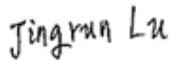
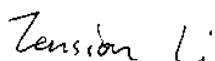


Test Report Number:	LCZS18120129	
Applicant Name:	IT'S ABOUT ROMI	
Applicant Address:	HERENGRACHT 516, 1017CC AMSTERDAM	
Test item:	Fixed lamp	
Model / Type Reference:	See model list on page 3	
Date of Issue:	2019-05-27	
Testing Laboratory:	LCTECH (Zhongshan) Testing Service Co., Ltd 2F., Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China	
Test Specification:	EN 60598-1:2015+A1:2018 EN 60598-2-1:1989	
Test Result:	Passed	
Compiled by:	Reviewed by:	
2019-05-27	Jingrun Lu	2019-05-27 Tension Li
		
<i>Date</i>	<i>Name</i>	<i>Signature</i>
Remark:	N/A	
The duplication of this report or parts of it and its use for advertising purposes is only allowed with permission of the testing laboratory. This report contains the result of the examination of the product sample submitted by the applicant. A general statement concerning the quality of the products from the series manufacture cannot be derived therefore.		

Test item description.....:	Fixed lamp
Trade Mark.....:	N/A
Manufacturer.....:	
Model/Type reference.....:	See model list on page 3
Ratings.....:	220-240V~50/60Hz, Class II, IP20, See model list on page 3
Test item particulars.....:	
Classification of installation and use.....:	Fixed lamp for indoor used only
Supply Connection.....:	See model list on page 3
Possible test case verdicts:	
- test case does not apply to the test object.....: N/A	
- test object does meet the requirement.....: P (Pass)	
- test object does not meet the requirement.....: F (Fail)	
Testing.....:	
Date of receipt of test item.....:	2019-01-11
Date (s) of performance of tests.....:	2019-02-11~2019-05-25

General remarks:
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. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF. Throughout this report a comma (point) is used as the decimal separator. Clause numbers between brackets refer to clauses in EN 60598-1. When determining of test conclusion, measurement uncertainty of test has been considered.

General product information:

1. The product is FIXED LED LUMINAIRES for use indoor or outdoor.
2. All models are same structure, except model name, lampholder and power.

Model list

No.	Model	Input	Lampholder	Power
1.	KL031091	220-240V~50/60Hz	E27	60W
2.	KL031203	220-240V~50/60Hz	E27	60W
3.	KL031214	220-240V~50/60Hz	E14	40W
4.	KL031214C	220-240V~50/60Hz	E14	40W
5.	KL031230	220-240V~50/60Hz	E27	60W
6.	KL031259	220-240V~50/60Hz	E27	40W
7.	KL031260	220-240V~50/60Hz	E27	60W
8.	KL042974	220-240V~50/60Hz	E27	7 X 40W
9.	KL042974A	220-240V~50/60Hz	E27	7 X 40W
10.	KL042980	220-240V~50/60Hz	E27	40W
11.	KL042980B	220-240V~50/60Hz	E27	40W
12.	KL042980C	220-240V~50/60Hz	E27	40W
13.	KL042981	220-240V~50/60Hz	E27	3X40W
14.	KL043195LB	220-240V~50/60Hz	E14	12 X 40W
15.	KL043200	220-240V~50/60Hz	E27	40W
16.	KL043500	220-240V~50/60Hz	E27	75W
17.	KL043559	220-240V~50/60Hz	E27	60W
18.	KL043634A	220-240V~50/60Hz	E27	60W
19.	KL044091	220-240V~50/60Hz	E27	60W
20.	KL044091A	220-240V~50/60Hz	E27	60W
21.	KL044123	220-240V~50/60Hz	E27	60W
22.	KL044123A	220-240V~50/60Hz	E27	60W
23.	KL043459LA	220-240V~50/60Hz	E27	60W
24.	KL043459XL	220-240V~50/60Hz	E27	60W
25.	KL043500B	220-240V~50/60Hz	E27	75W
26.	KL043500C	220-240V~50/60Hz	E27	2X75W
27.	KL045185	220-240V~50/60Hz	E27	25W
28.	KL045332	220-240V~50/60Hz	E27	25W



29.	KL045306	220-240V~50/60Hz	E14	6X25W
Summary of testing: Models KL031091, KL031214, KL031259, KL042974, KL043200, KL043559, KL043634A, KL043500C, KL045306 were selected as representative models for the full test. The models were found to comply with the standard: - EN 60598-1:2015+A1:2018 - EN 60598-2-1:1989				

Copy of marking plate

Marking plate, sticking on the enclosure, other models' label same as below, except model name, lampholder and power.

Model: KL031091
Input voltage: 220-240V~50Hz
Power: E27 1 x Max. 60W



Located on the lamp enclosure

Remark:

1. The height of graphical symbols shall be not less than 5mm;
2. The height of letters and numerals shall be not less than 2mm.

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.2 (0)	GENERAL TEST REQUIREMENTS		—
1.2 (0.3)	More sections applicable	Yes ☐ No ☒ Section/s:	—
1.2 (0.5)	Components	(see Annex 1)	—
1.2 (0.7)	Information for luminaire design in light sources standards		—
1.2 (0.7.2)	Light source safety standard		—
	Luminaire design in the light source safety standard		P

1.4 (2)	CLASSIFICATION OF LUMINAIRES		—
1.4 (2.2)	Type of protection	Class II	—
1.4 (2.3)	Degree of protection	IP20	—
1.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....	Yes ☒ No ☐	—
1.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—

1.5 (3)	MARKING		—
1.5 (3.2)	Mandatory markings		P
	Position of the marking	Located near the enclosure	P
	Format of symbols/text		P
1.5 (3.3)	Additional information		P
	Language of instructions	English	P
1.5 (3.3.1)	Combination luminaires		N/A
1.5 (3.3.2)	Nominal frequency in Hz	50Hz	P
1.5 (3.3.3)	Operating temperature		N/A
1.5 (3.3.5)	Wiring diagram		N/A
1.5 (3.3.6)	Special conditions		N/A
1.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
1.5 (3.3.8)	Limitation for semi-luminaires		N/A
1.5 (3.3.9)	Power factor and supply current		N/A
1.5 (3.3.10)	Suitability for use indoors		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5 (3.3.11)	Luminaires with remote control		N/A
1.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
1.5 (3.3.13)	Specifications of protective shields		N/A
1.5 (3.3.14)	Symbol for nature of supply	~	P
1.5 (3.3.15)	Rated current of socket outlet		N/A
1.5 (3.3.16)	Rough service luminaire		N/A
1.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		P
1.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
1.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
1.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
1.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	Non-user replaceable light sources	N/A
1.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
1.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
1.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
1.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P

1.6 (4)	CONSTRUCTION		—
1.6 (4.2)	Components replaceable without difficulty	Bulb only	P
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	Lampholders		P
1.6 (4.4.1)	Integral lampholder		P
1.6 (4.4.2)	Wiring connection		P

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
1.6 (4.4.4)	Positioning		P
	- pressure test (N)		—
	After test the lampholder comply with relevant standard sheets and show no damage		P
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		P
	- bending test (N)	E14: 1,2Nm, E27: 2,0Nm	—
	After test the lampholder have not moved from its position and show no permanent deformation		P
1.6 (4.4.5)	Peak pulse voltage		N/A
1.6 (4.4.6)	Centre contact		N/A
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
1.6 (4.4.8)	Lamp connectors		N/A
1.6 (4.4.9)	Caps and bases correctly used		N/A
1.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
1.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
1.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
1.6 (4.7)	Terminals and supply connections		P
1.6 (4.7.1)	Contact to metal parts		P
1.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		N/A
1.6 (4.7.3)	Terminals for supply conductors		P
1.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
1.6 (4.7.4)	Terminals other than supply connection		N/A
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
1.6 (4.8)	Switches		P
	- adequate rating		P
	- adequate fixing		P
	- polarized supply		P
	- compliance with IEC 61058-1 for electronic switches		P
1.6 (4.9)	Insulating lining and sleeves		P
1.6 (4.9.1)	Retainment		P
	Method of fixing: Fixing by construction		P
1.6 (4.9.2)	Insulated linings and sleeves:		P
	Resistant to a temperature > 20 °C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C):		N/A
1.6 (4.10)	Double or reinforced insulation		P
1.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		P
	Safe installation fixed luminaires		P
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
1.6 (4.10.2)	Assembly gaps:		P

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- not coincidental		P
	- no straight access with test probe		P
1.6 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
1.6 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
1.6 (4.11)	Electrical connections and current-carrying parts		P
1.6 (4.11.1)	Contact pressure		P
1.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
1.6 (4.11.3)	Screw locking:		NA
	- spring washer		NA
	- rivets		N/A
1.6 (4.11.4)	Material of current-carrying parts	Copper>50%	P
1.6 (4.11.5)	No contact to wood or mounting surface		N/A
1.6 (4.11.6)	Electro-mechanical contact systems	No this parts used	N/A
1.6 (4.12)	Screws and connections (mechanical) and glands		P
1.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:	Screws fixed earthing: 0,5Nm	P
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm)		N/A
	- lampholder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm.....		N/A
1.6 (4.12.5)	Screwed glands; force (Nm)		N/A
1.6 (4.13)	Mechanical strength		P
1.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)		N/A
	- other parts; energy (Nm)	0,35Nm	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
1.6 (4.13.2)	Metal parts have adequate mechanical strength	Apply to enclosure, 30N	P
1.6 (4.13.3)	Straight test finger		N/A
1.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		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
1.6 (4.13.6)	Tumbling barrel		N/A
1.6 (4.14)	Suspensions, fixings and means of adjusting		P
1.6 (4.14.1)	Mechanical load:		P

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	A) four times the weight	1,805kg x 4=7,222kg (for model KL031091) 1,584kg x 4=6,336kg (for model KL031214) 1,220kg x 4=4,88kg (for model KL031259) 5,45kg x 4=21,8kg (for model KL043559) 3,370kg x 4=13,48kg (for model KL043634A). 0,83kg x 4=3,32kg (for model KL043500), 2.21kg x4=8.84kgfor model KL045306),	P
	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
	Fixed luminaire or independent control gear without fixing devices		N/A
1.6 (4.14.2)	Load to flexible cables		P
	Mass (kg) :	0.22KG	—
	Stress in conductors (N/mm ²) :	1,437 N/mm ²	P
	Mass (kg) of semi-luminaire :		N/A
	Bending moment (Nm) of semi-luminaire :		N/A
1.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles..... :		P
	- strands broken..... :		P
	- electric strength test afterwards		P
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
1.6 (4.14.5)	Guide pulleys		N/A
1.6 (4.14.6)	Strain on socket-outlets		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.15)	Flammable materials		P
	- glow-wire test 650°C	See Test Table 1.15 (13.3.2)	P
	- spacing ≥ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
1.6 (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
1.6 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
1.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
1.6 (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
1.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
1.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
1.6 (4.18)	Resistance to corrosion		N/A
1.6 (4.18.1)	- rust-resistance		N/A
1.6 (4.18.2)	- season cracking in copper		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.18.3)	- corrosion of aluminium		N/A
1.6 (4.19)	Ignitors compatible with ballast		N/A
1.6 (4.20)	Rough service vibration		N/A
1.6 (4.21)	Protective shield		N/A
1.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.6 (4.21.3)	No direct path		N/A
1.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 1.15 (13.3.2)	N/A
1.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
1.6 (4.23)	Semi-luminaires comply Class II		N/A
1.6 (4.24)	Photobiological hazards		N/A
1.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
1.6 (4.24.2)	Retinal blue light hazard		N/A
	Class of risk group assessed according to IEC/TR 62778		—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 ...:		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	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/A
1.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
1.6 (4.26)	Short-circuit protection		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
1.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
1.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
1.6 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C):		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
1.6 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
1.6 (4.30)	Luminaires with non-user replaceable light source		N/A
	If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:		N/A
	Minimum two fixing means		N/A
1.6 (4.31)	Insulation between circuits		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	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/A
1.6 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
1.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
1.6 (4.31.3)	Other circuits		N/A

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
1.6 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A

1.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		—
1.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
1.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- 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	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A
1.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 1.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 1.7 (11.2) II	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 1.7 (11.2) II	N/A

1.8 (7)	PROVISION FOR EARTHING		—
1.8 (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
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
1.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
1.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
1.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
1.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
1.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
1.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.9 (14)	SCREW TERMINALS		—
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A
1.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		—
	Separately approved; component list.....:	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 4)	N/A
1.10 (5)	EXTERNAL AND INTERNAL WIRING		—
1.10 (5.2)	Supply connection and external wiring		P
1.10 (5.2.1)	Means of connection	Terminal block	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
1.10 (5.2.2)	Type of cable	See Annex 1	P
	Nominal cross-sectional area (mm ²)	2 x 0,75 mm ²	N/A
	Cables equal to IEC 60227 or IEC 60245	IEC 60227	N/A
1.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	N/A
1.10 (5.2.5)	Type Z not connected to screws		N/A
1.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
1.10 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- material not likely to deteriorate		P
	- tubes or guards made of insulating material		P
1.10 (5.2.9)	Locking of screwed bushings		N/A
1.10 (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
1.10 (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
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
1.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)..... :		P
	- torque test: torque (Nm) :		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- function independent of electrical connection		P
1.10 (5.2.11)	External wiring passing into luminaire		P
1.10 (5.2.12)	Looping-in terminals		N/A
1.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
1.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
1.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
1.10 (5.2.18)	Used plug in accordance with		P
	- IEC 60083		N/A
	- other standard		P
1.10 (5.3)	Internal wiring		P
1.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A)		N/A
	- temperatures (see Annex 2)		N/A
	Green-yellow for earth only		N/A
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Cross-sectional area (mm ²)	See ANNEX 1	P
	Insulation thickness (mm)	>0,5mm	P
	Extra insulation added where necessary		P
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²)	See ANNEX 1	N/A
1.10 (5.3.1.3)	Double or reinforced insulation for class II		P
1.10 (5.3.1.4)	Conductors without insulation		N/A
1.10 (5.3.1.5)	SELV current-carrying parts		N/A
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
1.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		P
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
1.10 (5.3.3)	Insulating bushings:		P
	- suitable fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- cables with protective sheath		P
1.10 (5.3.4)	Joints and junctions effectively insulated		N/A
1.10 (5.3.5)	Strain on internal wiring		N/A
1.10 (5.3.6)	Wire carriers		N/A
1.10 (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
1.10 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A

1.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		—
1.11 (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
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	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
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
1.11 (8.2.3.a)	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		P

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Clause	Requirement + Test	Result - Remark	Verdict

	- glass protective shields not used as supplementary insulation		N/A
1.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
1.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V).....:		N/A
	- no-load voltage (V).....:		N/A
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V)		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
1.11 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.11 (8.2.6)	Covers reliably secured		P
1.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

1.12 (12)	ENDURANCE TEST AND THERMAL TEST	—
1.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 1.13	—
1.12 (12.2)	Selection of lamps and ballasts	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied		—
1.12 (12.3)	Endurance test		P
	a) mounting-position	As normal used	—
	b) test temperature (°C).....	35°C	—
	c) total duration (h)	240h	—
	d) supply voltage (V).....	264V	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A)	--	—
	e) luminaire ceases to operate		—
1.12 (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
1.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
1.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
1.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
1.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un		—
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
1.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions		—

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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
1.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
1.12 (12.7.1)	Luminaire without temperature sensing control		N/A
1.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test.....	See Test Table 1.15 (13.2.1)	N/A
1.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....		—
	- calculated temperature of fixing point/exposed part (°C)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ball-pressure test.....:	See Test Table 1.15 (13.2.1)	N/A
1.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
1.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link	Yes ☐ No ☐	—
	- manual reset cut-out	Yes ☐ No ☐	—
	- auto reset cut-out	Yes ☐ No ☐	—
	- case of abnormal conditions		—
	- highest measured temperature of fixing point/ exposed part (°C):		—
	Ball-pressure test.....:	See Test Table 1.15 (13.2.1)	N/A

1.13 (9)	RESISTANCE TO DUST AND MOISTURE	—
1.13 (-)	If IP > IP 20 the order of tests as specified in clause 1.12	P
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:	P
	- classification according to IP	IP20
	- mounting position during test	As in normal use
	- fixing screws tightened; torque (Nm).....	--
	- tests according to clauses	Clause 9.2.0 & 9.2.5
	- 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 on insulation where it could become a hazard	N/A
	c.1) For luminaires without drain holes – no water entry	N/A
	c.2) For luminaires with drain holes – no hazardous water entry	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		P
	e) no entry into enclosure (IP 3X and IP 4X)	IP20	N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)	IP20	N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
1.13 (9.3)	Humidity test 48 h	25 °C; 93% RH	P

1.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		—
1.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	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
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		P
	- between live parts of different polarity	2MΩ (Limit:1MΩ)	P
	- between live parts and mounting surface	20MΩ (Limit:2MΩ)	P
	- between live parts and metal parts	20MΩ (Limit:2MΩ)	P
	- between live parts of different polarity through action of a switch		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts.....:		N/A
	- Insulation bushings as described in Section 5		N/A
1.14 (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
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts.....:		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		P
	- between live parts of different polarity.....:	1480V	P
	- between live parts and mounting surface	2960V	P
	- between live parts and metal parts	2960V	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.....:		N/A
	- Insulation bushings as described in Section 5		N/A
1.14 (10.3)	Touch current or protective conductor current (mA):	Max. 0,07mA	P



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Clause	Requirement + Test	Result - Remark	Verdict
1.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		—
1.15 (13.2.1)	Ball-pressure test.....:	See Test Table 1.15 (13.2.1)	P
1.15 (13.3.1)	Needle-flame test (10 s).....:	See Test Table 1.15 (13.3.1)	P
1.15 (13.3.2)	Glow-wire test (650°C)	See Test Table 1.15 (13.3.2)	P
1.15 (13.4)	Proof tracking test (IEC 60112)	See Test Table 1.15 (13.4)	N/A

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Clause	Requirement + Test				Result - Remark		Verdict
1.7 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						P
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	>1,5	1,5	11.1B	>2,5	2,5	11.1A
Working voltage (V)					240V ac		—
PTI.....					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					--		—
Supplementary information:							
Distance 2:	B	>1,5	1,5	11.1B	>2,5	2,5	11.1A
Working voltage (V)					240V ac		—
PTI.....					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)					--		—
Supplementary information:							
Distance 3:	--	--	--	11.1B	--	--	11.1A
Working voltage (V)					Max. 60V DC		—
PTI.....					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_p if applicable (kV)							—
Supplementary information:							
Distance 1: The distance between the L and N.							
Distance 2: The distance between the live part and metal enclosure.							
Distance 3: No values are specified for working voltages below 25 V r.m.s. and 60 V d.c. as the test voltage of 500Velectric strength test is considered sufficient.							

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

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Clause	Requirement + Test	Result - Remark	Verdict

1.7 (11.2)		TABLE II: Creepage distances and clearances					N/A	
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:	--	--	--	--	--	--	--	
Working voltage (V)					--	---		
Frequency if applicable (kHz)					--	---		
PTI.....					< 600 ☐	≥ 600 ☐	---	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)					--	---		
Supplementary information:								
Distance 2:	--	--	--	--	--	--	--	
Working voltage (V)					--	---		
Frequency if applicable (kHz)					--	---		
PTI.....					< 600 ☐	≥ 600 ☐	---	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)					--	---		
Supplementary information:								
Distance 3:	--	--	--	--	--	--	--	
Working voltage (V)					--	---		
Frequency if applicable (kHz)					--	---		
PTI.....					< 600 ☐	≥ 600 ☐	---	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)					--	---		
Supplementary information:								

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

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Clause	Requirement + Test	Result - Remark	Verdict

1.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm):		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Terminal bock	See ANNEX 1	125°C	0,7mm	
Lampholder	See ANNEX 1	125°C	0.5 mm	
Supplementary information:				

1.15 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Terminal block	See ANNEX 1	--	No	--	P
Lampholder	See ANNEX 1	--	No	--	P
Supplementary information:					

1.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)					P
Glow wire temperature:				650°C	—	
Object/ Part No./ Material	Manufacturer/ trademark		Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict	
Terminal block	--	--	No	--	P	
Supplementary information:						

1.15 (13.4)	TABLE: Proof tracking test (IEC 60112)					N/A
Test voltage PTI :				175 V		—
Object/ Part No./ Material		Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
--		--	--	--	--	--
Supplementary information:						

ANNEX 1	TABLE: Critical components information				—
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Clause	Requirement + Test	Result - Remark	Verdict

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Terminal block	B	MPM Moulages Plastiques du Midi.	BMA 2215	10A, 250V, T100	EN 60998-1 EN 60998-2-1	VDE 40035410
Alt.	D	Various	Various	10A, 250V, T100	EN 60998-1 EN 60998-2-1	VDE, TUV, etc
Plug	B	Jhi Wei Electric Wire & Cable Co. Ltd.	JW-05	2.5A, 250V AC	EN 50075	VDE 40005490
Alternative	D	Various	Various	2.5A, 250V AC	EN 50075	VDE /TUV. Etc
Power cord	B	Dong Guan Yuan Hui Electric Co., Ltd	H03VVH2-F, H03VV-F	2 x 0,75 mm ²	EN 50525-2-11	VDE 40042368
Alt.	D	Various	Various	2 x 0,75 mm ²	EN 50525-2-11	VDE, TUV, etc
Cord switch	B	Openwise Industrial Ltd.	304	2A, 250V AC	EN 61058-1 EN 61058-2-1	SE/9927-27
Alternative	D	Various	Various	2A, 250V AC	EN 61058-1 EN 61058-2-1	VDE /TUV. Etc
E27 lampholder	D	ZHONG SHAN YI HANG ELECTRIC CO., LTD.	YH266, YH267,	250V, 4A, T210	EN 60238	VDE 40033010
Alternative	D	Various	Various	250V, 4A, T210	EN 60238	VDE, TUV, etc
E14 lampholder	B	Xiaolan Town BaiLe Electrical Appliance Factory	E14-A/1, E14-B/1	250V, 2A, T210	EN 60238	VDE 40032350
Alternative	D	Various	Various	250V, 2A, T210	EN 60238	VDE, TUV, etc
Close-end connector	B	Heavy Power Co., Ltd	CE1, CE2, CE5	600V, 150°C	--	UL E113650
Alternative	D	Various	Various	600V, 150°C	--	VDE, TUV, etc



EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Heat shrinkable tube	B	DongGuan Salipt Co., Ltd	S-901-600	600V, 150°C	--	UL E209436
Alternative	D	Various	Various	600V, 150°C	--	VDE, TUV, etc
Cord switch	B	Openwise Industrial Ltd.	303	AC 250V; 2(x)2A; 10E3; T55	EN 61558-1 EN 61558-2-1	VDE 106396
Alt.	D	Various	Various	AC 250V; 2(x)2A; 10E3; T55	EN 61558-1 EN 61558-2-1	VDE, TUV, etc

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12		—
	Type reference.....:	KL031091	—
	Lamp used	E27 60W	—
	Lamp control gear used	N/A	—
	Mounting position of luminaire	Fixed on the ceiling	—
	Supply wattage (W).....:	63	—
	Supply current (A)	0,267	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—
	- abnormal operating mode.....:	--	—
1.12 (12.4)	- test 1: rated voltage	--	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 60W = 63W	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—

Temperature measurements (°C)

Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Mounting surface	-	28,5	-	90	-	-
Contact point of lampholder	-	117,3	-	210	-	-
Lamp holder lead wire		62,2	-	90	-	-
Rim of lampholder	-	116,6	-	210	-	-
Switch	-	25,8	-	55	-	-
Light surface(0.5m)		28,2		90		

EN 60598-2-1						
Clause	Requirement + Test	Result - Remark	Verdict			
	Type reference.....:	KL031214	—			
	Lamp used	E27 40W	—			
	Lamp control gear used	N/A	—			
	Mounting position of luminaire	Fixed on the ceiling	—			
	Supply wattage (W).....:	42	—			
	Supply current (A)	0,18	—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—			
	- abnormal operating mode.....:	--	—			
1.12 (12.4)	- test 1: rated voltage	--	—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 60W = 63W	—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—			
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—			
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—			
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Mounting surface	-	26,2	-	90	-	-
Contact point of lampholder	-	99,0	-	210	-	-
Lamp holder lead wire		66,2	-	90	-	-
Rim of lampholder	-	134,9	-	210	-	-
Switch	-	25,9	-	55	-	-
Light surface(0.5m)		27,7		90		

EN 60598-2-1						
Clause	Requirement + Test	Result - Remark	Verdict			
	Type reference.....:	KL031259	—			
	Lamp used	E27 40W	—			
	Lamp control gear used	N/A	—			
	Mounting position of luminaire	Fixed on the ceiling	—			
	Supply wattage (W).....:	42	—			
	Supply current (A)	0,182	—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—			
	- abnormal operating mode.....:	--	—			
1.12 (12.4)	- test 1: rated voltage	--	—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 60W = 63W	—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—			
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—			
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—			
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
room temperature	-	25,0	-	90	-	-
Mounting surface	-	25,9	-	90	-	-
Contact point of Lampholder		131,9	-	210	-	-
Lampholder lead wire	-	64,7	-	90	-	-
Rim of Lampholder	-	93,9	-	210	-	-
Light surface(0.5m)		27,0		90		
Lamp handle		34,2		60		
Enclosure		42,9		60		
Switch		25,4		60		
Adjuster		32,5		90		

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Type reference.....:	KL042974	—
	Lamp used	E27 40X7W	—
	Lamp control gear used	N/A	—
	Mounting position of luminaire	Fixed on the ceiling	—
	Supply wattage (W).....:	294	—
	Supply current (A).....:	1,25	—
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—
	- abnormal operating mode.....:	--	—
1.12 (12.4)	- test 1: rated voltage	--	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 40W x4= 294W	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—

Temperature measurements (°C)

Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Mounting surface	-	28,5	-	90	-	-
Contact point of lampholder	-	145,6	-	90	-	-
Rim of lampholder		140,5	-	210	-	-
Terminal block	-	29,4	-	90	-	-
Close-end connector	-	28,4	-	210	-	-
Shrink tube	-	28,5	-	90	-	
Lamp holder lead wire bifurcation point	-	85,3	-	60	-	

EN 60598-2-1						
Clause	Requirement + Test			Result - Remark		Verdict
	Type reference.....:			KL043200		—
	Lamp used			E27 40W		—
	Lamp control gear used			N/A		—
	Mounting position of luminaire			Fixed on the ceiling		—
	Supply wattage (W).....:			42		—
	Supply current (A)			0,182		—
	Temperatures in test 1 - 4 below are corrected for ta (°C)			25		—
	- abnormal operating mode.....:			--		—
1.12 (12.4)	- test 1: rated voltage			--		—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current			1,05 x 40W= 42W		—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:			--		—
	Through wiring or looping-in wiring loaded by a current of A during the test			--		—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:			--		—
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Mounting surface	-	28,8	-	90	-	-
Contact point of lampholder	-	61,5	-	210	-	-
Lamp holder lead wire bifurcation point	-	80,7	-	180	-	-
Rim of lampholder	-	81,0	-	210	-	-
Terminal block	-	30,0	-	100	-	-

EN 60598-2-1						
Clause	Requirement + Test	Result - Remark	Verdict			
	Type reference.....:	KL043559	—			
	Lamp used	E27 60W	—			
	Lamp control gear used	N/A	—			
	Mounting position of luminaire	Fixed on the ceiling	—			
	Supply wattage (W).....:	63	—			
	Supply current (A)	0,270	—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—			
	- abnormal operating mode.....:	--	—			
1.12 (12.4)	- test 1: rated voltage	--	—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 63W= 63W	—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	—			
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—			
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—			
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Mounting surface	-	27,0	-	90	-	-
Contact point of lampholder	-	139,1	-	210	-	-
Lamp holder lead wire bifurcation point	-	65,7	-	180	-	-
Rim of lampholder	-	106,9	-	210	-	-
Terminal block	-	26,1	-	100	-	-
lampshade	-	35,7	-	90	-	-
Light surface(0.5m)	-	29,3	-	60	-	-

EN 60598-2-1						
Clause	Requirement + Test	Result - Remark	Verdict			
	Type reference.....:	KL043500C	—			
	Lamp used	E27 2x75W	—			
	Lamp control gear used	N/A	—			
	Mounting position of luminaire	Fixed on the ceiling	—			
	Supply wattage (W).....:	157.5	—			
	Supply current (A)	0,662	—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—			
	- abnormal operating mode.....:	--	—			
1.12 (12.4)	- test 1: rated voltage	--	—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 63W= 157,5W	—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—			
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—			
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—			
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Room temperature	-	26,0	-	90	-	-
Mounting surface	-	26,5	-	90	-	-
Terminal block	-	26,8	-	55	-	-
Lampholder lead wire	-	86,7	-	90	-	-
Contact point of lampholder	-	159,0	-	210	-	-
Rim of lampholder	-	29,5	-	210	-	-
Lamp shade	-	111,0	-	Ref.	-	-

EN 60598-2-1						
Clause	Requirement + Test			Result - Remark		Verdict
	Type reference.....:	KL043634A			—	
	Lamp used	E27 60W			—	
	Lamp control gear used	N/A			—	
	Mounting position of luminaire	Fixed on the ceiling			—	
	Supply wattage (W).....:	63			—	
	Supply current (A)	0,270			—	
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25			—	
	- abnormal operating mode.....:	--			—	
1.12 (12.4)	- test 1: rated voltage	--			—	
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,05 x 63W= 63W			—	
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--			—	
	Through wiring or looping-in wiring loaded by a current of A during the test	--			—	
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--			—	
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Mounting surface	-	26,6	-	90	-	-
Contact point of lampholder	-	154,7	-	210	-	-
Lamp holder lead wire	-	80,6	-	180	-	-
Rim of lampholder	-	168,2	-	210	-	-
Terminal block	-	27,0	-	100	-	-
Light surface(0.5m)	-	32,3	-	90	-	-

EN 60598-2-1						
Clause	Requirement + Test	Result - Remark	Verdict			
	Type reference.....:	KL043634A	—			
	Lamp used	E27 60W	—			
	Lamp control gear used	N/A	—			
	Mounting position of luminaire	Fixed on the ceiling	—			
	Supply wattage (W).....:	6X1.05X25W=157,5W	—			
	Supply current (A)	0,668	—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	—			
	- abnormal operating mode.....:	--	—			
1.12 (12.4)	- test 1: rated voltage	--	—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	6X1.05X25W=157,5W	—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—			
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—			
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—			
Temperature measurements (°C)						
Part	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Room temperature	-	25,0	-	90	-	-
Mounting surface	-	29,4	-	90	-	-
Terminal block	-	28,8	-	55	-	-
Lampholder lead wire	-	70,6	-	90	-	-
Contact point of lampholder	-	117,7	-	210	-	-
Rim of lampholder	-	142,6	-	210	-	-
Lamp shade	-	57,7	-	Ref.	-	-

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	Screw terminals (part of the luminaire)		—
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal		—
	Rated current (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)		—
(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).....	M	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

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	Screwless terminals (part of the luminaire)		—
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal		—
	Rated current (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)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		
	Voltage drop (mV) after 1 h (4 samples)		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	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

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		
	Terminal size and rating		N/A
15.6.2	Mechanical tests		
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) :		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) :		N/A
(15.6.3)	Electrical tests		
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										N/A
	Voltage drop after 10th alt. 25th cycle										N/A
	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										N/A
	Max. allowed voltage drop (mV).....:										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
	Continued ageing: voltage drop after 10th alt. 25th cycle										N/A
	Max. allowed voltage drop (mV).....:										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)										N/A	
	Continued ageing: voltage drop after 50th alt. 100th cycle										N/A



EN 60598-2-1										
Clause	Requirement + Test					Result - Remark				Verdict
	Max. allowed voltage drop (mV).....:									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
CENELEC COMMON MODIFICATIONS (EN)			N/A
1.5 (3)	MARKING		—
1.5 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package		P
1.6 (4)	CONSTRUCTION		—
1.6 (4.11.6)	Electro-mechanical contact systems		N/A
1.10 (5)	EXTERNAL AND INTERNAL WIRING		—
1.10 (5.2.1)	Connecting leads		N/A
	- without a means for connection to the supply		N/A
	- terminal block specified		N/A
	- relevant information provided		N/A
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		N/A
1.10 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – supply cord		P
1.12 (12)	ENDURANCE TEST AND THERMAL TEST		—
1.12 (12.4.2c)	Thermal test (normal operation) See footnote c to table 12.2 relating to unsleeved fixed wiring		P
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		—
(3.3)	DK: power supply cords of class I luminaires		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, GB: type of plug		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		—



EN 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
(4 & 5)	1. FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings (Arrêté du 30 décembre 2011 portant règlement de sécurité pour la construction des immeubles de grande hauteur et leur protection contre les risques d'incendie et de panique; Section VIII; Article GH 48, Eclairage) Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	GB: Requirements according to United Kingdom Building Regulation		N/A

Annex 6: Photo document



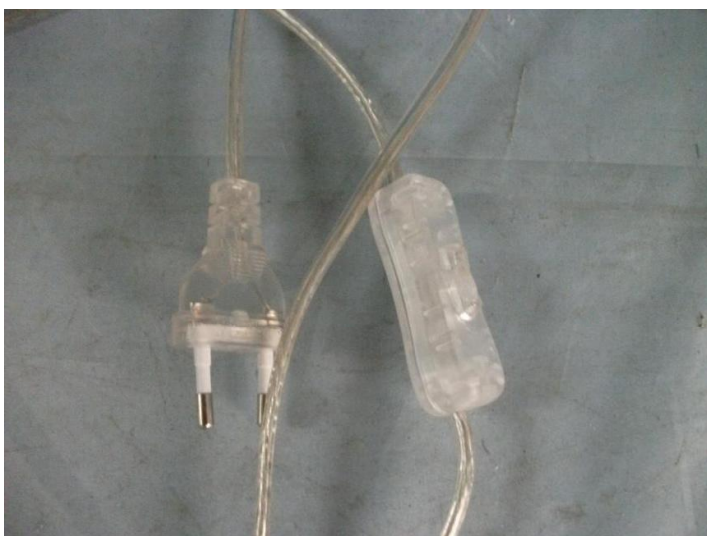
Picture 1: Overview of model KL031091



Picture 2: Lampholder of model KL031091



Picture 3: Lampholder lead wire of model KL031091



Picture 4: Switch of model KL031091



Picture 5: Overview of model KL031203



Picture 6: Overview of model KL031214



Picture 7: Lampholder of model KL031214



Picture 8: Lampholder lead wire of model KL031214



Picture 9: Plug and switch of model KL031214



Picture 10: Overview of model KL031214C



Picture 11: Overview of model KL031230



Picture 12: Overview of model KL031259



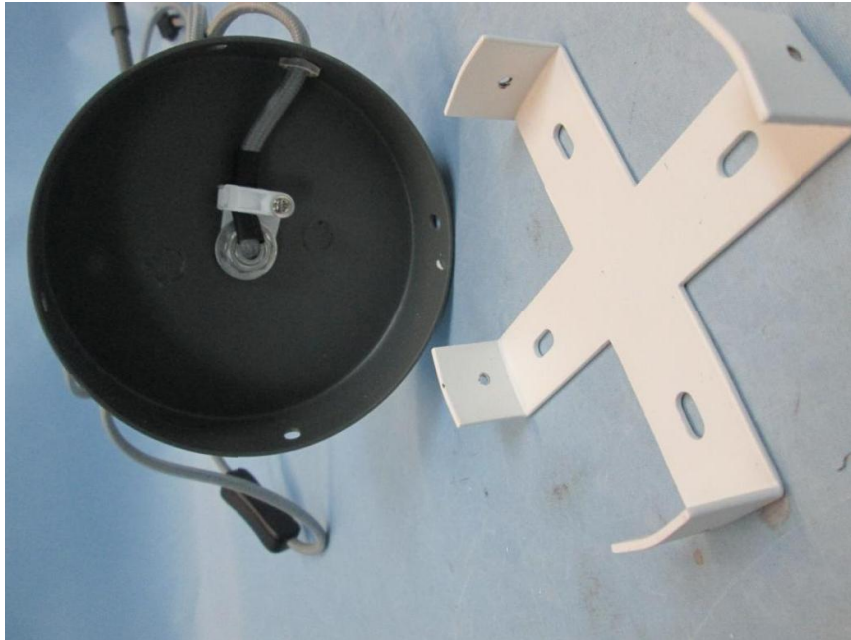
Picture 13: Overview of model KL031259



Picture 14: Lampholder of model KL031259



Picture 15: Lampholder lead wire of model KL031259



Picture 16: Cord anchorage of model KL031259



Picture 17: Overview of model KL031260



Picture 18: Overview of model KL042974



Picture 19: Lampholder of model KL042974



Picture 20: Lampholder of model KL042974



Picture 21: Mounting surface of model KL042974



Picture 22: Terminal block of model KL042974



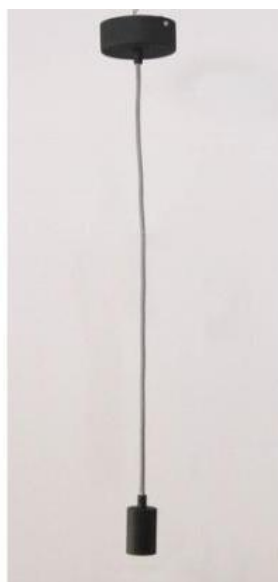
Picture 23: Overview of model KL042974A



Picture 24: Overview of model KL042980



Picture 25: Overview of model KL042980B



Picture 26: Overview of model KL042980C



Picture 27: Overview of model KL042981



Picture 28: Overview of model KL043195LB



Picture 29: Overview of model KL043200



Picture 30: Lampholder of model KL043200



Picture 31:Internal wire of model KL043200



Picture 32:Terminal block of model KL043200



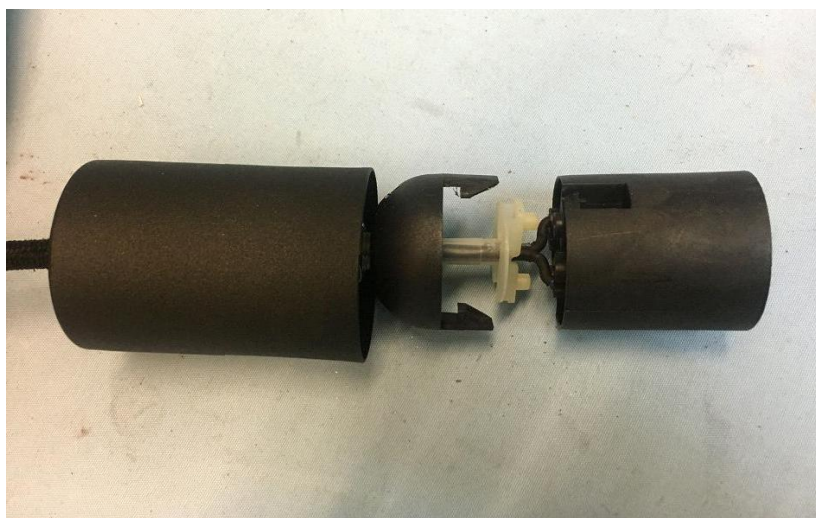
Picture 33: Overview of model KL043500



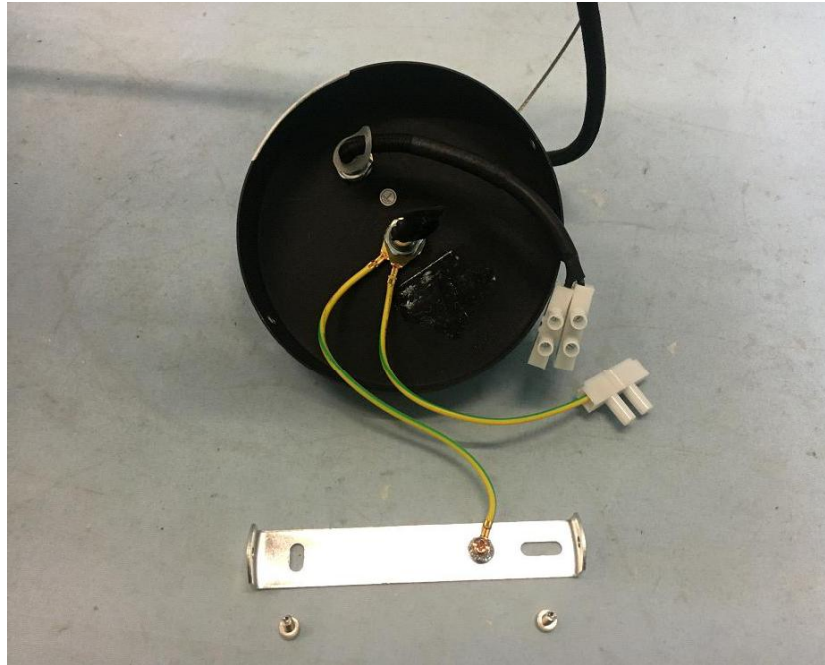
Picture 34: Overview of model KL043559



Picture 35:Lampholder of model KL043559



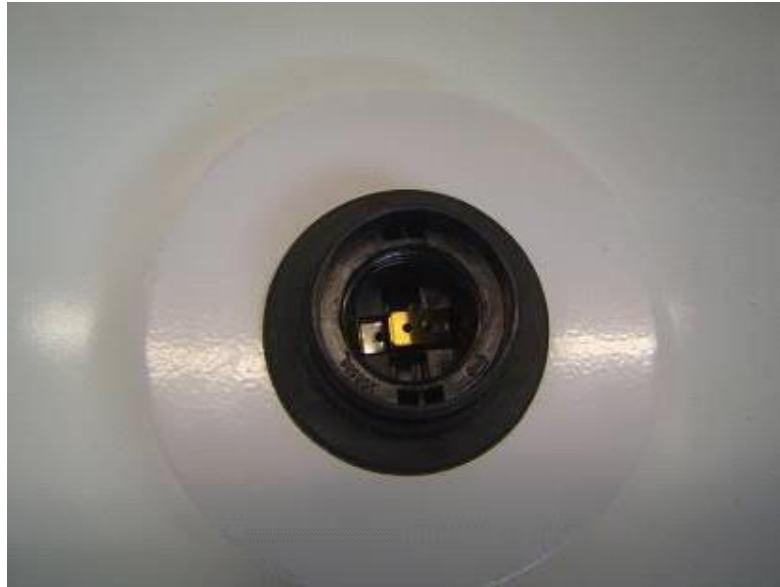
Picture 36:Internal wire of model KL043559



Picture 37: Terminal block and Cord anchorage of model KL043559



Picture 38: Overview of model KL043634A



Picture 39:Lampholder of model KL043634A



Picture 40:Lampholder lead wire of model KL043634A



Picture 41: Terminal block of model KL043634A



Picture 42: Overview of model KL044091



Picture 43: Overview of model KL044091A



Picture 44: Overview of model KL044123



Picture 45: Overview of model KL044123A



Picture 46: Overview of model KL043459LA



Picture 47: Overview of model KL043459XL



Picture 48: Overview of model KL043500B



Picture 49: Overview of model KL043500C



Picture 50: Terminal block of model KL043500C



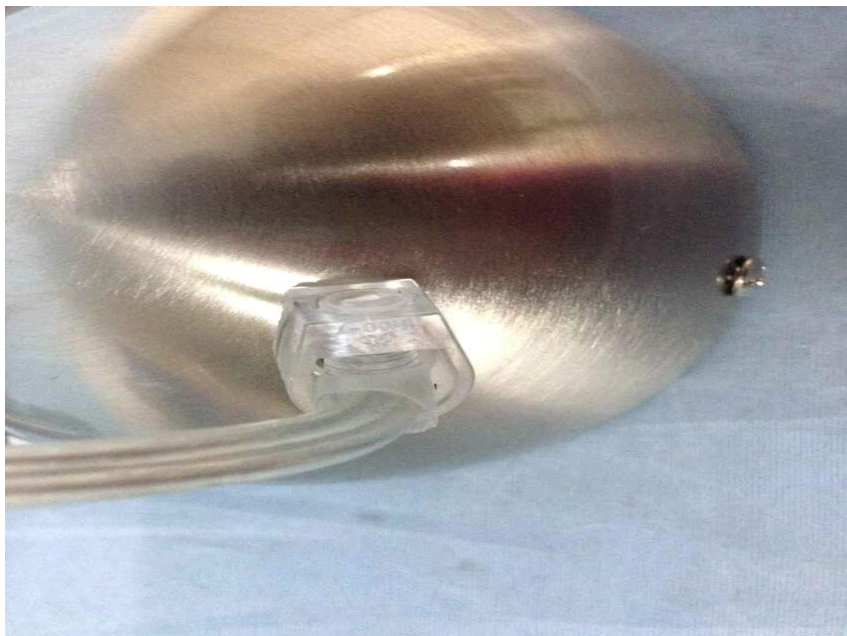
Picture 51: Lampholder of model KL043500C



Picture 52: Lampholder lead wire of model KL043500C



Picture 53: Cord anchorage of model KL043500C



Picture 54: Cord anchorage of model KL043500C



Picture 55: Overview of model of model KL045185



Picture 56: Overview of model of model KL045332



Picture 57: Overview of model of model KL045306



Picture 58: Terminal block of model



Picture 59: Lampholder of model KL045306



Picture 60: Lampholder lead wire of model KL045306

--- End of test report ---