

Test Report No.: xx001	Page 1 of xx
Issue Date:	DD/MM/YYYY

Manufacturer:	Applicant's Name
	Applicant's Address
Test item:	Audio/video, information and communication technology equipment
Identification:	(Model No.) Serial No.:
Receipt No.:	Date of receipt:
Testing laboratory and its address:	Lab Name
	Lab Address
Test specification:	IS 10322 (Part 5/Sec 7) : 2026
Test Result:	<i>The test item passed / failed the test specification(s).</i>
Other Aspects:	
	- <i>Brief description or additional details could be given by the labs here.</i>
This test report relates to the test sample submitted and list of documents attached.	

Tested by:	Approved by / Authorized Signatory:	Issued by:
(Name / Designation)	(Name / Designation)	(Name / Designation)
Date:	Date:	Date:

TEST REPORT IS 10322 (Part 5/Sec 7) : 2026 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Reference No.	Xxxxxxxx 001
Date of issue.....	(see cover page)
Total number of pages	(see cover page)
Testing Laboratory	Lab Name
Address	Lab Address
Manufacturer's name	Applicant's Name
Address	Applicant's Address
Test specification:	
Standard.....	IS 10322 (Part 5/Sec 7) : 2026
Test procedure.....	
Non-standard test method.....	
Test Report Form No.	BIS_ IS 10322-5-7_V2.0
Test Report Form(s) Originator	Bureau of Indian Standards
Master TRF.....	
Test item description	Audio/video, information and communication technology equipment
Trademark	
Model/Type reference	
Ratings	
Other Documents submitted.....	Please refer to Table – List of Attachments at Page No. xx

Tested by:	Approved by / Authorized Signatory:	Issued by:
(Name / Designation)	(Name / Designation)	(Name / Designation)
Date:	Date:	Date:

Test Report issued under the responsibility of:

TEST REPORT IS 10322 (Part 5/Sec 7) : 2026 Luminaires Part 2: Particular requirements Section 7: Lighting Chains	
Report Number..... : Date of issue..... : Total number of pages :	
Name of Testing Laboratory preparing the Report :	
Applicant's name : Address..... :	
Test specification: Standard : IS 10322 (Part 5/Sec 7) : 2026 Test procedure..... : Non-standard test method : N/A	
TRF template used..... : Test Report Form No. : Test Report Form(s) Originator : Master TRF :	
General disclaimer: 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 NCB. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test item description :		
Trade Mark(s)		
Manufacturer		
Model/Type reference :		
Ratings		
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input type="checkbox"/>	CB Testing Laboratory:	
Testing location/ address:		
Tested by (name, function, signature):		
Approved by (name, function, signature) ...:		
<input type="checkbox"/>	Testing procedure: CTF Stage 1:	
Testing location/ address:		
Tested by (name, function, signature):		
Approved by (name, function, signature) ...:		
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	
Testing location/ address:		
Tested by (name + signature)		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature) ...:		
<input type="checkbox"/>	Testing procedure: CTF Stage 3:	
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	
Testing location/ address:		
Tested by (name, function, signature):		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature) ...:		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment):	
Summary of testing:	
Tests performed (name of test, test clause and date test performed):	Testing location: (CBTL, SPTL, CTF, Subcontractor)
Summary of compliance with National Differences (List of countries addressed):	
<input type="checkbox"/> The product fulfils the requirements of _____ (insert standard number and Year of publication, and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)	
Use of uncertainty of measurement for decisions on conformity (decision rule) :	
<input type="checkbox"/> No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").	
<input type="checkbox"/> Other: ... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)	
Information on uncertainty of measurement:	
<p>The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.</p> <p>IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.</p> <p>Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.</p>	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.


Test item particulars :	
Classification of installation and use :	
Supply Connection	
..... :	
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	
Date (s) of performance of tests	
..... :	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.	
<input type="checkbox"/> This Test Report Form contains requirements according to IEC/ISO Standard dated and includes Corrigendum dated	
(Note: The above text maybe removed if not applicable)	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60384-14:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided :	<input type="checkbox"/> Yes <input type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	
..... :	
General product information and other remarks:	

20.4 (0)	GENERAL TEST REQUIREMENTS		
20.4 (0.3)	More sections applicable	Yes <input type="checkbox"/> No <input type="checkbox"/> Section/s:	—
20.4 (0.5)	Components	(See Annex 1)	—
20.4 (0.7)	Information for luminaire design in light sources standards		—
20.4 (0.7.2)	Light source safety standard		—
	Luminaire design in the light source safety standard		

20.5 (2)	CLASSIFICATION OF LUMINAIRES		
20.5 (2.2)	Type of protection	Class	
20.5 (2.3)	Degree of protection	IP	—
20.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes <input type="checkbox"/> No <input type="checkbox"/>	
20.5 (2.5)	Luminaire for normal use	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
20.5.1 (-)	Ordinary luminaire classified “for indoor use only” ... :	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	Luminaires other than ordinary classified “for indoor use only”	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	Luminaires other than ordinary classified for “outdoor use” and “for indoor use”	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
20.5.2 (-)	Lighting chains shall be classified as Class II or Class III		
20.5.3 (-)	Lighting chains for outdoor use shall have a protective index IP 44 or higher		

20.6 (3)	MARKING		
20.6.1 (3.2)	Mandatory markings		
	Position of the marking		
	Format of symbols/text		
20.6.1 (3.3)	Additional information		
	Language of instructions		
20.6.1 (3.3.1)	Combination luminaires		
20.6.1 (3.3.2)	Nominal frequency in Hz		
20.6.1 (3.3.3)	Operating temperature		
20.6.1 (3.3.5)	Wiring diagram		
20.6.1 (3.3.6)	Special conditions		

20.6.1 (3.3.7)	Metal halide lamp luminaire – warning		
20.6.1 (3.3.8)	Limitation for semi-luminaires		
20.6.1 (3.3.9)	Power factor and supply current		
20.6.1 (3.3.10)	Suitability for use indoors		
20.6.1 (3.3.11)	Luminaires with remote control		
20.6.1 (3.3.12)	Clip-mounted luminaire – warning		
20.6.1 (3.3.13)	Specifications of protective shields		
20.6.1 (3.3.14)	Symbol for nature of supply		
20.6.1 (3.3.15)	Rated current of socket outlet		
20.6.1 (3.3.16)	Rough service luminaire		
20.6.1 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		
20.6.1 (3.3.18)	Non-ordinary luminaires with PVC cable		
20.6.1 (3.3.19)	Protective conductor current in instruction if applicable		
20.6.1 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		
20.6.1 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		
20.6.1 (3.3.22)	Controllable luminaires, classification of insulation provided		
20.6.1 (3.3.23)	Luminaires without controlgear provided with necessary information for selection of appropriate component		
20.6.1 (3.3.24)	If not supplied with terminal block, information on the packaging		
20.6.1 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		
20.6.1 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		
20.6.1 (3.4)	Test with water		
	Test with hexane		
	Legible after test		

	Label attached		
20.6.2 (-)	Lighting chain marking		
	The following information shall be marked on the lighting chain:		
	– rated voltage of the complete chain		
	– rated wattage of the complete chain		
	Where the information is on the cable, it shall be marked on a durable non-removable sleeve or label		
20.6.3 (-)	Lighting chain and packaging marking		
	The following marking shall be placed on the lighting chain and on the accompanying packaging of lighting chains for indoor use only:		
	– “FOR INDOOR USE ONLY”		
	– As an alternative to the text, the lighting chain can be marked with the symbol  The symbol shall be explained in the instructions.		
20.6.4 (-)	Packaging or instruction marking		
	The following or similar marking shall be placed on the accompanying packaging or instructions		
	a) For all lighting chains where the packaging has not been adapted for display purposes		
	– “Do not connect the chain to the supply while it is in the packaging”.		
	b) For lighting chains with replaceable lamps:		
	– voltage and wattage or manufacturer's article number of replacement lamps		
	– “Do not remove or insert lamps while the chain is connected to the supply”		
	– “Ensure that all lampholders are fitted with a lamp”		
	c) Lighting chains designed to be used without a lamp in every lampholder:		
	– adequate information about required blanking plug(s)		
	d) For chains with replaceable series-connected lamps:		
	– “Replace failed lamps immediately by lamps of the same type as delivered or of a type specified by the manufacturer”.		
	e) For lighting chains with ‘fuse’ lamp(s):		
	– “Do not replace a ‘fuse’ lamp with a non-‘fuse’ lamp”; in order to indicate the difference from ‘ordinary’ lamps, ‘fuse’ lamps shall be partly coloured white		
	– information indicating that the chain is provided with ‘fuse’ lamps and explanation of their function.		
	f) For lighting chains with non-replaceable lamps:		
	– “The lamps are not replaceable”		

	g) For class II lighting chains with non-replaceable lamps, the substance of the following:		
	– where breakage or damage to lamps occurs the chain must not be used/energised but disposed of safely		
	h) For lighting chains which rely on gaskets to provide the specified degree of protection against dust, solid objects and moisture		
	– “WARNING – THIS LIGHTING CHAIN MUST NOT BE USED WITHOUT ALL GASKETS BEING IN PLACE		
	i) For lighting chains intended for interconnection:		
	– “Do not interconnect parts of this lighting chain with parts of another manufacturer's lighting chain”		
	– “Interconnection shall be made only by the use of the supplied connectors. Any open ends must be sealed-off before use”;		
	– maximum system length that may be interconnected		
	– maximum number of lamps or max system wattage that may be interconnected		
	j) For lighting chains incorporating lamp bridging device(s):		
	– information stating that the chain is fitted with a bridging device(s).		
	k) For class III lighting chains delivered without a supply source:		
	– relevant information concerning the required supply source		
	l) For mains voltage lighting chains with series connected lamps:		
	– “WARNING – RISK OF ELECTRIC SHOCK IF LAMPS ARE BROKEN OR MISSING. DO NOT USE”		

20.7 (4)	CONSTRUCTION		
20.7.1 (4.2)	Components replaceable without difficulty		
20.7.1 (4.3)	Wireways smooth and free from sharp edges		
20.7.1 (4.4)	Lampholders		
20.7.1 (4.4.1)	Integral lampholder		
20.7.1 (4.4.2)	Wiring connection		
20.7.1 (4.4.3)	Lampholder for end-to-end mounting		
20.7.1 (4.4.4)	Positioning		
	- pressure test (N) :		—
	After test the lampholder comply with relevant standard sheets and show no damage		

	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		
	- bending test (N)		—
	After test the lampholder has not moved from its position and show no permanent deformation		
20.7.1 (4.4.5)	Peak pulse voltage		
20.7.1 (4.4.6)	Centre contact		
20.7.1 (4.4.7)	Parts in rough service luminaires resistant to tracking		
20.7.1 (4.4.8)	Lamp connectors		
20.7.1 (4.4.9)	Caps and bases correctly used		
20.7.1 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		
20.7.1 (4.5)	Starter holders		
	Starter holder in luminaires other than class II		
	Starter holder class II construction		
20.7.1 (4.6)	Terminal blocks		
	Tails		
	Unsecured blocks		
20.7.1 (4.7)	Terminals and supply connections		
20.7.1 (4.7.1)	Contact to metal parts		
20.7.1 (4.7.2)	Test 8 mm live conductor		
	Test 8 mm earth conductor		
20.7.1 (4.7.3)	Terminals for supply conductors		
20.7.1 (4.7.3.1)	Welded method and material		
	- stranded or solid conductor		
	- spot welding		
	- welding between wires		
	- Type Z attachment		
	- mechanical test according to 15.6.2		
	- electrical test according to 15.6.3		
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		
20.7.1 (4.7.4)	Terminals other than supply connection		

20.7.1 (4.7.5)	Heat-resistant wiring/sleeves		
20.7.1 (4.7.6)	Multi-pole plug		
	- test at 30 N		
20.7.1 (4.8)	Switches		
	- adequate rating		
	- adequate fixing		
	- polarized supply		
	- compliance with IEC 61058-1 for electronic switches		
20.7.1 (4.9)	Insulating lining and sleeves		
20.7.1 (4.9.1)	Retainment		
	Method of fixing		
20.7.1 (4.9.2)	Insulated linings and sleeves:		
	Resistant to a temperature > 20 °C to the wire temperature or		
	a) & c) Insulation resistance and electric strength		
	b) Ageing test. Temperature (°C)		
20.7.1 (4.10)	Double or reinforced insulation		
20.7.1 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		
	Safe installation fixed luminaires		
	Capacitors and switches		
20.7.1 (4.10.2)	Assembly gaps:		
	- not coincidental		
	- no straight access with test probe		
20.7.1 (4.10.3)	Retainment of insulation:		
	- fixed		
	- unable to be replaced; luminaire inoperative		
	- sleeves retained in position		
	- lining in lampholder		
20.7.1 (4.10.4)	Protective impedance device		
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		

	Double or reinforced insulation bridged by at least two separate resistors in series or appropriate capacitor(s)		
	Capacitors comply with IEC 60384-14		
	Resistors comply with test (a) in 14.2 of IEC 60065		
20.7.1 (4.11)	Electrical connections and current-carrying parts		
20.7.1 (4.11.1)	Contact pressure		
20.7.1 (4.11.2)	Screws:		
	- self-tapping screws		
	- thread-cutting screws		
20.7.1 (4.11.3)	Screw locking:		
	- spring washer		
	- rivets		
20.7.1 (4.11.4)	Material of current-carrying parts		
20.7.1 (4.14.7)	No contact to wood or mounting surface		
20.7.1 (4.14.7)	Electro-mechanical contact systems		
20.7.1 (4.12)	Screws and connections (mechanical) and glands		
20.7.1 (4.12.1)	Screws not made of soft metal		
	Screws of insulating material		
	Torque test: torque (Nm); part..... :		
	Torque test: torque (Nm); part..... :		
	Torque test: torque (Nm); part..... :		
20.7.1 (4.12.2)	Screws with diameter < 3 mm screwed into metal		
20.7.1 (4.12.4)	Locked connections:		
	- fixed arms; torque (Nm) :		
	- lampholder; torque (Nm) :		
	- push-button switches; torque 0,8 Nm :		
20.7.1 (4.12.5)	Screwed glands; force (Nm)..... :		
20.7.1 (4.13)	Mechanical strength		

20.7.1 (4.13.1)	Impact tests:		
	- fragile parts; energy (Nm)		
	- other parts; energy (Nm)		
	1) live parts		
	2) linings		
	3) protection		
	4) covers		
20.7.1 (4.13.2)	Metal parts have adequate mechanical strength		
20.7.1 (4.13.3)	Straight test finger		
20.7.1 (4.13.4)	Rough service luminaires		
	- IP54 or higher		
	a) fixed		
	b) hand-held		
	c) delivered with a stand		
	d) for temporary installations and suitable for mounting on a stand		
20.7.1 (4.13.6)	Tumbling barrel		
20.7.1 (4.14)	Suspensions, fixings and means of adjusting		
20.7.1 (4.14.1)	Mechanical load:		
	A) four times the weight		
	B) torque 2,5 Nm		
	C) bracket arm; bending moment (Nm)..... :		
	D) load track-mounted luminaires		
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		
	Metal rod. diameter (mm)		
	Fixed luminaire or independent control gear without fixing devices		
20.7.1 (4.14.2)	Load to flexible cables		
	Mass (kg)		—
	Stress in conductors (N/mm ²)		
	Mass (kg) of semi-luminaire		
	Bending moment (Nm) of semi-luminaire		

20.7.1 (4.14.3)	Adjusting devices:		
	- flexing test; number of cycles..... :		
	- strands broken		
	- electric strength test afterwards		
20.7.1 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		
20.7.1 (4.14.5)	Guide pulleys		
20.7.1 (4.14.6)	Strain on socket-outlets		
20.7.1 (4.15)	Flammable materials		
	- glow-wire test 650°C	See Test Table 20.15 (13.3.2)	
	- spacing ≥ 30 mm		
	- screen withstanding test of 13.3.1		
	- screen dimensions		
	- no fiercely burning material		
	- thermal protection		
	- electronic circuits exempted		
20.7.1 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		
	a) construction		
	b) temperature sensing control		
	c) surface temperature		
20.7.1 (4.16)	Luminaires for mounting on normally flammable surfaces		
	No lamp control gear	(Compliance with Section 12)	
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		
20.7.1 (4.16.1)	Lamp control gear spacing:		
	- spacing 35 mm		
	- spacing 10 mm		
20.7.1 (4.16.2)	Thermal protection:		
	- in lamp control gear		
	- external		
	- fixed position		
	- temperature marked lamp control gear		

20.7.1 (4.16.3)	Design to satisfy the test of 12.6	(See clause 12.6)	
20.7.1 (4.17)	Drain holes		
	Clearance at least 5 mm		
20.7.1 (4.18)	Resistance to corrosion		
20.7.1 (4.18.1)	- rust-resistance		
20.7.1 (4.18.2)	- season cracking in copper		
20.7.1 (4.18.3)	- corrosion of aluminium		
20.7.1 (4.19)	Ignitors compatible with ballast		
20.7.1 (4.20)	Rough service vibration		
20.7.1 (4.21)	Protective shield		
20.7.1 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		
	Shield of glass if tungsten halogen lamps		
20.7.1 (4.21.2)	Particles from a shattering lamp not impair safety		
20.7.1 (4.21.3)	No direct path		
20.7.1 (4.21.4)	Impact test on shield		
	Glow-wire test on lamp compartment..... :	See Test Table 20.15 (13.3.2)	
20.7.1 (4.22)	Attachments to lamps not cause overheating or damage		
20.7.1 (4.23)	Semi-luminaires comply Class II		
20.7.1 (4.24)	Photobiological hazards		
20.7.1 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		
20.7.1 (4.24.2)	Retinal blue light hazard		
	Class of risk group assessed according to IEC/TR 62778		—
	Luminaires with E_{thr} :		
	a) Fixed luminaires		
	- distance x m, borderline between RG1 and RG2 .. :		
	- marking and instruction according 3.2.23		

	b) Portable and handheld luminaires		
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		
	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		
20.7.1 (4.25)	Mechanical hazard		
	No sharp point or edges		
20.7.1 (4.26)	Short-circuit protection		
20.7.1 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts		
20.7.1 (4.26.2)	Short-circuit test with test chain according 4.26.3		
	Supply source ES1 PSE		
	Test chain not melt through		
	Test sample not exceed values of Table 12.1 and 12.2		
20.7.1 (4.27)	Terminal blocks with integrated screwless protective earthing contacts		
	Test according Annex V		
	Pull test of terminal fixing (20 N)		
	After test, resistance < 0,05 Ω		
	Pull test of mechanical connection (50 N)		
	After test, resistance < 0,05 Ω		
	Voltage drop test, resistance < 0,05 Ω		
20.7.1 (4.28)	Fixing of thermal sensing control		
	Not plug-in or easily replaceable type		
	Reliably kept in position		
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		
	Not outside the luminaire enclosure		
	Test of adhesive fixing:		
	Max. temperature on adhesive material ($^{\circ}\text{C}$) :		—
	100 cycles between t_{\min} and t_{\max}		
	Temperature sensing control still in position		
20.7.1 (4.29)	Luminaires with non-replaceable light source		
	Not possible to replace light source		
	Live part not accessible after parts have been opened by hand or tools		

20.7.1 (4.30)	Luminaires with non-user replaceable light source	
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:	
	At least one fixing means requiring use of tool	
20.7.1 (4.31)	Insulation between circuits	
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	
	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	
20.7.1 (4.31.1)	SELV or PELV circuits	
	Used SELV or PELV source	
	Voltage \leq ELV	
	Insulating of SELV or PELV circuits from LV supply	
	Insulating of SELV or PELV circuits from other non SELV or PELV circuits	
	Insulating of SELV or PELV circuits from FELV	
	Insulating of SELV or PELV circuits from other SELV or PELV circuits	
	SELV or PELV circuits insulated from accessible parts according Table X.1	
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems	
	Socket outlets does not admit plugs of other voltage systems	
	Plugs and socket-outlets does not have protective conductor contact	
20.7.1 (4.31.2)	FELV circuits	
	Used FELV source	
	Voltage \leq ELV	
	Insulating of FELV circuits from LV supply	
	FELV circuits insulated from accessible parts according Table X.1	
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems	
	Socket outlets does not admit plugs of other voltage systems	
	Socket-outlets have protective conductor contact	
20.7.1 (4.31.3)	Other circuits	

	Other circuits insulated from accessible parts according Table X.1		
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		
	- conductive parts are connected together		
	- test according 7.2.3		
	- conductive part does not cause an electric shock in case of an insulation fault		
	- equipotential bonding in master/slave applications		
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		
	- slave luminaire constructed as class I		
20.7.1 (4.32)	Overvoltage protective devices		
	Comply with IEC 61643-11		
	External to controlgear and connected to earth:		
	- only in fixed luminaires		
	- only connected to protective earth		
20.7.1 (4.33)	Luminaire powered via information technology communication cabling		
	Requirements for Class III luminaire		
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		
	Luminaire does not create any hazard from overvoltage	(See Annex 2)	
20.7.1 (4.34)	Electromagnetic fields (EMF)		
	No harmful electromagnetic fields		
20.7.1 (4.35)	Protection against moving fan blades		
	Test with a standard test finger		
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		
	Blades rounded with radius ≥ 0.5 mm and:		
	- hardness less than D60 Shore		
	- peripheral speed less than 15 m/s		
	- input power of fan ≤ 2 W at rated voltage		
20.7.1 (4.36)	Track-mounted luminaires		
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		
20.7.2 (-)	Lamp holders		

	Tested as part of the lighting chain if non-standardised lampholders		
	E5, E10, E14 and E27 according to IEC 60238		
	Bayonet according to IEC 61184		
	Insulating piercing terminals only if SELV circuit or permanent non-rewireable connections in class II chain		
	Maximum voltage used for E5, E10 and small lampholders		
	Body of insulating material		
20.7.3 (-)	Terminal blocks		
	Clause 4.6 of IEC 60598-1 referring to terminal blocks does not apply		
20.7.4 (-)	Terminals and supply connections		
	Comply with Annex A		
	Plugs and socket-outlets with temporarily installed protected lighting (TPL) conform to IEC 60309-1		
20.7.5 (-)	Gaskets		
	Gasket weather resistant if outdoor use		
	Gasket remains in place and fit tightly		
20.7.6 (-)	Mechanical strength		
	Mechanical strength requirements according to Clause 16 of IEC 61184:2017 or Clause 16 of IEC 60238:2016.		
	Accessories comply with 4.13.6 of Part 1		
20.7.7 (-)	Lamp bridging devices		
	Protection against electric shock and fire will not be impaired by bridging lamp filaments		
20.7.8 (-)	Control units and control gear		
	Forming an integral part enclosed in non-flammable insulating material tested according 20.16		
	Securely fixed to the cable		
	Electronic control unit complies with IEC 61347-2-11		
	LED control gear complies with IEC 61347-2-13		
	Impact test on enclosure of electronic control unit:		
	- 0.5 Nm (marked "for indoor use only")		
	- 0.7 Nm (without marking "for indoor use only")		
20.7.9 (-)	Lamp rotation		
	Bulb and lamp cap of push-in lamps will not rotate with a torque of 0,025 Nm		
20.7.10 (-)	Lamp insertion and withdrawal force		
	Pull force up to 3 N for push-in lamps		

	Push-in force up to 3 N for push-in lamps		
	Pull out force of between 3 N and 10 N for push-in lamps		
20.7.11 (-)	Lamp mechanical requirements		
	Impact test of 0,2 Nm on lamps (other than supplied by SELV):		
	- non-removable lamps		
	- non-standardized lamps		
20.7.12 (-)	Temporarily installed protected lighting (TPL) chains		
	Comply with requirements for rough service luminaires in Part 1		

20.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		
20.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II <input type="checkbox"/> Category III <input type="checkbox"/>	—
	Category III according to Annex U		
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		
20.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 20.8 (11.2) I	
	Creepage distances for frequency over 30 kHz:		
	- Controlgear marked with \hat{U}_{OUT} and f_{UOUT} according to IEC 61347-1, clause 7.1, item w	See Test Table 20.8 (11.2) II	
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 20.8 (11.2) II	
20.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 20.8 (11.2) I	
	Clearances distances for frequency over 30 kHz:		
	- Controlgear marked with U_P	See Test Table 20.8 (11.2) II	
	- Requirements according to IEC 60664-4 for control gear not covered by IEC 61347	See Test Table 20.8 (11.2) II	

20.10 (14)	SCREW TERMINALS		
	Separately approved; component list..... :	(See Annex 1)	
	Part of the luminaire	(See Annex 3)	

20.10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		
	Separately approved; component list..... :	(See Annex 1)	
	Part of the luminaire	(See Annex 4)	

20.11 (5)	EXTERNAL AND INTERNAL WIRING		
20.11.1 (5.2)	Supply connection and external wiring		
20.11.1 (5.2.1)	Means of connection		
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment		
20.11.1 (5.2.2)	Type of cable		
	Nominal cross-sectional area (mm ²)		
	Cables equal to IEC 60227 or IEC 60245		
20.11.1 (5.2.3)	Type of attachment, X, Y or Z		
20.11.1 (5.2.5)	Type Z not connected to screws		
20.11.1 (5.2.6)	Cable entries:		
	- suitable for introduction		
	- adequate degree of protection		
20.11.1 (5.2.7)	Cable entries through rigid material have rounded edges		
20.11.1 (5.2.8)	Insulating bushings:		
	- suitably fixed		
	- material in bushings		
	- material not likely to deteriorate		
	- tubes or guards made of insulating material		
20.11.1 (5.2.9)	Locking of screwed bushings		
20.11.1 (5.2.10)	Cord anchorage:		
	- covering protected from abrasion		
	- clear how to be effective		
	- no mechanical or thermal stress		
	- no tying of cables into knots etc.		
	- insulating material or lining		
20.11.1 (5.2.10.1)	Cord anchorage for type X attachment:		
	a) at least one part fixed		
	b) types of cable		
	c) no damaging of the cable		

	d) whole cable can be mounted		
	e) no touching of clamping screws		
	f) metal screw not directly on cable		
	g) replacement without special tool		
	Glands not used as anchorage		
	Labyrinth type anchorages		
20.11.1 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		
20.11.1 (5.2.10.3)	Tests:		
	- impossible to push cable; unsafe		
	- pull test: 25 times; pull (N)		
	- torque test: torque (Nm)		
	- displacement ≤ 2 mm		
	- no movement of conductors		
	- no damage of cable or cord		
	- function independent of electrical connection		
20.11.1 (5.2.10.4)	Luminaire with/ designed for use with supply cord with maximum current of 2A:		
	- Ordinary Class III luminaire supplied with SELV ≤ 25 V RMS/60V DC		
	- Ordinary Class III luminaire supplied with PELV ≤ 12 V RMS/30V DC		
	- Other than ordinary Class III luminaire supplied with voltage ≤ 12 V RMS/30V DC		
	Pull test of 30 N		
20.11.1 (5.2.11)	External wiring passing into luminaire		
20.11.1 (5.2.12)	Looping-in terminals		
20.11.1 (5.2.13)	Wire ends not tinned		
	Wire ends tinned: no cold flow		
20.11.1 (5.2.14)	Mains plug same protection		
	Class III luminaire plug		
	No unsafe compatibility		
20.11.1 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		
20.11.1 (5.2.16)	Appliance inlets (IEC 60320)		
	Installation couplers (IEC 61535)		

	Appliance inlet or connector systems (IEC 61984)		
20.11.1 (5.2.17)	No standardized interconnecting cables properly assembled		
20.11.1 (5.2.18)	Used plug in accordance with		
	- IEC 60083		
	- other standard		
20.11.1 (5.3)	Internal wiring		
20.11.1 (5.3.1)	Internal wiring of suitable size and type		
	Through wiring		
	- not delivered/ mounting instruction		
	- factory assembled		
	- socket outlet loaded (A) :		
	- temperatures : (See Annex 2)		
	Green-yellow for protective earth only		
20.11.1 (5.3.1.1)	Internal wiring connected directly to fixed wiring		
	Cross-sectional area (mm ²)..... :		
	Insulation thickness (mm) :		
	Extra insulation added where necessary		
20.11.1 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		
	Cross-sectional area (mm ²)..... :		
20.11.1 (5.3.1.3)	Double or reinforced insulation for class II		
20.11.1 (5.3.1.4)	Conductors without insulation		
20.11.1 (5.3.1.5)	SELV or PELV current-carrying parts		
20.11.1 (5.3.1.6)	Insulation thickness other than PVC or rubber		
20.11.1 (5.3.2)	Sharp edges etc.		
	No moving parts of switches etc.		
	Joints, raising/lowering devices		
	Telescopic tubes etc.		
	No twisting over 360°		
20.11.1 (5.3.3)	Insulating bushings:		
	- suitable fixed		

	- material in bushings		
	- material not likely to deteriorate		
	- cables with protective sheath		
20.11.1 (5.3.4)	Joints and junctions effectively insulated		
20.11.1 (5.3.5)	Strain on internal wiring		
20.11.1 (5.3.6)	Wire carriers		
20.11.1 (5.3.7)	Wire ends not tinned		
	Wire ends tinned: no cold flow		
20.11.1 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		
	Under test the temperature of the luminaire wiring insulation does not exceed the limits stated in Table 12.2	(See Annex 2)	
	No damage to luminaire wiring after test		
20.11.2 (-)	Cables for lighting chains		
	Type of cable :		
	Cables not lighter than IEC 60227 or IEC 60245 for class II chain		
	Cables not lighter than insulation according to 5.3.1 of part 1 for class III chain		
	Nominal cross-sectional area (mm ²) :		
	Mechanical properties according 4.14.1 and 4.14.2 of part 1		
20.11.3 (-)	Cord anchorage test		
	Pull test 30 N 25 times on single-core cable		
20.11.4 (-)	Plugs and cable length		
	Splash-proof plug or permanent connection if for outdoor use		
	Length of the cable between the plug and first lamp or lampholder not less than 1,5 m		
20.11.5 (-)	Maximum length of extendable class II lighting chains		
	Maximum length 100 m for 0,5 mm ² cable		
	Maximum length 150 m for 0,75 mm ² cable		
20.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK		
20.12.1 (8.2.1)	Live parts not accessible		
	Basic insulated parts not used on the outer surface without appropriate protection		

	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		
	Basic insulation only accessible under lamp or starter replacement		
	Protection in any position		
	Double-ended tungsten filament lamp		
	Insulation lacquer not reliable		
	Double-ended high-pressure discharge lamp		
	Relevant warning according to 3.2.18 fitted to the luminaire		
20.12.1 (8.2.2)	Portable luminaire adjusted in most unfavourable position		
20.12.1 (8.2.3.a)	Class II luminaire:		
	- basic insulated metal parts not accessible		
	- required insulation from live parts in compliance with Table X.1		
	- glass protective shields not used as supplementary insulation		
20.12.1 (8.2.3.b)	Metal BC lampholder in class I luminaires connected to protective earth		
20.12.1 (8.2.3.c)	SELV circuits with exposed current carrying parts:		
	Ordinary luminaire:		
	- voltage under load/ no-load AC (V)..... :		
	- voltage under load/ no-load DC (V)		
	- interrupted DC voltage (V)		
	- touch current if applicable (mA)		
	One conductive part insulated		
	Other than ordinary luminaire:		
	- voltage under load/ no-load AC (V)..... :		
	- voltage under load/ no-load DC (V)		
	- interrupted DC voltage (V)		
20.12.1 (8.2.3.d)	PELV circuits with exposed current carrying parts:		
	Ordinary luminaire:		
	- voltage under load/ no-load AC (V)..... :		

	- voltage under load/ no-load DC (V)		
	Other than ordinary luminaire:		
	- voltage under load/ no-load AC (V).....		
	- voltage under load/ no-load DC (V)		
	Pole not connected to earth insulated		
	Class III luminaire only for connection to SELV or PELV		
20.12.1 (8.2.4)	Portable luminaire has protection independent of supporting surface		
20.12.1 (8.2.5)	Compliance with the standard test finger or relevant probe		
20.12.1 (8.2.6)	Covers reliably secured		
20.12.1 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		
	Portable luminaire with capacitor > 0,1 μ F (0,25) not exceed 34 V 1 s after disconnection		
	Other luminaires with capacitor > 0,1 μ F (0,25) with plug and track adaptors not exceed 60 V 5 s after disconnection		
20.12.2 (-)	Divisible plug		
	Divisible plug in compliance with Figure 1		
	Parts of the connector do not separate with a pull force of 10 N		
20.12.3 (-)	Electrification of decorations		
	Test with flat probe		
20.12.4 (-)	Contact of push-in lampholders		
	Lampholder contacts in push-in lampholders is reliably secured		
	Contacts move maximum 0,8 mm during the endurance test		
20.12.5 (-)	Blanking plugs		
	Blanking plugs provided if chain designed to be used without lamp in every lampholder		

20.13 (12)	ENDURANCE TEST AND THERMAL TEST		
20.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) but before (9.3) specified in 20.14		—
20.13.1 (12.2)	Selection of lamps and ballasts		—
	Lamp used according to Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
20.13.1 (12.3)	Endurance test		

	a) mounting-position		—
	b) test temperature (°C)		—
	c) total duration (h)		—
	d) supply voltage (V)		—
	d) if not equipped with controlgear, constant voltage/current (V) or (A)		—
20.13.1 (12.3.1d)	d) Class III luminaires powered via information technology communication cable:		—
	- voltage under normal operation (V)		—
	- voltage under abnormal operation (V)		—
	e) luminaire ceases to operate		—
	f) luminaire with a constant light output function		
20.13.1 (12.3.2)	After endurance test:		
	- no part unserviceable		
	- luminaire not unsafe		
	- no damage to track system		
	- marking legible		
	- no cracks, deformation etc.		
20.13.1 (12.4)	Thermal test (normal operation)	(See Annex 2)	
20.13.1 (12.5)	Thermal test (abnormal operation)	(See Annex 2)	
20.13.1 (12.6)	Thermal test (failed lamp control gear condition):		
20.13.1 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		—
	- electronic lamp control gear		
	- measured winding temperature (°C): at 1,1 Un		—
	- measured mounting surface temperature (°C) at 1,1 Un		
	- calculated mounting surface temperature (°C)		
	- track-mounted luminaires		
20.13.1 (12.6.2)	Temperature sensing control		
	- case of abnormal conditions		—
	- thermal link		
	- manual reset cut-out		
	- auto reset cut-out		
	- measured mounting surface temperature (°C)		

	- track-mounted luminaires		
20.13.1 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		
20.13.1 (12.7.1)	Luminaire without temperature sensing control		
20.13.1 (12.7.1.1)	Luminaire with fluorescent lamp $\leq 70W$		
	Test method 12.7.1.1 or Annex W		—
	Test according to 12.7.1.1:		
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—
	- Components retained in place after the test		
	- Test with standard test finger after the test		
	Test according to Annex W:		
	- 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 20.15 (13.2.1)	
20.13.1 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp $> 70W$, transformer $> 10 VA$		
	- 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 20.15 (13.2.1)	
20.13.1 (12.7.1.3)	Luminaire with short circuit proof transformers $\leq 10 VA$		
	- case of abnormal conditions		—
	- Components retained in place after the test		
	- Test with standard test finger after the test		
20.13.1 (12.7.2)	Luminaire with temperature sensing control		
	- thermal link	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- manual reset cut-out	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- auto reset cut-out	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- case of abnormal conditions		—

	- highest measured temperature of fixing point/ exposed part (°C):		—
	Ball-pressure test:	See Test Table 20.15 (13.2.1)	
20.13.2 (-)	Test voltage		
	Provision of 12.3.1 d) of part 1 and if class III chain 1,1 x rated voltage of transformer/convertor		
	Provision of 12.4.1 d) of part 1 and if class III chain 1,06 x rated voltage of transformer/convertor		
20.13.3 (-)	Lamp bridging devices		
	Lamp bridging not cause temperature which impair safety		
	Temperature of lampholders and cables not exceed values in Table 12.1 when bridging device operate successively on each lamp		
20.13.4 (-)	Short-circuit test of rectifier		
	No emission of flames or molten material or production of flammable gases and no live parts accessible when short-circuit output of the rectifier		

20.14 (9)	RESISTANCE TO DUST AND MOISTURE		
20.14 (-)	If IP > IP 20 the order of tests as specified in clause 20.13		
20.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		
	- classification according to IP	IP	—
	- mounting position during test		—
	- fixing screws tightened; torque (Nm)		—
	- tests according to clauses		—
	- electric strength test afterwards		
	a) no deposit in dust-proof luminaire		
	b) no talcum in dust-tight luminaire		
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		
	c.1) For luminaires without drain holes – no water entry		
	c.2) For luminaires with drain holes – no hazardous water entry		
	d) no water in watertight, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold-water jet-proof luminaire		
	e) no contact with live parts (IP 2X)		
	e) no entry into enclosure (IP 3X and IP 4X)		
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		

	f) no trace of water on part of lamp requiring protection from splashing water		
	g) no damage of protective shield or glass envelope		
20.14 (9.3)	Humidity test 48 h		

20.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		
20.15 (10.2.1)	Insulation resistance test		
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø :		
	Insulation resistance (MΩ):		
	SELV or PELV:		
	- between current-carrying parts of different polarity:		
	- between current-carrying parts and mounting surface..... :		
	- between current-carrying parts and metal parts of the luminaire..... :		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		
	- Insulation bushings as described in Section 5 :		
	Other than SELV or PELV:		
	- between live parts of different polarity :		
	- between live parts and mounting surface :		
	- between live parts and metal parts :		
	- between live parts of different polarity through action of a switch..... :		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		
	- Insulation bushings as described in Section 5 :		
20.15 (10.2.2)	Electric strength test		
	Dummy lamp		
	Luminaires with ignitors after 24 h test		
	Luminaires with manual ignitors		
	Luminaires with ignitors provided with ballasts conforming to IEC 61347-2-9		
	SELV or PELV:		
	- between current-carrying parts of different polarity:		
	- between current-carrying parts and mounting surface..... :		

	- between current-carrying parts and metal parts of the luminaire		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		
	- Insulation bushings as described in Section 5		
	Other than SELV/PELV:		
	- between live parts of different polarity		
	- between live parts and mounting surface		
	- between live parts and metal parts		
	- between live parts of different polarity through action of a switch		
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		
	- Insulation bushings as described in Section 5		
20.15 (10.3)	Touch current (mA)		
	Protective conductor current (mA)		

20.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		
20.16 (13.2.1)	Ball-pressure test	See Test Table 20.16 (13.2.1)	
20.16 (13.3.1)	Needle-flame test (10 s)	See Test Table 20.16 (13.3.1)	
20.16 (13.3.2)	Glow-wire test (650°C)	See Test Table 20.16 (13.3.2)	
20.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 20.16 (13.4)	

20.8 (11.2)	TABLE I: Creepage distances and clearances							
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages							
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2* and Table U.1*							
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:								
Working voltage (V)							—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—	
Pulse voltage or U_P if applicable (kV)							—	
Supplementary information:								
Distance 2:								
Working voltage (V)							—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—	
Pulse voltage or U_P if applicable (kV)							—	
Supplementary information:								
Distance 3:								
Working voltage (V)							—	
PTI					< 600 <input type="checkbox"/>	≥ 600 <input type="checkbox"/>	—	
Pulse voltage or U_P if applicable (kV)							—	
Supplementary information:								
** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.								

20.8 (11.2)		TABLE II: Creepage distances and clearances					
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 <input type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
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 <input type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
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 <input type="checkbox"/> ≥ 600 <input type="checkbox"/>		—
Peak value of the working voltage \hat{U}_{out} if applicable (kV)							—
Supplementary information:							
** Insulation type: B – Basic; S – Supplementary; R – Reinforced.							

20.16 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			
Allowed impression diameter (mm) :				2
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Supplementary information:				

20.16 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)					
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	
Supplementary information:						

20.16 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests					
Object/ Part No./ Material	Manufacturer/ trademark	GWT (°C): 650			Verdict	
		t_E (s)	t_I (s)	t_R (s)		
Ignition of the specified layer placed underneath the test specimen (Yes/No)						
Supplementary information:						

20.16 (13.4)	TABLE: Proof tracking test (IEC 60112)				
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						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Description:							
Description:							
Description:							
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							

ANNEX 2		TABLE: Thermal tests of Section 12					
	Type reference					—	
	Lamp used					—	
	Lamp control gear used					—	
	Mounting position of luminaire					—	
	Supply wattage (W)					—	
	Supply current (A)					—	
	Temperatures in test 1 - 4 below are corrected for ta (°C)					—	
	- abnormal operating mode					—	
20.13 (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						
	- 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						
20.13 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current or 130/150% of rated input voltage						
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnor.	
		test 1	test 2	test 3	limit	test 4	limit
Supplementary information:							

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

ANNEX 4	Screwless terminals (part of the luminaire)		
(15)	SCREWLESS TERMINALS		
(15.2)	Type of terminal..... :		—
	Rated current (A)..... :		—
(15.3.1)	Material		
(15.3.2)	Clamping		
(15.3.3)	Stop		
(15.3.4)	Unprepared conductors		
(15.3.5)	Pressure on insulating material		
(15.3.6)	Clear connection method		
(15.3.7)	Clamping independently		
(15.3.8)	Fixed in position		
(15.3.10)	Conductor size		
	Type of conductor		
(15.5)	Terminals and connections for internal wiring		
(15.5.1)	Mechanical tests		
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)		
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		
	Insertion force not exceeding 50 N		
(15.5.1.2)	Permanent connections: pull-off test (20 N)		
(15.5.2)	Electrical tests		
	Voltage drop (mV) after 1 h (4 samples)		
	Voltage drop of two inseparable joints		
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)..... :		
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		
(15.6)	Terminals and connections for external wiring		
(15.6.1)	Conductors		
	Terminal size and rating		
15.6.2	Mechanical tests		
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		

(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)		
(15.6.3)	Electrical tests		
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		

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