



CE LVD TEST REPORT

For
LED T5 TUBE LIGHT

Model No.: VT-1225, VT-6005

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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Note:

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LVD Report EN 62776:2015 Double-capped LED lamps designed to retrofit linear fluorescent lamps - Safety specifications	
Report reference No.	D00.06.0444S
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 62776:2015 EN 60061-1:1993+A53:2015 EN 61347-1: 2015 EN 61347-2-13: 2014 EN 62031: 2008+A2:2015 EN 62471: 2008 EN 62493: 2015
Procedure deviation.....	N/A
Non-standard test method.....	N/A
Type of test equipment	LED T5 TUBE LIGHT
Trade mark.....	
Model/Type designation.....	VT-1225, VT-6005
Rating.....	AC220-240V, 50/60Hz, Max.16W
TRF originator.....	Global-Standard Testing Service Co., Ltd.
Copyright blank test report.....	Global-Standard Testing Service Co., Ltd.
Test item particulars.....	--
Operating Condition.....	Continuous
Tested for IT power systems.....	No
IT testing, phase-phase voltage (V)....	N/A.
Class of equipment.....	Class II equipment and Fixed equipment
Protection against ingress of water.....	IP20



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 : Sean Xiao
Signature

December 23, 2016
Date

Sean Xiao / Test Engineer
Name/title

Reviewed by : Jerry Hu
Signature

December 28, 2016
Date

Jerry Hu / Project Engineer
Name/title

Approved by : Tim Sun
Signature

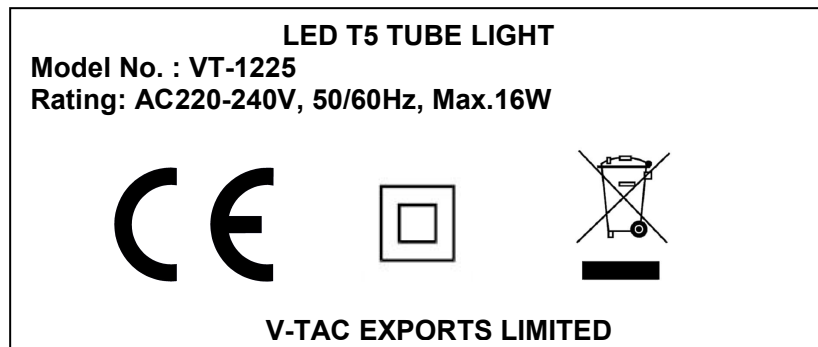
December 28, 2016
Date

Tim Sun / Manager
Name/title



General remarks:	
<p>Clause number between brackets refer to clauses in IEC 60598-1</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>Unless otherwise specified, test are made under normal conditions at an ambient temperature within the range of 15°C to 35°C, RH45% to 75% and an air pressure of 860mbar of 1060mbar</p>	<p>Attachment with:</p> <p>1) Photo documentation</p>
<p>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.</p> <p>This report covers model VT-1225, VT-6005.</p> <p>LED T5 TUBE LIGHT with different power depended on lamp LED numbers and dimension of shade.</p> <p>All tests were performed by model VT-1225 to represent the other identical models.</p> <p>The Safety specifications of LED modules for general lighting was evaluated with reference to EN 62031</p> <p>Fixed Luminaires were supplied by SELV equipment controlgear isolated electrical control gear, between live parts of control gear and lamp enclosure was separated by double or reinforce insulation SELV equipment controlgear are approved by CE</p> <p>The European standard IEC 62493 for requirement has considered.</p> <p>The European standard IEC 62471 for LED laser product requirement has considered.</p>	

Label



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	See label	P
	- mark of origin	See label	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).....		N
	- 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	2480	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 Cap.....1.15Nm		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

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict

	3) protection		N
	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 :	ANNEX 1	P
	- E14..... 125 K :		N
	-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

EN 62560			
Clause	Requirement – Test	Result - Remark	Verdict

13	FAULT CONDITIONS		P
13.2	Extreme electrical conditions (dimnable 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-dimnable 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
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	Input: 220-240VAC, 50/60Hz Output: 10-25VDC, 20W	Appliance of test
Cover of LED driver	Celanese International Corp	T140	Min.thickness 1.0mm, 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, 18AWG	Appliance of test and UL

Test Data table

13	TABLE: tests of fault conditions		P
Part	Simulated fault	Result	Hazard
C10	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	0.92	≤2.0	
Diffuser	125	1.33	≤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:

NNEX 1	TABLE: temperature measurements, thermal tests of Section 12		P
	Lamp used.....:	VT-1225	—
	Ballast used.....:	Built-in LED Driver	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	17.7W	—
	Supply current (A).....:	0.07A	—
	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.....:	1.06Un=254.4V	—
	- 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
DB1	---	77.7	---	Ref.	---	---
MOV1	---	74.5	---	85	---	---
Fuse	---	80.9	---	125	---	---
C2	---	74.7	---	105	---	---
L1	---	69.3	---	125	---	---
Input wire of LED driver	---	58.9	---	105	---	---
Onput wire of LED driver	---	50.2	---	105	---	---
LED	---	92.4	---	Ref.	---	---
LED PCB	---	74.0	---	130	---	---
Diffuser	---	60.3	---	130	---	---
Lamp enclosure	---	48.8	---	130	---	---
Lamp base	---	42.4	---	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>	
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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 checked="" 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--