



CE LVD TEST REPORT

For

LED SPOTLIGHT

Model No.: VT-1890, VT-1860 D, VT-2888, VT-1112, VT-2882, VT-1971, VT-2828, VT-1959, VT-2888D, VT-2666, VT-2886, VT-2887, VT-2778, VT-2779, VT-2887D, VT-1975, VT-2889, VT-1933, VT-1932, VT-2002, VT-2095, VT-2107, VT-2108, VT-2096, VT-205, VT-247, VT-247D, VT-227D, VT-277, VT-275, VT-275D, VT-2165, VT-2225, VT-2206, VT-232, VT-291, VT-271, VT-278, VT-227, VT-292, VT-2165D, VT-2244, VT-3333, VT-4444, VT-2305, VT-249

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 : J02.06.0182S-R4

Issued Date : December 26, 2019

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Note:

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TEST REPORT EN 62560: 2012+ A1:2015 Self-ballasted LED-lamps for general lighting services by voltage > 50 V – Safety specifications	
Report reference No.:	J02.06.0182S-R4
Testing laboratory	Global-Standard Testing Service Co., Ltd.
Location.....:	Room 1505, Building B, Chuangxin Plaza, Pingshan Avenue, Pingshan District, Shenzhen, 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+A57:2018 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 SPOTLIGHT
Trade mark.....:	
Model/Type designation.....:	VT-1890, VT-1860 D, VT-2888, VT-1112, VT-2882, VT-1971, VT-2828, VT-1959, VT-2888D, VT-2666, VT-2886, VT-2887, VT-2778, VT-2779, VT-2887D, VT-1975, VT-2889, VT-1933, VT-1932, VT-2002, VT-2095, VT-2107, VT-2108, VT-2096, VT-205, VT-247, VT-247D, VT-227D, VT-277, VT-275, VT-275D, VT-2165, VT-2225, VT-2206, VT-232, VT-291, VT-271, VT-278, VT-227, VT-292, VT-2165D, VT-2244, VT-3333, VT-4444, VT-2305, VT-249
Rating.....:	AC 230V, 50/60Hz, 7W Max.
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>Attachment - A. Photo Documentation</p>
<p>Brief description of the test sample:</p> <p>1.The equipment with models VT-1890, VT-1860 D, VT-2888, VT-1112, VT-2882, VT-1971, VT-2828, VT-1959, VT-2888D, VT-2666, VT-2886, VT-2887, VT-2778, VT-2779, VT-2887D, VT-1975, VT-2889, VT-1933, VT-1932, VT-2002, VT-2095, VT-2107, VT-2108, VT-2096, VT-205, VT-247, VT-247D, VT-227D, VT-277, VT-275, VT-275D, VT-2165, VT-2225, VT-2206, VT-232, VT-291, VT-271, VT-278, VT-227, VT-292, VT-2165D, VT-2244, VT-3333, VT-4444, VT-2305, VT-249.</p> <p>2.All the models are the same construction except cap head, LED color and LED numbers. The control gear inside lamp with different out voltage have different parameters of secondary components;</p> <p>3.The model VT-1890 was selected as representative sample;</p> <p>4.The European standard EN 62471 for LED laser product requirement has considered;</p> <p>5.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 VT-1890 have been consideration;</p> <p>6.The Safety specifications of LED modules for general lighting was evaluated with reference to EN 62031;</p> <p>7.The European standard EN 62493 for requirement has considered;</p> <p>8.This report is based on J02.06.0182-R3 which issued on April 19, 2019.</p>	

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 1505, Building B, Chuangxin Plaza, Pingshan Avenue,
 Pingshan District, Shenzhen, China

Tested by :  December 23, 2019
 Signature Date

Evan Chen/ Engineer
 Name/title

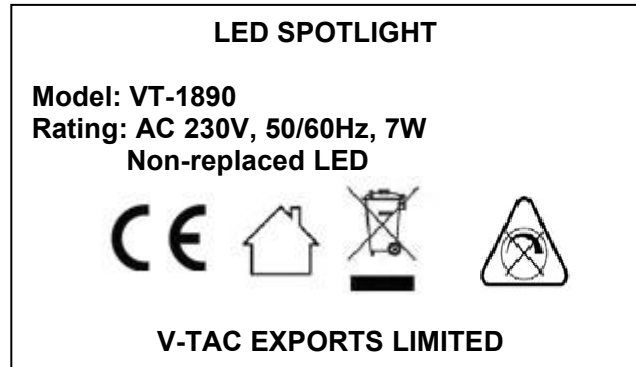
Witnessed by:  December 26, 2019
 Signature Date

Gloria Wang / project Engineer
 Name/title

Approved by :  December 26, 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).....	230VAC	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).....		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 62471:2008.	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
	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)		P
	Mass not exceeding value tabel 2 (kg) :	0.045kg	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
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		P
	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 :	100 MΩ.	P
8.3	Immediately after clause 8.2 electric strength test for 1 min		P
	Double or reinforced insulation, 4U + 2000 V	3000	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
	E 14 Cap.....	1,15 Nm	N
	E 27 Cap.....	1,5 Nm	N
	GU 10 Cap.....	1.5 Nm	P
	GX 53 Cap.....	3,0 Nm	under consideration
9.2	Torsion resistance of lamps after a defined time of usage		N
	Torsion resistance of used lamp	under consideration.	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:		P
	- fixed arms; torque (Nm).....:	5.0Nm	P
	- lampholder; torque (Nm).....:		N
	- push-button switches; torque (Nm).....:		N
	No sharp point or edges		P
	Impact tests:		P
	- fragile parts; energy (Nm).....:	0.35Nm	N
	- other parts; energy (Nm).....:		P
	1) live parts		P
	2) linings		P
	3) protection		P

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict
	4) covers		P
	Straight test finger		P

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
	- E17..... 125 K :		N
	-GU10.....75 K	48.3	P

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

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict
13	FAULT CONDITIONS		P
13.2	Extreme electrical conditions (dimmmable 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-dimmable 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
PCB	Shikibo Electronics Co Ltd	E4	V-0, 130°C	UL
Heat-shrinkable tube	Shenzhen Woer Heat-Shrinkable Material Co Ltd	RSFR	600V, 125°C	UL
internal wire	--	1007	VW-1, 300V, 80°C, 22AWG	UL
Plastic part	CHENGUANG RESEARCH INSTITUTE OF CHEMICAL IND CHINA NATL BLUE STAR CO LTD	PCV0	V-0, 130°C	UL

Test Data table

13	TABLE: tests of fault conditions					N
Part	Simulated fault			Result		Hazard
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	
Lamp shade	75		1.26		≤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 decry (mm)	decry (mm)
L and N on PCB	--	230	1.5	2.6	2.5	4.2
Different polarity of fuse	--	230	1.5	2.7	2.5	2.7
Live parts on driver PCB and accessible part	--	230	3.0	>3.0	3.0	>3.0
Primary circuit and secondary circuit of LED driver PCB	--	230	3.0	>3.0	3.0	>3.0
Primary winding of transformer and secondary circuit of LED driver	--	230	3.0	>3.0	3.0	>3.0
Core of transformer and secondary winding of LED driver	--	230	3.0	>3.0	3.0	>3.0
Supplementary information:						

Attachment –A
Photo Documentation

Photo 1

View:

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

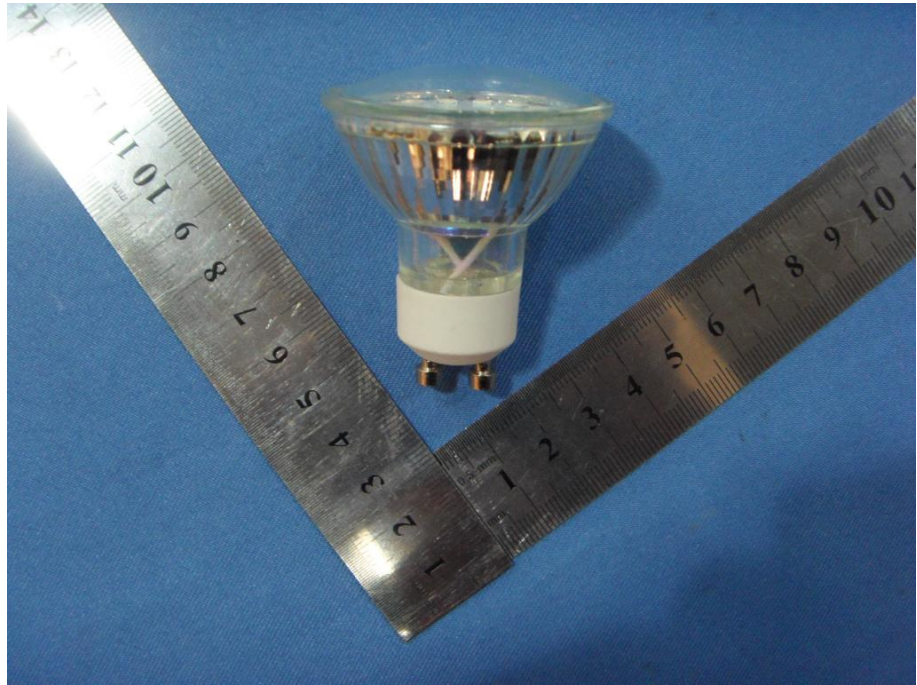
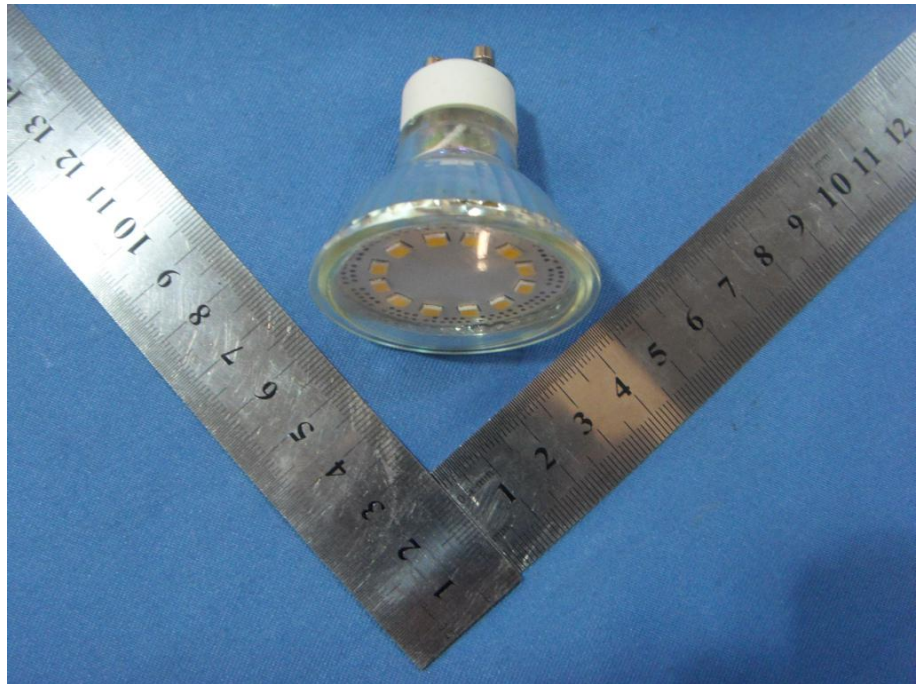


Photo 2

View:

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



--END.--