



Shenzhen Shuangcheng Pharmaceutical Co., Ltd

CE LVD REPORT

Prepared For:	<p>Shenzhen Shuangcheng Pharmaceutical Co., Ltd 2, Shuangcheng Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China</p>
Product Name:	MOBILE LAMP
Model :	SH-LD-001, SH-LD-002,SH-LD-003,SH-LD-004,SH-LD-005,SH-LD-006,SH-LD-007,SH-LD-008,SH-LD-009,SH-LD-010,SH-LD-011,SH-LD-012,SH-LD-013,SH-LD-014,SH-LD-015,SH-LD-016,SH-LD-017,SH-LD-018,SH-LD-019,SH-LD-020,SH-LD-021,SH-LD-022,SH-LD-023,SH-LD-024,SH-LD-025,SH-LD-026,SH-LD-027,SH-LD-028,SH-LD-029,SH-LD-030,SH-LD-031,SH-LD-032,SH-LD-033,SH-LD-034,SH-LD-035,SH-LD-036,SH-LD-037,SH-LD-038,SH-LD-039,SH-LD-040,SH-LD-041,SH-LD-042,SH-LD-043,SH-LD-044,SH-LD-045,SH-LD-046,SH-LD-047,SH-LD-048,SH-LD-049,SH-LD-050,SH-LD-051,SH-LD-052,SH-LD-053,SH-LD-054,SH-LD-055,SH-LD-056,SH-LD-057,SH-LD-058,SH-LD-059,SH-LD-060,SH-LD-061,SH-LD-062,SH-LD-063,SH-LD-064,SH-LD-065,SH-LD-066,SH-LD-067,SH-LD-068,SH-LD-069,SH-LD-070,SH-LD-071,SH-LD-072,SH-LD-073,SH-LD-074,SH-LD-075,SH-LD-076,SH-LD-077,SH-LD-078,SH-LD-079,SH-LD-080,SH-LD-081,SH-LD-082,SH-LD-083,SH-LD-084,SH-LD-085,SH-LD-086,SH-LD-087,SH-LD-088,SH-LD-089,SH-LD-090,SH-LD-091,SH-LD-092,SH-LD-093,SH-LD-094,SH-LD-095,SH-LD-096,SH-LD-097,SH-LD-098,SH-LD-099,SH-LD-100
Prepared By :	BST Testing (Shenzhen) Co.,Ltd
	No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Test Date:	Oct. 21-21, 2019
Date of Report :	Oct. 31, 2019
Report No.:	BSTXD190712891802SR



<p>LVD REPORT</p> <p>EN 60598-1 & EN60598-2-4</p> <p>Luminaires</p> <p>Part 1: General requirements and tests</p> <p>Part 2: Particular requirements</p> <p>Section Four – Portable general purpose luminaires</p>	
Testing Laboratory Name	BST Testing (Shenzhen) Co.,Ltd
Address	No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Testing location.....	BST Testing (Shenzhen) Co.,Ltd
Applicant's Name	[REDACTED]
Address	[REDACTED]
Manufacturer	[REDACTED]
Address	[REDACTED]
Test specification	
Standard	EN 60598-1:2015+A1:2018 EN 60598-2-4:2018
Procedure deviation.....	N/A
Non-standard test method	N/A
Test item description..... MOBILE LAMP	
Trademark	SOHEN
Model and/or type reference	See Page 1
Rating(s)	AC220-240V,50-60Hz, E27 Max100W
Test case verdicts	
Test case does not apply to the testobject ...:	N/A
Test item does meet therequirement	P(ass)
Test item does not meet therequirement	F(ail)



General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Clause numbers between brackets refer to clauses in IEC 60 598-1 (EN 60 598-1)

Throughout this report a comma is used as the decimal separator.

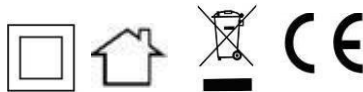
Remark:

A. photo documentation

B. General product information:

The series products have the same circuit diagram, PCB layout and functionality. The differences are the appearance, so, we select SH-LD-001 to test.

MOBILE LAMP
Model : SH-LD-001
Rating: AC220-240V,50-60Hz, E27 Max100W





Name and address of the testing laboratory: **BST Testing (Shenzhen) Co.,Ltd**

**No.7, New Era Industrial Zone, Guantian, Bao'an District,
Shenzhen, Guangdong, China**

Prepared by :

Engineer

Reviewer :

Supervisor

Approved & Authorized Signer :



Manager



EN 60598-1& EN 60598-2-4

Cl.	Requirement – Test	Result	Verdict
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4.1 (0)	SCOPE		P
4.1 (0.1)	More sections applicable.....	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]	—

4.4 (2)	CLASSIFICATION		P
4.4 (2.2)	Type of protection.....	Class II	—
4.4 (2.3)	Degree of protection.....	IP 20	—
4.4 (2.4)	Portable or handheld luminaire	Portable luminaire	—
	Fixed luminaire suitable for normally flammable surfaces	No	—
	Fixed luminaire suitable for non-combustible materials only	No	—
4.4 (2.5)	Luminaire for normal use	Yes	—
	Luminaire for rough service	No	—

4.5 (3)	MARKING		P
4.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text	Symbols: 5,0mm min; Letter: 2,0mm min.	P
4.5 (3.3)	Additional information		P
	Language of instructions	English	P
4.5 (3.3.1)	Combination luminaires		N
4.5 (3.3.2)	Nominal frequency in Hz	50-60Hz	P
4.5 (3.3.3)	Operating temperature		P
4.5 (3.3.4)	Symbol or warning notice		N
4.5 (3.3.5)	Wiring diagram		N
4.5 (3.3.6)	Special conditions		N
4.5 (3.3.7)	Metal halid lamp luminaire – warning		N
4.5 (3.3.8)	Limitation for semi-luminaires		N
4.5 (3.3.9)	Power factor and supply current	0.26A	P
4.5 (3.3.10)	Suitability for use indoors		P
4.5 (3.3.11)	Luminaires with remote control		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.5 (3.3.12)	Clip-mounted luminaire - warning		N
4.5 (3.3.13)	Specifications of protective shields		N
4.5 (3.3.14)	Symbol for nature of supply	~	P
4.5 (3.3.15)	Rated current of socket outlet	No socket outlet	N
4.5 (3.3.16)	Rough service luminaire		N
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	Ordinary luminaires	N
4.5 (3.3.19)	The protective conductor current shall be clearly stated in the manufacturers' instructions		N
4.5 (3.3.20)	Provided with information if not intended to be mounted within arms reach		N
4.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		N
	Cautionary symbol		N
4.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N
4.5 (3.4)	Test with water	15s with water	P
	Test with hexane	15s with hexane	P
	Legible after test	The marking is legible	P
	Label attached	The marking not be easily removable and shows no curling	P

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°	Not overturn	P
4.6.4 (-)	Candlestick luminaires with switch		N
4.6.5 (-)	E5 lampholders		N
4.6 (4.2)	Components replaceable without difficulty		P
4.6 (4.3)	Wireways smooth and free from sharp edges		P



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.4)	Lampholders		P
4.6 (4.4.1)	Integral lampholder		N
4.6 (4.4.2)	Wiring connection		P
4.6 (4.4.3)	Lampholder for end-to-end mounting		N
4.6 (4.4.4)	Positioning		P
4.6 (4.4.5)	Peak pulse voltage		N
4.6 (4.4.6)	Centre contact		N
4.6 (4.4.7)	Rough service luminaires	Ordinary luminaires	N
4.6 (4.4.8)	Lamp connectors		N
4.6 (4.5)	Starter holders		N
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
4.6 (4.6)	Terminal blocks		N
	Tails		N
	Unsecured blocks		N
4.6 (4.7)	Terminals and supply connections		N
4.6 (4.7.1)	Contact to metal parts		N
4.6 (4.7.2)	Test 8 mm live conductor		N
	Test 8 mm earth conductor		N
4.6 (4.7.3)	Terminals for supply conductors		N
4.6 (4.7.4)	Terminals other than supply connection		N
4.6 (4.7.5)	Heat-resistant wiring/sleeves		N
4.6 (4.7.6)	Multi-pole plug		N
4.6 (4.8)	Switches:		P
	- adequate rating		P
	- adequate fixing		P
	- polarized supply		P
4.6 (4.9)	Insulating lining and sleeves		P
4.6 (4.9.1)	Retainment		P
	Method of fixing		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



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
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		N
	Safe installation fixed luminaires		N
	Capacitors	No such capacitors	N
	Interference suppression capacitors according to IEC 60384-14		N
4.6 (4.10.2)	Assembly gaps:		N
	- not coincidental		N
	- no straight access with test probe		N
4.6 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P
	- lining in lampholder		N
4.6 (4.11)	Electrical connections		P
4.6 (4.11.1)	Contact pressure	Not transmitted through insulating materials	P
4.6 (4.11.2)	Screws:		N
	- self-tapping screws		N
	- thread-cutting screws		N
	- at least two self-tapping screws		N
4.6 (4.11.3)	Screw locking:		N
	- spring washer		N
	- rivets		N
4.6 (4.11.4)	Material of current-carrying parts		P
4.6 (4.11.5)	No contact to wood		N
4.6 (4.11.6)	Electro-mechanical contact systems	No such devices	N
4.6 (4.12)	Mechanical connections and glands		P



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.12.1)	Screws not made of soft metal		N
	Screws of insulating material		N
	Torque test: torque (Nm); part.....		N
	Torque test: torque (Nm); part.....		N
	Torque test: torque (Nm); part.....		N
4.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N
4.6 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm)	2.5 Nm	P
	- lampholder; torque (Nm).....	E27:3.0Nm	P
	- push-button switches; torque 0,8 Nm.....		N
4.6 (4.12.5)	Screwed glands; force (N).....		N
4.6 (4.13)	Mechanical strength		P
4.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....		N
	- other parts; energy (Nm).....	Enclosure, 0,5Nm	P
	1) live parts	Not become accessible	P
	2) linings		N
	3) protection	Continue to afford the degree of protection against ingress of dust, solid objects and moisture	P
	4) covers	No break	P
4.6 (4.13.3)	Straight test finger	Not touch the live parts with a force of 30N	P
4.6 (4.13.4)	Rough service luminaires		N
	a) fixed		N
	b) hand-held		N
	c) delivered with a stand		N
	d) for temporary installations and suitable for mounting on a stand		N
4.6 (4.13.6)	Tumbling barrel		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.14)	Suspensions and adjusting devices		N
4.6 (4.14.1)	Mechanical load:		N
	A) four times the weight		N
	B) torque 2,5 Nm		N
	C) bracket arm; bending moment (Nm)..... :		N
	D) load track-mounted luminaires		N
	E) clip-mounted luminaires, glass-shelve. Thickness (mm).....		N
	metal rod. diameter (mm).....		N
4.6 (4.14.2)	Load to flexible cables		N
	Mass (kg).....		N
	Stress in conductors (N/mm ²).....		N
	Mass (kg) of semi-luminaire		N
	Bending moment (Nm) of semi-luminaire.....		N
4.6 (4.14.3)	Adjusting devices:		N
	- flexing test; number of cycles.....		N
	- strands broken		N
	- electric strength test afterwards	150cycles	N
4.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N
4.6 (4.14.5)	Guide pulleys		N
4.6 (4.14.6)	Strain on socket-outlets		N
4.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 °C		P
	- spacing ≥ 30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N
	- no fiercely burning material		P
	- thermal protection		N
	- electronic circuits exempted		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N
	a) construction		N
	b) temperature sensing control		N
	c) surface temperature		N
4.6 (4.16)	Luminaires marked with F-symbol		P
	No lamp control gear	(compliance with Section 12)	P
4.6 (4.16.1)	Lamp control gear spacing:		N
	- spacing 35 mm		N
	- spacing 10 mm		N
4.6 (4.16.2)	Thermal protection:		N
	- in lamp control gear		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
4.6 (4.16.3)	"F" curve measured	(see 12.6)	N
4.6 (4.17)	Drain holes		N
	Clearance at least 5 mm		N
4.6 (4.18)	Resistance to corrosion:		P
4.6 (4.18.1)	- rust-resistance		P
4.6 (4.18.2)	- season cracking in copper		N
4.6 (4.18.3)	- corrosion of aluminium		N
4.6 (4.19)	Ignitors compatible with ballast		N
4.6 (4.20)	Rough service vibration		N
4.6 (4.21)	Protective shield:		N
4.6 (4.21.1)	Shield fitted		N
4.6 (4.21.2)	Particles from a shattering lamp not impair safety		N
4.6 (4.21.3)	No direct path		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.6 (4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment		N
4.6 (4.22)	Attachments to lamps		N
4.6 (4.23)	Semi-luminaires comply Class II		N
4.6 (4.24)	Photobiological hazards		N
4.6 (4.24.1)	UV radiation for tungsten halogen lamps and metal halide lamps (Annex P)		N
4.6 (4.24.2)	Retinal blue light hazard		N
	Luminaires with Ethr :		N
	a) Fixed luminaires		N
	- distance x m, borderline between RG1 and RG2		N
	- marking and instruction according 3.2.23		N
	b) Portable and handheld luminaires		N
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N
4.6 (4.25)	No sharp point or edges		P
4.6 (4.26)	Short-circuit protection:		N
4.6 (4.26.1)	Uninsulated accessible SELV parts		N
4.6 (4.26.2)	Short-circuit test		N
4.6 (4.26.3)	Test chain according to IEC 61032		N
4.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N
	Test according Annex V		N
	Pull test of terminal fixing (20 N)		N
	After test, resistance < 0,05 Ω		N
	Pull test of mechanical connection (50 N)		N
	After test, resistance < 0,05 Ω		N
	Voltage drop test, resistance < 0,05 Ω		N
	Test according Annex V		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	Not plug-in or easily replaceable type		N
	Reliably kept in position		N
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N
	Not outside the luminaire enclosure		N
	Test of adhesive fixing:		N
	Max. temperature on adhesive material (°C) :		N
	100 cycles between t min and t max		N
	Temperature sensing control still in position		N
4.6 (4.29)	Luminaires with non-replaceable light source		N
	Not possible to replace light source		N
	Live part not accessible after parts have been opened by hand or tools		N
4.6 (4.30)	Luminaires with non-user replaceable light source		N
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N
	Minimum two fixing means		N
4.6 (4.31)	Insulation between circuits		N
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N
	Used SELV source		N
	Voltage ≤ ELV		N
	Insulating of SELV circuits from LV supply		N
	Insulating of SELV circuits from other non SELV circuits		N
	Insulating of SELV circuits from FELV		N
	Insulating of SELV circuits from other SELV circuits		N
	SELV circuits insulated from accessible parts according Table X.1		N
	Plugs not able to enter socket-outlets of other voltage systems		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	Socket outlets does not admit plugs of other voltage systems		N
	Plugs and socket-outlets does not have protective conductor contact		N
4.6 (4.31.2)	FELV circuits		N
	Used FELV source		N
	Voltage \leq ELV		N
	Insulating of FELV circuits from LV supply		N
	FELV circuits insulated from accessible parts according Table X.1		N
	Plugs not able to enter socket-outlets of other voltage systems		N
	Socket outlets does not admit plugs of other voltage systems		N
	Socket-outlets does not have protective conductor contact		N
4.6 (4.31.3)	Other circuits		N
	Other circuits insulated from accessible parts according Table X.1		N
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N
	- conductive parts are connected together		N
	- test according 7.2.3 of above		N
	- conductive part not cause an electric shock in case of an insulation fault		N
	- equipotential bonding in master/slave applications		N
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N
	- slave luminaire constructed as class I		N
4.6 (4.32)	Overvoltage protective devices		N
	Comply with IEC 61643-11		N
	External to control gear and connected to earth:		N
	- only in fixed luminaires		N
	- only connected to protective earth		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict

4.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
1.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—
	Category III according Annex U		—
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		—
1.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	N
	Creepage distances for frequency over 30 kHz:	P	
	- Controlgear marked with \hat{U}_{OUT} and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 1.7 (11.2) II	P
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	P
1.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	N
	Clearances distances for frequency over 30 kHz:	P	
	- Controlgear marked with U_P	See Test Table 1.7 (11.2) II	P
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	P

4.8 (7)	PROVISION FOR EARTHING		N
4.8 (7.2.1 + 7.2.3)	Accessible metal parts		N
	Metal parts in contact with supporting surface		N
	Resistance < 0,5 Ω		N
	Two self-tapping screws used		N
	Thread-forming screws		N
	Connector earthing first		N
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		N
4.8 (7.2.4)	Locking of clamping means		N
	Compliance with 4.7.3		N
4.8 (7.2.5)	Earth terminal integral part of connector socket		N
4.8 (7.2.6)	Earth terminal adjacent to mains terminals		N
4.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N
4.8 (7.2.8)	Material of earth terminal		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	Contact surface bare metal		N
4.8 (7.2.10)	Class II luminaire for looping-in		N
4.8 (7.2.11)	Earthing core coloured green-yellow		N
	Length of earth conductor		N

4.9 (14)	SCREW TERMINALS		N
	Separately approved; component list		N
	Part of the luminaire		N

4.9 (15)	SCREWLESS TERMINALS		N
	Separately approved; component list		N
	Part of the luminaire		N
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	Plug	P
4.10 (5.2.2)	Type of cable.....		P
	Nominal cross-sectional area (mm ²)	2x0.75mm ²	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
4.10 (5.2.6)	Cable entries:		N
	- suitable for introduction		N
	- adequate degree of protection		N
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



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.10 (5.2.9)	Locking of screwed bushings		N
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
4.10 (5.2.10.1)	Cord anchorage for type X attachment:		N
	a) at least one part fixed		N
	b) types of cable		N
	c) no damaging of the cable		N
	d) whole cable can be mounted		N
	e) no touching of clamping screws		N
	f) metal screw not directly on cable		N
	g) replacement without special tool		N
	Glands not used as anchorage		N
	Labyrinth type anchorages		N
4.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
4.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		N
	- pull test: 25 times; pull (N).....	60N	P
	- torque test: torque (Nm).....	0.25Nm	P
	- displacement ≤ 2 mm	<1mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
4.10 (5.2.11)	External wiring passing into luminaire		N
4.10 (5.2.12)	Looping-in terminals		N
4.10 (5.2.13)	Wire ends not tinned		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	Wire ends tinned: no cold flow		N
4.10 (5.2.14)	Mains plug same protection		P
	Class III luminaire plug		N
4.10 (5.2.15)	Colour code low voltage		N
4.10 (5.2.16)	Appliance inlets (IEC 60320)		N
	Appliance couplers of class II type		N
4.10 (5.3)	Internal wiring		P
4.10 (5.3.1)	Cross-sectional area (mm ²)..... :	0.75 mm ²	P
	Insulation thickness		P
	Temperature resistant		N
	Sleeves suitable for hot spots		N
	Green-yellow for earth only		N
	Through wiring		N
	- cross-sectional area (mm ²)		P
	- not delivered/ mounting instruction		N
	- factory assembled		N
	- socket outlet loaded (A).....		N
	- temperatures.....	(see Annex 2)	N
4.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		P
	Joints, raising/lowering devices		N
	Telescopic tubes etc.		N
	No twisting over 360°		P
4.10 (5.3.3)	Openings		P
	Bushings not removable		P
	Bushings in sharp openings		P
	Cables with protective sheath		N
4.10 (5.3.4)	Joints and junctions effectively insulated		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
4.10 (5.3.5)	Strain on internal wiring		N
4.10 (5.3.6)	Wire carriers		N
4.10 (5.3.7)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N

4.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
4.11.1 (-)	Luminaires with BC cap		N
4.11 (8.2.1)	Live parts not accessible		P
	Protection in any position		P
	Double-ended tungsten filament lamp		N
	Insulation lacquer not reliable		P
	Double-ended high pressure discharge lamp		N
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		P
	- basic insulation not accessible other than during starter or lamp replacement		N
	- glass protective shields not used as supplementary insulation		N
	Class I luminaire with BC lampholder		N
4.11 (8.2.4)	Portable luminaire:		P
	- protection independent of supporting surface		P
	- terminal block completely covered		N
4.11 (8.2.6)	Covers reliably secured		P
4.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		N
	Portable plug connected luminaire with capacitor		N
	Other plug connected luminaire with capacitor		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	Discharge device on or within capacitor		N
	Discharge device mounted separately		N

4.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
4.12 (12.3)	Endurance test:		P
	- mounting-position.....		—
	- test temperature (°C).....	25°C	—
	- total duration (h).....	240h	—
	- supply voltage: Un factor; calculated voltage (V)	264V	—
	- lamp used.....	TUNGSTEN LAMP	—
4.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N
	- 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)		N
4.12 (-)	Test overturned position (overturns = 15°)		N
4.12 (12.6)	Thermal test (failed lamp control gear condition):		N
4.12 (12.6.1)	- case of abnormal conditions.....		—
	- electronic lamp control gear		
	- measured winding temperature (°C): at 1,1 Un.		—
	- measured mounting surface temperature (°C): at 1,1 Un.....		N
	- calculated mounting surface temperature (°C)..		N
	- track-mounted luminaires		N
4.12 (12.6.2)	Temperature sensing control		N
	- case of abnormal conditions.....		—
	- thermal link		N
	- manual reset cut-out		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	- auto reset cut-out		N
	- measured mounting surface temperature (°C):.....		N
	- track-mounted luminaires		N
4.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N
	- case of abnormal conditions		—
4.12 (12.7.1)	- measured winding temperature (°C): at 1,1 Un.		—
	- measured temperature of fixing point/ exposed part (°C): at 1,1 Un		N
	- calculated temperature of fixing point/ exposed part (°C).....		N
4.12 (12.7.2)	Temperature sensing control		N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured temperature of fixing point/ exposed part (°C):		N

4.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
4.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		
	- classification according to IP.....	IP 20	—
	- mounting position during test.....		—
	- fixing screws tightened; torque (Nm).....		—
	- tests according to clauses.....		—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		N
	c) no trace of water on current-carrying parts or where it could become a hazard		N
	d) i) For luminaires without drain holes – no water entry		N
	d) ii) For luminaires with drain holes – no hazardous water entry		N
	e) no water in watertight luminaire		N



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	f) no contact with live parts (IP 2X)		P
	f) no entry into enclosure (IP 3X and IP 4X)		N
4.13 (9.3)	Humidity test 48 h	R.H.:93% T:25°C	P

4.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
4.14 (10.2.1)	Insulation resistance test		P
	Insulation resistance (MΩ):		P
	SELV:		N
	- between current-carrying parts of different polarity		N
	- between current-carrying parts and mounting surface.....		N
	- between current-carrying parts and metal parts of the luminaire.....		N
	Other than SELV:		P
	- between live parts of different polarity.....	> 100MΩ	P
	- between live parts and mounting surface.....	> 100MΩ	P
	- between live parts and metal parts.....	> 100MΩ	P
	- between live parts of different polarity through action of a switch.....		N
4.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N
	Luminaires with ignitors after 24 h test		N
	Luminaires with manual ignitors		N
	Test voltage (V):		P
	SELV:		N
	- between current-carrying parts of different polarity		N
	- between current-carrying parts and mounting surface.....		N
	- between current-carrying parts and metal parts of the luminaire.....		N
	Other than SELV:		P



EN 60598-1& EN 60598-2-4			
Cl.	Requirement – Test	Result	Verdict
	- between live parts of different polarity.....	1480Vac, no broken	P
	- between live parts and mounting surface.....	2960Vac, no broken	P
	- between live parts and metal parts.....	2960Vac, no broken	P
	- between live parts of different polarity through action of a switch.....		N
4.14 (10.3.1)	Leakage current (mA).....	0,009mA ≤ 0.7mA	P

4.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
4.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C)		P
	- part tested; temperature (°C)		N
4.15 (13.3.1)	Needle flame test (10 s):		P
	- part tested		P
	- part tested		N
4.15 (13.3.2)	Glow-wire test (650°C):		P
	- part tested		P
	- part tested		N
4.15 (13.4.1)	Tracking test: part tested.....		N

	COMMON MODIFICATIONS		N
(3.3.101 + 5.2.1)	For luminaires connected by tails, information about terminal block		N
(5.2.2)	Cables equal to HD 21 S2 or HD 22 S2		N
(5.2.15)	Colour code low voltage		N

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS		N
(2.2)	Class 0 not accepted		N
4.4 (2.2)	PL: class 0 and class I not permitted on portable luminaires		N
(3.3)	DK: power supply cord with label		N
	IT: warning label on Class 0 luminaire		N



(4.5.1)	DK: socket-outlets		N
(4.5.1)	FR: socket-outlets		N
(5.2.1)	DK, FI, SE, GB: type of plug		N

ZC	ANNEX ZC, NATIONAL DEVIATIONS		N
(13.3)	DK: Needle flame test or glow-wire test 750 °C for luminaires in access routes		N
(13.3)	GB: Requirements according to United Kingdom Building Regulation		N



1.7 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						N
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						N
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	--	--	--	--	--	--	--
Working voltage (V)					--	—	
PTI					< 600 <input checked="" type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Pulse voltage or U_P if applicable (kV)					--	—	
Supplementary information: Current-carrying parts of different polarity							
Distance 2:	--	--	--	--	--	--	--
Working voltage (V)					--	—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Pulse voltage or U_P if applicable (kV)					--	—	
Supplementary information: Current-carrying parts and accessible metal parts (earthing)							
Distance 3:	--	--	--	--	--	--	--
Working voltage (V)					--	—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Pulse voltage or U_P if applicable (kV)					--	—	
Supplementary information: Current-carrying parts and supporting surface							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

1.7 (11.2)	TABLE II: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages						
	Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2						
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	8,3	1,5	7,8	8,3	2,5	11.1
Working voltage (V)					264V	—	
Frequency if applicable (kHz)						—	
PTI					< 600 <input checked="" type="checkbox"/>	≥ 600 <input type="checkbox"/>	—
Peak value of the working voltage \hat{U}_{out} if applicable (kV)					--	—	



Supplementary information: Current-carrying parts of different polarity							
Distance 2:	B	3,2	1,5	11.1	3,2	2,5	11.1
Working voltage (V)	264V						—
Frequency if applicable (kHz)							—
PTI	< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>						—
Peak value of the working voltage \hat{U}_{out} if applicable (kV)	--						—
Supplementary information: Current-carrying parts and accessible metal parts (earthing)							
Distance 3:	B	3,2	1,5	7,8	3,2	2,5	11.1
Working voltage (V)	264V						—
Frequency if applicable (kHz)							—
PTI	< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>						—
Peak value of the working voltage \hat{U}_{out} if applicable (kV)	--						—
Supplementary information: Current-carrying parts and supporting surface							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.



(13.3.2)	FR: Glow-wire test 850 °C alt. 750 °C for luminaires in premises open to public and workers				N
	ANNEX 1: components				P
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
EU plug	Kenic Electric Mfg. Co.Ltd	KE-21	AC250V, 2.5A	EN 50075	VDE09718 2
Alt.	Dongguan Mayguan Electrical Co., Ltd	Ms-u101	AC250V, 6A	VDE0620-101	VDE40009 940
Alt.	Jiangmen Jiaqixing House Appliance Industry Co.Ltd	JQX-201	Ac 250v 2.5A	--	VDE,UL,C SA
Supply cord	Kenic Electric Mfg. Co. Ltd	H03VVH2-F	2×0,75mm ²	EN 50525-2-11	VDE10385 3
Alt.	Jiangmen Jiaqixing House Appliance Industry Co.Ltd	H03VV-F2...3 × 0,5...0,75mm ² H03VVH2-F2 × 0,5...0,75mm ² 05VV-F2...3× 0,75...1,5mm ² H05VVH2-F2 × 0,75. 1.0mm ²	94V-0, 130°C	--	UL
Alt.	Yu Jia Wire Electronics Co., Ltd.	H03VVH2-F	2×0,75mm ²	EN 50525-2-11	VDE40022 346
Alt.	Top Resoureces., Ltd	H03VVH2-F	2×0,75mm ²	EN 50525-2-11	VDE09627 3
Switch	Openwise Industrial Limited	317	250VAC,2A	EN 61058-1	ENEC:SE/ 9927-29
Alt.	Dongguan Xianghui Elec.Engineering Material Co.Ltd	XH-317	250Vac,2A	--	VDE
Alt.	China Ningbo Jietong Electronics Co., Ltd	MTS-1	250VAC,3A	EN 61058-1	TUV RH R5020837 1
E27 Lamp holder	Zhongshan Guzhen heyi Electric Appliance Factory	HY-2701, HY-2702, HY-2703, HY-2704	E27, 250V, 4A,T210°C	EN 60238	YHT:20152 573
Alt.	Jiangmen Jiaqixing House Appliance Industry Co.Ltd	E27	250V 4A T210°C	--	VDE,CE
Lamp holder	Jiangmen Jiaqixing House Appliance Industry Co.Ltd	E27	250V 4A T210°C	EN 60238 (VDE 0616 Teil 1)	VDE40044 560
wire	Zhongshan Weisource Electrical Co., Ltd	H03VV-F 2...3 x 0,5...0,75 mm ² H03VVH2-F 2 x	--	DIN EN 50525-2-11(VDE 0285-525-2-	VDE400418 65



		0,5...0,75 mm ² H05VV-F 2...3 x 0,75...2,5 mm ² H05VVH2-F 2 x 0,75...1,0 mm ²		11):2012-01; EN 50525-2- 11 :2011	
Plug	Guangdong Yincheng Electric Appliance Co.Ltd.	YC-S2.5	AC250V 2.5A IP20	DIN VDE 0620 Teil 101:1992- 05;EN 50075:1990	VDE400252 73
wire	Guangdong Detong Electric Wire & Cable Co., Ltd.	H05V-K 1 x 0,5...1,0 mm ² H07V-K 1 x 1,5...2,5 mm ²	--	DIN EN 50525- 2-31 (VDE 0285-525-2- 31):2012-01; EN 50525-2- 31:2011	VDE400504 75
Wire	Guangdong Detong Electric Wire & Cable Co., Ltd.	H05VV-F 2...3 x 0,75...1,5 mm ² H05VVH2-F 2 x 0,75...1,0 mm ² H03VV-F 2...3 x 0,5...0,75 mm ² H03VVH2-F 2 x 0,5...0,75 mm ²	--	DIN EN 50525- 2-11 (VDE 0285-525-2- 11):2012-01; EN 50525-2- 11:2011	VDE400508 72



ANNEX 2: TEMPERATURE MEASUREMENTS, THERMAL TESTS OF SECTION 12					P		
Type reference			SH-LD-001		—		
Lamp used.....			Tungsten lamp		—		
Lamp control gear used.....			No use		—		
Mounting position of luminaire.....			On table surface		—		
Supply wattage (W).....			100W		—		
Supply voltage (V).....			240V		—		
Supply current (A).....			0.26		—		
Calculated power factor.....			>0.5		—		
Table: measured temperatures corrected for ta = 25 °C:							
- abnormal operating mode					—		
- test 1: rated voltage.....					—		
- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....			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
Power cord		--	31.3	--	90	--	--
Lamp holder		--	52.3	--	210	--	--
Ambient		--	25.0	--	--	--	--

ANNEX 3: SCREW TERMINALS (PART OF THE LUMINAIRE)					N		
(14)	SCREW TERMINALS					N	
(14.2)	Type of terminal.....					—	
Rated current (A).....					—		
(14.3.2.1)	One or more conductors					N	
(14.3.2.2)	Special preparation					N	
(14.3.2.3)	Terminal size					N	
Cross-sectional area (mm ²).....					N		
(14.3.3)	Conductor space (mm).....					N	
(14.4)	Mechanical tests					N	
(14.4.1)	Minimum distance					N	



(14.4.2)	Cannot slip out		N
(14.4.3)	Special preparation		N
(14.4.4)	Nominal diameter of thread (metric ISO thread)		N
	External wiring		N
	No soft metal		N
(14.4.5)	Corrosion		N
(14.4.6)	Nominal diameter of thread (mm).....		N
	Torque (Nm).....		N
(14.4.7)	Between metal surfaces		N
	Lug terminal		N
	Mantle terminal		N
	Pull test; pull (N).....		N
(14.4.8)	Without undue damage		N

	ANNEX 4: SCREWLESS TERMINALS (PART OF THE LUMINAIRE)		N
(15)	SCREWLESS TERMINALS		N
(15.2)	Type of terminal.....		—
	Rated current (A).....		—
(15.3.1)	Material		N
(15.3.2)	Clamping		N
(15.3.3)	Stop		N
(15.3.4)	Unprepared conductors		N
(15.3.5)	Pressure on insulating material		N
(15.3.6)	Clear connection method		N
(15.3.7)	Clamping independently		N
(15.3.8)	Fixed in position		N
(15.3.10)	Conductor size		N
	Type of conductor		N
(15.5.1)	Terminals internal wiring		N
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N
	Insertion force not exceeding 50 N		N
(15.5.2)	Permanent connections: pull-off test (20 N)		N
(15.6)	Electrical tests		N
	Voltage drop (mV) after 1 h (4 samples)		N
	Voltage drop of two inseparable joints		N



	Number of cycles.....										—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....										N
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....										N
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples).....										N
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples).....										N
(15.7)	Terminals external wiring										N
	Terminal size and rating										N
(15.8.1)	Pull test spring-type terminals (4 samples); pull (N)										N
	Pull test pin or tab terminals (4 samples); pull (N)										N
(15.9)	Contact resistance test										N
	Voltage drop (mV) after 1 h										N
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)											
	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)											
	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)											

ANNEX B:

Photo-document

Photo 1 General appearance of the EUT

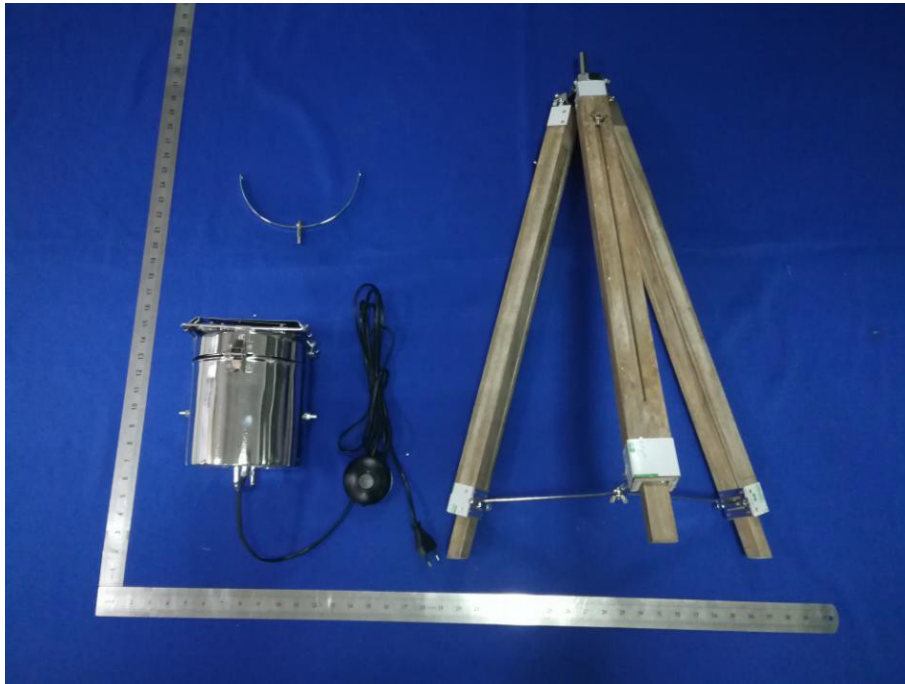


Photo 2 General appearance of the EUT



Photo 3 General appearance of the EUT



Photo 4 General appearance of the EUT

