

Ningbo Corelead Optoelectronics Technology Co., Ltd

CE LVD REPORT

Prepared For:	Ningbo Corelead Optoelectronics Technology Co., Ltd No.1, Chending Line Yaojiapu village, Yunlong Town, Yinzhou District Ningbo City, 315137 Zhejiang, P.R.China
Product Name:	LED Mirror
Model :	D3041-Kassel-xyyy, D8001-Brest-xyyy, D3041-Windsor-xyyy, D8001-Munich-xyyy, D3015-Munich-xyyy, D3030-Madrid-xyyy
Prepared By :	BST Testing (Shenzhen) Co.,Ltd No.7, New Era Industrial Zone, Guantian, Bao' an District, Shenzhen, Guangdong, China
Test Date:	Jun. 13, 2024 - Jun. 25, 2024
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Report No.:	XDX50240124062502FAR

**LVD REPORT****EN 60598-2-4****Luminaires****Part 1: General requirements and tests****Part 2: Particular requirements****Section Four – Portable general purpose luminaires**

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	NINGBO CORELEAD OPTOELECTRONICS TECHNOLOGY CO., LTD
Address	No.1, Chending Line Yaojiapu village, Yunlong Town, Yinzhou District Ningbo City, 315137 Zhejiang, P.R.China
Manufacturer	NINGBO CORELEAD OPTOELECTRONICS TECHNOLOGY CO., LTD
Address	No.1, Chending Line Yaojiapu village, Yunlong Town, Yinzhou District Ningbo City, 315137 Zhejiang, P.R.China
Test specification	
Standard.....	EN 60598-2-4:2018 EN IEC 60598-1:2021/A11:2022
Procedure deviation	N/A
Non-standard test method	N/A
Test item description	LED MIRROR
Trademark	N/A
Model and/or type reference	D3041-KASSEL-XXYYY, D8001-BREST-XXYYY, D3041-WINDSOR-XXYYY, D8001-MUNICH-XXYYY, D3015-MUNICH-XXYYY, D3030-MADRID-XXYYY
Rating(s) :	220-240V~, 50/60Hz, 24W, IP44, Class II
Test case verdicts	
Test case does not apply to the test object ... :	N/A
Test item does meet the requirement	P(ass)
Test item does not meet the requirement	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 60598-1 (EN 60598-1)

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

Copy of marking plate and summary of test results:

LED Mirror
Model: D3041-Kassel-xyyy
Rating(s): 220-240V~, 50/60Hz, 24W, IP44



Ningbo Corelead Optoelectronics Technology Co., Ltd
Made In China

Prepared by :

Jade Zhan

Engineer

Reviewer :

Jacky Zhang

Supervisor

Approved & Authorized Signer :



**Model List**

Client name	Model name	Voltage	Wattate	Adapter
831-888V70AK	D3041-Kassel-40160	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-BW
831-888V70GY	D3041-Kassel-40160	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-BW
831-888V90GY	D3041-Kassel-40160	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-EW
831-888V90WT	D3041-Kassel-40160	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-EW
831-888V90AK	D3041-Kassel-40160	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-EW
831-882V90SR	D8001-Brest-40150	220V-240Vac 50/60Hz	17w	XY24LR-120200VH-EW
831-883V70BK	D3041-Windsor-40150	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-BW
831-884V90BK	D8001-Munich-40150	220V-240Vac 50/60Hz	17w	XY24LR-120200VH-EW
831-885V90BK	D3015-Munich-40150	220V-240Vac 50/60Hz	18w	XY24LR-120200VH-EW
831-887V90CR	D3030-Madrid-40150	220V-240Vac 50/60Hz	19w	XY24LR-120200VH-EW
831-886V90CR	D3030-Madrid-40150	220V-240Vac 50/60Hz	19w	XY24LR-120200VH-EW
	D3041-Kassel-xyyy	220V-240Vac 50/60Hz	24w	XY24LR-xxxxxyVH-EW, XY24LR-xxxxxyVH-BW, XY24LR-xxxxxyVH-ET, XY24LR-xxxxxyVH-BT, XY24LQ-xxxxxyVH-EW
	D8001-Brest-xyyy	220V-240Vac 50/60Hz	24w	XY24LR-xxxxxyVH-EW, XY24LR-xxxxxyVH-BW, XY24LR-xxxxxyVH-ET, XY24LR-xxxxxyVH-BT, XY24LQ-xxxxxyVH-EW
	D3041-Windsor-xyyy	220V-240Vac 50/60Hz	24w	XY24LR-xxxxxyVH-EW, XY24LR-xxxxxyVH-BW, XY24LR-xxxxxyVH-ET, XY24LR-xxxxxyVH-BT, XY24LQ-xxxxxyVH-EW
	D8001-Munich-xyyy	220V-240Vac 50/60Hz	24w	XY24LR-xxxxxyVH-EW, XY24LR-xxxxxyVH-BW, XY24LR-xxxxxyVH-ET, XY24LR-xxxxxyVH-BT, XY24LQ-xxxxxyVH-EW
	D3015-Munich-xyyy	220V-240Vac 50/60Hz	24w	XY24LR-xxxxxyVH-EW, XY24LR-xxxxxyVH-BW, XY24LR-xxxxxyVH-ET, XY24LR-xxxxxyVH-BT, XY24LQ-xxxxxyVH-EW
	D3030-Madrid-xyyy	220V-240Vac 50/60Hz	24w	XY24LR-xxxxxyVH-EW, XY24LR-xxxxxyVH-BW, XY24LR-xxxxxyVH-ET, XY24LR-xxxxxyVH-BT, XY24LQ-xxxxxyVH-EW



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.4 (0)	GENERAL TEST REQUIREMENTS		P
4.4 (0.1)	Information for luminaire design considered..... :	Yes ☐ No ☒ Lamp standard:	—
4.4 (0.3)	More sections applicable..... :	Yes ☐ No ☒ Section/s:	—
4.5 (2)	CLASSIFICATION OF LUMINAIRES		
4.5 (2.2)	Type of protection	Class II	
4.5 (2.3)	Degree of protection..... :	IP44	
4.5 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
4.5.1 (-)	Ordinary luminaire	Yes ☒ No ☐	
4.5.2 (-)	Portable luminaire for outdoor use	Yes ☐ No ☒	
4.5.3 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces..... :	Yes ☐ No ☒	—
4.6 (3)	MARKING		P
4.6 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
4.6 (3.3)	Additional information		P
	Language of instructions	In English	P
4.6 (3.3.1)	Combination luminaires	Not combination luminaires	N/A
4.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
4.6 (3.3.3)	Operating temperature		N/A
4.6 (3.3.4)	Symbol or warning notice		N/A
4.6 (3.3.5)	Wiring diagram		N/A
4.6 (3.3.6)	Special conditions		N/A
4.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
4.6 (3.3.8)	Limitation for semi-luminaires	No semi-luminaires	N/A
4.6 (3.3.9)	Power factor and supply current		N/A
4.6 (3.3.10)	Suitability for use indoors		P
4.6 (3.3.11)	Luminaires with remote control	No remote control	N/A
4.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
4.6 (3.3.13)	Specifications of protective shields		N/A



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.6 (3.3.14)	Symbol for nature of supply	~	P
4.6 (3.3.15)	Rated current of socket outlet		N/A
4.6 (3.3.16)	Rough service luminaire		N/A
4.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	P
4.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
4.6 (3.3.19)	Protective conductor current in instructions, if applicable		N/A
4.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
4.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		N/A
	Cautionary symbol		N/A
4.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
4.6 (3.4)	Test with water	15s with water, and then	P
	Test with hexane	15s with petroleum hexane	P
	Legible after test	No legible and curling	P
	Label attached	No easily removable	P
4.6.1 (-)	Luminaire not suitable for outdoor application		P
	Required symbol		N/A
	Information in the instructions		P
4.6.2 (-)	Outdoor use, socket outlet incorporated in the luminaire		N/A
	Maximum current rating marked		N/A
	Position of the marking		N/A
4.7 (4)	CONSTRUCTION		P
4.7 (4.2)	Components replaceable without difficulty		N/A
4.7 (4.3)	Wireways smooth and free from sharp edges		P
4.7 (4.4)	Lampholders		N/A
4.7 (4.4.1)	Integral lampholder		N/A
4.7 (4.4.2)	Wiring connection		N/A
4.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
4.7 (4.4.4)	Positioning		N/A
	- pressure test (N)		—



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
4.7 (4.4.5)	Peak pulse voltage		N/A
4.7 (4.4.6)	Centre contact		N/A
4.7 (4.4.7)	Parts in rough service luminaires resistant to tracking	No rough service luminaire	N/A
4.7 (4.4.8)	Lamp connectors	No lamp connector	N/A
4.7 (4.4.9)	Caps and bases correctly used	No single-capped ELV lamp is used on product	N/A
4.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
4.7 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II	No starter	N/A
	Starter holder class II construction	No starter	N/A
4.7 (4.6)	Terminal blocks		P
	Tails		P
	Unsecured blocks		N/A
4.7 (4.7)	Terminals and supply connections		P
4.7 (4.7.1)	Contact to metal parts		N/A
4.7 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		N/A
4.7 (4.7.3)	Terminals for supply conductors		P
4.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- 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



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.7.4)	Terminals other than supply connection		P
4.7 (4.7.5)	Heat-resistant wiring/sleeves		P
4.7 (4.7.6)	Multi-pole plug	No multi-pole plug	N/A
	- test at 30 N		N/A
4.7 (4.8)	Switches		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
4.7 (4.9)	Insulating lining and sleeves		P
4.7 (4.9.1)	Retainment		P
	Method of fixing.....:		N/A
4.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C).....:		N/A
4.7 (4.10)	Double or reinforced insulation		P
4.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		P
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
4.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
4.7 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
4.7 (4.10.4)	Protective impedance device		N/A



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	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
4.7 (4.11)	Electrical connections and current-carrying parts		P
4.7 (4.11.1)	Contact pressure		P
4.7 (4.11.2)	Screws:		P
	- self-tapping screws		P
	- thread-cutting screws		N/A
4.7 (4.11.3)	Screw locking:		P
	- spring washer		P
	- rivets		N/A
4.7 (4.11.4)	Material of current-carrying parts	Copper	P
4.7 (4.11.5)	No contact to wood or mounting surface		P
4.7 (4.11.6)	Electro-mechanical contact systems		N/A
4.7 (4.12)	Screws and connections (mechanical) and glands		P
4.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		P
	Torque test: torque (Nm); part.....:	Fixed enclosure: 0.5 Nm	P
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
4.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
4.7 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm).....:		N/A
	- lampholder; torque (Nm).....:		N/A
	- push-button switches; torque 0,8 Nm.....:	0,8 Nm	P
4.7 (4.12.5)	Screwed glands; force (Nm).....:	2.5 Nm	P
4.7 (4.13)	Mechanical strength		P
4.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....:	Cover: 0.35 Nm	P
	- other parts; energy (Nm).....:	Enclosure: 0.50 Nm	P



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Clause	Requirement + Test	Result - Remark	Verdict
	1) live parts	The live parts not have become accessible	P
	2) linings		N/A
	3) protection	Sample can be continued to afford protection against	P
	4) covers	0.35 Nm	P
4.7 (4.13.3)	Straight test finger		N/A
4.7 (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
4.7 (4.13.6)	Tumbling barrel		N/A
4.7 (4.14)	Suspensions, fixings and means of adjusting		N/A
4.7 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
4.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
4.7 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken..... :		N/A
	- electric strength test afterwards		N/A



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
4.7 (4.14.5)	Guide pulleys		N/A
4.7 (4.14.6)	Strain on socket-outlets		N/A
4.7 (4.15)	Flammable materials		P
	- glow-wire test 650°C.....:	See Test Table 4.15 (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
4.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
4.7 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear.....:	(compliance with Section 12)	N/A
4.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
4.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
4.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
4.7 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
4.7 (4.18)	Resistance to corrosion		P
4.7 (4.18.1)	- rust-resistance		P
4.7 (4.18.2)	- season cracking in copper		P
4.7 (4.18.3)	- corrosion of aluminium		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.7 (4.19)	Igniters compatible with ballast		N/A
4.7 (4.20)	Rough service vibration		N/A
4.7 (4.21)	Protective shield		N/A
4.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
4.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
4.7 (4.21.3)	No direct path		N/A
4.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 4.15 (13.3.2)	N/A
4.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
4.7 (4.23)	Semi-luminaires comply Class II		N/A
4.7 (4.24)	Photobiological hazards		P
4.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
4.7 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778		—
	Luminaires with E_{thr} :		P
	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		P
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778	RG1	P
	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
4.7 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
4.7 (4.26)	Short-circuit protection		N/A
4.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
4.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Test sample not exceed values of Table 12.1 and 12.2		N/A
4.7 (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
4.7 (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 ($^{\circ}\text{C}$) :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
4.7 (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
4.7 (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
4.7 (4.31)	Insulation between circuits		N/A
	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
4.7 (4.31.1)	SELV circuits		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	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
4.7 (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
4.7 (4.31.3)	Other circuits		N/A
	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



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
4.7 (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
4.7.1 (-)	Insulation not damaged when placing on support		P
4.7.2 (-)	Wiring fixed, to avoid rubbing		P
4.7.3 (-)	Luminaire not overturn at angle 6°		P
	Outdoor use luminaire not overturn at an angle 15°	15° No rollover	P
4.7.4 (-)	Candlestick luminaires with E5 or E10 lampholders provided with a switch		N/A
	Switch part of the luminaire or within 300 mm of the luminaire if with cord		N/A
4.7.5 (-)	Voltage not exceed 25 V for E5 lampholders		N/A
	E10 lampholder voltage not exceed:		—
	60 V for series connection) or		N/A
	250 V for parallel connections		N/A
	Maximum rated wattage not exceed 100 W		N/A
4.7.6 (-)	Portable luminaires for outdoor use tails not provided		N/A
4.7.7 (-)	Portable luminaires for outdoor use, cable entries		N/A
4.7.8 (-)	Portable luminaires for outdoor use, socket-outlet degree of protection at least IPX4.		N/A
	Degree of protection maintained with or without a plug inserted into the socket-outlet.		N/A
	Class II luminaires, mains socket-outlets, connection only to Class II luminaires.		N/A
	Class I luminaires, mains socket-outlets, connection only to Class I luminaires.		N/A
4.7.9 (-)	Portable luminaires for outdoor use, lampholders and plugs are of material resistant to tracking	Indoor use	P
	Compliance to clause 13.4		N/A
4.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
4.8 (11.2)	Creepage distances and clearances.....:	See Table 4.7 (11.2)	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	—

4.9 (7)	PROVISION FOR EARTHING		N/A
4.9 (7.2.1 + 7.2.3)	Accessible metal parts	Class II luminaire	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
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
4.9 (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
4.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
4.9 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
4.9 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
4.9 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
4.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
4.9 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
4.10 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		N/A
	Separately approved; component list.....:	(see Annex 1)	N/A
	Part of the luminaire.....:	(see Annex 4)	N/A
4.11 (5)	EXTERNAL AND INTERNAL WIRING		P
4.11 (5.2)	Supply connection and external wiring		P
4.11 (5.2.1)	Means of connection.....:	Supply cord	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
4.11 (5.2.2)	Type of cable.....:	see Annex 1	P
	Nominal cross-sectional area (mm ²).....:	see Annex 1	P
	Cables equal to IEC 60227 or IEC 60245	see Annex 1	P
4.11 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
4.11 (5.2.5)	Type Z not connected to screws		N/A
4.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
4.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
4.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
4.11 (5.2.9)	Locking of screwed bushings		N/A
4.11 (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
4.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
4.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y	P
4.11 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N)..... :	For the Luminaire Cord anchorage: 60N	P
	- torque test: torque (Nm)..... :	for the Luminaire Cord anchorage: 0.15Nm	P
	- displacement ≤ 2 mm	for the Luminaire Cord anchorage: 1.1mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
4.11 (5.2.11)	External wiring passing into luminaire		P
4.11 (5.2.12)	Looping-in terminals		N/A
4.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
4.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
4.11 (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
4.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
4.11 (5.3)	Internal wiring		P
4.11 (5.3.1)	Internal wiring of suitable size and type	see Annex 1	P
	Through wiring		P
	- not delivered/ mounting instruction		P
	- factory assembled		P
	- socket outlet loaded (A)..... :		N/A
	- temperatures..... :	(see Annex 2)	P
	Green- yellow for earth only		N/A
4.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm ²)..... :		N/A
	Insulation thickness		N/A
	Extra insulation added where necessary		N/A
4.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Adequate cross-sectional area and insulation thickness		N/A
4.11 (5.3.1.3)	Double or reinforced insulation for class II		P
4.11 (5.3.1.4)	Conductors without insulation		N/A
4.11 (5.3.1.5)	SELV current-carrying parts		N/A
4.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
4.11 (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
4.11 (5.3.3)	Insulating bushings:		P
	- suitable fixed		P



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Clause	Requirement + Test	Result - Remark	Verdict
	- material in bushings		P
	- material not likely to deteriorate		P
	- cables with protective sheath		P
4.11 (5.3.4)	Joints and junctions effectively insulated		N/A
4.11 (5.3.5)	Strain on internal wiring		N/A
4.11 (5.3.6)	Wire carriers		N/A
4.11 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
4.11.1 (-)	Indoor use luminaire The requirement of one part of cord anchorage to be fixed to the luminaire not applied for LED Mirrors of glass or ceramic		—
4.11.2 (-)	Class I and class II indoor use Luminaire with a mass less than 1 kg the current $\leq 2,5$ A and cable ≤ 2 m and conductor $\geq 0,5$ mm ²	Class II indoor use	P
4.11.3 (-)	Portable luminaire for outdoor use delivered without a flexible cable or cord and a plug	Indoor use	P
	Terminals, a cord anchorage and an inlet opening for the proper connection of the flexible cable or cord.		N/A
4.11.4 (-)	Portable luminaires for outdoor use Insulation class I and class II, non-detachable flexible cables or cords at least type 245 IEC 57.	Indoor use	P
4.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
4.12 (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 starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		P
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		P



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Clause	Requirement + Test	Result - Remark	Verdict
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
4.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		P
4.12 (8.2.3.a)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement	Class II luminaire	P
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		P
4.12 (8.2.3.b)	BC lampholder of metal in class I luminaires is earthed		N/A
4.12 (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
4.12 (8.2.4)	Portable luminaire have protection independent of supporting surface		P
4.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
4.12 (8.2.6)	Covers reliably secured		N/A
4.12 (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



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Clause	Requirement + Test	Result - Remark	Verdict
	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
4.12.1 (-)	Class I luminaire with bayonet lampholder:		N/A
	1) cap not accessible with test finger		N/A
	2) metal lampholder is earthed		N/A
4.13 (12)	ENDURANCE TEST AND THERMAL TEST		P
4.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) specified in 4.13		—
4.13 (12.3)	Endurance test:		P
	- mounting-position.....:	As in normal use	—
	- test temperature ($^{\circ}$ C).....:	35 $^{\circ}$ C	—
	- total duration (h).....:	240h	—
	- supply voltage: Un factor; calculated voltage (V).....:	1.1 x 240V=264V	—
	- lamp used.....:	LED	—
4.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
4.13 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
4.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
4.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
4.13 (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 ($^{\circ}$ C): at 1,1 Un		—
	- measured mounting surface temperature ($^{\circ}$ C) at 1,1 Un.....:		N/A
	- calculated mounting surface temperature ($^{\circ}$ C)		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	- track-mounted luminaires		N/A
4.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions.....:		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C).....:		N/A
	- track-mounted luminaires		N/A
4.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
4.13 (12.7.1)	Luminaire without temperature sensing control		N/A
4.13 (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 Table 4.15 (13.2.1)	N/A
4.13 (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.....:		—



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Clause	Requirement + Test	Result - Remark	Verdict
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test.....:	See Table 4.15 (13.2.1)	N/A
4.13 (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
4.13 (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 Table 4.15 (13.2.1)	N/A
4.13 (-)	Indoor use luminaire, Test overturned position (overturns < 15°)		P
4.14 (9)	RESISTANCE TO DUST AND MOISTURE		P
4.14 (-)	If IP > IP 20 the order of tests as specified in clause 4.12		N/A
4.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP.....:	IP44	—
	- mounting position during test.....:	As normal use	—
	- fixing screws tightened; torque (Nm).....:	0.5X2/3 Nm	—
	- tests according to clauses.....:	Cl.9.2.0 and 9.2.5	P
	- 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	No water entry	P
	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)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		P
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		P
	g) no damage of protective shield or glass envelope		N/A
4.14 (9.3)	Humidity test 48 h	25 °C, 95% R.H.	P
4-14 (-)	Portable luminaire for outdoor use tested in the most unfavourable of the overturned positions likely to occur		
4.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
4.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø	covered by metal foil	—
	Insulation resistance (MΩ).....	Refer to below detail	—
	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.....	>100 MΩ	P
	- between live parts and mounting surface.....	>100 MΩ	P
	- between live parts and metal parts.....	>100 MΩ	P
	- between live parts of different polarity through action of a switch.....		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts.....	>100 MΩ	P
	- Insulation bushings as described in Section 5		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.15 (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.....:	2960V	P
	- Insulation bushings as described in Section 5		N/A
4.15 (10.3)	Touch current or protective conductor current (mA):	0.108mA	P
4.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
4.16 (13.2.1)	Ball-pressure test.....:	See Test Table 4.15 (13.2.1)	P
4.16 (13.3.1)	Needle-flame test (10 s).....:	See Test Table 4.15 (13.3.1)	P
4.16 (13.3.2)	Glow- wire test (650°C).....:	See Test Table 4.15 (13.3.2)	P
4.16 (13.4)	Proof tracking test (IEC 60112).....:	See Test Table 4.15 (13.4)	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
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4.7 (11.2)	TABLE: Clearance and creepage distance measurements						P
Class of luminaire..... :	Class I ☐ Class II ☒ Class III ☐						—
Impulse withstand category..... :	Category II ☒ Category II ☐						—
Clearance (cl) and creepage distance (cr) at/of/between:	Insulation type	U peak (V)	U r.m.s. (V)	Required cl (mm)	Measured cl (mm)	Required cr (mm)	Measured cr (mm)
Current-carrying parts of different polarity	B	340	240	1.5	>1.5	2.5	>2.5
Current-carrying parts and accessible parts	S	340	240	3.0	>3.0	5.0	>5.0
Current-carrying parts and outer accessible surface of insulating parts	S	340	240	3.0	>3.0	5.0	>5.0
Parts becoming live due to breakdown of basic insulation and metal parts	N/A						
Outer surface of cable where it is clamped and metal parts	B	340	240	1.5	>1.5	2.5	>2.5
Current-carrying parts and supporting surface	S	340	240	3.0	>3.0	5.0	>5.0
Supplementary information: B – Basic; S – Supplementary; R – Reinforced							

4.15a (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm):		≤2mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Connector	see Annex 1	125	0.7	
Terminal block	see Annex 1	125	0.8	
Supplementary information:				



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Clause	Requirement + Test			Result - Remark	Verdict
4.15b (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 black	See ANNEX 1	30	No	0	Pass
Connector	See ANNEX 1	30	No	0	Pass
Supplementary information: N/A					

4.15c (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
Connector	see Annex 1		30s	No	0s
Terminal black	see Annex 1		30s	No	0s
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No)..... :					
Supplementary information:					

4.15d (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: Components information				P
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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Supply cord (contain input and demist cord)	B	Zhejiang Jintong Nuclear Cable Co.,Ltd.	H03VVH2-F, H03VV-F	2x0,75mm2	DIN EN 50525-2-11	VDE 40013419



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Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	Zhejiang Jintong Nuclear Cable Co., Ltd.	H05VVH2-F, H05VV-F	2x0,75...1,0 mm ²	DIN EN 50525-2-11	VDE 40013419
Alternative	D	Yuyao Chunjiang Electrical Appliances Co., Ltd.	H03VVH2-F	2x0,75mm ²	DIN EN 50525-2-11	VDE 40006554
Alternative	D	Yuyao Chunjiang Electrical Appliances Co., Ltd.	H05VVH2-F, H05VV-F	2x0,75...1,0 mm ²	DIN EN 50525-2-11	VDE 40006554
Alternative	D	Ningbo Liansheng Wire & Cable Co., Ltd.	H03VVH2-F, H03VV-F	2x0,75mm ²	DIN EN 50525-2-11	VDE 40022054
Alternative	D	Ningbo Liansheng Wire & Cable Co., Ltd.	H05VVH2-F, H05VV-F	2x0,75...1,0 mm ²	DIN EN 50525-2-11	VDE 40022054
Alternative	D	Ningbo Jintao Electrical Co., Ltd.	H03VVH2-F, H03VV-F	2x0,75mm ²	DIN EN 50525-2-11	VDE 40024517
Alternative	D	Ningbo Jintao Electrical Co., Ltd.	H05VVH2-F, H05VV-F	2x0.75...1,0 mm ²	DIN EN 50525-2-11	VDE 40024517
Alternative	D	Yuyao Gangda Electric Co., Ltd.	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525-2-11	VDE 40022724
Alternative	D	Yuyao Gangda Electric Co., Ltd.	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525-2-11	VDE 40022724
Alternative	D	Ningbo Youpu Electrical Co., Ltd.	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525-2-11	VDE 40053716
Alternative	D	Ningbo Youpu Electrical Co., Ltd.	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525-2-11	VDE 40053716
Alternative	D	SHENZHEN CHAOJIE ELECTRONICS CO., LTD	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525-2-11	VDE 40047214
Alternative	D	SHENZHEN CHAOJIE ELECTRONICS CO., LTD	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525-2-11	VDE 40047214
Alternative	D	Zhongshan Henglan Boyi Electrical Appliance Factory	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525-2-11	VDE 40036714
Alternative	D	Zhongshan Henglan Boyi Electrical Appliance Factory	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525-2-11	VDE 40036714



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	NINGBO KEDA ELECTRIC WIRE CO.,LTD	H03VVH2-F	2x0.75mm ²	DIN EN 50525- 2-11	VDE 40053647
Alternative	D	NINGBO KEDA ELECTRIC WIRE CO.,LTD	H05VVH2-F	2x0.75...1.0 mm ²	DIN EN 50525- 2-11	VDE 40053647
Alternative	D	Ningbo A-Line Cable and Wire Co., Ltd.	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525- 2-11	VDE 40035199
Alternative	D	Ningbo A-Line Cable and Wire Co., Ltd.	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525- 2-11	VDE 40035199
Alternative	D	Dong Guan Sheng Pai Electric Wire & Cable Co Ltd	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525- 2-11	VDE 40042278
Alternative	D	Dong Guan Sheng Pai Electric Wire & Cable Co Ltd	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525- 2-11	VDE 40042278
Alternative	D	Dongguan Wenchang Electronic Co., Ltd.	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525- 2-11	VDE 40042054
Alternative	D	Dongguan Wenchang Electronic Co., Ltd.	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525- 2-11	VDE 40042054
Alternative	D	Ningbo JinTing Nuclear Cable Co., Ltd	H03VVH2-F, H03VV-F	2x0.75mm ²	DIN EN 50525- 2-11	VDE 40033767
Alternative	D	Ningbo JinTing Nuclear Cable Co., Ltd	H05VVH2-F, H05VV-F	2x0.75...1.0 mm ²	DIN EN 50525- 2-11	VDE 40033767
Alternative	D	Ningbo Qiaopu Electric Co., Ltd.	H03VVH2-F, H03VV-F	2x0.75mm ²	EN 50525-2-11	TUV R 50279801
Internal wire	C	DONGGUAN WENCHANG ELECTRONIC CO LTD	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E214500
Alternative	D	Dongguan TRIUMPH Cable Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E249743



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	Shenzhen XINLIAN WIRE& Cable Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E502584
Alternative	D	Guangdong Haerkn New Energy Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E300956
Alternative	D	Dongguan Fengjin Electronics Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E510480
Alternative	D	Dongguan Fengjin Electronics Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E510480
Alternative	D	Ningbo Youpu Electric Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E515632
Alternative	D	Ningbo Youpu Electric Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E510480
Alternative	D	Shenzhen BOSITAI Computer Accessories Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E341894
Alternative	D	Shenzhen BOSITAI Computer Accessories Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E341894
Alternative	D	Dongguan Zhongzheng wire & cable tech Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E336285
Alternative	D	Dongguan Zhongzheng wire & cable tech Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E336285



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	Ningbo Keda Electric Wire Co., Ltd	1007,1569	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E520510
Alternative	D	Ningbo Keda Electric Wire Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E520510
Alternative	D	YUEQING BOYUANELECTRON ICWIRE & CABLE Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E203561
Alternative	D	YUEQING BOYUANELECTRON ICWIRE & CABLE Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E203561
Alternative	D	DONGGUAN ZIQIANG Cable Co., Ltd	1007	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E350945
Alternative	D	DONGGUAN ZIQIANG Cable Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E350945
Alternative	D	Suzhou Dianhang Electronics Co., Ltd	1007,1061	300V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E354173
Alternative	D	Suzhou Dianhang Electronics Co., Ltd	1015	600V, 80°C, 24AWG, 26AWG or 28AWG	EN 61347-1 EN 61347-2- 13	Tested with appliance UL E354173
Output signal wire	C	DONGGUAN WENCHANG ELECTRONIC CO LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E214500



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	DONGGUAN TRIUMPHCABLE CO LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E249743
Alternative	D	SHENZHEN XINLIAN WIRE&CABLE CO.,LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E502584
Alternative	D	GUANGDONG HAERKN NEW ENERGY CO LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E300956
Alternative	D	DONGGUAN FENGJIN ELECTRONICS CO LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E510480
Alternative	D	NINGBO YOUPU ELECTRICAL CO LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E515632
Alternative	D	SHENZHEN BOSITAI COMPUTER ACCESSORY CO LTD	2468, 2464,2725	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E341894
Alternative	D	DONGGUAN ZHONGZHENG WIRE & CABLE TECH CO LTD	2468, 2464, 2725	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E336285
Alternative	D	YUEQING BOYUAN ELECTRONIC WIRE & CABLE CO LTD	2468, 2464,2725	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E203561
Alternative	D	DONGGUAN ZIQIANG CABLE CO LTD	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E350945



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	Suzhou Dian Hang Electronic Co Ltd	2468, 2464	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E354173
Alternative	D	Zhongshan Henglan Boyi Electrical Appliance Factory	2464, 2468, 2725, 2661	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E494675
Alternative	D	Zhongshan Henglan Boyi Electrical Appliance Factory	2733	600V, 105°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E494675
Output wire (other)	D	DONGGUAN WENCHANG ELECTRONIC CO LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E214500
Alternative	D	DONGGUAN TRIUMPHCABLE CO LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E249743
Alternative	D	SHENZHEN XINLIAN WIRE&CABLE CO.,LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E502584
Alternative	D	GUANGDONG HAERKN NEW ENERGY CO LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E300956
Alternative	D	DONGGUAN FENGJIN ELECTRONICS CO LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E510480
Alternative	D	NINGBO YOUPU ELECTRICAL CO LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E515632
Alternative	D	SHENZHEN BOSITAI COMPUTER ACCESSORY CO LTD	2468, 2464,2725	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E341894
Alternative	D	DONGGUAN ZHONGZHENG WIRE & CABLE TECH CO LTD	2468, 2464, 2725	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E336285



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	D	YUEQING BOYUAN ELECTRONIC WIRE & CABLE CO LTD	2468, 2464,2725	300V, 80°C, 22AWG, 24AWG or 26AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E203561
Alternative	D	DONGGUAN ZIQIANG CABLE CO LTD	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E350945
Alternative	D	Suzhou Dian Hang Electronic Co Ltd	2468, 2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E354173
Alternative	D	Zhongshan Henglan Boyi Electrical Appliance Factory	2464, 2468, 2725, 2661	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E494675
Alternative	D	Zhongshan Henglan Boyi Electrical Appliance Factory	2733	600V, 105°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E494675
Alternative	D	XINYA ELECTRONIC CO LTD	2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E170689
Alternative	D	GUANGDONG TIANHONG CABLES CO LTD	2464	300V, 80°C, 22AWG or 24AWG	EN 60598-1 EN 60598-2-1	Tested with appliance UL E337280
Alternative	D	GUANGZHOU RMEECO WATERPROOF AND APPLIANCES STOCK CO.,LTD	RMEECO A-02-18	300V, 2x0.3...0.5m m ² or 3x0.3...0.5m m ²	EN 60598-1 EN 60598-2-1	Tested with appliance
Alternative	D	GUANGZHOU PANYU YONGTAI DIANLANCHANG	RMEECO A-02-18	300V, 2x0.3...0.5m m ² or 3x0.3...0.5m m ²	EN 60598-1 EN 60598-2-1	Tested with appliance
Alternative	D	Yuyao Xien Electronic Factory	XIEN G-02, M-12, M-18, M-20	300V, 2x0.3...0.5m m ² or 3x0.3...0.5m m ²	EN 60598-1 EN 60598-2-1	Tested with appliance



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	C	Ningbo Jintao Dianzi Youxian Gongs	XIEN G-02, M-12, M-18, M-20	300V, 2x0.3...0.5m m ² or 3x0.3...0.5m m ²	EN 60598-1 EN 60598-2-1	Tested with appliance
Alternative	D	NingboYijia Electronic CO.,LTD	XIEN G-02, M-12, M- 18,M-20	300V, 2x0.3...0.5m m ² or 3x0.3...0.5m m ²	EN 60598-1 EN 60598-2-1	Tested with appliance
Terminal black	B	Jiang Men Krealux Electrical	T06S, T04S	450V, 0.5...0.75mm ² , 110°C	EN 60998-1 EN 60998- 2-1	VDE 40023124
Alternative	D	Openwise Industrial Ltd.	230(Brass), 230 WP, 230 TH, 230 WP TH, 230(Steel), 230 S WP, E230, E230 WP, 104, 104(PP)	450V, 0.5...0.75mm ² , 110°C	EN 60998-1 EN 60998- 2-1	VDE 40014728
Alternative	D	Foshan Shunde Jinjin Electrical Co. Ltd.,	KZ8-104 , KZ8-204, KZ8-230, KZ8-PA7, KZ8-PA8, KZ8-106, KZ8-206, KZ8-500, KZ8-502, KZ8-PA9, KZ8-PA10	450V, 0.5...0.75mm ² , 110°C	EN 60998-1 EN 60998- 2-1	VDE 40018824
Lamp cover	C	NingBo HAODI Plastic Industry Co., Ltd.	PC	---	EN 60598-1 EN 60598-2-1	Tested with appliance
Alternative	D	Yuyao qingfeng plastic products factory	PC	---	EN 60598-1 EN 60598-2-1	Tested with appliance
Alternative	D	Shanghai haozhe precision machinery co., LTD	PC	---	EN 60598-1 EN 60598-2-1	Tested with appliance
Heat-shrinkable tube	C	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	125°C	EN 60598-1 EN 60598-2-1	Tested with appliance UL E203950



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity1)
Alternative	C	SHENZHEN WOLIDA TRADING CO LTD	RSFR-H	125°C	EN 60598-1 EN 60598-2-1	Tested with appliance UL E329530
LED	C	NINGBO JINGFENG PHOTOELECTRIC TECHNONGY CO.,LTD	2835	Vf: 2.8-3.4V, If: 60mA, Ra>80 2700K- 7000K	IEC/TR 62778 EN 62471	Tested with appliance
Alternative	C	Ningbo Weizhi Optoelectronics Technology Co., Ltd	2835	Vf: 2.8-3.4V, If: 150mA, Ra>80 2700K- 7000K	IEC/TR 62778 EN 62471	Tested with appliance
Alternative	C	NINGBO JINGFENG PHOTOELECTRIC TECHNONGY CO.,LTD	3014	Vf: 2.8-3.4V, If: 60mA, Ra>80 2700K- 7000K	IEC/TR 62778 EN 62471	Tested with appliance
Alternative	C	Ningbo Alite Electronic Technology Co., LTD	4222	Vf: 2.8-3.4V, If: 60mA, Ra>80 2700K- 7000K	IEC/TR 62778 EN 62471	Tested with appliance
Alternative	C	NINGBO JINGFENG PHOTOELECTRIC TECHNONGY CO.,LTD	4014	Vf: 2.8-3.4V, If: 60mA, Ra>80 2700K- 7000K	IEC/TR 62778 EN 62471	Tested with appliance
Heating film	B	Ningbo Best Optics- Electrical Technology Co., Ltd.	BAabbcc-Hdd (a:C,Z,Y,S,T,B or X; bb:03 to100; cc:03 to100 dd:05 to 100)	230V, 50- 60Hz, IP65	EN 60335-1	CE (SGS) LVDNBES21 0600294701 HSC
Terminal block	B	DONGGUAN CHANGHE ELECTRONICS CO.LTD	CA350-04-500	AC 250V, 10A, 2.5- 4.0mm2,T11 0	EN 60998-2-1 EN 60998-1	VDE 40021481
Alternative	D	XIAMEN GHGM INDUSTRIAL TRADE Co., LTD	JAAV500	AC 300V, 2.5mm2,T10 5	EN 60998-2-1 EN 60998-1	VDE 40049876



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	Degson Electronics Co., Ltd	DG126-5.0	AC 250V, 2.5mm ² , T110	EN 60998-2-1 EN 60998-1	VDE 40024856
Alternative	D	CIXI KAIFENG ELECTRONIC CO.LED	KF126	10A/250V	EN60998-1 EN60998-2-1	VDE 40041233
Alternative	D	Degson Electronics Co., Ltd	DG126-5.0	10A/250V	EN 60998-2-1 EN 60998-1	VDE 40024856
Connector	C	ZHE JIANG DELI CONNECTOR CO.LTD	PH	V-0, 85°C, 2A	EN61347-1 EN61347-2-3	Tested with Appliance UL E217379
Alternative	D	ZHE JIANG DELI CONNECTOR CO.LTD	TJC3	V-0, 85°C, 2A	EN61347-1 EN61347-2-3	Tested with Appliance UL E217379
Alternative	D	ZHE JIANG DELI CONNECTOR CO.LTD	TJC3	3A	EN61347-1 EN61347-2-3	E217379+Tested with appliance
Alternative	D	ZHEJIANG HONGXING ELECTRICAL CO.LTD	HX2000X-YYY Wafer	V-0, 85°C, 2A	EN 61347-1 EN 61347-2-3	Tested with Appliance UL E228500
Alternative	D	ZHEJIANG HONGXING ELECTRICAL CO.LTD	HX2500X-YYY Wafer	3A	EN61347-1 EN61347-2-3	E228500+Tested with appliance
Alternative	D	Putian Hanjing Fucon Electronics Co., Ltd.	CM-200	250V, 2.5mm ² , T120	EN 60998-2-1 EN 60998-1	VDE (40022547)
Touch	Touch	Touch	Touch	Touch	Touch	Touch
Touch sensor	C	NINGBO HANGYONG ELECTRONIC	HY-TUCH	5Vdc	EN 60598-1 EN 60598-2-1	Tested with appliance
Alternative	D	NINGBO HANGYONG ELECTRONIC	HY-TUCH-XXXX	5Vdc	EN 60598-1 EN 60598-2-1	Tested with appliance
PCB	C	Kingboard Laminates Holdings Ltd.	KB-616(X), KB-6160A	V-0, 130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E123995
Alternative	D	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	ILM-R1, GDM-R1 GF432, GDM-C3, ILM-C3	V-0, 130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E330731



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
PCB	C	Kingboard Laminates(Macao Commercial Offshore) Ltd	KB-6160A ; 12V42W PFC;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E123995+Tested with appliance
Alternative	D	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	ILM-R1; 12V42W PFC;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E330731+Tested with appliance
Alternative	D	ANHUI HENGXING ELECTRONICS Co Ltd	HX-1; 12V42W PFC;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E254930+Tested with appliance
PCB	C	Kingboard Laminates(Macao Commercial Offshore) Ltd	KB-6160A ; QM-GL12V2A;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E123995+Tested with appliance
Alternative	D	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	ILM-R1; QM-GL12V2A;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E330731+Tested with appliance
Alternative	D	ANHUI HENGXING ELECTRONICS Co Ltd	HX-1; QM-GL12V2A;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E254930+Tested with appliance
Alternative	D	ANHUI HONGXIN ELECTROINC TECHNOLOGY CO LTD	AB-S; QM-GL12V2A;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E500792+Tested with appliance
Alternative	D	Wenzhou Huabang Electronics Co Ltd	BLH; QM-GL12V2A;	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E480235+Tested with appliance
X2 Capacitor	C	Guangdong JURCC electronics Co., LTD	MPX/MKP	AC 275/305/310 V 0.22uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40034920
Alternative	D	JYH HSU(JEC) ELECTRONICS LTD	MPX	AC 310/305/300/275/250V 0.22uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40044985
Alternative	D	JYH HSU(JEC) ELECTRONICS LTD	MPX	MPX 104K 275 40/110/56/B	EN60384-14 IEC60384-14	VDE 40044985
Alternative	D	JYH HSU(JEC) ELECTRONICS LTD	MPX	MPX 224K 275 40/110/56/B	EN60384-14 IEC60384-14	VDE 40044985



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	Guangzhou Yes Electronic Technology Co.Ltd	MKP	AC 310/305/300/275/250V 0.22uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40043020
Alternative	D	Dongguan Weiqing Electronic Co.Ltd	MPX	AC 310/300/275 V 0.22uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40040406
Alternative	D	Guangzhou Yes Electronic Technology Co.Ltd	MKP	224K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40035535
Alternative	D	Guangzhou Yes Electronic Technology Co.Ltd	MKP	104K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40035535
Alternative	D	Dongguan Weiqing Electronic Co.Ltd	MPX	224K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40040406
Alternative	D	Dongguan Weiqing Electronic Co.Ltd	MPX	104K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40040406
Alternative	D	Dongguan Hong Farad Electronic Co.Ltd	HMKP	224K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40044173
Alternative	D	Dongguan Hong Farad Electronic Co.Ltd	HMKP	104K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40014173
Alternative	D	Shenzhen Su Rong Capacitors Co.,Ltd.	MKP	224K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40008924
Alternative	D	Shenzhen Su Rong Capacitors Co.,Ltd.	MKP	104K/275V/3 05V/310V	EN60384-14 IEC60384-14	VDE 40008924
Alternative	D	Wuxi Wansheng Electronic Co., Ltd.	MKP	275/300/310 VAC, 0.1uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40043893
Alternative	D	Shenzhen Weidy Industrial Development Co., Ltd.	MKP	275/280/300/310VAC, 0.1uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40041066
Alternative	D	Changzhou Jiaguan Electronics Co., Ltd.	MKP	275/300VAC , 0.1uF, 40/110/21	EN60384-14 IEC60384-14	VDE 40037250
Alternative	D	Shantou High-new Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	275/305/310 VAC,0.1uF, 40/110/56	EN60384-14 IEC60384-14	VDE 40034679
Alternative	D	DongGuan Chengdong Electronic Technology Co., Ltd.	MPX	275/300/305/310VAC,0.1 uF,40/110/56	IEC 60384-14 EN 60384-14	VDE 40046845



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	Wuxi Wansheng Electronic Co., Ltd.	MKP	AC250/275/280/300/310V /315V 0.1uF 40/110/56	IEC 60384-14 EN 60384-14	VDE 40043893
Alternative	D	Shenzhen Weidy Industrial Development Co., Ltd.	MKP	AC250/275/300/305/310V 0.1uF 40/110/56 oder/or 40/100/21	IEC 60384-14 EN 60384-14	VDE 40041066
Alternative	D	Changzhou Jiaguan Electronics Co., Ltd.	MKP	a) AC275/300V b) AC275V 0.1uF 40/110/21	IEC 60384-14 EN 60384-14	VDE 40037250
Alternative	D	Shantou High-new Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	AC310V;AC 305V; AC275V 0.1uF,40/110 /56	IEC 60384-14 EN 60384-14	VDE 40034679
Alternative	D	Changxing Huaqiang Electron Co.,Ltd.	MPX2	AC275/300/305/310V ,0.1 uF,40/110/56	IEC 60384-14 EN 60384-14	VDE 40043543
Alternative	D	Dongguan City Dafu, Electronics Co. Ltd	MPX Series	AC250/275/300/310/330/350V 0.1uF,40/110 /56	IEC 60384-14 EN 60384-14	VDE 40044620
Alternative	D	Guangdong JURCC electronics Co., LTD	MPX/MKP	0.1uF 275/305/310	EN 60384-14	E343072+Tested with appliance
Alternative	D	JYH HSU(JEC) ELECTRONICS LTD	MPX	0.1uF 250/275/300/305/310	EN 60384-14	E356696+Tested with appliance
Alternative	D	Guangdong JURCC electronics Co., LTD	MPX/MKP	0.68uF 275/305/310	EN 60384-14	E343072+Tested with appliance
Alternative	D	Guangdong JURCC electronics Co., LTD	MPX/MKP	0.22uF 275/305/310	EN 60384-14	E343072+Tested with appliance
Alternative	D	JYH HSU(JEC) ELECTRONICS LTD	MPX	0.68 uF 250/275/300/305/310	EN 60384-14	E356696+Tested with appliance
Alternative	D	JYH HSU(JEC) ELECTRONICS LTD	MPX	0.22 uF 250/275/300/305/310	EN 60384-14	E356696+Tested with appliance



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Varistor	C	DongGuan City Jiankun Electronics Technology Co. Ltd	07D471K	470V, T125	IEC 61051-1 IEC61051-2 IEC61051-2-2	VDE 40046024
Alternative	D	JYH HSU (JEC) ELECTRONICS LTD	07D471K	470V, T125	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40044685
Alternative	D	THINKING ELECTRONIC INDUSTRIAL CO LTD	TVR07471-D	470V, T125	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40021243
Alternative	D	Guangdong City JianKun Electronics Technology Co., LTD	JK_ET	07D471K	IEC 61051-1 IEC61051-2 IEC61051-2-2	E489693+Te sted with appliance
Alternative	D	JYH HSU (JEC) ELECTRONICS LTD	JEC	07D471K	IEC 61051-1 IEC61051-2 IEC61051-2-2	E486000+Te sted with appliance
Alternative	D	THINKING ELECTRONIC INDUSTRIAL CO LTD	TVR	07D471K	IEC 61051-1 IEC61051-2 IEC61051-2-2	E314979+Te sted with appliance
Alternative	D	Hongzhi Enterprises Ltd.	HEL7D511K	510V	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40037512
Alternative	D	Shenzhen Weidy Industrial Development Co., Ltd.	V-511K-07DEH	510V	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40045960
Alternative	D	Xiamen Wanming Electronics Co., Ltd.	07D511K	510V	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40043176
Alternative	D	Guangdong Huiwan Electronics Technology CO., LTD.	V-511K-07DEH	510V	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40043880
Alternative	D	Cerglass MFG Inc	07D511K	510V	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40028836
FUSE	C	Sunny East Enterprise Co.,Ltd	TSP	AC 250Vac, 2A	EN 60127-3 EN 60127-1	VDE 40027173
Alternative	D	Shanghai Fullness Electrical Co.,Ltd.	TSP	T2AL/250Va c	EN 60127-1 EN 60127-3	TUV R 50315914
Alternative	D	Sunny East Enterprise Co.,Ltd	TSP	T2A 300V	EN 60127-3 EN 60127-1	VDE 40027173
Alternative	D	Shanghai Fullness Electrical Co.,Ltd.	TSP	T2A 300V	EN 60127-1 EN 60127-3	TUV R 50315914
Alternative	D	Shenzhen Lanson Electronics Co. Ltd	SMT	AC 250Vac, 2A	EN 60127-3 EN 60127-1	VDE 40012592



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	XC Electronics (ShenZhen) Crop., LTD	5TE	AC 250Vac, 2A	EN 60127-3 EN 60127-1	VDE 40036821
Alternative	D	Dongguan Reomax Electronics Technology Co., Ltd.	MTS	AC250V,2A	EN 60127-3 IEC 60127-1 IEC 60127-3 EN 60127-1	VDE 40039420
Alternative	D	XC ELECTRONICS (SHENZHEN) CORP LTD	5TE	AC250V,2A	EN 60127-3 IEC 60127-1 IEC 60127-3 EN 60127-1	VDE 40036821
Alternative	D	Dongguan Hongda Electronic Technology Co.,Ltd.	2009	AC250V,2A	EN 60127-3 IEC 60127-1 IEC 60127-3 EN 60127-1	VDE 40028260
Alternative	D	Conquer Electronics Co.,Ltd.	MST	T2AL/250Vac	EN 60127-1 EN 60127-3	VDE 40017157
Alternative	D	Dongguan Better Electronic Technology Co.,Ltd	932	T2AL/250Vac	EN 60127-1 EN 60127-3	VDE 40033369
Alternative	D	SUZHOU WALTER ELECTRONIC CO LTD	3K	AC250V,2A	EN 60598-1 EN 60598-2-1	E221465+Tested with appliance
Alternative	D	Shenzhen Lanson Electronics Co. Ltd	3K	AC250V,2A	EN 60127-1 EN 60127-3	E249609+Tested with appliance
Alternative	D	XC Electronics (ShenZhen) Crop., LTD	3T	AC250V,2A	EN 60127-1 EN 60127-3	E56092+Tested with appliance
Bobbin	C	Changshu South-east Plastic Co.,Ltd	PF2A5-151J	150℃	EN 60598-1 EN 60598-2-1	E136137+Tested with appliance
Alternative	D	Changchun Plastics Co.Ltd	T-375J T-375HF	150℃	EN 60598-1 EN 60598-2-1	E59481+Tested with appliance
Alternative	D	Zhejiang Jiamin Plastic Co.,Ltd	PF2A4-161J	150℃	EN 60598-1 EN 60598-2-1	E231580+Tested with appliance
Wire	C	SHANDONG SAINT ELECTRIC CO LTD	MW 75-C	130℃	EN 60598-1 EN 60598-2-1	E194410+Tested with appliance
Alternative	D	HENG YA ELECTRIC KUN SHAN LTD	MW 75-C	130℃	EN 60598-1 EN 60598-2-1	E245514+Tested with appliance
Tape	C	JINGJIANG YAHUA PRESSURE SENSITIVEGLUE CO LTD	CT	130℃	EN 60598-1 EN 60598-2-1	E165111+Tested with appliance



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	JINGJIANG JINGYI ADHESIVE PRODUCT COLTD	JY25-A	130℃	EN 60598-1 EN 60598-2-1	E246950+Tested with appliance
Sleeving	C	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	200℃	EN 60598-1 EN 60598-2-1	E203950+Tested with appliance
Alternative	D	GREAT HOLDING INDUSTRIAL CO LTD	TFS	200℃	EN 60598-1 EN 60598-2-1	E156256+Tested with appliance
Wire	C	SHANDONG SAINT ELECTRIC CO LTD	MW 75-C	130℃	EN 60598-1 EN 60598-2-1	E194410+Tested with appliance
Alternative	D	HENG YA ELECTRIC KUN SHAN LTD	MW 75-C	130℃	EN 60598-1 EN 60598-2-1	E245514+Tested with appliance
Tape	C	JINGJIANG YAHUA PRESSURE SENSITIVEGLUE CO LTD	CT	130℃	EN 60598-1 EN 60598-2-1	E165111+Tested with appliance
Alternative	D	JINGJIANG JINGYI ADHESIVE PRODUCT COLTD	JY25-A	130℃	EN 60598-1 EN 60598-2-1	E246950+Tested with appliance
Sleeving	C	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	200℃	EN 60598-1 EN 60598-2-1	E203950+Tested with appliance
Alternative	D	GREAT HOLDING INDUSTRIAL CO LTD	TFS	200℃	EN 60598-1 EN 60598-2-1	E156256+Tested with appliance
Triple insulated wiring	C	SHANGHAI XIANGXIANG ELECTRICCAL CO.LTD	TKW-B	Ø0.5mm 130℃	IEC60950-1 EB60950-1	VDE:40026588
Alternative	D	E&B TECHNOLOGY CO.LTD	E&B-XXXB	Ø0.5mm	IEC60950-1 EB60950-1	VDE:40023473
Insulating tape	C	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO.LTD	CT280B	130℃	EN 61347-1 EN 61347-2-13	UL :E165111
Bobbin	C	Changshu South-east Plastic Co.,Ltd	PF2A5-151J	V-0,150℃	EN 61347-1 EN 61347-2-13	Tested with appliance UL E136137



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	Changchun Plastics Co.Ltd	T375J T375HF	V-0,150°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E59481
Alternative	D	Zhejiang Jiamin Plastic Co.,Ltd	PF2A4-161J	150°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E231508
Pri. Winding	C	HENG YA ELECTRIC KUN SHAN LTD	MW 75-C	130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E245514
Alternative	D	SHANDONG SAINT ELECTRIC CO LTD	MW 75-C	130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E194410
Sec. Winding	C	SUZHOU YUSHENG ELECTRONIC CO LTD	TIW-B	130°C	EN 61347-1 EN 61347-2-13	VDE 40033527
Tape	C	JINGJIANG YAHUA PRESSURE SENSITIVEGLUE CO LTD	CT	130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E165111
Alternative	D	JINGJIANG JINGYI ADHESIVE PRODUCT COLTD	JY25-A	130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E246950
Sleeving	C	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E203950
Alternative	D	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	600V, 125°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E203950
Alternative	D	GREAT HOLDING INDUSTRIAL CO LTD	TFS	600V,200°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E156256
Varnish	C	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD	T4260(a)	130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E228349



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	ZHUHAI CHANGXIAN NEW MATERIALS TECHNOLOGY CO LTD	E962	130°C	EN 61347-1 EN 61347-2-13	Tested with appliance UL E335405
Pri. Winding	C	Dongguan Yida Industrial Co., Ltd.	xUEW/155, QA- x/155	155°C	IEC 61347-1 IEC 61347-2-13	UL E344055 + tested with appliance
Alternative	D	Zhejiang Hongbo Technology Co., Ltd.	xUEW/155, QA- x/155	155°C	IEC 61347-1 IEC 61347-2-13	UL E221719 + tested with appliance
Alternative	D	HANGZHOU WEIFENG ELECTRONIC CO., LTD.	UEWF-@(%), QA- @(%)/155	155°C	IEC 61347-1 IEC 61347-2-13	UL E229341 + tested with appliance
Alternative	D	SIHUI HENGHUI ELECTRICAL APPLIANCES CO LTD	*UEW/155 or QA*/155	155°C	IEC 61347-1 IEC 61347-2-13	UL E337948 + tested with appliance
Bobbin	C	CHANGSHU SOUTH-EAST PLASTIC CO LTD	PF2A5-151J	V-0	IEC 61347-1 IEC 61347-2-13	UL E136137
Insulation tape	C	Haining ChuLong Tape Co Ltd	CL ALL TAPE	130°C	IEC 61347-1 IEC 61347-2-13	UL E464604
Alternative	D	DONGGUAN SHIN YAHUA ELECTRONIC MATERIAL CO LTD	CT* (c)(g)	130°C	IEC 61347-1 IEC 61347-2-13	UL E324093
PCB	C	KINGBOARD LAMINATES(MACAO COMMERCIAL OFFSHORE) LTD	FR-4 HY-GL12V1A	FR-4, T:1.0mm- 1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E123995+Tte sted with appliance
Alternative	D	KINGBOARD LAMINATES(MACAO COMMERCIAL OFFSHORE) LTD	FR-4 QM-GL12V1A	FR-4, T:1.0mm- 1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E123995+Tte sted with appliance
Alternative	D	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	FR-4 HY-GL12V1A	FR-4, T:1.0mm- 1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E330731+Tte sted with appliance
Alternative	D	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	FR-4 QM-GL12V1A	FR-4, T:1.0mm- 1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E330731+Tte sted with appliance



EN 60598-2-4						
Clause	Requirement + Test			Result - Remark		Verdict
Alternative	D	WENZHOU HENGXING ELECTRONICS Co Ltd	FR-4 HY-GL12V1A	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E254930+Ttested with appliance
Alternative	D	WENZHOU HENGXING ELECTRONICS Co Ltd	FR-4 QM-GL12V1A	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E254930+Ttested with appliance
Alternative	D	ANHUI HONGXIN ELECTROINC TECHNOLOGY CO LTD	FR-4 HY-GL12V1A	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E468758+Ttested with appliance
Alternative	D	ANHUI HONGXIN ELECTROINC TECHNOLOGY CO LTD	FR-4 QM-GL12V1A	FR-4, T:1.0mm-1.6mm; 94V-0;	EN 60598-1 EN 60598-2-1	E254930+Ttested with appliance
Transformer	D	Ningbo Zlor Electronics Co., Ltd.	EFD20	EFD20	EN 60598- 1 EN 60598-2- 1	Tested with appliance
Alternative	D	NINGBO EILUX ELECTRIC APPLIANCE CO.,LTD	EFD20	EFD20	EN 60598- 1 EN 60598-2- 1	Tested with appliance
Alternative	D	Ningbo yuce electronics co. LTD	EFD20	EFD20	EN 60598- 1 EN 60598-2- 1	Tested with appliance
DC female head	B	Ningbo Corelead Optoelectronics Technology Co., Ltd	DC female head	5.5*2.1mm		Tested with appliance
Adapter	B	XING YUAN ELECTRONICS CO.,LTD	XY24LR-xxxxyyVH-EW, XY24LR-xxxxyyVH-BW, XY24LR-xxxxyyVH-ET, XY24LR-xxxxyyVH-BT, XY24LQ-xxxxyyVH-EW	Input: 220-240Vac, 50/60Hz Output: 5.0-6.0; 9.0-17.0; 17.1-30V		4900023.01A OC, 4900023.02A OC
Supplementary information: The models of the drivers used in these products refer to "General product information" for details. 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 60598-2-4

Clause	Requirement + Test	Result - Remark	Verdict
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ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P				
	Type reference.....:	D3041-Kassel-xyyy	—				
	Lamp used.....:	LED	—				
	Lamp control gear used.....:	External Adapter for LED	—				
	Mounting position of luminaire.....:	As in normal use	—				
	Supply wattage (W).....:	24W	—				
	Supply current (A).....:		—				
	Calculated power factor.....:		—				
	Table: measured temperatures corrected for ta = 25 °C:		P				
	- abnormal operating mode.....:	15° Overturn	—				
	- test 1: rated voltage.....:	240	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:	1,06 times rated voltage : 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.....:	1,1 times rated voltage : 264V	—				
	Through wiring or looping-in wiring loaded by a current of A during the test:		—				
	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord	25	--	45.7	--	105	--	--
Internal Wire	25	--	43.1	--	105	--	--
Terminal black	25	--	39.5	--	110	--	--
External Adapter Tc	25	--	41.6	--	75	--	--
Cover	25	--	49.4	--	90	50.5	130
Enclosure	25	--	38.7	--	Ref	--	--
Supplementary information:							



EN 60598-2-4			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal..... :		—
	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)..... :		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

ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(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



EN 60598-2-4										
Clause	Requirement + Test							Result - Remark		Verdict
(15.3.4)	Unprepared conductors									N/A
(15.3.5)	Pressure on insulating material									N/A
(15.3.6)	Clear connection method									N/A
(15.3.7)	Clamping independently									N/A
(15.3.8)	Fixed in position									N/A
(15.3.10)	Conductor size									N/A
	Type of conductor									N/A
(15.5.1)	Terminals internal wiring									N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples).....:									N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples).....:									N/A
	Insertion force not exceeding 50 N									N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)									N/A
(15.5.2)	Electrical tests									N/A
	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
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:									N/A
(15.6)	Terminals external wiring									N/A
	Terminal size and rating									N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)									N/A
	Pull test pin or tab terminals (4 samples); pull (N)									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



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Clause	Requirement + Test					Result - Remark				Verdict
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)										
Supplementary information:										



ANNEX B:

Photo-document



Photo Overview

Photo 1 (D3041-Kassel-40160TDX)



Photo 2 (D3041-Kassel-40160TDX)



Photo 3 (D3041-Kassel-40160TDX)



Photo 4 (D3041-Windsor-40150)



Photo 5 (D8001-Brest-40150)



Photo 6 (D8001-Munich-40150)



Photo 7 (D3015-Munich-40150)



Photo 8 (D3030-Madrid-40150)



※※※※END OF REPORT※※※※