CTW-300H),all types except Kaneta CTW-300H of connector are tested,only the most unfavourable test data recorded.

Amendment 8

The original test report ref. No. 140300061HZH-001 dated on 2014-04-23 with Amendment 1 dated on 2014-05-26 ,Amendment 2 dated on 2014-06-18, Amendment 3 dated on 2014-11-03, Amendment 4 dated on 2014-11-24, Amendment 5 dated on 2015-04-14, Amendment 6 dated on 2015-09-09, Amendment 7 dated on 2016-05-31 was modified on 2017-01-12 to include the following addition:

1.Add one new model:LD-888;

2. Add one alternative Connector with thermostat for all models:CTW-300H

After review,tests need to be done.

Clause concerned: Cl.7, Cl.10, Cl.11.Z102,Cl.22,Cl.25,Cl.27,Cl.29 Annex EMF
Table concerned: Table 10.1,Table 11.Z102, Table 24.1**,** Table 29.1**,** Table 29.2

LD-888 is all the same with LD-800 except the grill size is bigger and handle material is Bakelite,so all other tests can be covered by the test data of LD-800;
Connector CTW-300H(Kaneta)is all the same with CTW-300(Kaneta)except CTW-300H(Kaneta)has no press board for cord,so all tests of Connector CTW-300H(Kaneta)can be covered by the test data of CTW-300(Kaneta).

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V)..... .....:	Refer to marking	P
	Symbol for nature of supply, or..... .....:	Refer to marking	P
	Rated frequency (Hz) ....:	Refer to marking	P
	Rated power input (W), or ....:	Refer to marking	P
	Rated current (A) ....:		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark..... .....:	Refer to marking	P
	Model or type reference..... .....:	Refer to marking	P
	Symbol IEC 60417-5172, for class II appliances		N/A
	IP number, other than IPX0..... .....:	IPX0	N/A
7.6	Correct symbols used		P
	Symbol for nature of supply placed next to rated voltage		P
	Symbol for class II appliances placed unlikely to be confused with other marking		N/A
	Units of physical quantities and their symbols according to international standardized system		P
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		
	- marking of terminals exclusively for the neutral conductor (letter N)		N/A
	- marking of protective earthing terminals (symbol IEC 60417-5019)		P
	- marking not placed on removable parts		P
7.9	Marking or placing of switches which may cause a hazard		P
7.12	Instructions for safe use provided		P
	Details concerning precautions during user maintenance		P
	The instructions shall state that the appliances are not intended to be operated by means of an external timer or separate remote-control system (IEC 60335-2-9)		P
	Instructions for use		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	The instructions for use for appliances intended to be used with a connector incorporating a thermostat shall state that only the appropriate connector must be used (IEC 60335-2-9)		P
7.13	Instructions and other texts in an official language	German & English	P
7.14	Marking clearly legible and durable, rubbing test as specified		P
	The height of the triangle used with symbol IEC 60417-5041(DB:2002-10) shall be at least 12mm (IEC 60335-2-9)		N/A
7.15	Markings on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
	The marking specified for hot surfaces shall be visible when the appliance is operated as in normal used (IEC 60335-2-9)		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Lamps behind a detachable cover not removed, if conditions met		N/A
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032, with a force not exceeding 1 N: no contact with live parts		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Use of test probe B of IEC 61032 through openings, with a force of 20N: no contact with live parts		P
	For toasters having a crumb tray : use of test probe 41 of IEC 61032 : no contact through crumb tray with live parts that are disconnected by double pole switch using (IEC 60335-2-9)		N/A
8.1.2	Use of test probe 13 of IEC 61032, with a force not exceeding 1 N, through openings in class 0 appliances and class II appliances/constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
10	POWER INPUT AND CURRENT		
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1..:	(see appended table)	P
22	CONSTRUCTION		
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances, unless	Not exposed to such substances	P
	the substance has adequate insulating properties		N/A
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self-tapping screws or other fasteners, likely to be touched by the user in normal use or during user maintenance		P
22.18	Current-carrying parts and other metal parts resistant to corrosion		P
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless		P
	material used is non-corrosive, non-hygroscopic and non-combustible		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless		P
	impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos	No such substances	P
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Neither clearances nor creepage distances over supplementary and reinforced insulation reduced below values specified in clause 29 as a result of wear		P
	Neither clearances nor creepage distances between live parts and accessible parts reduced below values for supplementary insulation if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation constructed or protected against pollution so that clearances or creepage distances are not reduced below the values in clause 29		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar materials or beads alone not used as supplementary or reinforced insulation		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation, not reinforced insulation		P
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless		P
	the shaft is not accessible when the part is removed		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
22.35	For other than class III constructions, handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		P
	This requirement does not apply to handles, levers and knobs on stationary appliances, other than those of electrical components, provided they are reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
	Insulating material covering metal handles, levers and knobs withstand the electric strength test of 16.3 for supplementary insulation		N/A
22.41	No components, other than lamps, containing mercury	No components containing mercury	P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.3 due to deformation as a result of an external force applied to the enclosure		P
	the appliance switches off automatically or can operate continuously without hazard		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		
	- supply cord fitted with a plug,		N/A
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance, or		P
	- pins for insertion into socket-outlets		N/A
	Appliances incorporating an appliance inlet other than those standardized in IEC 60320-1,shall be supplied with a cord set (IEC 60335-2-9)	The technical specification of plug and non-rewirable cord of the certified connector is checked.	P
27	PROVISION FOR EARTHING		

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
27.1	Accessible metal parts of Class 0I and I appliances permanently and reliably connected to an earthing terminal or earthing contact of the appliance inlet		P
	Earthing terminals and earthing contacts not connected to the neutral terminal		P
	Class 0, II and III appliances have no provision for earthing		N/A
	Safety extra-low voltage circuits not earthed, unless		N/A
	protective extra-low voltage circuits		N/A
	No earthing via flexible metal tubes, coiled springs and cord anchorage (IEC 60335-2-9)		P
27.2	Clamping means of earthing terminals adequately secured against accidental loosening		P
	Terminals for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², and		N/A
	do not provide earthing continuity between different parts of the appliance, and		N/A
	conductors cannot be loosened without the aid of a tool		N/A
27.3	For a detachable part having an earth connection and being plugged into another part of the appliance, the earth connection is made before and separated after current-carrying connections when removing the part		N/A
	For appliances with supply cords, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
27.4	No risk of corrosion resulting from contact between parts of the earthing terminal and the copper of the earthing conductor or other metal		P
	Parts providing earthing continuity, other than parts of a metal frame or enclosure, have adequate resistance to corrosion		P
	If of steel, these parts provided with an electroplated coating with a thickness at least 5 µm		P
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	In the body of the earthing terminal is a part of a frame or enclosure of aluminium or aluminium alloys, precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω)....:	Max :0,03Ω	P
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), Annex J applies .....:		N/A
	The microenvironment is pollution degree 1 under type 1 protection		N/A
	For type 2 protection, the spacing between the conductors before the protection is applied is not less than the values specified in Table 1 of IEC 60664-3		N/A
	These values apply to functional, basic, supplementary and reinforced insulation.....:		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless .....:	(see appended table)	P
	for basic insulation and functional insulation they comply with the impulse voltage test of clause 14		N/A
	However, if the distances are affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N/A
	Impulse voltage test is not applicable:		
	- when the microenvironment is pollution degree 3, or		P
	- for basic insulation of class 0 and class 01 appliances		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances are in overvoltage category II		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	The values of table 16 or the impulse voltage test of clause 14 are applicable.....:	(see appended table)	P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1,0 mm if the microenvironment is pollution degree 1		N/A
	Lacquered conductors of windings considered to be bare conductors		N/A
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16:	(see appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, using the next higher step for rated impulse voltage .....:	(see appended table)	P
	For double insulation, with no intermediate conductive part between basic and supplementary insulation, clearances are measured between live parts and the accessible surface, and the insulation system is treated as reinforced insulation		N/A
29.1.4	Clearances for functional insulation are the largest values determined from:		
	- table 16 based on the rated impulse voltage .....:	(see appended table)	P
	- table F.7a in IEC 60664-1, frequency not exceeding 30 kHz		N/A
	- clause 4 of IEC 60664-4, frequency exceeding 30 kHz		N/A
	If values of table 16 are largest, the impulse voltage test of clause 14 may be applied instead, unless		N/A
	the microenvironment is pollution degree 3, or		P
	the distances can be affected by wear, distortion, movement of the parts or during assembly		N/A
	However, clearances are not specified if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Lacquered conductors of windings considered to be bare conductors		N/A

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	However, clearances at crossover points are not measured		N/A
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree.....:	(see appended table)	P
	Pollution degree 2 applies, unless		N/A
	- precautions taken to protect the insulation; pollution degree 1	End of the heating element	P
	- insulation subjected to conductive pollution; pollution degree 3		P
	A force of 2 N is applied to bare conductors, other than heating elements		P
	A force of 30 N is applied to accessible surfaces		P
	In a double insulation system, the working voltage for both the basic and supplementary insulation is taken as the working voltage across the complete double insulation system		P
	Pollution degree 3 applies, unless the insulation is enclosed or located so that it is unlikely to be exposed to pollution during normal use of the appliance (IEC 60335-2-9)	All parts except the end of heating element	P
29.2.1	Creepage distances of basic insulation not less than specified in table 17.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 17.....:		N/A
	Except for pollution degree 1, corresponding creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14 .....:		N/A
29.2.2	Creepage distances of supplementary insulation at least those specified for basic insulation in table 17, or .....:	(see appended table)	P
	Table 2 of IEC 60664-4, as applicable .....:		N/A
29.2.3	Creepage distances of reinforced insulation at least double those specified for basic insulation in table 17, or .....:	(see appended table)	P

IEC 60335-2-9			
Clause	Requirement + Test	Result - Remark	Verdict
	Table 2 of IEC 60664-4, as applicable .....:		N/A
29.2.4	Creepage distances of functional insulation not less than specified in table 18.....:	(see appended table)	P
	However, if the working voltage is periodic and has a frequency exceeding 30 kHz, the creepage distances are also determined from table 2 of IEC 60664-4, these values being used if exceeding the values in table 18.....:		N/A
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation have adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked:		
	- by measurement, in accordance with 29.3.1, or		P
	- by an electric strength test in accordance with 29.3.2, or		N/A
	- by an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3, and		N/A
	for accessible parts of reinforced insulation consisting of a single layer, by measurement in accordance with 29.3.4, or		N/A
	- as specified in subclause 6.3 of IEC 60664-4 for insulation that is subjected to any periodic voltage having a frequency exceeding 30 kHz		N/A
	Requirement not applied to the sheath of a visibly glowing heating element that is inaccessible to test probe 41 of IEC 61032 (IEC 60335-2-9)		N/A
29.3.1	Supplementary insulation have a thickness of at least 1 mm		P
	Reinforced insulation have a thickness of at least 2 mm		P

IEC60335_2_9K - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60335-2-9
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Household and similar electrical appliances – Safety –
Part 2: Particular requirements for grills, toasters and similar cooking appliances

Differences according to:	EN 60335-2-9:2003+A1:04+A2:06+A12:07+A13:10+AC:11+EK1-AG2:2014-10 used in conjunction with EN 60335-1:2012+AC:2014+A11: 2014 EN 62233:2008
Attachment Form No.:	EU_GD_IEC60335_2_9K
Attachment Originator:	LCIE
Master Attachment:	2014-08

IEC60335_2_9K - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	CENELEC COMMON MODIFICATIONS		
8.1.1	Also test probe 18 of EN 61032 is applied		P
	The appliance being in every possible position during the test		P
	The force on the probe in the straight position is increased to 10 N when probe 18 is used		P
	When using test probe 18 the appliance is fully assembled as in normal use without any parts removed, and		P
	parts intended to be removed for user maintenance are also not removed		P
8.2	Compliance is checked by applying the test probes of EN 61032		P
	For built-in appliances and fixed appliances, the test probe B and probe 18 of EN 61032 are applied only after installation		N/A
11.1	For ovens, rotary grills, rotisseries and cookers, compliance is also checked by the test of 11.Z101. (EN 60335-2-9)		N/A
	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills, griddles, barbecues, hot plates, candy floss, popcorn makers, compliance is also checked by the test of 11.Z102. (EN 60335-2-9)	Grills	P
	For breadmakers and food dehydrators, compliance is also checked by the test of 11.Z103. ..... (EN 60335-2-9)		N/A
	For toasters, compliance is also checked by test of 11.Z104. ..... (EN 60335-2-9)		N/A
	For roasters, compliance is also checked by test of 11.Z105. ..... (EN 60335-2-9)		N/A
	For all other types of appliances, compliance is checked by submitting the appliance to the tests of the nearest mentioned relevant type of appliance. (EN 60335-2-9)		N/A
11.3	For flat surfaces, temperature rises are measured using the probe of figure Z101(or any measuring instrument giving the same results), applied with a force of 4 N ± 1 N. ..... (EN 60335-2-9)	(see appended table)	P
11.8	Footnotes to “External enclosure of motor-operated appliances” to be taken into account		N/A

IEC60335_2_9K - ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
11.Z102	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills, griddles, the temperature rise limits for top surfaces in table Z101 apply. (EN 60335-2-9)	Replaced by EN 60335-2-9/A13	N/A
	For contact grills, waffle irons, sandwich makers, radiant grills, raclette grills and griddles, barbecues, hot plates, candy floss, popcorn makers, the temperature rise limits in Table Z101 apply. The appliance is supplied at rated power and operated under normal operation. (EN 60335-2-9)	grills	P
ANNEX EMF			
	The Tested product also complies to the requirements of EN 62233:2008	Refer to 140300061HZH-EMF1+A2 : 2016-12-23 Measured max. : <10%	P

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Clause	Requirement - Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	**P rated (W)**	**P measured (W)**	**Δ P**	**Required Δ P**	**Remark**
LD-888	2000	1930	-3,5%	-10% ~ +5%	Supplied at 230V
Supplementary information:					

11.Z102	TABLE: Temperature rise limits for surfaces LD-888		P
	Ambient (℃):		23,2
	Test voltage (V):		244
	dT (K)	Max. dT (K)	Twice Max. Dt (K)
Bare metal	21,6	45	N/A
Coated metal	--	55	N/A
Glass and ceramic	--	60	N/A
Plastic and plastic coating > 0,3 mm c	20,7	65	N/A

24.1	TABLE: Components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Connector with thermostat for all models -alternative	Zhejiang Kaneta Electrics Co., Ltd.	CTW-300H	AC 250V, 10A Max T of pin:120 ^{o}C Diameter of pin: 3,7mm	EN 60320-1 EN 60335-2-9	TUV*/R5019 0132 +test with appliance

29.1	TABLE: Clearances						P
	Overvoltage category .... :		II				—
		Type of insulation:					
Rated impulse voltage (V):	**Min. cl (mm)**	**Basic (mm)**	**Supplementary (mm)**	**Reinforced (mm)**	**Functional (mm)**	**Verdict / Remark**	
330	0,2* / 0,5 / 0,8**					N/A	
500	0,2* / 0,5 / 0,8**					N/A	
800	0,2* / 0,5 / 0,8**					N/A	
1 500	0,5 / 0,8** / 1,0***					N/A	

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Clause	Requirement - Test	Result - Remark	Verdict

2 500	**1,5 /** 2,0***	X	X		X	P
4 000	**3,0 /** 3,5***			X		P
6 000	5,5 / 6,0***					N/A
8 000	8,0 / 8,5***					N/A
10 000	11,0 / 11,5***					N/A

Supplementary information:

***) For tracks on printed circuit boards if pollution degree 1 and 2**
****) For pollution degree 3**
*****) If the construction is affected by wear, distortion, movement of the parts or during assembly**

29.2	**TABLE: Creepage distances, basic, supplementary and reinforced insulation**										P
Working voltage (V)	**Creepage distance (mm) Pollution degree**										
	1	**2**			**3**			**Type of insulation**			
		Material group			**Material group**						
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**B****	**S****	**R****	**Verdict**
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9		—	—	N/A
≤50	0,18	0,6	0,85	1,2	1,5	1,7	1,9	—		—	N/A
≤50	0,36	1,2	1,7	2,4	3,0	3,4	3,8	—	—		N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4		—	—	N/A
125	0,28	0,75	1,05	1,5	1,9	2,1	2,4	—		—	N/A
125	0,56	1,5	2,1	3,0	3,8	4,2	4,8	—	—		N/A
250	**0,56**	1,25	1,8	2,5	3,2	3,6	**4,0**	X	—	—	P
250	0,56	1,25	1,8	2,5	3,2	3,6	**4,0**	—	X	—	P
250	1,12	2,5	3,6	5,0	6,4	7,2	**8,0**	—	—	X	P
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A
400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A

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Clause	Requirement - Test	Result - Remark	Verdict

500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>630 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A

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Clause	Requirement - Test	Result - Remark	Verdict

>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

Supplementary information:

***) Material group IIIb is allowed if the working voltage does not exceed 50 V**
****) B = Basic insulation, S = Supplementary insulation, R = Reinforced insulation**

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	**Creepage distance (mm) Pollution degree**							
	1	**2**			**3**			
		Material group			**Material group**			
		I	**II**	**IIIa/IIIb**	**I**	**II**	**IIIa/IIIb***	**Verdict / Remark**
≤10	0,08	0,4	0,4	0,4	1,0	1,0	1,0	N/A
50	0,16	0,56	0,8	1,1	1,4	1,6	1,8	N/A
125	0,25	0,71	1,0	1,4	1,8	2,0	2,2	N/A
250	0,42	1,0	1,4	2,0	2,5	2,8	**3,2**	P
400	0,75	1,6	2,2	3,2	4,0	4,5	5,0	N/A
500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>630 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A

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Clause	Requirement - Test	Result - Remark	Verdict

>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A

Supplementary information:

***) Material group IIIb is allowed if the working voltage does not exceed 50 V**

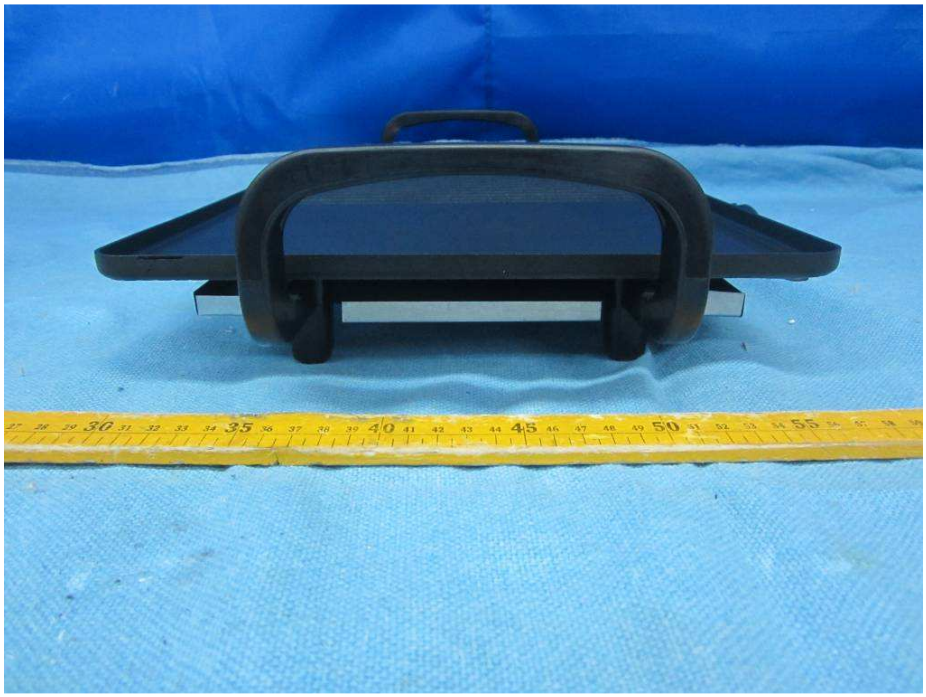
Appendix – Photographs

Photo 1.

Description: front view of LD-888

Photo 2.

Description: side view of LD-888



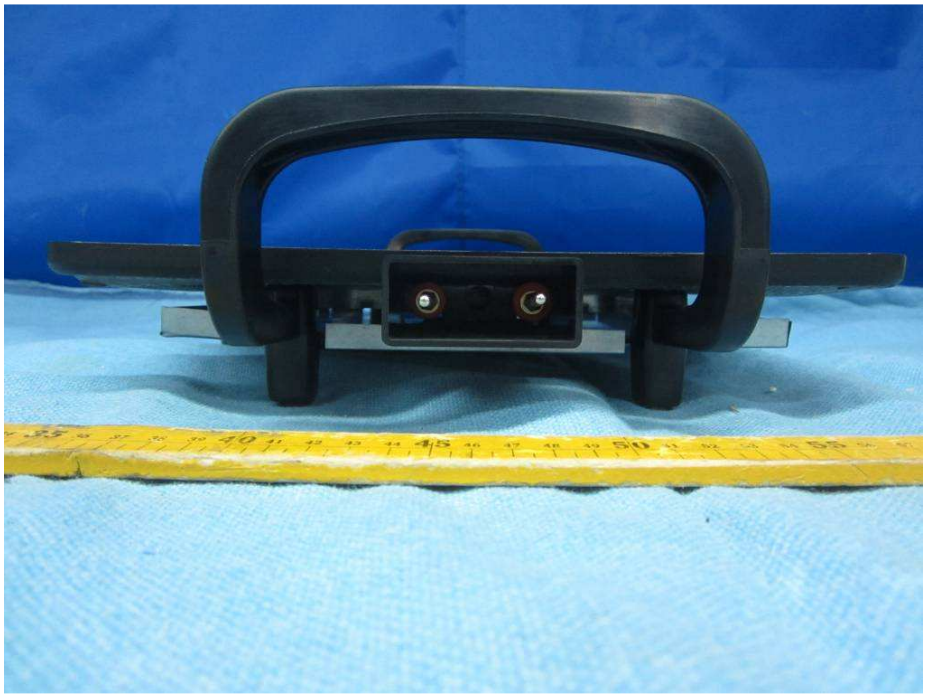
Appendix – Photographs

Photo 3.

Description: back view of LD-888

Photo 4.

Description: side view of LD-888



Appendix – Photographs

Photo 5.

Description: top view of LD-888

Photo 6.

Description: bottom view of LD-888

Appendix – Photographs

Photo 7.

Description: heating element view of LD-888

Photo 8.

Description: connector(Kaneta CTW-300H) view

Appendix – Photographs

Photo 9.

Description: internal view of connector(Kaneta CTW-300H) view