



CE LVD TEST REPORT

For

LED FILAMENT BULB

Model No.: VT-1983, VT-1993, VT-1980, VT-1962, VT-1964, VT-1966, VT-1988, VT-1885, VT-1895, VT-1887, VT-1885D, VT-1964D, VT-1980D, VT-1994D, VT-1989, VT-1978, VT-1981, VT-1968, VT-1979, VT-1952, VT-1982, VT-1958, VT-1956, VT-1935, VT-1938, VT-1934, VT-1939, VT-1974, VT-1954, VT-1957, VT-2034, VT-2045, VT-2047, VT-2049, VT-2057, VT-2067, VT-2067D, VT-2023, VT-2018, VT-2026, VT-2028, VT-2018D, VT-1885, VT-2114, VT-2105D, VT-2186, VT-2194, VT-214, VT-266, VT-256, VT-244, VT-296, VT-286, VT-297, VT-287, VT-276, VT-2147, VT-2162, VT-2185, VT-2195, VT-2144, VT-2126, VT-2132, VT-2105D, VT-2154, VT-2164, VT-2143, VT-2153, VT-2123, VT-2133, VT-2138D, VT-2158D, VT-2168D, VT-2178D, VT-2188D, VT-2198D, VT-2159, VT-2169, VT-2203, VT-2223, VT-2233, VT-2205

Applicant : V-TAC EXPORTS LIMITED

ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD
CENTRAL, CENTRAL, HONGKONG

Manufacturer : V-TAC EXPORTS LIMITED

ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD
CENTRAL, CENTRAL, HONGKONG

Issued By : Global-Standard Testing Service Co., Ltd.

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Report Number : D00.06.0434S-R3

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Note:

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TEST REPORT EN 62560:2012 Self-ballasted LED-lamps for general lighting services by voltage > 50 V – Safety specifications	
Report reference No.:	D00.06.0434S-R3
Testing laboratory	Global-Standard Testing Service Co., Ltd.
Location.....:	Room 1911-1914, Noble Plaza, Qian Jin 1st Road, Bao An District, Shenzhen, Guangdong, China.
Applicant.....:	V-TAC EXPORTS LIMITED
Address:.....:	ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD CENTRAL, CENTRAL, HONGKONG
Manufacturer.....:	V-TAC EXPORTS LIMITED
Address:.....:	ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD CENTRAL, CENTRAL, HONGKONG
Standards.....:	EN 62560:2012+A1:2015 EN 60061-1:1993+A:57:2018 EN 62031:2008+A1:2013+A2:2015 EN 61347-1:2015 EN 61347-2-13:2014+A1:2017 EN 62471:2008 EN 62493:2015
Procedure deviation.....:	N/A
Non-standard test method.....:	N/A
Type of test equipment	LED FILAMENT BULB
Trade mark.....:	
Model/Type designation.....:	VT-1983, VT-1993, VT-1980, VT-1962, VT-1964, VT-1966, VT-1988, VT-1885, VT-1895, VT-1887, VT-1885D, VT-1964D, VT-1980D, VT-1994D, VT-1989, VT-1978, VT-1981, VT-1968, VT-1979, VT-1952, VT-1982, VT-1958, VT-1956, VT-1935, VT-1938, VT-1934, VT-1939, VT-1974, VT-1954, VT-1957, VT-2034, VT-2045, VT-2047, VT-2049, VT-2057, VT-2067, VT-2067D, VT-2023, VT-2018, VT-2026, VT-2028, VT-2018D, VT-1885, VT-2114, VT-2105D, VT-2186, VT-2194, VT-214, VT-266, VT-256, VT-244, VT-296, VT-286, VT-297, VT-287, VT-276, VT-2147, VT-2162, VT-2185, VT-2195, VT-2144, VT-2126, VT-2132, VT-2105D, VT-2154, VT-2164, VT-2143, VT-2153, VT-2123, VT-2133, VT-2138D, VT-2158D, VT-2168D, VT-2178D, VT-2188D, VT-2198D, VT-2159, VT-2169, VT-2203, VT-2223, VT-2233, VT-2205
Rating.....:	AC220-240V, 50-60Hz, 6W Max
Copyright blank test report:	Global-Standard Testing Service Co., Ltd.
Test item particulars:	--



Report Reference No.: D00.06.0434S-R3

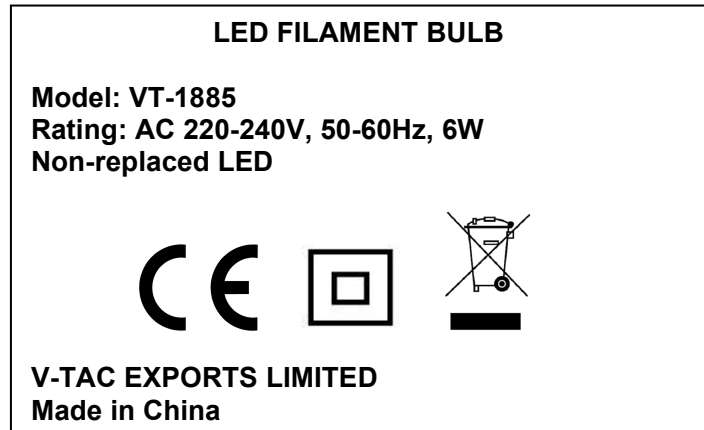
Operating Condition	Continuous
Class of equipment	Class II equipment
Protection against ingress of water	IP20

<p>General remarks:</p>	
<p>“(see remark #)” refers to a remark appended to the report.</p> <p>“(see appended table)” refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>Until otherwise specified, all tests are done under normal ambient condition 25°C+10°C, Max RH: 75% and air pressure of 860 mbar to 1060 mbar.</p>	<p>Attached with:</p> <p>Attachment - A. Photo Documentation</p>
<p>Brief description of the test sample:</p> <p>1 This report covers the LED FILAMENT BULB with models VT-1983, VT-1993, VT-1980, VT-1962, VT-1964, VT-1966, VT-1988, VT-1885, VT-1895, VT-1887, VT-1885D, VT-1964D, VT-1980D, VT-1994D, VT-1989, VT-1978, VT-1981, VT-1968, VT-1979, VT-1952, VT-1982, VT-1958, VT-1956, VT-1935, VT-1938, VT-1934, VT-1939, VT-1974, VT-1954, VT-1957, VT-2034, VT-2045, VT-2047, VT-2049, VT-2057, VT-2067, VT-2067D, VT-2023, VT-2018, VT-2026, VT-2028, VT-2018D, VT-1885, VT-2114, VT-2105D, VT-2186, VT-2194, VT-214, VT-266, VT-256, VT-244, VT-296, VT-286, VT-297, VT-287, VT-276, VT-2147, VT-2162, VT-2185, VT-2195, VT-2144, VT-2126, VT-2132, VT-2105D, VT-2154, VT-2164, VT-2143, VT-2153, VT-2123, VT-2133, VT-2138D, VT-2158D, VT-2168D, VT-2178D, VT-2188D, VT-2198D, VT-2159, VT-2169, VT-2203, VT-2223, VT-2233, VT-2205 for indoor use;</p> <p>2.All models have the same construction except for wattage;</p> <p>3.The model VT-1885 was selected as representative sample to perform all testing;</p> <p>4.The standard of LED modules for general lighting was evaluated with reference to EN 62031;</p> <p>5.The standard of EN 62471 and EN 62493 have been considered in report.</p> <p>6. This report is based on report D00.06.0434S-R2 dated April 24, 2018.</p>	

Possible test case verdicts : test case does not apply to the test object test object does meet the requirement test object does not meet the requirement	N(/A.) P(ass) F(ail)
Name and address of the testing laboratory : Global-Standard Testing Service Co., Ltd. Room 1911-1914, Noble Plaza, Qian Jin 1st Road, Bao An District, Shenzhen, Guangdong, China.	
Tested by : <u>Evan Chen</u> Signature	<u>April 20, 2018</u> Date
<u>Evan Chen/ Engineer</u> Name/title	
Witnessed by: <u>Gloria Wang</u> Signature	<u>January 16, 2019</u> Date
<u>Gloria Wang / project Engineer</u> Name/title	
Approved by : <u>Nico Xie</u> Signature	<u>January 16, 2019</u> Date
<u>Nico Xie / Manager</u> Name/title	

Label

Representative





Note:

1. Due to similarity of the labels, only above label was listed;
2. All models have the same marking plate except the model name and input rating with wattage;
3. The height of WEEE directive mark is at least 7mm and others directive mark are at least 5mm height.

EN 62560			
Clause	Requirement	Result - Remark	Verd.

4	GENERAL REQUIREMENTS		P
4.1	The lamp shall be so designed and constructed that in normal use cause no danger to the user.		P
4.2	Self-ballasted LED-Lamp are non-repairable.		P

5.	MARKING		P
5.1	Mandatory marking		P
	- mark of origin	Made in China	P
	- rated supply voltage (V).....	220-240VAC	P
	- rated wattage (W).....	See label	P
	- rated frequency (Hz).....	50-60Hz	P
5.2	Addition marking	See label	P
	- burning position		N
	- rated current (A).....	36mA	P
	- weight significantly higher	Warning:increased weight of lamp may reduce the mechanical stability of certain luminaires and lampholders and may impair contact making and lamp retention (inthe instruction manual)	P
	- special conditions or restrictions		N/A
	Not suitable for dimming;symbol used 		P
	- eye protection	The products are classified as exempt group according to IEC 62471:2008.	P
5.3	Marking durable and legible		P
	rubbing 15 s water, 15 s petroleum; marking legible		P
Addition:	Position of the marking	On the body	P
	Language of instructions	English	P
	Suitability for use indoors		P

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict

	Wireways smooth and free from sharp edges		P
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6	INTERCHANGEABILITY		P
6.1	Cap interchangeability in accordance with IEC 60061-1		P
	Gauge in accordance with IEC 60061-3		N/A
6.2	Bending moment, axial pull and mass		P
	Bending moment imparted by the lamp at the lampholder		P
	Lamp construction withstands axial pull (N)	40N	P
	Mass not exceeding value tabel 2 (kg)	0.032kg	P

7.	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		P
	Internal, basic insulated or live metal parts not accessible		P
	Tested with a test finger with a force of 10 N		P
	Compliance checked with appropriate gauges		N/A
Addition:	Live parts not accessible		P
	Protection in any position		P
	Insulation lacquer not reliable		P
	Class II luminaire:		P
	- insulation-encased, reinforced insulation		P
	- glass protective shields not used as supplementary insulation		N/A
	Covers have adequate strength		N/A
	Covers reliably secured		N/A
	Portable plug connected luminaire with capacitor		N/A

8.	INSULATION RESISTANCE AND ELECTRIC STRENGTH AFTER HUMIDITY TREATMENT		P
8.1	Insulation resistance and electric strength shall be adequate between live parts of the lamp and accessible parts of the lamp.		P
8.2	After storage 48 h at 91- 95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MΩ):		P
	≥ 4 MΩ for double or reinforced insulation :	100 MΩ.	P

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict
8.3	Immediately after clause 8.2 electric strength test for 1 min		N/A
	Double or reinforced insulation, 4U + 2000 V		N/A
	No flashover or breakdown		N/A

9.	MECHANICAL STRENGTH		P
	Torsion resistance of unused lamps		
9.1	Torque test		P
	B 15 d Cap.....	1,15 Nm	N/A
	B 22 d Cap.....	3,0 Nm	N/A
	E 11 Cap.....	0,8 Nm	N/A
	E 12 Cap.....	0,8 Nm	N/A
	GU10 Cap	1.15Nm	N/A
	E 14 Cap.....	1,15 Nm	N/A
	E 27 Cap.....	1,5 Nm	under consideration
	GX 53 Cap.....	3,0 Nm	N/A
	GU13 Cap.....	1.15 Nm	N/A
9.2	Torsion resistance of lamps after a defined time of usage		P
	Torsion resistance of used lamp		P
9.3	Repetition of clause 8		P
	Clause 8 shall comply after the mechanical strength test.		P
Addition:	Lampholders		P
	Mounting brackets for Edison screw or bayonet-capped lampholders are subjected to testing for 1min, to the following bending moments:		P
	Locked connections:		P
	- fixed arms; torque (Nm).....:		N/A
	- lampholder; torque (Nm).....:	3Nm	P
	- push-button switches; torque (Nm).....:		N/A
	No sharp point or edges		P
	Impact tests:		P
	- fragile parts; energy (Nm).....:	0.2Nm	P

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict

	- other parts; energy (Nm).....:		N/A
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		N
	Straight test finger		N

10	CAP TEMPERATURE RISE		P
	The cap temperature rise Δt_s of the lamp shall not exceed 120 K.		P
	- B22d..... 125K		N
	- B15d..... 120K		N
	- E27..... 120K	26.4K	N
	- E14..... 125K		N
	- GU10.....100K		N
	- GU13.....100K		P

11	RESISTANCE TO HEAT		N/A
	External parts of insulating material providing protection against electric shock, and parts of insulating material retaining live parts in position, ball pressure test:		N/A
	Part tested; temperature (°C); diameter of impression (≤ 2 mm):		N/A
	Part tested; temperature (°C); diameter of impression (≤ 2 mm):		N/A
	Part tested; temperature (°C); diameter of impression (≤ 2 mm):		N/A

12.	RESISTANCE TO FLAME AND IGNITION		N/A
	Parts of insulating material retaining live parts in position and external parts of insulating material providing protection against electric shock, glow-wire test 650 °C		N/A
	- no flaming drops igniting tissue paper		N/A
	- flame extinguished within 30 s		N/A

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict
	Part tested; temperature (°C).....:		N/A
	No visible flame and no sustained glowing		N/A

13	FAULT CONDITIONS		N/A
13.2	Extreme electrical conditions (dimmable lamps)		N/A
	Lamp withstands overpower condition >15 min.		N/A
	Lamp fails safe after 15 min overpower condition		N/A
	Lamp with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
13.3	Extreme electrical conditions (non-dimmable lamps)		N/A
	Tested according 13.2 (as far as possible)		N/A
13.4	Short-circuit across capacitors	(see appended table)	N/A
13.5	Fault conditions: where diagram indicates fault condition impairs safety, electronic components have been short-circuited or disconnected	(see appended table)	N/A
13.6	When operated under fault conditions the lamp		N/A
	- does not emit flames or molten material		N/A
	- does not produce flammable gases or smoke		N/A
	- live parts not accessible		N/A
	After the tests the insulation resistance with d.c. 1000 V complies with requirements of Cl. 8.1.....		N/A

14 (16)	CREEPAGE DISTANCES AND CLEARANCES		P
	Creepage distances and clearances according to Table 3 and 4 of IEC 61347-1, as appropriate		P
	Printed boards see clause 14 of IEC 61347-1		P
	Insulating lining of metallic enclosures		N/A

TABLE		List of critical components and materials		
Component	manufacturers / trademark	Type / model	Value / rating	Approval/ Reference
E27 lamp base	Various	Various	Copper 60%	Ref
PCB	Shikibo Electronics Co Ltd	E4	V-0, 130°C	UL and test with appliance
Internal wire	various	1007	VW-1, 105°C, 24AWG	UL and test with appliance

Test Data table

11	TABLE: ball pressure test of thermoplastics				N/A	
Part	Test temperature (°C)	Impression diameter (mm)	Required impression diameter (mm)			
13	TABLE: tests of fault conditions				N/A	
Part	Simulated fault		Result		Hazard	
14(16)	TABLE: Clearance And Creep age Distance Measurements					P
clearance cl and creep age distance decry at/of:	Up (V)	U rams. (V)	Required cl (mm)	cl (mm)	required decry (mm)	decry (mm)
L and N on PCB	--	240	1.5	2.61	2.5	2.61
Different polarity of fuse	--	240	1.5	3.32	2.5	3.32
Live parts of driver PCB and accessible part	--	--	3.0	--	5.0	--
Primary circuit and secondary circuit of LED driver PCB	--	--	3.0	--	5.0	--
Primary winding of transformer and secondary circuit of LED driver	--	--	3.0	--	5.0	--
Supplementary information:						
	Temperature measurements,					P
	Type reference..... :	VT-1885			--	
	Lamp used..... :	LED			--	
	Ballast used..... :	—			--	
	Mounting position of luminaire..... :	As in normal use			--	
	Supply wattage (W)..... :	6.24W			--	
	Supply current (A)..... :	0.021A			--	
	Table: measured temperatures corrected for Ta = 25°C:					P
	- abnormal operating mode..... :	—			--	
	- test 1: rated voltage..... :	—			--	
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1.06×240V			--	
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	—			--	



Report Reference No.: D00.06.0434S-R3

	- test 4: 1,1 times rated voltage or 1,05 times rated wattage..... :			—	—	
temperature (C) of part	clause 12.4 - normal				clause 12.5 - abnormal	
	test 1	test 2	test 3	limits	test 4	limit
E 27 lamp base		51.4		Ref		
Glass surface		47.8		Ref		
Supplementary information:						

Attachment –A
Photo Documentation

<p>Photo 1</p> <p>View:</p> <p><input checked="" type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input type="checkbox"/> Internal</p>	
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--END.--