



CE LVD TEST REPORT

For
LED BULB

Model No.: VT-1917, VT-2237, VT-2213

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

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Report Number : A01.06.0293S-R1


Issued Date : April 22, 2019

Date of Report : April 22, 2019

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.:	A01.06.0293S-R1
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+A11:2019 EN 60061-1:1993+A58:2018 EN 61347-1: 2015 EN 61347-2-13: 2014+A1:2017 EN 62031: 2008+A1:2013+A2:2015 EN 62471: 2008 EN 62493: 2015
Procedure deviation.....:	N/A
Non-standard test method.....:	N/A
Type of test equipment	LED Bulb
Trade mark.....:	
Model/Type designation.....:	VT-1917, VT-2237, VT-2213
Rating.....:	220-240VAC, 50/60Hz, 7W
Copyright blank test report:	Global-Standard Testing Service Co., Ltd.
Test item particulars:	--
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 $25^{\circ}\text{C}\pm 10^{\circ}\text{C}$, Max RH: 75% and air pressure of 860 mbar to 1060 mbar.</p>	<p>Attached with:</p>
<p>Brief description of the test sample:</p> <ol style="list-style-type: none"> 1. The equipment with model VT-1917, VT-2237, VT-2213 are class II LED BULB used for Self-ballasted lamps for general lighting services; 2. The European standard EN 62471 for LED laser product requirement has considered; 3. Clauses 8,10, 11, 12, 14, 16, 17, 18, 19 and 20 of the European standard test EN61347-2-13 used in conjunction with EN 61347-1 for lamp control gear inside INF-9 have been consideration; 4. The Safety specifications of LED modules for general lighting was evaluated with reference to EN 62031; 5. The European standard EN 62493 for requirement has considered. 	

Possible test case verdicts :

test case does not apply to the test object	N(/A.)
test object does meet the requirement	P(ass)
test object does not meet the requirement	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: *Evan Chen* April 19, 2019
 Signature Date

Evan Chen/ Engineer
 Name/title

Witnessed by : *Gloria Wang* April 22, 2019
 Signature Date

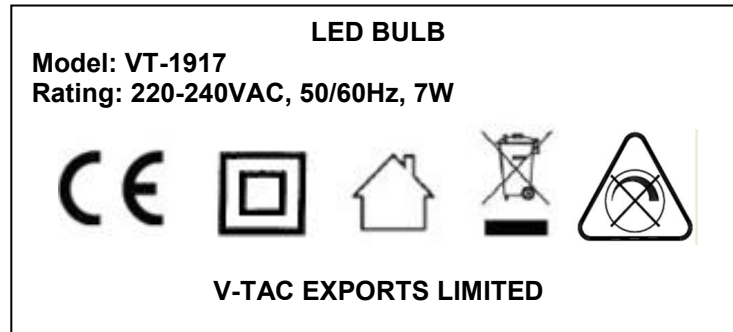
Gloria Wang / Project Engineer
 Name/title

Approved by : *Nico Xie* April 22, 2019
 Signature Date

Nico Xie / Manager
 Name/title



Copy of marking plate



Note: Due to similarity of the labels, only above label was listed.



- The above copy of marking plate as an example, All the other models will have the same marking plate except the model name and input rating only and other parameter

-The above markings are the minimum requirements required by the safety standard. For the final productions samples, the additional markings which do not give rise to misunderstanding may be added.

- the height of WEEE directive mark is at least 7mm 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	V-TAC EXPORTS LIMITED	P
	- mark of origin		P
	- rated supply voltage (V).....	See label	P
	- rated wattage (W).....	See label	P
	- rated frequency (Hz).....	See label	P
5.2	Addition marking	See label	P
	- burning position		N
	- rated current (A).....	See label	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
	Not suitable for dimming;symbol used  		P
	- eye protection	The products are classified as exempt group according to IEC 62471:2006.	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
	Wireways smooth and free from sharp edges		P

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict

6	INTERCHANGEABILITY		P
6.1	Cap interchangeability in accordance with IEC 60061-1		P
	Gauge in accordance with IEC 60061-3		P
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)	:	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		P
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
	Covers have adequate strength		P
	Covers reliably secured		P
	Portable plug connected luminaire with capacitor		N

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 :	>100MΩ.	P
8.3	Immediately after clause 8.2 electric strength test for 1 min		P
	Double or reinforced insulation, 4U + 2000 V	2960	P

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict
	No flashover or breakdown		P
9.	MECHANICAL STRENGTH		P
	Torsion resistance of unused lamps		
9.1	Torque test		P
	B 15 d Cap..... 1,15 Nm		N
	B 22 d Cap..... 3,0 Nm		N
	E 11 Cap..... 0,8 Nm		N
	E 12 Cap..... 0,8 Nm		N
	GU10 Cap1.15Nm		N
	E 14 Cap..... 1,15 Nm		N
	E 27 Cap..... 1,5 Nm		N
	Cap..... 3,0 Nm		P
	GX 53 Cap..... 3,0 Nm		N
9.2	Torsion resistance of lamps after a defined time of usage		N
	Torsion resistance of used lamp		N
9.3	Repetition of clause 8		P
	Clause 8 shall comply after the mechanical strength test.		P
Addition:	Lampholders		N
	Mounting brackets for Edison screw or bayonet-capped lampholders are subjected to testing for 1min, to the following bending moments:		N
	Locked connections:		N
	- fixed arms; torque (Nm).....:		N
	- lampholder; torque (Nm).....:		N
	- push-button switches; torque (Nm).....:		N
	No sharp point or edges		N
	Impact tests:		N
	- fragile parts; energy (Nm).....:		N
	- other parts; energy (Nm).....:		N
	1) live parts		N
	2) linings		N
	3) protection		N

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict

	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 :		N
	- Cap..... 125 K :		N
	- E14..... 125 K :	ANNEX 1	P
	-GU10..... 100 K		N

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

12.	RESISTANCE TO FLAME AND IGNITION		P
	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		P
	- no flaming drops igniting tissue paper		P
	- flame extinguished within 30 s		P
	Part tested; temperature (°C).....:	See table 11	P
	No visible flame and no sustained glowing		P

13	FAULT CONDITIONS		P
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EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict
13.2	Extreme electrical conditions (dimmbable lamps)		P
	Lamp withstands overpower condition >15 min.		N
	Lamp fails safe after 15 min overpower condition		P
	Lamp with automatic protective device or power limiter, test performed 15 min. At limit.		P
13.3	Extreme electrical conditions (non-dimmbable lamps)		P
	Tested according 13.2 (as far as possible)		P
13.4	Short-circuit across capacitors	(see appended table)	P
13.5	Fault conditions: where diagram indicates fault condition impairs safety, electronic components have been short-circuited or disconnected	(see appended table)	P
13.6	When operated under fault conditions the lamp		P
	- does not emit flames or molten material		P
	- does not produce flammable gases or smoke		P
	- live parts not accessible		P
	After the tests the insulation resistance with d.c. 1000 V complies with requirements of Cl. 8.1.....		P

14 (16)	CREEPAGE DISTANCES AND CLEARANCES		P
	Creep age 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


TABLE		List of critical components and materials		
Component	manufacturers / trademark	Type / model	Value / rating	Approval/ Reference
LED PCB	Shikibo Electronics Co Ltd	E4	V-0, 130°C	Appliance of test and UL
Diffuser	Celanese International Corp	T140	Min.thickness 0.75mm, HWI 3, HAI 3, RTI 3, V-0, 130°C	Appliance of test and UL
Lamp base	Zhongshan guzhen China thousand lamp factory	—	Made of aluminium alloy. Min.thickness 0.24mm.	Appliance of test
PCB of LED driver	Hunan Foundersoonest Electronic Technology Co., Ltd.	FZD02	Min.thickness 0.2mm, HWI 4, HAI 3, RTI 3V-0, 130°C	Appliance of test and UL
LED driver	V-TAC EXPORTS LIMITED	VT-20	220-240VAC, 50/60Hz, Max.8W	Appliance of test
Enclosure	Celanese International Corp	T140	Min.thickness 0.75mm, HWI 3, HAI 3, RTI 3, V-0, 130°C	Appliance of test and UL
Internal wire	Dongguan Wenchang Electronic Co., Ltd.	1007	VW-1, 300V, 105°C, 22AWG	Appliance of test and UL

Test Data table

13	TABLE: tests of fault conditions						
Part	Simulated fault			Result		Hazard	
C1	Short circuit			Fuse open		NO	
BD1	Short circuit			Fuse open		NO	
Output + and _	Short circuit			Unit shut down, recoverable		NO	
11	TABLE: ball pressure test of thermoplastics					P	
Part	Test temperature (°C)		Impression diameter (mm)		Required impression diameter (mm)		
PCB	125		0.88		≤2.0		
Diffuser	125		1.12		≤2.0		
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 Cr (mm)	Cr (mm)	
L and N on PCB	--	240	3.0	>3.0	5.0	>5.0	
Live parts on driver PCB and accessible part	--	240	3.0	>3.0	5.0	>5.0	
Primary circuit and secondary circuit of LED driver PCB	--	240	3.0	>3.0	5.0	>5.0	
Supplementary information:							
ANNEX 1	TABLE: temperature measurements, thermal tests of Section 12					P	
	Lamp used.....:		VT-2017			--	
	Ballast used.....:		Built-in lamp controlgear			--	
	Mounting position of luminaire.....:		As in normal use			--	
	Supply wattage (W).....:		7.0W			--	
	Supply current (A).....:		0.057A			--	
	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 *240			--	
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:		—			--	
	- 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
Bobbin of transformer	---	76.4	---	112	---	---
Winding of transformer	---	77.4	---	110	---	---
Output wire of LED driver	---	69.8	---	105	---	---
LED	---	116.2	---	Ref.	---	---
LED PCB	---	68.1	---	130	---	---
Input wire of LED	---	67.4	---	105	---	---
Diffuser	---	33.0	---	130	---	---
Lamp enclosure	---	43.6	---	90	---	---
Lamp base screws	---	53.3	---	Ref.	---	---
Ambient	---	25.0	---	---	---	---

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>	 <p>A photograph of a white cylindrical device with a series of orange LEDs along its length. The device is positioned horizontally against a blue background. Below the device, a white ruler with black markings and a red line is visible, providing a scale for the object's size. The device has a white cap on the left side and a white connector on the right side. A small label is attached to the right side of the device.</p>
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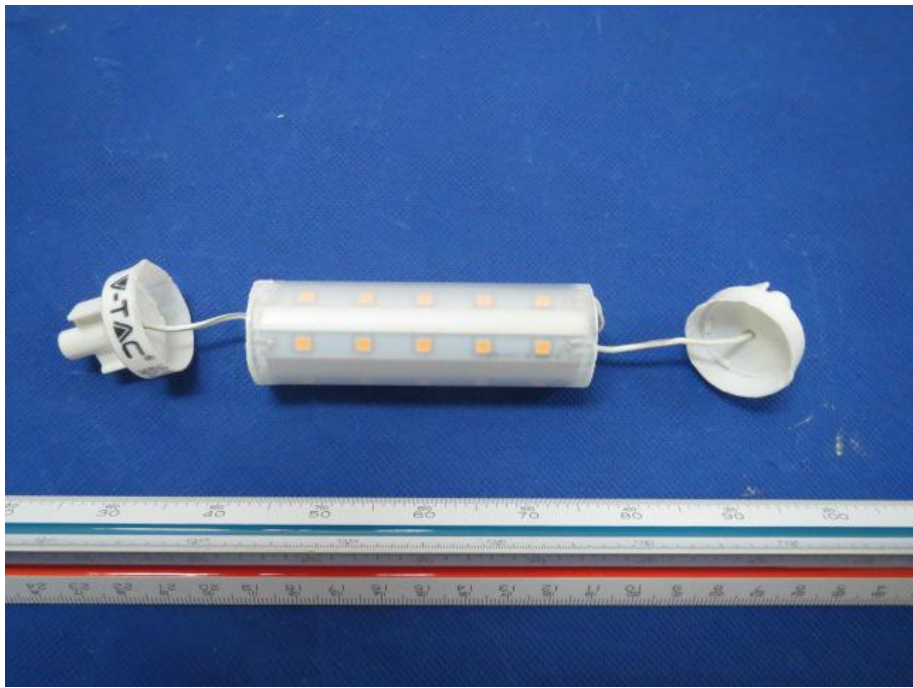
<p>Photo 2</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input checked="" type="checkbox"/> Internal</p>	 <p>A photograph showing the device with its white caps removed, revealing the internal components. The device is positioned horizontally against a blue background. Below the device, a white ruler with black markings and a red line is visible, providing a scale for the object's size. The internal components include a series of orange LEDs and a white connector on the right side. A small label is attached to the left side of the device.</p>
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Photo 3

View:

- Front
- Rear
- Right side
- Left side
- Top
- Bottom
- Internal



Photo 4

View:

- Front
- Rear
- Right side
- Left side
- Top
- Bottom
- Internal

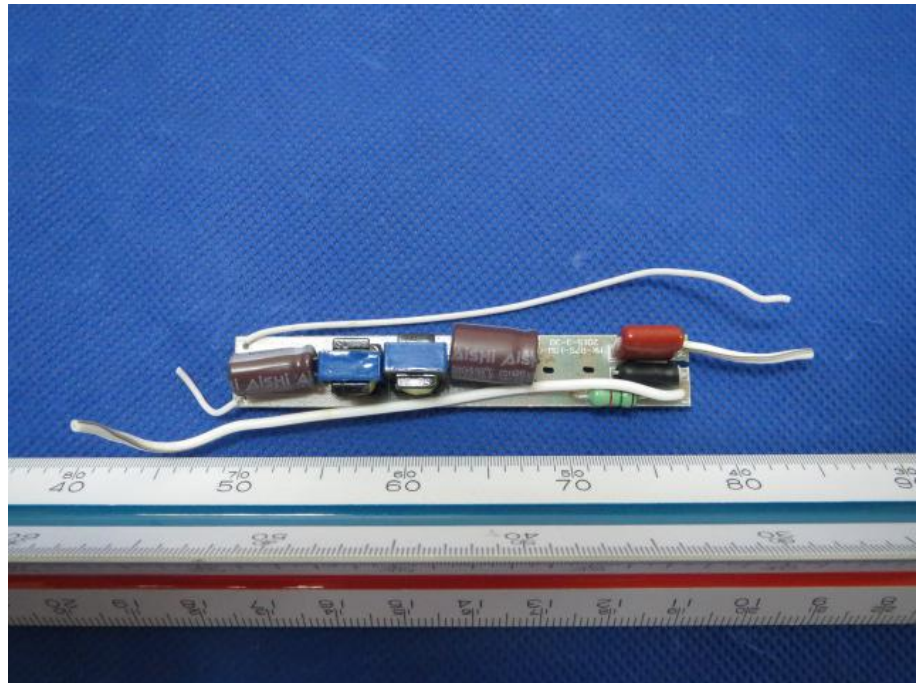
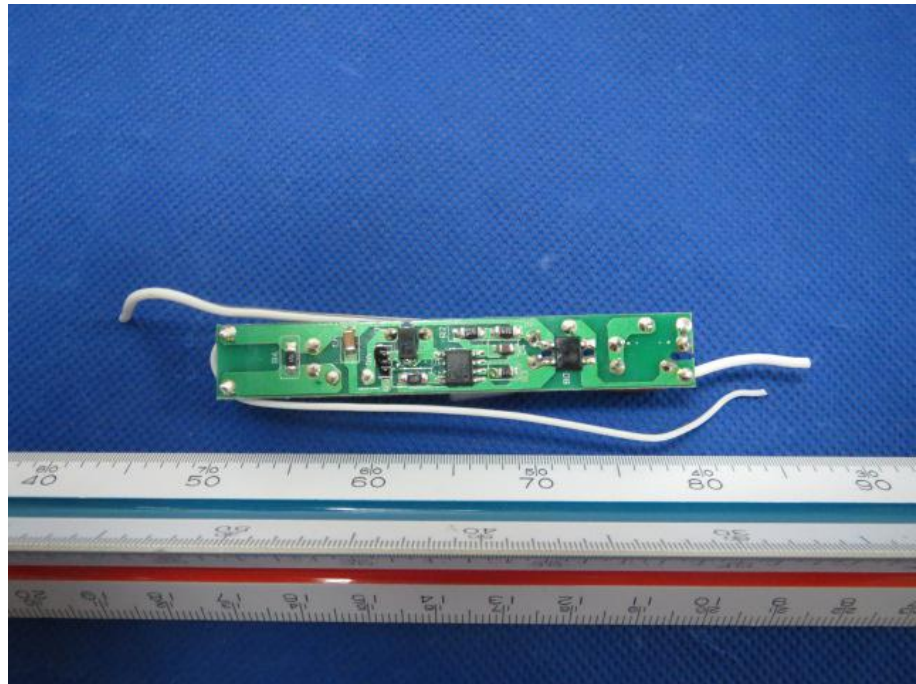


Photo 5

View:

- Front
- Rear
- Right side
- Left side
- Top
- Bottom
- Internal



---END---