TEST REPORT
IEC 61058-2-1
Switches for appliances
Part 2-1: Particular requirements for cord switches

Report Reference No.....:	210301853SHA-001
Date of issue .....:	2021-04-21
Total number of pages	8
Testing Laboratory.....:	INTERTEK TESTING SERVICES SHANGHAI
Address.....:	Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China
Applicant's name.....:	ADVANCE DIMMING TECHNOLOGY LTD
Address .....:	Rm. A2, 1/F, Blk. E&F Wang Kwong Ind. Bldg.,45 Hung To Road, Kwun Tong, Kln., H.K.
Test specification:	
Standard.....:	IEC 61058-2-1 (Second Edition):2010 (see also IEC 61058-1:2000 + A1:2001 + A2:2007)
	EN 61058-2-1: 2011 (see also EN 61058-1: 2002+A2: 2008)
Test procedure .....:	Testing
Non-standard test method……..:	N/A
Test Report Form No.....:	IEC61058_2_1B
Test Report Form(s) Originator .....:	IMQ
Master TRF .....:	Dated 2011-07

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Test item description .....:	Dimmer
Trade Mark .....:	ADT
Manufacturer .....:	Same as applicant
Model/Type reference .....:	LNE-DRT60U, LNE-LVR60U
Ratings .....:	100-240V~, 50/60Hz, 10-60W (GLs), 2-60W (LED)

Testing procedure and testing location:			
☒	**Testing Laboratory**:	INTERTEK TESTING SERVICES SHANGHAI	
Testing location/ address..... :		Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China	
	Tested by (name + signature).....:	Steven Lu	Steven lu
	Approved by (name + signature) .....:	Kent Wu	Kent wu
☐	Testing procedure: TMP		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Approved by (name + signature) .....:		
☐	Testing procedure: WMT		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Witnessed by (name + signature).....:		
	Approved by (name + signature) .....:		
☐	Testing procedure: SMT		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Approved by (name + signature) .....:		
	Supervised by (name + signature)....:		
☐	Testing procedure: RMT		
Testing location/ address..... :			
	Tested by (name + signature).....:		
	Approved by (name + signature) .....:		
	Supervised by (name + signature)....:		

List of Attachments (including a total number of pages in each attachment):

N/A

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
1. The devices under evaluation are two dimmers of type LNE-DRT60U, LNE-LVR60U. 2. Clause 23.3 has been performed on model LNE-DRT60U and LNE-LVR60U. 3. Clause 23.3 was subcontracted to subcontracted to Zhejiang Fang Yuan Electric Equipment Test Co., Ltd.	Zhejiang Fang Yuan Electric Equipment Test Co., Ltd.

Summary of compliance with National Differences

List of countries addressed: N/A

☐ **The product fulfils the requirements of _____.**

Copy of marking plate

N/A

Test item particulars.....:	
Type reference .....:	☐ unique (U.T.) ☒ common (C.T.)
Method of actuating.....:	☒ rotary ☐ lever ☐ rocker ☐ push-button ☐ push-pull ☐ push-push ☐ cord-operated ☐ other:
Type of circuit.....:	☒ 1.2 ☐ 2.2 [1.2] ☐ 3.2 ☐ 4.2 ☐ 1.3 ☐ 2.3 ☐ 3.3 ☐ 4.3 ☐ 1.4 [1.2] ☐ 2.4 [1.3] ☐ 3.4 ☐ 4.4 ☐ 1.5 [1.2] [1.4] ☐ 2.5 ☐ 3.5 ☐ 4.5 ☐ 1.6 ☐ 2.6 ☐ 3.6 ☐ 1.6 ☐ 1.7 ☐ 2.7 ☐ 3.7 [3.3] ☐ 1.8 ☐ 2.8 ☐ 3.8 ☐ Special ☐ 2.9 ☐ 3.9 [3.3]
Table 15 – Electrical endurance tests for the different types of electronic switches with or without electrical contact(s)	☒ SSD without electrical contact(s) ☐ SSD with serial contact(s) ☐ SSD with parallel contact(s) ☐ SSD with serial and parallel contact(s)
Connection to the switch: .....:	☒ rewirable ☐ non rewirable
Disconnection.....:	☒ electronic ☐ micro ☐ full ☐ all-pole
Type of load.....:	☐ Substantially resistive ☐ Resistive and/or motor ☐ Circuit for specific load of motor with a locked rotor ☐ Circuit for an inductive load ☐ Resistive and capacitive ☐ Tungsten filament lamp load ☐ Circuit for specific lamp load ☒ Specific declared (GLs, LED)
Means of suspension.....:	☐ with means ☒ without means
Number of cycles.....:	1E4
Ambient temp., actuating member °C)..:	0~45
Ambient temperature, other parts (°C)..:	0~45
For appliance class.....:	II
IP number.....:	IP20
PTI (V).....:	175
Rated Impulse Voltage U_{imp} (V).....:	2500
Material group.....:	☐ I ☐ II ☒ IIIa ☐ IIIb
Pollution degree.....:	☐ 1 ☒ 2 ☐ 3
Type of terminals.....:	Pillar terminal
Type of flexible cable.....:	☐ round ☐ flat ☒ round / flat

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 .....: 2021-03-17

Date (s) of performance of tests .....: 2021-03-17 to 2021-04-20

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.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 6.2.5 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):

Same as applicant

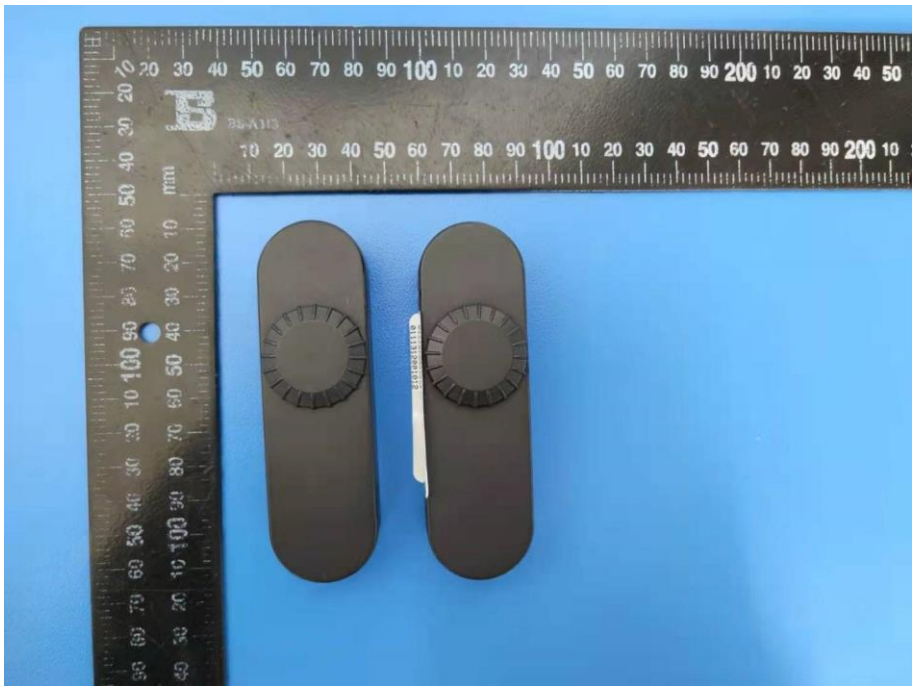
General product information:

1. The devices under evaluation are two dimmers of type LNE-DRT60U, LNE-LVR60U.
2. Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.
3. We conclude that the products presented in this report comply with the requirement of subclause 23.3 on the submitted samples.

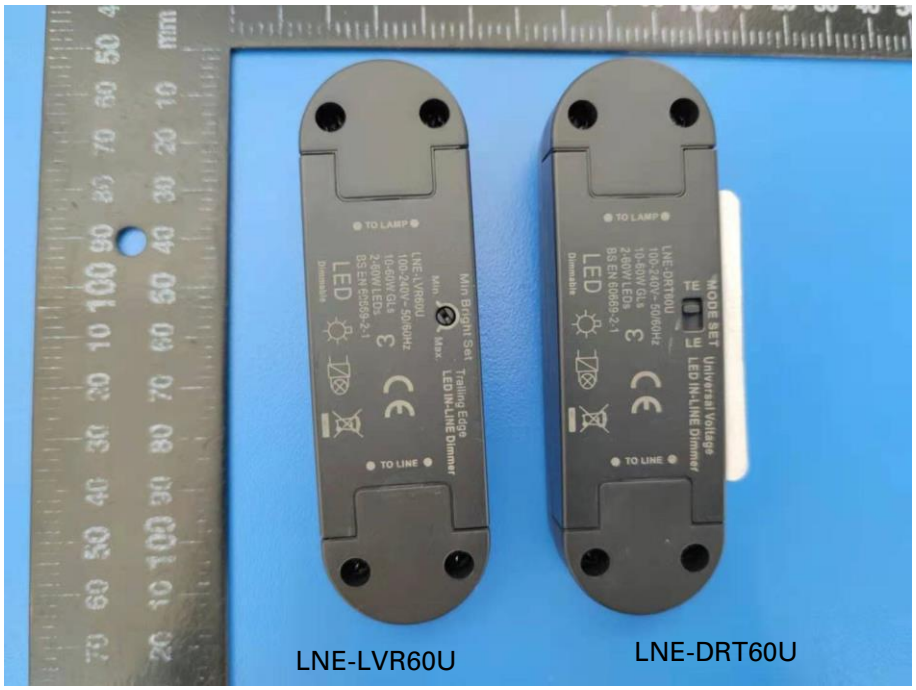
IEC 61058-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

23	**ABNORMAL OPERATION AND FAULT CONDITION FOR ELECTRONIC SWITCHES**			
23.3	Electronic cord switches and electronic independently mounted switches withstand the short circuits they may be subjected to. -Tested in a substantially non-inductive circuit in series with a load impedance and a device for limiting the let-through I^2t. - The prospective short circuit of the supply is 1500 A r.m.s. at the U_N of the switch under test. - The prospective let-through I^2t value is 15000 A^2s. - The diagram of the circuit in which the switch is tested as shown in figure 17 - The impedance Z_1 (*short-circuit impedance*) adjusted to the specified prospective short-circuit current. - The impedance Z_2 (*load impedance*) so adjusted that the switch			
	- is loaded with its minimum load - or ≈10 % of the rated load, whichever is higher	10W GLs 6W LED	☐ A ☒ W	P
	The circuit is calibrated with the following tolerances:			
	- current + 5 % / 0 % (A) - voltage + 10 % / 0 % (V) - frequency ± 5% (Hz) - I^2t value ± 10% (A^2s)	1500 240 50 15000		P
	The incorporated fuse, if any, recommended by the manufacturer,			
	- is inserted into the switch which is loaded	-		N/A
	The variable control, if any,			
	- is set at the position of maximum output with any by-pass in open position	OK		P
	Short circuit 6 times by auxiliary switch A.	OK		P
	During the test, emission of flames or burning particles does not occur.	OK		P
	Enclosed switches wrapped in tissue paper.			
	- No traces or burn-through shall occur.	OK		P
	Unenclosed parts of a partially enclosed switch tested with dry absorbent surgical cotton placed at a distance of 6 – 10 mm from the surface.			
	Ignition of the cotton does not occur.	-		N/A
	After test, accessible metal parts have not been live.	-		N/A
	The contacts of any incorporated automatic protective device not welded, unless the switch is obviously useless.	-		N/A
23.4	Protection against fire in case of failure of cooling For switches with declared I_{th} intended to be used with forced cooling,			
	- the switch is mounted and connected as in 16.3.2, but without forced cooling during the test	-		N/A
	The switch is loaded with I_R, continued until steady state or the switch disconnects the load circuit.	-	A	N/A
	During the test,			
	Emission of flames or burning particles not occur	-		N/A
	If declared by the manufacturer that the switch will open during these test condition,			
	- this function is verified	-		N/A

Photo attachment

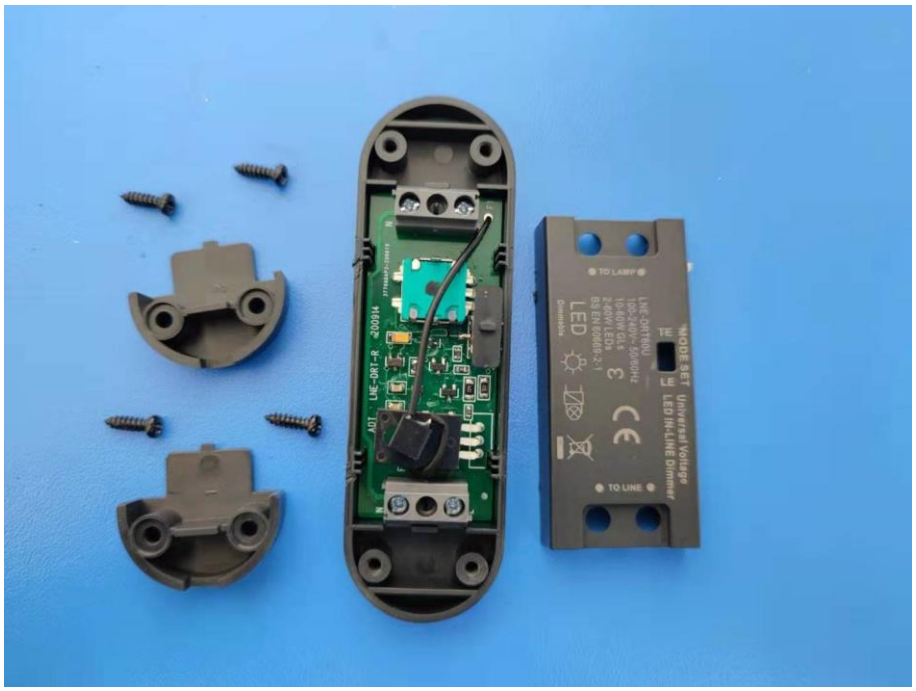


Front view

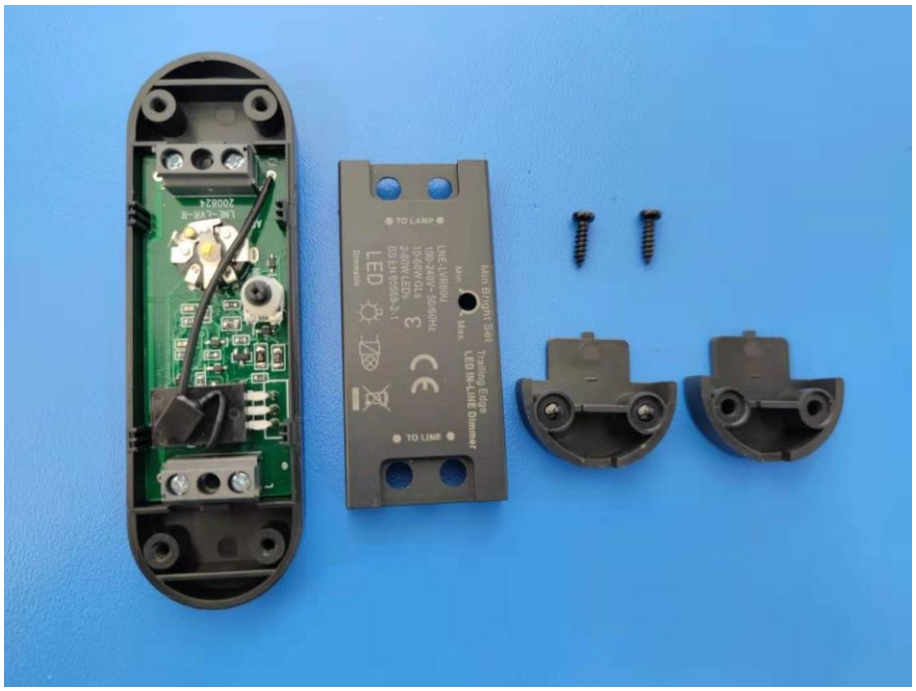


Back view

Photo attachment



Open view of LNE-DRT60U



Open view of LNE-LVR60U