



CE LVD TEST REPORT

For
LED STRING LIGHT

Model No.: VT-713, VT-7135

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 : GST.190514.M103S


Issued Date : May 22, 2019

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Note:

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LVD Report EN60598-1 Luminaires—Part 1 :General requirements and tests EN60598-2-4 Part 2-4:Particular requirments Section 4 – portable general purpose luminaires	
Report reference No.	GST.190514.M103S
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 60598-1: 2015+A1: 2018 EN 60598-2-4: 2018 EN 62493: 2015
Procedure deviation.....	N/A
Non-standard test method.....	N/A
Type of test equipment	LED STRING LIGHT
Trade mark.....	
Model/Type designation.....	VT-713, VT-7135
Rating	Input: 220-240VAC, Max.1000W.E27
TRF originator.....	Global-Standard Testing Service Co., Ltd.
Test item particulars.....	--
Operating Condition.....	Continuous
Tested for IT power systems.....	N/A
IT testing, phase-phase voltage (V)....	N/A
Class of equipment.....	Class II equipment
Protection against ingress of water.....	IP54

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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 : John Huang May 19, 2019
 Signature Date

John Huang / Engineer
 Name/title

Reviewed by : Gloria Wang May 22, 2019
 Signature Date

Gloria Wang / Project Engineer
 Name/title

Approved by :  May 22, 2019
 Signature Date

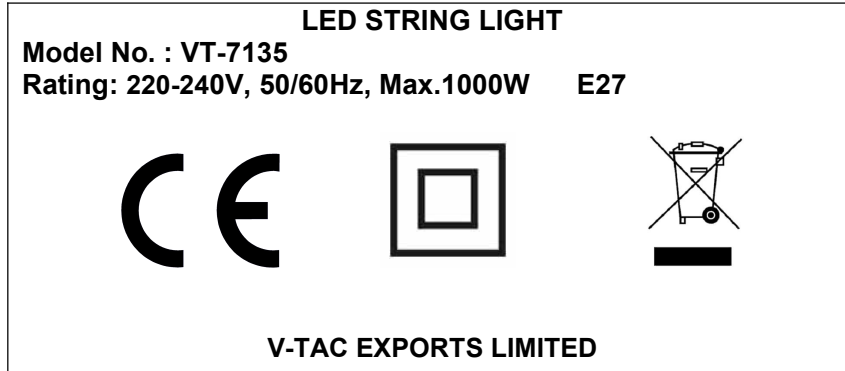
Nico Xie / Manager
 Name/title

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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 samples were pre-production samples without serial numbers. This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>1. EN 60598-2-4: 2018 used in conjunction with EN 60598-1: 2015+A1: 2018; 2. The standard of EN 62493 have been considered with positive result in this report.</p>	

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Label:



Location: Attached on surface of power cable near plug and visible during installation and normal use.

E26 Max.25W X 40

Location: attached on the main body of product near lampholder and visible during lamp replacement.

Note:

1. Due to similarity of the labels, only above label was listed.
2. The height of graphical symbols shall not be less than 5mm, and the height of letters and numerals shall be not less than 2 mm.

EN 60598-2-4

Clause	Requirement - Test	Result – Remark	Verdict
4.4 (2)	CLASSIFICATION		-
4.4 (2.2)	Type of protection.....:	Class II	-
4.4 (2.3)	Degree of protection.....:	IP54	-
4.4 (2.4)	Portable or handheld luminaire	Portable luminaire	-
	Fixed luminaire suitable for normally flammable surfaces.....:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	-
	Fixed luminaire suitable for non-combustible materials only	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-
4.4 (2.5)	Luminaire for normal use	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	-
	Luminaire for rough service	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-

4.5 (3)	MARKING		P
4.5 (3.2)	Mandatory markings	See marking	P
	Position of the marking	Sticking on the enclosure of product	P
	Format of symbols/text		P
4.5 (3.2.1)	Mark of origin		P
4.5 (3.2.2)	Rated voltage(s) in volts	See marking	P
4.5 (3.2.3)	Rated max. ta, if other than 25 °C		N/A
4.5 (3.2.4)	Symbol for class II luminaires		P
4.5 (3.2.5)	Symbol for class III luminaires		N/A
4.5 (3.2.6)	Marking (if applicable) with IP number	IP54	N/A
4.5 (3.2.7)	Maker's model number or type reference		P
4.5 (3.2.8)	Rated wattage	See marking	P
4.5 (3.2.9)	suitability or non-suitability for mounting on normally flammable surface		N/A
4.5 (3.2.10)	Information concerning special lamp		N/A
4.5 (3.2.11)	Symbol for 'cool beam'		N/A
4.5 (3.2.12)	Except for type Z attachments, terminations shall be clearly marked		N/A
	Information for luminaires with non-detachable flexible cable not fitted with a plug		N/A
	ELV d.c. supplied fluorescent luminaires		N/A
4.5 (3.2.13)	Symbol for minimum distance		N/A
	Explanation for its meaning in instructions		N/A
4.5 (3.2.14)	Symbol for rough service luminaires		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
4.5 (3.2.15)	Symbol for luminaires with bowl mirror lamp		N/A
4.5 (3.2.16)	Luminaires with glass protective shield		N/A
4.5 (3.2.17)	Interconnected luminaires		N/A
4.5 (3.2.18)	Warning for luminaires with ignitors		N/A
4.5 (3.2.19)	Symbol for luminaires designed for use with self-shielded tungsten halogen lamps only		N/A
4.5 (3.3)	Additional information		P
	Language of instructions	English	P
4.5 (3.3.1)	Combination luminaires		N/A
4.5 (3.3.2)	Nominal frequency in Hz	See marking	P
4.5 (3.3.3)	Operating temperature		N/A
4.5 (3.3.4)	Symbol or warning notice		N/A
4.5 (3.3.5)	Wiring diagram		N/A
4.5 (3.3.6)	Special conditions		N/A
4.5 (3.3.7)	Metal halid lamp luminaire – warning		N/A
4.5 (3.3.8)	Limitation for semi-luminaires		N/A
4.5 (3.3.9)	Power factor and supply current		N/A
4.5(3.3.10)	Suitability for use indoors		N/A
4.5 (3.3.11)	Luminaires with remote control		N/A
4.5 (3.3.12)	Clip-mounted luminaire - warning		N/A
4.5 (3.3.13)	Specifications of protective shields		N/A
4.5 (3.3.14)	Symbol for nature of supply		N/A
4.5 (3.3.15)	Rated current of socket outlet		N/A
4.5 (3.3.16)	Rough service luminaire		N/A
4.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	type Y	P
4.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.3.101	If no terminal block is provided with the luminaire, the packaging needs to contain the warning: "Terminal block not included. Installation may require advice from a qualified person"		N/A
4.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P

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Clause	Requirement - Test	Result – Remark	Verdict
4.6 (4)	CONSTRUCTION		P
4.6.1 (-)	Insulation not damaged when placing on support		P
4.6.2 (-)	Wiring fixed, to avoid rubbing		P
4.6.3 (-)	Stability 6°		P
4.6.4 (-)	Candlestick luminaires with switch		N/A
4.6.5 (-)	E5 lampholders		N/A
4.6 (4.2)	Components replaceable without difficulty		N/A
4.6 (4.3)	Wireways smooth and free from sharp edges		P
4.6 (4.4)	Lampholders		P
4.6 (4.4.1)	Integral lampholder		N/A
4.6 (4.4.2)	Wiring connection		N/A
4.6 (4.4.3)	Lampholder for end- to-end mounting		N/A
4.6 (4.4.4)	Positioning		N/A
	- pressure test (N)		N/A
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)	E27; 2,0 Nm	P
	After test the lampholder have not moved from its position and show no permanent deformation		P
4.6 (4.4.5)	Peak pulse voltage		N/A
4.6 (4.4.6)	Centre contact		N/A
4.6 (4.4.7)	Rough service luminaires		N/A
4.6 (4.4.8)	Lamp connectors		N/A
4.6(4.4.9)	Caps and bases correctly used		N/A
4.6(4.4.10)	Light source for lampholder or connection according IEC 60061 not connectde another way		P
4.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
4.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
4.6 (4.7)	Terminals and supply connections		P

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Clause	Requirement - Test	Result – Remark	Verdict
4.6 (4.7.1)	Contact to metal parts		P
4.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
4.6 (4.7.3)	Terminals for supply conductors		P
4.6 (4.7.4)	Terminals other than supply connection		P
4.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
4.6 (4.7.6)	Multi-pole plug		N/A
4.6 (4.8)	Switches:		P
	- adequate rating		P
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
4.6 (4.9)	Insulating lining and sleeves		P
4.6 (4.9.1)	Retainment		P
	Method of fixing.....: Heat-shrinkable tube and fixed by structure		P
4.6 (4.9.2)	Insulated linings and sleeves		P
	a) & c) Insulation resistance and electric strength		P
	b) Ageing test. Temperature (°C).....: N/A		N/A
4.6 (4.10)	Insulation of Class II luminaires		P
4.6 (4.10.1)	No contact, mounting surface - accessible metal parts - wiring of basic insulation		P
	Safe installation fixed luminaires		N/A
	Capacitors		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
4.6 (4.10.2)	Assembly gaps:		P
	- not coincidental		P
	- no straight access with test probe		P
4.6 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P

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Clause	Requirement - Test	Result – Remark	Verdict
	- lining in lampholder		N/A
4.6 (4.11)	Electrical connections		P
4.6 (4.11.1)	Contact pressure		P
4.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
	- at least two self-tapping screws		N/A
4.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
4.6 (4.11.4)	Material of current-carrying parts		P
4.6 (4.11.5)	No contact to wood or mounting surface		P
4.6 (4.11.6)	Electro-mechanical contact systems		N/A
4.6 (4.12)	Mechanical connections and glands		P
4.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		P
	Torque test: torque (Nm); part.....: Plastic cord anchorage screw for model HA1904: 0.5Nm		P
	Torque test: torque (Nm); part.....: Screw fixed bushing for 592008: 0,5 Nm		P
4.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
4.6 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm).....: M10; 2.5 Nm		P
	- lampholder; torque (Nm).....: E27; 2,0 Nm		P
	- push-button switches; torque 0,8 Nm.....:		N/A
4.6 (4.12.5)	Screwed glands; force (N).....:		N/A
4.6 (4.13)	Mechanical strength		P
4.6 (4.13.1)	Impact tests:		P

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Clause	Requirement - Test	Result – Remark	Verdict
	- fragile parts; energy (Nm).....:		N/A
	- other parts; energy (Nm)..... :	Lampholder cover: 0.5Nm	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
4.6 (4.13.3)	Straight test finger		P
4.6 (4.13.4)	Rough service luminaires		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
4.6 (4.13.6)	Tumbling barrel		N/A
4.6 (4.14)	Suspensions and adjusting devices		N/A
4.6 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm).....:		N/A
	D) load track- mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm).....:		N/A
	metal rod. diameter (mm).....:		N/A
4.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg).....:		-
	Stress in conductors (N/mm ²).....:		N/A
	Mass (kg) of semi-luminaire.....:		-
	Bending moment (Nm) of semi-luminaire.....:		N/A
4.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles.....:		N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
4.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
4.6 (4.14.5)	Guide pulleys		N/A
4.6 (4.14.6)	Strain on socket-outlets		N/A
4.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 °C	See Test Table 4.15 (13.3.2)	N/A
	- spacing \geq 30 mm		P
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		-
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
4.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
4.6 (4.16)	Luminaires suitable for normally flammable surfaces		P
	No lamp control gear		P
4.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
4.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
4.6 (4.16.3)	Luminaires suitable for normally flammable surfaces measured		N/A
4.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
4.6 (4.18)	Resistance to corrosion:		P
4.6 (4.18.1)	- rust-resistance		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
4.6 (4.18.2)	- season cracking in copper		P
4.6 (4.18.3)	- corrosion of aluminium		N/A
4.6 (4.19)	Igniters compatible with ballast		N/A
4.6 (4.20)	Rough service vibration		N/A
4.6 (4.21)	Protective shield:		N/A
4.6 (4.21.1)	Shield fitted		N/A
4.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
4.6 (4.21.3)	No direct path		N/A
4.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment		N/A
4.6 (4.22)	Attachments to lamps		N/A
4.6 (4.23)	Semi-luminaires comply Class II		N/A
4.6 (4.24)	UV radiation, metal halide lamps		N/A
4.6 (4.25)	No sharp point or edges		P
4.6 (4.26)	Short-circuit protection:		N/A
4.6 (4.26.1)	Uninsulated accessible SELV parts		N/A
4.6 (4.26.2)	Short-circuit test		N/A
4.6 (4.26.3)	Test chain according to IEC 61032		N/A

4.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V).....:	230VAC	-
	Voltage form	Sinusoidal	-
	PTI	< 600 [×] ≥ 600 []	-
	Rated pulse voltage (kV).....:		-
	(1) Current-carrying parts and accessible parts: limit of cr: <u>5,0</u> (mm); limit of cl: <u>3,0</u> (mm).....:	Cr: >6.5 Cl: >4.0	P
	(2) Current-carrying parts and accessible parts: limit of cr: <u>5,0</u> (mm); limit of cl: <u>3,0</u> (mm).....:	Cr: >6.5 Cl: >4.0	P

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Clause	Requirement - Test	Result – Remark	Verdict
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: limit of cr: <u>2,5</u> (mm); limit of cl: <u>1,5</u> (mm)..... :	Cr: >4.0 Cl: >2.0	P
	(4) Outer surface of cable where it is clamped and metal parts: limit of cr: <u>2,5</u> (mm); limit of cl: <u>1,5</u> (mm)..... :	Cr: >4.0 Cl: >2.0	P
	(5) Current-carrying parts of switches and metal parts, after removal of insulation..... :		N/A
	(6) Current-carrying parts and supporting surface: limit of cr: <u>5,0</u> (mm); limit of cl: <u>3,0</u> (mm)..... :	Cr: >6.5 Cl:>4.0	P

4.8 (7)	PROVISION FOR EARTHING		N/A
4.8 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω		N/A
	Two self-tapping screws used		N/A
	Thread-forming screws		N/A
	Connector earthing first		N/A
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		N/A
4.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
4.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
4.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
4.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
4.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
4.8 (7.2.10)	Class II luminaire for looping-in		N/A
4.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A

4.9 (14)	SCREW TERMINALS		N/A
	Separately approved; component list		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
	Part of the luminaire		N/A
4.9 (15)	SCREWLESS TERMINALS		N/A
	Separately approved; component list	See below	N/A
	Part of the luminaire		N/A
4.10 (5)	EXTERNAL AND INTERNAL WIRING		P
4.10 (5.2)	Supply connection and external wiring		P
4.10 (5.2.1)	Means of connection.....:	Non-detachable flexible cable with plug	P
4.10 (5.2.2)	Type of cable.....:	H03VVH2-F	P
	Nominal cross-sectional area (mm ²).....:	2 x 0.75mm ²	-
	Cables equal to IEC 60227 or IEC 60245		P
4.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
4.10 (5.2.5)	Type Z not connected to screws		N/A
4.10 (5.2.6)	Cable entries		P
	- suitable for introduction		P
	- adequate degree of protection		P
4.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
4.10 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- tubes or guards made of insulating material		P
4.10 (5.2.9)	Locking of screwed bushings		N/A
4.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P

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Clause	Requirement - Test	Result – Remark	Verdict
4.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
4.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y	P
4.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N).....: 60 N		P
	- torque test: torque (Nm).....: 0.15 Nm		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
4.10 (5.2.11)	External wiring passing into luminaire		P
4.10 (5.2.12)	Looping-in terminals		N/A
4.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
4.10 (5.2.14)	Mains plug same protection		P
	Class III luminaire plug		N/A
4.10 (5.2.15)	Colour code low voltage		N/A
4.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Appliance couplers of class II type		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
4.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
4.10 (5.2.18)	Used plug in accordance with		P
	- IEC 60083		N/A
	- other standard		P
4.10 (5.3)	Internal wiring		P
4.10 (5.3.1)	Cross-sectional area (mm ²).....:		P
	Insulation thickness		P
	Temperature resistant		P
	Sleeves suitable for hot spots		P
	Green-yellow for earth only		N/A
	Through wiring		N/A
	- cross-sectional area (mm ²).....:		P
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A).....:		N/A
	- temperatures.....:		N/A
4.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
4.10 (5.3.3)	Openings		N/A
	Bushings not removable		N/A
	Bushings in sharp openings		N/A
	Cables with protective sheath		N/A
4.10 (5.3.4)	Joints and junctions effectively insulated		N/A
4.10 (5.3.5)	Strain on internal wiring		N/A
4.10 (5.3.6)	Wire carriers		N/A
4.10 (5.3.7)	Wire ends not tinned		P

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Clause	Requirement - Test	Result – Remark	Verdict
	Wire ends tinned: no cold flow		N/A
4.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
4.11.1 (-)	Luminaires with BC cap		N/A
4.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		P
	Lamp and starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements		P
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
4.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		P
4.11 (8.2.3)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		N/A
	Class I luminaire with BC lampholder		N/A
4.11 (8.2.4)	Portable luminaire:		P
	- protection independent of supporting surface		P
	- terminal block completely covered		N/A
4.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
4.11 (8.2.6)	Covers reliably secured		P

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Clause	Requirement - Test	Result – Remark	Verdict
4.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		N/A
	Portable plug connected luminaire with capacitor		N/A
	Other plug connected luminaire with capacitor		N/A
	Discharge device on or within capacitor		N/A
	Discharge device mounted separately		N/A

4.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
4.12 (12.3)	Endurance test:		P
	- mounting- position.....:	As normal use	-
	- test temperature ($^{\circ}\text{C}$).....:	35 $^{\circ}\text{C}$	-
	- total duration (h).....:	240h	-
	- supply voltage: Un factor; calculated voltage (V):		-
	- lamp used.....:		-
4.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
4.12 (12.4)	Thermal test (normal operation)	See ANNEX 2	P
4.12 (12.5)	Thermal test (abnormal operation)	See ANNEX 2	P
4.12 (-)	Test overturned position (overturns $< 15^{\circ}$)		N/A
4.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
4.12 (12.6.1)	- case of abnormal conditions.....:		N/A
	- electronic lamp control gear		N/A
	- measured winding temperature ($^{\circ}\text{C}$): at 1,1 Un :		N/A
	- measured mounting surface temperature ($^{\circ}\text{C}$): at 1,1 Un.....:		N/A
	- calculated mounting surface temperature ($^{\circ}\text{C}$). :		N/A
	- track-mounted luminaires		N/A
4.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions.....:		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)::		N/A
	- track-mounted luminaires		N/A
4.12 (12.7)	Thermal test:		N/A
	- case of abnormal conditions		N/A
4.12 (12.7.1)	- measured winding temperature (°C): at 1,1 Un :		N/A
	- measured temperature of fixing point/ exposed part (°C): at 1,1 Un.....:		N/A
	- calculated temperature of fixing point/ exposed part (°C).....:		N/A
4.12 (12.7.2)	Temperature sensing control		N/A
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured temperature of fixing point/ exposed part (°C):		N/A

4.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
4.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP.....:	IP54	-
	- mounting position during test.....:	As normal use	-
	- fixing screws tightened; torque (Nm).....:	0.33 Nm	-
	- tests according to clauses.....:	Cl 9.2.0	-
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		N/A
	c) no trace of water on current-carrying parts or where it could become a hazard		N/A
	d) i) For luminaires without drain holes – no water entry		N/A
	d) ii) For luminaires with drain holes – no hazardous water entry		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
	e) no water in watertight luminaire		N/A
	f) no contact with live parts (IP 2X)		P
	f) no entry into enclosure (IP 3X and IP 4X)		N/A
4.13 (9.3)	Humidity test 48 h	25°C; 93% RH	P

4.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
4.14 (10.2.1)	Insulation resistance test		P
	Insulation resistance (MΩ):		-
	SELV:		N/A
	- between current-carrying parts of different polarity..... :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire..... :		N/A
	Other than SELV:		P
	- between live parts of different polarity..... :	>100MΩ(lampholder)	P
	- between live parts and mounting surface..... :	>100 MΩ	P
	- between live parts and metal parts..... :	>100 MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :	>100 MΩ	P
4.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V):		N/A
	SELV:		N/A
	- between current-carrying parts of different polarity..... :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire..... :		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
	Other than SELV:		P
	- between live parts of different polarity.....:	1460V(lampholder)	P
	- between live parts and mounting surface.....:	2920V	P
	- between live parts and metal parts.....:	2920V	P
	- between live parts of different polarity through action of a switch.....:		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts.....:	1460V	P
	- Insulation bushings as described in Section 5	1460V	P
4.14 (10.3.1)	Leakage current (mA).....:	Max. 0.05mA peak	P
4.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
4.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C) of Lampholder cover.....:	135°C	P
4.15 (13.3.1)	Needle flame test (10 s):		N/A
	- part tested.....:		N/A
	- part tested.....:		N/A
4.15 (13.3.2)	Glow-wire test (650°C):		P
	- part tested.....:	0s	N/A
4.15 (13.4.1)	Tracking test: part tested.....:		N/A
	COMMON MODIFICATIONS (including A11 and A12 to EN 60598-1:2000)		N/A
(3.3.101 + 5.2.1)	For luminaires connected by tails, information about terminal block		N/A
4.10 (5.2.1) (EN 60598 -1:2000/ A12: 2002)	Connecting leads (tail): account shall be taken of national installation rules/practice when deciding whether to supply a connection device or not.		N/A
(5.2.2)	Cables equal to HD 21 S2 or HD 22 S2		N/A
(5.2.15)	Colour code low voltage		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
C (EN 60598: 2000/A11)	ANNEX C, ABNORMAL CIRCUIT CONDITIONS (For metal halide lamps and high-pressure sodium vapour lamps.)		N/A
	Item b) and Figure C.3 replaced		N/A

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS		N/A
(2.2)	Class 0 not accepted		N/A
4.4 (2.2)	PL: class 0 and class I not permitted on portable luminaires		N/A
(3.3)	DK: power supply cord with label		N/A
	IT: warning label on Class 0 luminaire		N/A
(4.5.1)	DK: socket-outlets		N/A
(4.5.1)	FR: socket-outlets		N/A
(5.2.1)	DK, FI, SE, GB: type of plug		N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS		N/A
(13.3)	DK: Needle flame test or glow-wire test 750 °C for luminaires in access routes		N/A
(13.3)	GB: Requirements according to United Kingdom Building Regulation		N/A
(13.3.2)	FR: Glow-wire test 850 °C alt. 750 °C for luminaires in premises open to public and workers		N/A

TABLE		List of critical components and materials		
Component	manufacturers / trademark	Type / model	Value / rating	Approval/ Reference
Pulg	ZHONGSHAN RUITIAN WIRE & CABLE CO LTD	RT-05 250 V; 2,5 A EN 50075	RT-05 250 V; 2,5 A EN 50075	RT-05 250 V; 2,5 A EN 50075
Supply cable	Dongguan Ubill Electrical Co., Ltd.	H03VVH2-F	2 x 0,75mm ²	EN 50525-2-11
E27 lampholder	Dong Guan Nuo Bao Xin Plastic Co., Ltd	270; 270F; 270S	250 V; 2 A; T210	EN 60238
Internal wire	Dongguan Nistar Transmitting Technology Co.,Inc	7022	300/500 V	VDE 0250
Heat-shrinkable tube	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR	600V,T125	IEC/EN 60598-2-4

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Clause	Requirement - Test	Result – Remark	Verdict				
	ANNEX 2: TEMPERATURE MEASUREMENTS, THERMAL TESTS OF SECTION 12		P				
	Type reference..... :	VT-7135	--				
	Lamp used..... :	E26; 40x25 incandescent lamp; Type G	--				
	Mounting position of luminaire..... :	As in normal use	--				
	Supply wattage (W)..... :	105W	--				
	Supply current (A)..... :	0.442A	--				
	Calculated power factor..... :	--	--				
	Table: measured temperatures corrected for $t_a = 25\text{ }^\circ\text{C}$:		--				
	- abnormal operating mode..... :	--	--				
	- test 1: 1,06 times rated voltage or 1,05 times rated wattage..... :	--	--				
	- test 2: 1,1 times rated voltage or 1,05 times rated wattage..... :	1.05 x 4x25W = 105W	--				
	- test 3: 1,1 times rated voltage or 1,05 times rated wattage..... :	--	--				
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage..... :	--	--				
	- test 5: 1,1 times rated voltage or 1,05 times rated wattage..... :	--	--				
temperature ($^\circ\text{C}$) of part	clause 12.4 – normal		clause 12.5 – abnormal				
	test 1	Limits	test 2	test 3	test 4	test 5	Limits
Lamp cap	99	210	-	-	-	-	-
Lampholder screw shell	96	210	-	-	-	-	-
Lampholder rim	113	210	-	-	-	-	-
Lampholder cover	48	Ref.	-	-	-	-	-
Lampholder wire (10 mm from lampholder)	57	90	-	-	-	-	-
Closed-end connector	27	105	-	-	-	-	-
Power cable clamped by cord anchorage in lampholder cover	27	75	-	-	-	-	-
Switch surface	28	55	-	-	-	-	-
Mounting surface	27	90	-	-	-	-	-
Lighted object(0,1 m)	31	90					

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Clause	Requirement - Test	Result – Remark	Verdict
	ANNEX 3: SCREW TERMINALS (PART OF THE LUMINAIRE)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal..... :		N/A
	Rated current (A)..... :		N/A
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm ²)..... :		N/A
(14.3.3)	Conductor space (mm)..... :		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread).. :		N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm)..... :		N/A
	Torque (Nm)..... :		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)..... :		N/A
(14.4.8)	Without undue damage		N/A

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Clause	Requirement - Test	Result – Remark	Verdict
	ANNEX 4: SCREWLESS TERMINALS (PART OF THE LUMINAIRE)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal..... :		N/A
	Rated current (A)..... :		N/A
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5.1)	Terminals internal wiring		N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.2)	Permanent connections: pull-off test (20 N)		N/A
(15.6)			N/A
	Voltage drop (mV) after 1 h (4 samples)..... :		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles..... :		N/A
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)..... :		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)..... :		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
(15.7)	Terminals external wiring		N/A
	Terminal size and rating		N/A
(15.8.1)	Pull test spring-type terminals (4 samples); pull (N)		N/A
	Pull test pin or tab terminals (4 samples); pull (N)		N/A
(15.9)	Contact resistance test		N/A

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Clause	Requirement - Test									Result – Remark	Verdict
	Voltage drop (mV) after 1 h										N/A
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										
	Voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											

Appendix 1

Photo Documentation

<p>Photo 1</p> <p>Model 550064</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>Model 550064</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---