

Test Report issued under the responsibility of:  
Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch

**TEST REPORT**  
**IEC 60598-2-6**  
**Luminaires**  
**Part 2: Particular requirements:**  
**Section Six – Luminaires with built-in transformers or convertors for filament lamps**

**Report Reference No.** .....: GZ10100444-2

**Date of issue** .....: 6 December 2010

**Total number of pages** .....: 26

**CB Testing Laboratory** .....: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

**Address** .....: Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China

**Applicant's name** .....: Eaglerise Electric & Electronic (Foshan) Co., Ltd.

**Address** .....: Guicheng Sci-Tech Industrial Park, Jianping Road, Nanhai District, Foshan City, Guangdong Province, P.R. China

**Test specification:**

**Standard** .....:  IEC 60598-2-6:1994+A1:1996 used in conjunction with IEC 60598-1:2008  
 EN 60598-2-6:1994+A1:1997 used in conjunction with EN 60598-1:2008 +A11:2009

**Test procedure** .....: Testing of additional requirements for independent LED power supply

**Non-standard test method** .....: N/A

**Test Report Form No.** .....: IEC60598\_2\_6A

**Test Report Form(s) Originator** .....: Intertek Semko AB


**Master TRF** .....: 2008-12

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<b>Test item description.....</b>	LED Power Supply (Electronic convertor for LED)
<b>Trade Mark .....</b>	
<b>Manufacturer.....</b>	Eaglerise Electric & Electronic (Foshan) Co., Ltd.
<b>Model/Type reference.....</b>	ELP030C0700LSD; ELP6X3LSD; ELP15X1LSD
<b>Ratings.....</b>	Input: 220-240 VAC; 50/60 Hz; Output: ELP030C0700LSD: DC 700 mA; 21-35 VDC; Max. 50 VDC; Load: 18-30 W; Non-inherently short-circuit proof; ELP6X3LSD: DC 700 mA; Max. 27 VDC; Load: 6X3 W; Non-inherently short-circuit proof; ELP15X1LSD: DC 350 mA; Max. 59 VDC; Load : 15X1W; Inherently short-circuit proof; Class II; SELV; IP 20; ta 50 °C; tc 80 °C; Independent; Constant current type; 110°C thermal protection; Suitable for direct mounting on normally flammable surfaces

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Testing location/ address .....	Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
<input type="checkbox"/> Associated CB Laboratory:	
Testing location/ address .....	
Tested by (name + signature).....	Rock Hong <i>Rock H</i>
Approved by (+ signature) .....	Shelley Ying <i>Shelley Ying</i>
<input type="checkbox"/> Testing procedure: TMP	
Tested by (name + signature).....	—
Approved by (+ signature) .....	—
Testing location/ address .....	
<input type="checkbox"/> Testing procedure: WMT	
Tested by (name + signature).....	—
Witnessed by (+ signature).....	—
Approved by (+ signature) .....	—
Testing location/ address .....	
<input type="checkbox"/> Testing procedure: SMT	
Tested by (name + signature).....	—
Approved by (+ signature) .....	—
Supervised by (+ signature).....	—
Testing location/ address .....	
<input type="checkbox"/> Testing procedure: RMT	
Tested by (name + signature).....	—
Approved by (+ signature) .....	—
Supervised by (+ signature).....	—
Testing location/ address .....	

<p><b>Summary of testing:</b>          The tested samples fulfilled the requirements of specified standards.          Other see report GZ10100444-1.</p>	
<p><b>Tests performed (name of test and test clause):</b>          6.5 Marking          6.6 Construction          6.7 Creepage distances and clearances          6.9 Terminals          6.10 External and internal wiring          6.11 Protection against electric shock          6.12 Endurance tests and thermal tests          6.13 Resistance to dust and moisture          6.14 Insulation resistance and electric strength          6.15 Resistance to heat, fire and tracking</p>	<p><b>Testing location:</b>          Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China</p>
<p><b>Summary of compliance with National Differences:</b>          Australia national deviation was checked.</p>	
<p><b>Copy of marking plate</b>          See report GZ10100444-1.</p>	
<p><b>Test item particulars</b>.....:</p>	
<p>Classification of installation and use.....:</p>	<p>Independent; Class II; for use with LED</p>
<p>Supply Connection.....:</p>	<p>Terminal block</p>
<p><b>Possible test case verdicts:</b></p>	
<p>- test case does not apply to the test object.....:</p>	<p>N/A</p>
<p>- test object does meet the requirement.....:</p>	<p>P (Pass)</p>
<p>- test object does not meet the requirement.....:</p>	<p>F (Fail)</p>
<p><b>Testing</b> .....</p>	
<p>Date of receipt of test item.....:</p>	<p>14 October 2010</p>
<p>Date (s) of performance of tests .....</p>	<p>14 October 2010 to 6 December 2010</p>

**General remarks:**

The test results presented in this report relate only to the object tested.

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"(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 comma is used as the decimal separator.

Clause numbers between brackets refer to clauses in IEC 60598-1

When determining for test conclusion, measurement uncertainty of tests has been considered.

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The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

The clause which indicated with \* is the subcontract test item.

This report shall be used in conjunction with the test report GZ10100444-1.

Total: 26 pages: Page 1-26 for test report.

Manufacturing site: Eaglerise Electric & Electronic (Foshan) Co., Ltd.

Manufacturing address: Guicheng Sci-Tech Industrial Park, Jianping Road, Nanhai District, Foshan City, Guangdong Province, P.R. China

**General product information:**

See report GZ10100444-1.

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict

<b>6.2 (0)</b>	<b>GENERAL TEST REQUIREMENTS</b>		—
6.2 (0.1)	Information for luminaire design considered	Standard IEC/EN 62471 Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
64.2 (0.3)	More sections applicable .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

<b>6.4 (2)</b>	<b>CLASSIFICATION</b>		—
6.4 (2.2)	Type of protection (Class 0 excluded) .....	Class II	—
6.4 (2.3)	Degree of protection (Requirement: Ordinary) .....	IP 20	—
6.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire not suitable for direct mounting on normally flammable surfaces .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
6.4 (2.5)	Luminaire for normal use .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

<b>6.5 (3)</b>	<b>MARKING</b>		P
6.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
6.5 (3.3)	Additional information		P
	Language of instructions		P
6.5 (3.3.1)	Combination luminaires		N/A
6.5 (3.3.2)	Nominal frequency in Hz		P
6.5 (3.3.3)	Operating temperature		P
6.5 (3.3.4)	Symbol or warning notice		N/A
6.5 (3.3.5)	Wiring diagram		N/A
6.5 (3.3.6)	Special conditions		N/A
6.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
6.5 (3.3.8)	Limitation for semi-luminaires		N/A
6.5 (3.3.9)	Power factor and supply current		P
6.5 (3.3.10)	Suitability for use indoors		N/A
6.5 (3.3.11)	Luminaires with remote control		N/A
6.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
6.5 (3.3.13)	Specifications of protective shields		N/A
6.5 (3.3.14)	Symbol for nature of supply		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
6.5 (3.3.15)	Rated current of socket outlet		N/A
6.5 (3.3.16)	Rough service luminaire		N/A
6.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
6.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
6.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
6.5 (3.3.20)	Provided with information if not intended to be mounted within arms reach		N/A
6.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
6.5.1 (-)	Rated voltage		P
6.5.2 (-)	Output voltage visible during lamp replacement		P
6.5.3 (-)	Warning notice		N/A
6.5.4 (-)	Marking on transformer or convertor		P
6.5.5 (-)	Fuse-link rating		N/A

<b>6.6 (4)</b>	<b>CONSTRUCTION</b>		<b>P</b>
6.6 (4.2)	Components replaceable without difficulty		P
6.6 (4.3)	Wireways smooth and free from sharp edges		P
6.6 (4.4)	Lampholders		N/A
6.6 (4.4.1)	Integral lampholder		N/A
6.6 (4.4.2)	Wiring connection		N/A
6.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
6.6 (4.4.4)	Positioning		N/A
	- pressure test (N) .....		N/A
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) .....		N/A
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
6.6 (4.4.5)	Peak pulse voltage		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
6.6 (4.4.6)	Centre contact		N/A
6.4.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
6.6 (4.4.8)	Lamp connectors		N/A
6.6 (4.4.9)	Caps and bases correctly used		N/A
6.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
6.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
6.6 (4.7)	Terminals and supply connections		P
6.6 (4.7.1)	Contact to metal parts		P
6.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		N/A
6.6 (4.7.3)	Terminals for supply conductors		P
6.6 (4.7.3.1)	Welded connections:		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 15.8.2		N/A
	- electrical test according to 15.9		N/A
	- heat test according to 15.9.2.3 and 15.9.2.4		N/A
6.6 (4.7.4)	Terminals other than supply connection		P
6.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
6.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
6.6 (4.8)	Switches:		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with 61058-1 for electronic switches		N/A
6.6 (4.9)	Insulating lining and sleeves		N/A
6.6 (4.9.1)	Retainment		N/A



IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
	Method of fixing.....:		N/A
6.6 (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
6.6 (4.10)	Insulation of Class II luminaires		P
6.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation	No such metal parts	N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
6.6 (4.10.2)	Assembly gaps:		P
	- not coincidental		P
	- no straight access with test probe		P
6.6 (4.10.3)	Retention of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
6.6 (4.11)	Electrical connections		P
6.6 (4.11.1)	Contact pressure		P
6.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
6.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
6.6 (4.11.4)	Material of current-carrying parts		P
6.6 (4.11.5)	No contact to wood or mounting surface		P
6.6 (4.11.6)	Electro-mechanical contact systems		N/A
6.6 (4.12)	Mechanical connections and glands		P
6.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part .....	0,50; Fixing screws on cord anchorage	P
	Torque test: torque (Nm); part .....		N/A
	Torque test: torque (Nm); part .....		N/A
6.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
6.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) .....		N/A
	- lampholder; torque (Nm).....		N/A
	- push-button switches; torque 0,8 Nm .....		N/A
6.6 (4.12.5)	Screwed glands; force (Nm) .....		N/A
6.6 (4.13)	Mechanical strength		P
6.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) .....		N/A
	- other parts; energy (Nm).....	Enclosure: 0,50 Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
6.6 (4.13.3)	Straight test finger		P
6.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
6.6 (4.13.6)	Tumbling barrel		N/A
6.6 (4.14)	Suspensions and adjusting devices		N/A
6.6 (4.14.1)	Mechanical load:		N/A
	A) four times the weight		N/A
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm) .....		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) .....		N/A
	Metal rod. diameter (mm) .....		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
	Fixed luminaire or independent control gear without fixing devices		N/A
6.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) .....		N/A
	Stress in conductors (N/mm <sup>2</sup> ) .....		N/A
	Mass (kg) of semi-luminaire .....		N/A
	Bending moment (Nm) of semi-luminaire .....		N/A
6.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles .....		N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A
6.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
6.6 (4.14.5)	Guide pulleys		N/A
6.6 (4.14.6)	Strain on socket-outlets		N/A
6.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 °C		N/A
	- 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
6.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
6.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear	Electronic lamp control gear	N/A
6.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
6.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
	- temperature marked lamp control gear		N/A
6.6 (4.16.3)	Design to satisfy the test of 12.6		N/A
6.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
6.6 (4.18)	Resistance to corrosion:		P
6.6 (4.18.1)	- rust-resistance		N/A
6.6 (4.18.2)	- season cracking in copper		P
6.6 (4.18.3)	- corrosion of aluminium		N/A
6.6 (4.19)	Ignitors compatible with ballast		N/A
6.6 (4.20)	Rough service vibration		N/A
6.6 (4.21)	Protective shield:		N/A
6.6 (4.21.1)	Shield fitted		N/A
	Shield of glass if tungsten halogen lamps		N/A
6.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
6.6 (4.21.3)	No direct path		N/A
6.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment		N/A
6.6 (4.22)	Attachments to lamps		N/A
6.6 (4.23)	Semi-luminaires comply Class II		N/A
6.6 (4.24)	UV radiation for tungsten halogen lamps and metal halide lamps (Annex P)		N/A
6.6 (4.25)	No sharp point or edges		P
6.6 (4.26)	Short-circuit protection:		N/A
6.6 (4.26.1)	Uninsulated accessible SELV parts		N/A
6.6 (4.26.2)	Short-circuit test		N/A
6.6 (4.26.3)	Test chain according to Figure 29		N/A
6.6.1-3 (-)	Electrical safety output circuit		P

6.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V) .....	220-240 VAC (Primary); 59 VDC (Secondary)	—
	Voltage form	Sinusoidal (Primary) <input checked="" type="checkbox"/> Non-sinusoidal(Secondary) <input checked="" type="checkbox"/>	—
	PTI	< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>	—
	Impulse withstand category (Normal category II) (Category III Annex U)	Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—

IEC 60598-2-6				
Clause	Requirement + Test	Result - Remark		Verdict
	Rated pulse voltage (kV).....:	—		—
	Measured circuit.....:	Primary	Secondary	—
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm).....:	Approved terminal block; Cr. > 5 mm (limit: 2,5 mm); Cl. > 5 mm (limit: 1,5 mm)	Approved terminal block; Cr. > 4 mm (limit: 1,6 mm); Cl. > 4 mm (limit: 0,8 mm)	P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm).....:	Cr. = 7,0 mm (limit: 5 mm); Cl. = 7,0 mm (limit: 3 mm)	Cr. = 7,0 mm (limit: 1,6 mm); Cl. = 7,0 mm (limit: 0,8 mm)	P
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm).....:	Cr. > 5 mm (limit: 2,5 mm); Cl. > 5 mm (limit: 1,5 mm)	—	P
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm).....:	Cr. > 4 mm (limit: 2,5 mm); Cl. > 4 mm (limit: 1,5 mm)	—	P
	(5) Not used			—
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm).....:	Cr. = 7,0 mm (limit: 5 mm); Cl. = 7,0 mm (limit: 3 mm)	Cr. = 7,0 mm (limit: 1,6 mm); Cl. = 7,0 mm (limit: 0,8 mm)	P
	Between transformer windings: cr (mm); cl (mm) .:			N/A

<b>6.8 (7)</b>	<b>PROVISION FOR EARTHING</b>		N/A
6.8 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		N/A
6.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		N/A
6.8 (7.2.4)	Locking of clamping means		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
6.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
6.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
6.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
6.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
6.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
6.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
6.8.1 (-)	Metal shell of lampholders		N/A
6.8.2 (-)	Earthing of secondary circuit		N/A
6.8.3 (-)	Current path during operation		N/A

<b>6.9 (14)</b>	<b>SCREW TERMINALS</b>		P
	Separately approved; component list	Approved terminal block	P
	Part of the luminaire		N/A

<b>6.9 (15)</b>	<b>SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS</b>		N/A
	Separately approved; component list		N/A
	Part of the luminaire		N/A

<b>6.10 (5)</b>	<b>EXTERNAL AND INTERNAL WIRING</b>		<b>P</b>
6.10 (5.2)	Supply connection and external wiring		P
6.10 (5.2.1)	Means of connection.....:	Terminal block	P
6.10 (5.2.2)	Type of cable .....	Input: H03VVH2-F (not provided with the product)	P
	Nominal cross-sectional area (mm <sup>2</sup> ).....:	Input: 2 x 0,5...0,75mm <sup>2</sup> ; Output: 0,5...1,5mm <sup>2</sup>	P
	Cables equal to IEC 60227 or IEC 60245		P
6.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
6.10 (5.2.5)	Type Z not connected to screws		N/A
6.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- adequate degree of protection		P
6.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
6.10 (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
6.10 (5.2.9)	Locking of screwed bushings		N/A
6.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
6.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
6.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
6.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) .....: 60		P
	- torque test: torque (Nm).....: Input: 0,15; Output: 0,25		P
	- displacement $\leq 2$ mm		P
	- no movement of conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- no damage of cable or cord		P
6.10 (5.2.11)	External wiring passing into luminaire		N/A
6.10 (5.2.12)	Looping-in terminals		N/A
6.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
6.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
6.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Appliance couplers of class II type		N/A
6.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
6.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
6.10 (5.3)	Internal wiring		N/A
6.10 (5.3.1)	Internal wiring of suitable size and type		N/A
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) .....		N/A
	- temperatures.....		N/A
	Green-yellow for earth only		N/A
6.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm <sup>2</sup> ) .....		N/A
	Insulation thickness		N/A
	Extra insulation added where necessary		N/A
6.10 (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
6.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
6.10 (5.3.1.4)	Conductors without insulation		N/A
6.10 (5.3.1.5)	SELV current-carrying parts		N/A
6.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
6.10 (5.3.2)	Sharp edges etc.		N/A
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Telescopic tubes etc.		N/A
	No twisting over 360°		N/A
6.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
6.10 (5.3.4)	Joints and junctions effectively insulated		N/A
6.10 (5.3.5)	Strain on internal wiring		N/A
6.10 (5.3.6)	Wire carriers		N/A
6.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A

<b>6.11 (8)</b>	<b>PROTECTION AGAINST ELECTRIC SHOCK</b>		<b>P</b>
6.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable and adjustable luminaires		P
	Basic insulated parts not accessible with Ø 50 mm probe from outside, within arms reach, on wall-mounted luminaires		N/A
	Lampholders and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
6.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		P
6.11 (8.2.3.a)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		N/A
6.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
6.11 (8.2.3.c)	Class III luminaires with exposed SELV parts:		N/A
	Ordinary luminaire:		N/A
	- touch current .....		N/A
	- no-load voltage .....		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage .....		N/A
6.11 (8.2.4)	Portable luminaire:		P
	- protection independent of supporting surface		P
	- terminal block completely covered		P
6.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
6.11 (8.2.6)	Covers reliably secured		P
6.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		N/A
	Portable plug connected luminaire with capacitor	0,2 uF; 12 V	P
	Other plug connected luminaire with capacitor		N/A
	Discharge device on or within capacitor		N/A
	Discharge device mounted separately		N/A

<b>6.12 (12)</b>	<b>ENDURANCE TEST AND THERMAL TEST</b>		<b>P</b>
6.12 (12.3)	Endurance test:		P
6.12a (-)	- test voltage 1,1 Un (V) .....	264	—
6.12 (12.3)	- mounting-position .....	On ceiling	—
	- test temperature (°C) .....	60	—
	- total duration (h).....	240	—
	- supply voltage: Un factor; calculated voltage (V):	264	—
	- lamp used .....	Equivalent resistance	—
6.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- marking legible		P
	- no cracks, deformation etc.		P
6.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
6.12b (-)	- test voltage 1,06 Un (V) .....	254,4	—
6.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
6.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
6.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) .....		—
	- case of abnormal conditions .....		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un ..		—
	- measured mounting surface temperature (°C) at 1,1 Un.....		N/A
	- calculated mounting surface temperature (°C) ...		N/A
	- track-mounted luminaires		N/A
6.12 (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
6.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
6.12 (12.7.1)	Luminaire without temperature sensing control		N/A
6.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex V .....		—
	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 V:		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un...:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test:		N/A
	- part tested; temperature (°C).....:		N/A
	- part tested; temperature (°C).....:		N/A
6.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un...:		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test:		N/A
	- part tested; temperature (°C).....:		N/A
	- part tested; temperature (°C).....:		N/A
6.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
6.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- 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:		N/A
	- part tested; temperature (°C).....:		N/A
	- part tested; temperature (°C).....:		N/A

<b>6.13 (9)</b>	<b>RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE</b>		<b>P</b>
6.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP .....	IP20	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- mounting position during test.....	As in normal use	—
	- fixing screws tightened; torque (Nm) .....	0,34	—
	- tests according to clauses .....	9.2.0	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		N/A
	c) no trace of water on current-carrying parts or SELV parts or where it could become a hazard		N/A
	d) i) For luminaires without drain holes – no water entry		N/A
	d) ii) For luminaires with drain holes – no hazardous water entry		N/A
	e) no water in watertight luminaire		N/A
	f) no contact with live parts (IP 2X)		P
	f) no entry into enclosure (IP 3X and IP 4X)		N/A
	f) no contact with live parts (IP3X and IP4X)		N/A
	g) no trace of water on part of lamp requiring protection from splashing water		N/A
	h) no damage of protective shield or glass envelope		N/A
6.13 (9.3)	Humidity test 48 h	25 °C; 93% RH	P

<b>6.14 (10)</b>	<b>INSULATION RESISTANCE AND ELECTRIC STRENGTH</b>		<b>P</b>
6.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø .....		—
	Insulation resistance (MΩ)		—
	SELV:		P
	- between current-carrying parts of different polarity.....		N/A
	- between current-carrying parts and mounting surface .....	> 100 MΩ	P
	- between current-carrying parts and metal parts of the luminaire .....	> 100 MΩ	P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts of different polarity through action of a switch .....		N/A
6.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V):		P
	SELV:		P
	- between current-carrying parts of different polarity .....		N/A
	- between current-carrying parts and mounting surface .....	500 V	P
	- between current-carrying parts and metal parts of the luminaire .....	500 V	P
	Other than SELV:		P
	- between live parts of different polarity .....	1480 V	P
	- between live parts and mounting surface .....	2960 V	P
	- between live parts and metal parts .....	2960 V	P
	- between live parts of different polarity through action of a switch .....		N/A
6.14 (10.3)	Touch current (mA) .....	0,0023	P
<b>6.15 (13)</b>	<b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>		<b>P</b>
6.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C).....	See report GZ10100444-1	P
	- part tested; temperature (°C).....		N/A
6.15 (13.3.1)	Needle flame test (10 s):		P
	- part tested .....	See report GZ10100444-1	P
	- part tested .....		N/A
6.15 (13.3.2)	Glow-wire test (650°C):		P
	- part tested .....	See report GZ10100444-1	P
	- part tested .....		N/A
6.15 (13.4.1)	Tracking test: part tested .....		N/A

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict

	<b>ANNEX 1: components</b>	See report GZ10100444-1	
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	<b>ANNEX 2: temperature measurements, thermal tests of Section 12</b>		P
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	Type reference .....	ELP030C0700LSD	—
	Lamp used .....	Equivalent resistance	—
	Lamp control gear used.....	ELP030C0700LSD	—
	Mounting position of luminaire.....	Placed in oven	—
	Supply wattage (W) .....	27,6	—
	Supply current (A).....	0,113	—
	Calculated power factor.....	0,95	—
	Table: measured temperatures corrected for ta = 50 °C:		P
	- abnormal operating mode .....	Short circuited output	—
	- test 1: rated voltage.....	240 V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....	240 V x 1,06 = 254,4 V	—
	- 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.....	240 V x 1,1 = 264 V	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....	—	—

temperature (°C) of part	Clause 12.4 – normal				Clause 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Input terminal & Input cable	—	62	—	90	—	—
Output terminal & Input cable	—	69	—	90	—	—
Primary winding of TR	—	110	—	115	125	165
Secondary winding of TR	—	112	—	115	123	165
External enclosure (upper surface on Q3)	—	91	—	90+5 °C tolerance	—	—
Supports	—	84	—	90	92	130
Outer surface of enclosure at tc point	78	—	—	80	—	—
X2 capacitor (C1)	—	66	—	100	82	110

IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict

temperature (°C) of part	Clause 12.4 – normal				Clause 12.5 – abnormal	
	test 1	test 2	test 3	limit	test 4	limit
Winding and bobbin of L2	—	74	—	115	90	165
Winding of L1	—	83	—	115	106	165
Winding and bobbin of T2	—	83	—	115	80	165
Winding and bobbin of L3	—	76	—	115	72	165
Thermal protector	—	103	—	Ref	—	—
Electrolyte capacitor (C15)	—	79	—	105	76	115
Y1 capacitor (CY1)	—	89	—	125	89	135
PCB under T1	—	90	—	130	—	—
PCB under K1	—	103	—	130	—	—
Inner surface of enclosure (near T1)	—	93	—	130	—	—
Inner surface of enclosure (near K1)	—	77	—	130	—	—

Type reference .....	: ELP15X1LSD	—
Lamp used .....	: Equivalent resistance	—
Lamp control gear used .....	: ELP15X1LSD	—
Mounting position of luminaire .....	: Placed in oven	—
Supply wattage (W) .....	: 19,8	—
Supply current (A) .....	: 0,081	—
Calculated power factor .....	: 0,95	—
Table: measured temperatures corrected for $t_a = 50\text{ °C}$ :		P
- abnormal operating mode .....	: Short circuited output	—
- test 1: rated voltage .....	: 240 V	—
- test 2: 1,06 times rated voltage or 1,05 times rated wattage .....	: $240\text{ V} \times 1,06 = 254,4\text{ V}$	—
- 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 .....	: $240\text{ V} \times 1,1 = 264\text{ V}$	—
Through wiring or looping-in wiring loaded by a current of A during the test .....	: —	—

temperature (°C) of part	Clause 12.4 – normal	Clause 12.5 – abnormal
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IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict

	test 1	test 2	test 3	limit	test 4	limit
Input terminal & Input cable	—	64	—	90	—	—
Output terminal & Input cable	—	58	—	90	—	—
Primary winding of TR	—	87	—	115	142	165
Secondary winding of TR	—	80	—	115	118	165
External enclosure (upper surface on Q3)	—	73	—	90	—	—
Supports	—	80	—	90	93	130
Outer surface of enclosure at tc point	62	—	—	80	—	—
X2 capacitor (C1)	—	67	—	100	71	110
Winding and bobbin of L2	—	73	—	115	77	165
Winding of L1	—	79	—	115	90	165
Winding and bobbin of T2	—	67	—	115	97	165
Winding and bobbin of L3	—	63	—	115	97	165
Thermal protector	—	98	—	Ref	—	—
Electrolyte capacitor (C15)	—	65	—	105	91	115
Y1 capacitor (CY1)	—	73	—	125	95	135
PCB under T1	—	59	—	130	—	—
PCB under K1	—	98	—	130	—	—
Inner surface of enclosure (near T1)	—	69	—	130	—	—
Inner surface of enclosure (near K1)	—	83	—	130	—	—

	<b>ANNEX 3: screw terminals (part of the luminaire)</b>	N/A
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<b>(14)</b>	<b>SCREW TERMINALS</b>	N/A
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	<b>ANNEX 4: screwless terminals (part of the luminaire)</b>	N/A
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<b>(15)</b>	<b>SCREWLESS TERMINALS</b>	N/A
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IEC 60598-2-6			
Clause	Requirement + Test	Result - Remark	Verdict

	<b>CENELEC COMMON MODIFICATIONS (EN)</b>		N/A
<b>6.5 (3)</b>	<b>MARKING</b>		N/A
6.5 (3.3.101)	Adequate warning on the package		N/A
<b>6.10 (5)</b>	<b>EXTERNAL AND INTERNAL WIRING</b>		N/A
6.10 (5.2.1)	Connecting leads		N/A
	- without a means for connection to the supply		N/A
	- terminal block specified		N/A
	- relevant information provided		N/A
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		N/A
6.10 (5.2.2)	Cables equal to HD21 S2 or HD22 S2		N/A

<b>ZB</b>	<b>ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)</b>		Not checked
(3.3)	DK: power supply cord with label		Not checked
	IT: warning label on Class 0 luminaire		N/A
(4.5.1)	DK: socket-outlets		Not checked
(5.2.1)	CY, DK, FI, SE, GB: type of plug		Not checked

<b>ZC</b>	<b>ANNEX ZC, NATIONAL DEVIATIONS (EN)</b>		Not checked
(4 & 5)	FR: Shuttered socket-outlets 10/16A		Not checked
(13.3)	GB: Requirements according to United Kingdom Building Regulation		Not checked
(13.3.2)	FR: Glow-wire test 850°C alt. 750°C for luminaires in premises open to public or 960°C for luminaires in emergency exits		Not checked