Test Report issued under the responsibility of:

TEST REPORT
IEC 60598-2-2
Part 2: Particular requirements
Section 2: Recessed luminaires

Report Number. ..... :	SAFEONOKT210313
Date of issue ..... :	2022-05-02
Total number of pages ..... :	101 (including attachments)
Name of Testing Laboratory preparing the Report ..... :	IMQ Tecnocrea, S.L. C/ Sèquia de Benàger, 23. Pol. Ind. Alquería de Moret 46210 Picanya (Valencia) - Spain
Applicant's name ..... :	ONOK LUZ TÉCNICA, S.L.
Address ..... :	Polígono Industrial B, parcela 3. 46800 Xàtiva (Valencia) - Spain
Test specification:	
Standard ..... :	IEC 60598-2-2:2011 used in conjunction with IEC 60598-1:2020
Test procedure ..... :	CE Safe
Non-standard test method ..... :	N/A
TRF template used ..... :	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. ..... :	IEC60598_2_2G
Test Report Form(s) Originator .... :	Intertek Semko AB
Master TRF ..... :	Dated 2021-08-20

This report is not valid as a CB Test Report unless signed by an approved IECEE Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
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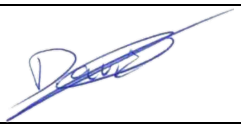
The tests marked with * are not covered by the accreditation of ENAC

ilac-MRA ENAC ENSAYOS Nº 1076/LE2135

Test item description ..... :	Recessed luminaire
Trade Mark(s) ..... :	ONOK
Manufacturer ..... :	ONOK LUZ TÉCNICA, S.L.
Model/Type reference ..... :	Refer to “General product information” for details
Ratings ..... :	Refer to “General product information” for details

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**Testing Laboratory:**	**IMQ Tecnocrea, S.L.**	
Testing location/ address ..... :		C/ Sèquia de Benàger, 23. Pol. Ind. Alquería de Moret 46210 Picanya (Valencia) - Spain	
Tested by (name, function, signature) ..... :		**David Martínez** [Laboratory Technician]	
Approved by (name, function, signature) ... :		**David Latorre** [Technical Manager]	

List of Attachments (including a total number of pages in each attachment):

Attachment No. 1: Photo document, total 34 pages.
Attachment No. 2: European Group Differences and National Differences of EN 60598-1 and EN 60598-2-1, total 2 pages.
Attachment No. 3: LED modules for general lighting – Safety specification IEC 62031 and EN IEC 62031, total 5 pages.

Summary of testing:

This Test Report covers the evaluation on references: Refer to “General product information” for details.

Following technical evaluation all tests have been carried out on models:

- LNEEA28D39AWS
- KDT1A10D33DBS + KPRFX05XXXXBS
- KFC5AD34BBS + KPRFX05XXXXBS
- KTB2A25D32ABS + KPRFX05XXXXBS
- KBLPA04D39ABS + KPRFX05XXXXBS

Partial tests have been carried out on the other models of the series as follows:

- LNEEA28N39AWS (Clauses: 10 and 12.4 tc only)
- LNEEA22N39AWS (Clauses: 10 and 12.4 tc only)
- KDT1A10N33DBS + KPRFX05XXXXBS (Clauses: 10 and 12.4 tc only)
- KFC5AN34BBS + KPRFX05XXXXBS (Clauses: 4, 7, 10 and 12)
- KFC2A25N32ABS + KPRFX05XXXXBS (Clauses: 10 and 12.4 tc only)
- KLR1A10D39ABS + KPRFX10XXXXBS (Clauses: 10 and 12)
- KBLUA04D39ABS + KPRFX05XXXXBS (Clauses: 12.4 tc only)

Tests performed (name of test and test clause):	**Testing location:**
Test Report No. SAFEONOKT210313	IMQ TECNOCREA, S.L. C/ Sèquia de Benàger, 23 Pol. Ind. Alquería de Moret 46210 Picanya (Valencia) – Spain
§2.3 (0)- General test requirements	
§2.5 (2)- Classification of luminaires	
§2.6 (3)- Marking	
§2.7 (4)- Construction	
§2.8 (11)- Creepage distances and clearances	
§2.9 (7)- Provision for earthing	
§2.10 (14)- Screw terminals	
§2.10 (15)- Screwless terminals and electrical connections	
§2.11 (5)- External and internal wiring	
§2.12 (8)- Protection against electric shock	
§2.13 (12)- Endurance test and thermal test	
§2.14 (9)- Resistance to dust and moisture	
§2.15 (10)- Insulation resistance and electric strength	
§2.16 (13)- Resistance to heat, fire and tracking	

Summary of compliance with National Differences (List of countries addressed):

- **European group differences.**

Use of uncertainty of measurement for decisions on conformity (decision rule):

☒ 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"). In this case, the risk of false acceptance (or false reject) is up to 50%.

☐ Other:… (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:

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.

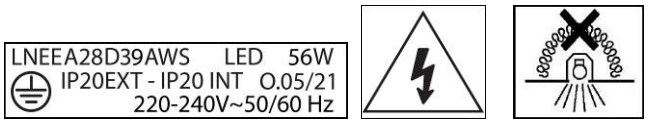
IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing

Copy of marking plate:

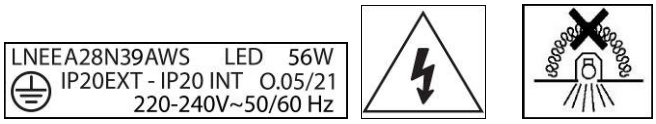
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

LINEE RECESSED / LNEEA28D39AWS



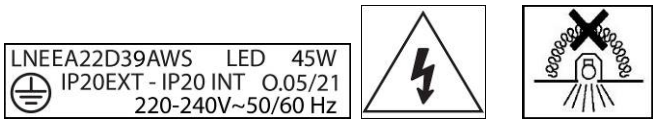
Location: Luminaire

LINEE RECESSED / LNEEA28N39AWS



Location: Luminaire

LINEE RECESSED / LNEEA22D39AWS



Location: Luminaire

CLICK DOT 10 / KDT1A10D33DBS + KPRFX05XXXXBS

Location: Luminaire Location: Track

CLICK DOT 10 / KDT1A10N33DBS + KPRFX05XXXXBS

Location: Luminaire Location: Track

CLICK FOCU 55 / KFC5AN34BBS + KPRFX05XXXXBS

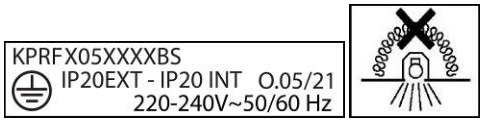
Location: Luminaire Location: Track

CLICK FOCU 55 / KFC5AD34BBS + KPRFX05XXXXBS

Location: Luminaire Location: Track

CLICK FOCUS 40 / KFC4A40D32ABS + KPRFX05XXXXBS

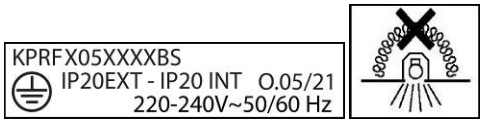
Location: Luminaire



Location: Track

CLICK FOCUS 25 / KFC2A25N32ABS + KPRFX05XXXXBS

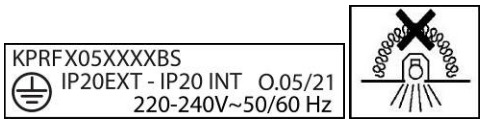
Location: Luminaire



Location: Track

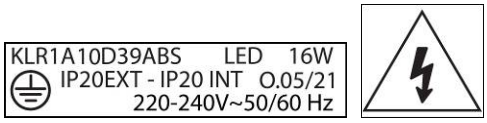
CLICK TUBE 25 / KTB2A25D32ABS + KPRFX05XXXXBS

Location: Luminaire

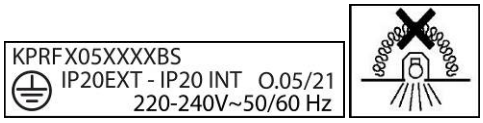


Location: Track

CLICK LINEAR / KLR1A10D39ABS + KPRFX05XXXXBS



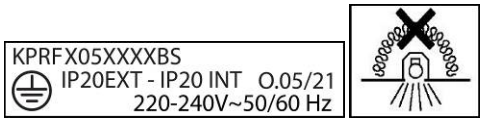
Location: Luminaire



Location: Track

CLCK PENDANT / KBLPA04D39ABS + KPRFX05XXXXBS

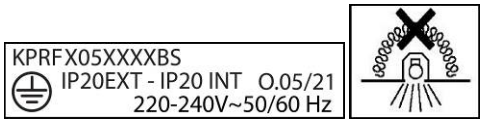
Location: Luminaire



Location: Track

CLKC BALO UP / KBLUA04D39ABS + KPRFX05XXXXBS

Location: Luminaire



Location: Track

Test item particulars.....:	Recessed luminaire
Classification of installation and use.....:	Suitable for direct mounting on normally flammable surfaces, not suitable for covering with thermally insulating material, indoor use
Supply Connection.....:	Terminal block
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 .....:	2021-09-21
Date (s) of performance of tests.....:	2021-09-21 to 2022-04-28

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 ☒ comma / ☐ point is used as the decimal separator.

The ability or reliability of this product to perform its intended function in a particular application has not been investigated.

Unless otherwise specified, warnings, installation instructions and/or user manual provided with the sample have been checked in Spanish or English version only.

Testing laboratory accepts no responsibility for the information provided by the applicant.

General product information and other remarks:

1. Maximum CCT **3000K**.
2. LED component according EN 62471 classification risk group:
   ☐ RG0 ☒ RG1 ☐ RG2 ☐ RG3
   (The EN 62471 information is based on data sheet Nº LED Line SMD Comfort Gen. 2 – W2 L07/14/28/50/56). For references LNEEA28D39AWS, LNEEA28N39AWS and LNEEA22D39AWS.

3. Maximum CCT **3000K**.
4. LED component according EN 62471 classification risk group:
   ☐ RG0 ☐ RG1 ☒ RG2 ☐ RG3
   (The EN 62471 information is based on the test report Nº 15-04-01). For references KDT1A10N33DBS + KPRFX05XXXXBS, KBLPA04D39ABS + KPRFX05XXXXBS and KBLUA04D39ABS + KPRFX05XXXXBS.

5. Maximum CCT **3000K**.
6. LED component according EN 62471 classification risk group:
   ☐ RG0 ☒ RG1 ☐ RG2 ☐ RG3
   (The EN 62471 information is based on the data sheet Nº LUGA Shop Gen. 5 – Retail and Industrial Lighting). For references KFC5AN34BBS + KPRFX05XXXXBS, KFC5AD34BBS + KPRFX05XXXXBS and KTB2A25D32ABS + KPRFX05XXXXBS.

7. Maximum CCT **3000K**.
8. LED component according EN 62471 classification risk group:
   ☐ RG0 ☐ RG1 ☒ RG2 ☐ RG3
   (The EN 62471 information is based on the data sheet CLD-AP34 REV 31). For reference KFC4A40D32ABS + KPRFX05XXXXBS.

9. Maximum CCT **3000K**.
10. LED component according EN 62471 classification risk group:
    ☐ RG0 ☒ RG1 ☐ RG2 ☐ RG3
    (The EN 62471 information is based on the test report Nº IE210178). For reference KFC2A25N32ABS + KPRFX05XXXXBS.

11. Maximum CCT **3000K**.
12. LED component according EN 62471 classification risk group:
    ☐ RG0 ☒ RG1 ☐ RG2 ☐ RG3
    (The EN 62471 information is based on data sheet Nº LED Line SMD Gen. 3 – L07/14/28/56/70/75/112 W2). For reference KLR1A10D39ABS + KPRFX10XXXXBS.

References tested:

Model/Type reference	**Sample ID**	**Ratings**
LINEE RECESSD / LNEEA28D39AWS	EBP_SAFEONOKT210313	220-240V~50/60Hz. Class I. LED. 56W. IP20.
LINEE RECESSED / LNEEA28N39AWS	EBP_SAFEONOKT210314	220-240V~50/60Hz. Class I. LED. 56W. IP20.
LINEE RECESSED / LNEEA22D39AWS	EBP_SAFEONOKT210315	220-240V~50/60Hz. Class I. LED. 45W. IP20.
CLICK DOT 10 / KDT1A10D33DBS + KPRFX05XXXXBS	EBP_SAFEONOKT210316	220-240V~50/60Hz. Class I. LED. 24W. IP20.
CLICK DOT 10 / KDT1A10N33DBS + KPRFX05XXXXBS	EBP_SAFEONOKT210317	220-240V~50/60Hz. Class I. LED. 24W. IP20.
CLICK FOCU 55 / KFC5AN34BBS + KPRFX05XXXXBS	EBP_SAFEONOKT210318	220-240V~50/60Hz. Class I. LED. 12,2W. IP20.
CLICK FOCU 55 / KFC5AD34BBS + KPRFX05XXXXBS	EBP_SAFEONOKT210319	220-240V~50/60Hz. Class I. LED. 10W. IP20.
CLICK FOCUS 40 / KFC4A40D32ABS + KPRFX05XXXXBS	EBP_SAFEONOKT210320	220-240V~50/60Hz. Class I. LED. 8,7W. IP20.
CLICK FOCUS 25 / KFC2A25N32ABS + KPRFX05XXXXBS	EBP_SAFEONOKT210321	220-240V~50/60Hz. Class I. LED. 12W. IP20.
CLICK TUBE 25 / KTB2A25D32ABS + KPRFX05XXXXBS	EBP_SAFEONOKT210322	220-240V~50/60Hz. Class I. LED. 21W. IP20.
CLICK LINEAR / KLR1A10D39ABS + KPRFX05XXXXBS	EBP_SAFEONOKT210323	220-240V~50/60Hz. Class I. LED. 16W. IP20.
CLCK PENDANT / KBLPA04D39ABS + KPRFX05XXXXBS	EBP_SAFEONOKT210324	220-240V~50/60Hz. Class I. LED. 11W. IP20.
CLKC BALO UP / KBLUA04D39ABS + KPRFX05XXXXBS	EBP_SAFEONOKT210325	220-240V~50/60Hz. Class I. LED. 11W. IP20.

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

2.3 (0)	**GENERAL TEST REQUIREMENTS**		**P**
2.3 (0.3)	More sections applicable ..... :	Yes ☐ No ☒ Section/s:	—
2.3 (0.5)	Components	(see Annex 1)	—
2.3 (0.7)	**Information for luminaire design in light sources standards**		**—**
2.3 (0.7.2)	Light source safety standard ..... :	EN IEC 62031	—

2.5 (2)	**CLASSIFICATION OF LUMINAIRES**		**P**
2.5 (2.2)	Type of protection ..... :	Class I	P
2.5 (2.3)	Degree of protection ..... :	IP20	—
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces..... :	Yes ☒ No ☐	—
2.5 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—
	Luminaire design in the light source safety standard		P

2.6 (3)	**MARKING**		**P**
2.6 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
2.6 (3.3)	Additional information		P
	Language of instructions		P
2.6 (3.3.1)	Combination luminaires		N/A
2.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
2.6 (3.3.3)	Operating temperature		N/A
2.6 (3.3.5)	Wiring diagram		N/A
2.6 (3.3.6)	Special conditions		N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
2.6 (3.3.8)	Limitation for semi-luminaires		N/A
2.6 (3.3.9)	Power factor and supply current		N/A
2.6 (3.3.10)	Suitability for use indoors		N/A
2.6 (3.3.11)	Luminaires with remote control		N/A
2.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
2.6 (3.3.13)	Specifications of protective shields		N/A
2.6 (3.3.14)	Symbol for nature of supply		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.6 (3.3.15)	Rated current of socket outlet		N/A
2.6 (3.3.16)	Rough service luminaire		N/A
2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
2.6 (3.3.19)	Protective conductor current in instruction if applicable		N/A
2.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
2.6 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided	Non-user replaceable	P
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided		P
2.6 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
2.6 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
2.6 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
2.6 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
2.7 (4)	**CONSTRUCTION**		**P**
2.7 (4.2)	Components replaceable without difficulty		P
2.7 (4.3)	Wireways smooth and free from sharp edges		P
2.7 (4.4)	**Lampholders**		**N/A**
2.7 (4.4.1)	Integral lampholder		N/A
2.7 (4.4.2)	Wiring connection		N/A
2.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning		N/A
	- pressure test (N) .....:		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	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
2.7 (4.4.5)	Peak pulse voltage		N/A
2.7 (4.4.6)	Centre contact		N/A
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
2.7 (4.4.8)	Lamp connectors		N/A
2.7 (4.4.9)	Caps and bases correctly used		N/A
2.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
2.7 (4.5)	**Starter holders**		**N/A**
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
2.7 (4.6)	**Terminal blocks**		**N/A**
	Tails		N/A
	Unsecured blocks		N/A
2.7 (4.7)	**Terminals and supply connections**		**P**
2.7 (4.7.1)	Contact to metal parts		P
2.7 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
2.7 (4.7.3)	Terminals for supply conductors		P
2.7 (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
2.7 (4.7.4)	Terminals other than supply connection		N/A
2.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
2.7 (4.7.6)	Multi-pole plug		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	- test at 30 N		N/A
2.7 (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
2.7 (4.9)	**Insulating lining and sleeves**		**P**
2.7 (4.9.1)	Retainment		P
	Method of fixing.....:	Mechanical (KFC4A40D32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS)	P
2.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 ºC to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (ºC).....:		N/A
2.7 (4.10)	**Double or reinforced insulation**		**N/A**
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
2.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
2.7 (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
2.7 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by at least two separate resistors in series or appropriate capacitor(s)		N/A
	Capacitors comply with IEC 60384-14		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Resistors comply with test (a) in 14.2 of IEC 60065		N/A
2.7 (4.11)	**Electrical connections and current-carrying parts**		**P**
2.7 (4.11.1)	Contact pressure		P
2.7 (4.11.2)	Screws:		P
	- self-tapping screws		P
	- thread-cutting screws		N/A
2.7 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
2.7 (4.11.4)	Material of current-carrying parts		P
2.7 (4.11.5)	No contact to wood or mounting surface		P
2.7 (4.11.6)	Electro-mechanical contact systems		N/A
2.7 (4.12)	**Screws and connections (mechanical) and glands**		**P**
2.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		P
	Torque test: torque (Nm); part .....:	0,4; insulating end cap	P
	Torque test: torque (Nm); part .....:	0,4; convertor screw	P
	Torque test: torque (Nm); part .....:	0,5; terminal block fixing	P
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
2.7 (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
2.7 (4.12.5)	Screwed glands; force (Nm) .....:		N/A
2.7 (4.13)	**Mechanical strength**		**P**
2.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....:	Diffuser; 0,2 (LNEEA28D39AWS) (LNEEA28N39AWS) (LNEEA22D39AWS) (KLR1A10D39ABS + KPRFX05XXXXBS)	P
	- other parts; energy (Nm) .....:	Luminaire enclosure; 0,35	P
	1) live parts		P
	2) linings		P
	3) protection		P

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Clause	Requirement + Test	Result - Remark	Verdict
	4) covers		P
2.7 (4.13.2)	Metal parts have adequate mechanical strength		P
2.7 (4.13.3)	Straight test finger		P
2.7 (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
2.7 (4.13.6)	Tumbling barrel		N/A
2.7 (4.14)	**Suspensions, fixings and means of adjusting**		**P**
2.7 (4.14.1)	Mechanical load:		P
	A) four times the weight	28kg = 7kg x 4 (LNEEA28D39AWS) 5,6kg = 1,5kg x 4 (KDT1A10D33DBS + KPRFX05XXXXBS) (KFC5AD34BBS + KPRFX05XXXXBS 6kg = 1,5kg x 4 (KFC5AN34BBS + KPRFX05XXXXBS 7,6kg = 1,9kg x 4 (KTB2A25D32ABS + KPRFX05XXXXBS 7,2kg = 1,8kg x 4 (KBLPA04D39ABS + KPRFX05XXXXBS)	P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm) .....:		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) .....:		N/A
	Metal rod. diameter (mm) .....:		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
2.7 (4.14.2)	Load to flexible cables		P
	Mass (kg) .....:	0,3kg (KTB2A25D32ABS + KPRFX05XXXXBS) 0,26kg (KBLPA04D39ABS + KPRFX05XXXXBS)	—

* The tests marked with * are not enshrined by ENAC accreditation.

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Clause	Requirement + Test	Result - Remark	Verdict
	Stress in conductors (N/mm²) .....:	6,7 (KTB2A25D32ABS + KPRFX05XXXXBS) 5,8 (KBLPA04D39ABS + KPRFX05XXXXBS)	P
	Mass (kg) of semi-luminaire .....:		N/A
	Bending moment (Nm) of semi-luminaire .....:		N/A
2.7 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles .....:	150 (KFC5AN34BBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS)	P
	- strands broken .....:	No strands broken	P
	- electric strength test afterwards		P
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
2.7 (4.14.5)	Guide pulleys		N/A
2.7 (4.14.6) *	Strain on socket-outlets		N/A
2.7 (4.15)	**Flammable materials**		**P**
	- glow-wire test 650ºC .....:	See Test Table 2.16 (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
2.7 (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
2.7 (4.16)	**Luminaires for mounting on normally flammable surfaces**		**P**
	No lamp control gear .....:	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
2.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A

* The tests marked with * are not enshrined by ENAC accreditation.

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Clause	Requirement + Test	Result - Remark	Verdict
	- spacing 10 mm		N/A
2.7 (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
2.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
2.7 (4.17)	**Drain holes**		**N/A**
	Clearance at least 5 mm		N/A
2.7 (4.18)	**Resistance to corrosion**		**N/A**
2.7 (4.18.1)	- rust-resistance		N/A
2.7 (4.18.2)	- season cracking in copper		N/A
2.7 (4.18.3)	- corrosion of aluminium		N/A
2.7 (4.19)	Ignitors compatible with ballast		N/A
2.7 (4.20) *	Rough service vibration		N/A
2.7 (4.21)	**Protective shield**		**N/A**
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
2.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
2.7 (4.21.3)	No direct path		N/A
2.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment .....:	See Test Table 2.16 (13.3.2)	N/A
2.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
2.7 (4.23)	Semi-luminaires comply Class II		N/A
2.7 (4.24)	**Photobiological hazards**		**P**
2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
2.7 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 .....:	RG2 (KDT1A10N33DBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS)	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Luminaires with E_{thr} :		P
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2...:	2m (KDT1A10N33DBS + KPRFX05XXXXBS) 1,2m (KFC4A40D32ABS + KPRFX05XXXXBS) 0,25m (KBLPA04D39ABS + KPRFX05XXXXBS)	P
	- marking and instruction according 3.2.23		P
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
2.7 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
2.7 (4.26)	**Short-circuit protection**		**N/A**
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV or PELV parts		N/A
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
2.7 (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
2.7 (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 (ºC) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
2.7 (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
2.7 (4.30)	**Luminaires with non-user replaceable light source**		**P**
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		P
	One fixing means requiring the use of a tool for its removal		P
2.7 (4.31)	**Insulation between circuits**		**P**
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	EN 61347-1	P
	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	(LNEEA28D39AWS) (KDT1A10D33DBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS)	P
2.7 (4.31.1)	SELV or PELV circuits		P
	Used SELV or PELV source	(KDT1A10D33DBS + KPRFX05XXXXBS) (KFC5AN34BBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS)	P
	Voltage ≤ ELV		P
	PELV circuit shall have one pole connected to functional earth		N/A
	The connection between PELV and earth shall comply with functional earth		N/A
	Insulating of SELV or PELV circuits from LV supply		N/A
	Insulating of SELV or PELV circuits from other non SELV circuits		N/A
	Insulating of SELV or PELV circuits from FELV		N/A
	Insulating of SELV or PELV circuits from other SELV or PELV circuits		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	SELV or PELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact 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
2.7 (4.31.2)	FELV circuits		P
	Used FELV source		P
	Voltage ≤ 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 make any electrical contact 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
2.7 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
2.7 (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
2.7(4.33)	**Luminaire powered via information technology communication cabling**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
	Luminaire shall fulfil the requirement for Class III		N/A
	Rated voltage of luminaire shall be within range of ES1, not exceed maximum voltage rated to used connector		N/A
	The luminaire shall be designed in line with the limits of the electrical parameters of a PSE.		N/A
	No hazard with 130% rated input voltage minimum 7.5VDC for circuit greater than 5VDC		N/A
	No hazard with 150% rated input voltage for circuit equal to or less than 5VDC		N/A
2.7(4.34)	**Electromagnetic field (EMF)**		**P**
	Compliance to IEC 62493:2015	According to IEC/EN 62493:2015 clause 4.2.2 EUT is deemed to comply without testing.	P
2.7(4.35)	**Protection against moving fan blades**		**N/A**
	Fan blades not accessible when installed and wired as in normal use and replacing light sources or components		N/A
	This test is not necessary for fans have leading edges and tips rounded with a radius of not less than 0,5mm and:		N/A
	Hardness less than D60 Shore, or		N/A
	Peripheral speed less than 15m/s supplied with rated voltage, or		N/A
	Fan has input power not exceeding 2W supplied with rated voltage.		N/A
2.7(4.36)	Track-mounted luminaires		N/A
	Tested according to Annex A of IEC 60570		N/A

2.8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		**P**
2.8 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
2.8 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 2.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.8 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 2.8 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 2.8 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 2.8 (11.2) II	N/A
2.9 (7)	**PROVISION FOR EARTHING**		**P**
2.9 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω .....:	0,08Ω	P
	Self-tapping screws used		P
	Thread-forming screws		P
	Thread-forming screw used in a grove		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		P
2.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
2.9 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
2.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
2.9 (7.2.6)	Earth terminal adjacent to mains terminals		P
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal		P
2.9 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
2.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
2.9 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
2.9 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.10 (14)	**SCREW TERMINALS**		**P**
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	P

2.10 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		**P**
	Separately approved; component list .....:	(see Annex 1)	P
	Part of the luminaire.....:	(see Annex 4)	N/A

2.11 (5)	**EXTERNAL AND INTERNAL WIRING**		**P**
2.11 (5.2)	**Supply connection and external wiring**		**P**
2.11 (5.2.1)	Means of connection.....:	Terminal block	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c/60 V d.c./25V peak interrupted DC voltage with frequency between 10Hz and 200Hz or protected from outdoor environment		N/A
2.11 (5.2.2)	Type of cable .....:		N/A
	Nominal cross-sectional area (mm²).....:		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
2.11 (5.2.3)	Type of attachment, X, Y or Z		N/A
2.11 (5.2.5)	Type Z not connected to screws		N/A
2.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
2.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
2.11 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- tubes or guards made of insulating material		P
2.11 (5.2.9)	Locking of screwed bushings		N/A
2.11 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
2.11 (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
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
2.11 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe		N/A
	- pull test: 25 times; pull (N) .....:		N/A
	- torque test: torque (Nm) .....:		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
2.11 (5.2.10.4)	Exemption from cord anchorage test in 5.2.10.3 if maximum current 2A, including short circuit current.		N/A
	Prior to the operation of an overcurrent limiting device and the following conditions and test requirements are met		N/A
	Ordinary SELV Class III luminaire at voltage not exceeding 25Vrms or 60VDC		N/A
	Ordinary PELV Class III luminaire at voltage not exceeding 12Vrms or 30VDC		N/A
	Other than ordinary Class III luminaire at voltage not exceeding 12Vrms or 30VDC		N/A
	Pull test 30N for 1min		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.2.11)	External wiring passing into luminaire		P
2.11 (5.2.12)	Looping-in terminals		N/A
2.11 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
2.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
1.10 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
2.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	For appliance inlet or connector systems according to IEC 61984, additional requirements apply:		N/A
	a) Polarization		N/A
	b) Protection against electric shock		N/A
	c) Mechanical locking		N/A
	d) Early contact making		N/A
	e) Protection against short circuit poles		N/A
	f) Cable Clamp		N/A
2.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
2.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
2.11 (5.3)	**Internal wiring**		**P**
2.11 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A).....:		N/A
	- temperatures.....:	(see Annex 2)	N/A
	Green-yellow for earth only		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²) .....:	0,75mm²	P
	Insulation thickness (mm) .....:	0,7	P
	Extra insulation added where necessary		N/A
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Cross-sectional area (mm²) .....:	0,75mm²	P
2.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
2.11 (5.3.1.4)	Conductors without insulation		N/A
2.11 (5.3.1.5)	SELV current-carrying parts		N/A
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360 ·		P
2.11 (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
2.11 (5.3.4)	Joints and junctions effectively insulated		N/A
2.11 (5.3.5)	Strain on internal wiring		N/A
2.11 (5.3.6)	Wire carriers		N/A
2.11 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
2.11 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		**P**
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	P
	No damage to luminaire wiring after test		P

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Clause	Requirement + Test	Result - Remark	Verdict

2.12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		**P**
2.12 (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		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high-pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		P
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
2.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
2.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
2.12 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
2.12 (8.2.3.d)	PELV circuit may have exposed current carrying parts under the following conditions:		N/A
	For ordinary luminaires voltage not exceed 12 VRMS or 30VDC (under load and no load)		N/A
	For other than ordinary, voltage nor exceed 12 VRMS or 30VDC (under load and no load)		N/A
	If voltage exceed, only the earthed pole may be accessible, other pole shall be insulated accordance with 10.2.2		N/A
	Class III luminaires are accepted by connection to SELV source or PELV source		N/A
2.12 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
2.12 (8.2.6)	Covers reliably secured		P
2.12 (8.2.7)	Luminaire other than below with capacitor ≥ 0,5 µF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor ≥ 0,1 µF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor ≥ 0,1 µF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
2.12 (-)	Parts within the celling space provide same degree of protection against electric shock as parts below the celling space		P
2.13 (12)	**ENDURANCE TEST AND THERMAL TEST**		**P**
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 2.14		—
2.13 (12.2)	**Selection of lamps and ballasts**		**—**
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
2.13 (12.3)	**Endurance test**		**P**
	a) mounting-position .....:	(according to instructions)	—
	b) test temperature (ºC) .....:	35 = 25 + 10	—

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Clause	Requirement + Test	Result - Remark	Verdict
	c) total duration (h) .....:	240	—
	d) supply voltage (V).....:	264V = 240V x 1,1	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) .....:	--	—
	e) luminaire ceases to operate	Luminaire works	—
2.13 (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
2.13 (12.4)	**Thermal test (normal operation)**	(see Annex 2)	**P**
2.13 (12.5)	**Thermal test (abnormal operation)**	(see Annex 2)	**N/A**
2.13 (12.6)	**Thermal test (failed lamp control gear condition):**		**N/A**
2.13 (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 (ºC): at 1,1 Un .....:		—
	- measured mounting surface temperature (ºC) at 1,1 Un .....:		N/A
	- calculated mounting surface temperature (ºC) .....:		N/A
	- track-mounted luminaires		N/A
2.13 (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 (ºC) .....:		N/A
	- track-mounted luminaires		N/A
2.13 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		**N/A**
2.13 (12.7.1)	Luminaire without temperature sensing control		N/A
2.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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 (ºC): at 1,1 Un.....:		—
	- measured temperature of fixing point/exposed part (ºC): at 1,1 Un .....:		—
	- calculated temperature of fixing point/exposed part (ºC).....:		—
	Ball-pressure test..... :	See Test Table 2.16 (13.2.1)	N/A
2.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions.....:		—
	- measured winding temperature (ºC): at 1,1 Un.....:		—
	- measured temperature of fixing point/exposed part (ºC): at 1,1 Un .....:		—
	- calculated temperature of fixing point/exposed part (ºC).....:		—
	Ball-pressure test.....:	See Test Table 2.16 (13.2.1)	N/A
2.13 (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
2.13 (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 (ºC): .....:		—
	Ball-pressure test: .....:	See Test Table 2.16 (13.2.1)	N/A
2.13.1 (-)	Wiring, for connection to the supply, not reach unsafe temperature		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured temperature of the cable (ºC) .....:	(see Annex 2)	P

2.14 (9)	**RESISTANCE TO DUST AND MOISTURE**		**P**
2.14 (-)	If IP > IP 20 the order of tests as specified in clause 2.13		N/A
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP .....:	IP20	—
	- mounting position during test.....:	(according to instructions)	—
	- fixing screws tightened; torque (Nm).....:	2/3 torque	—
	- 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 on insulation where it could become a hazard		N/A
	c.1) For luminaires without drain holes – no water entry		N/A
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire or high pressure and temperature water jet-proof luminaire or high pressure and cold water jet-proof luminaire		N/A
	e) no contact with live parts (IP 2X)		P
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	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		N/A
	g) no damage of protective shield or glass envelope		N/A
2.14 (9.3)	Humidity test 48 h	25ºC / 93%	P

2.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		**P**
2.15 (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/PELV		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts of different polarity:		N/A
	- between current-carrying parts and mounting surface .....:	500V (KDT1A10D33DBS + KPRFX05XXXXBS) (KDT1A10N33DBS + KPRFX05XXXXBS) (KFC5AN34BBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KFC2A25N32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS) (KBLUA04D39ABS + KPRFX05XXXXBS)	P
	- between current-carrying parts and metal parts of the luminaire .....:	500V (KDT1A10D33DBS + KPRFX05XXXXBS) (KDT1A10N33DBS + KPRFX05XXXXBS) (KFC5AN34BBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KFC2A25N32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS) (KBLUA04D39ABS + KPRFX05XXXXBS)	P
	- 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/PELV		P
	- between live parts of different polarity.....:		N/A
	- between live parts and mounting surface.....:	>2,6MΩ (LNEEA28D39AWS) (LNEEA28N39AWS) (LNEEA22D39AWS) (KLR1A10D39ABS + KPRFX10XXXXBS)	P
	- between live parts and metal parts.....:	>2,6MΩ (LNEEA28D39AWS) (LNEEA28N39AWS) (LNEEA22D39AWS) (KLR1A10D39ABS + KPRFX10XXXXBS)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts of different polarity through action of a switch .....:		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts .....:		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
2.15 (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/PELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface .....:	500V (KDT1A10D33DBS + KPRFX05XXXXBS) (KDT1A10N33DBS + KPRFX05XXXXBS) (KFC5AN34BBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KFC2A25N32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS) (KBLUA04D39ABS + KPRFX05XXXXBS)	P
	- between current-carrying parts and metal parts of the luminaire .....:	500V (KDT1A10D33DBS + KPRFX05XXXXBS) (KDT1A10N33DBS + KPRFX05XXXXBS) (KFC5AN34BBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KFC2A25N32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS) (KBLUA04D39ABS + KPRFX05XXXXBS)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts .....:		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
	Other than SELV/PELV		P
	- between live parts of different polarity.....:		N/A
	- between live parts and mounting surface.....:	1480V (LNEEA28D39AWS) (LNEEA28N39AWS) (LNEEA22D39AWS) (KLR1A10D39ABS + KPRFX10XXXXBS)	P
	- between live parts and metal parts.....:	1480V (LNEEA28D39AWS) (LNEEA28N39AWS) (LNEEA22D39AWS) (KLR1A10D39ABS + KPRFX10XXXXBS)	P
	- between live parts of different polarity through action of a switch .....:		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts .....:		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
2.15 (10.3)	Touch current or protective conductor current (mA).:	0,02 (LNEEA28D39AWS) 0,01 (KFC4A40D32ABS + KPRFX10XXXXBS) 0,02 (KDT1A10D33DBS + KPRFX10XXXXBS) (KTB2A25D32ABS + KPRFX10XXXXBS) (KBLPA04D39ABS + KPRFX10XXXXBS)	P

2.16 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		**P**
2.16 (13.2.1)	Ball-pressure test..... :	See Test Table 2.16 (13.2.1)	N/A
2.16 (13.3.1)	Needle-flame test (10 s) ..... :	See Test Table 2.16 (13.3.1)	N/A
2.16 (13.3.2)	Glow-wire test (650 · C) ..... :	See Test Table 2.16 (13.3.2)	P
2.16 (13.4)	Proof tracking test (IEC 60112) ..... :	See Test Table 2.16 (13.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.8 (11.2)	**TABLE I: Creepage distances and clearances**							**P**
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages							**P**
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*							**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:	B	8,1	1,5	11.1.B	8,3	2,4	11.1.A	
Working voltage (V) .....:					240V AC			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage or U_P if applicable (kV) .....:					N/A			—
Supplementary information: Between terminal block and conductive parts (LNEEA28D39AWS)								
Distance 2:	B	4,8	1,5	11.1.B	4,9	2,4	11.1.A	
Working voltage (V) .....:					240V AC			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage or U_P if applicable (kV) .....:					N/A			—
Supplementary information: Between AC connector and conductive parts (LNEEA28D39AWS)								
Distance 3:	B	4	1,5	11.1.B	4,1	1,3	11.1.A	
Working voltage (V) .....:					71V DC			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage or U_P if applicable (kV) .....:					N/A			—
Supplementary information: Between LED module and conductive parts (LNEEA28D39AWS)								
Distance 4:	B	7,9	1,5	11.1.B	8,7	2,4	11.1.A	
Working voltage (V) .....:					240V AC			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage or U_P if applicable (kV) .....:					N/A			—
Supplementary information: Between terminal block and conductive parts (KDT1A10D33DBS + KPRFX10XXXXBS)								
Distance 5:	B	4,9	1,5	11.1.B	5,1	2,4	11.1.A	
Working voltage (V) .....:					240V AC			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage or U_P if applicable (kV) .....:					N/A			—
Supplementary information: Between AC connector and conductive parts (KDT1A10D33DBS + KPRFX10XXXXBS)								
Distance 6:	B	--	N/A	11.1.B	--	N/A	11.1.A	
Working voltage (V) .....:					29,3V DC			—

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Clause	Requirement + Test				Result - Remark		Verdict
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between LED module and conductive parts. SELV convertor (KDT1A10D33DBS + KPRFX10XXXXBS)							
Distance 7:	B	8,0	1,5	11.1.B	8,2	2,4	11.1.A
Working voltage (V) ..... :					240V AC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between terminal block and conductive parts (KFC4A40D32ABS + KPRFX10XXXXBS)							
Distance 8:	B	4,8	1,5	11.1.B	4,9	2,4	11.1.A
Working voltage (V) ..... :					240V AC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between AC connector and conductive parts (KFC4A40D32ABS + KPRFX10XXXXBS)							
Distance 9:	B	--	N/A	11.1.B	--	N/A	11.1.A
Working voltage (V) ..... :					30,1V DC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between LED module and conductive parts. SELV convertor (KFC4A40D32ABS + KPRFX10XXXXBS)							
Distance 10:	B	8,1	1,5	11.1.B	8,3	2,4	11.1.A
Working voltage (V) ..... :					240V AC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between terminal block and conductive parts (KTB2A25D32ABS + KPRFX10XXXXBS)							
Distance 11:	B	4,8	1,5	11.1.B	4,9	2,4	11.1.A
Working voltage (V) ..... :					240V AC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between AC connector and conductive parts (KTB2 A 25 D 3 2 A BS + KPRFX10XXXXBS)							
Distance 12:	B	--	N/A	11.1.B	--	N/A	11.1.A
Working voltage (V) ..... :					34,1V DC		—

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Clause	Requirement + Test				Result - Remark		Verdict
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between LED module and conductive parts. SELV convertor (KTB2A25D32ABS + KPRFX10XXXXBS)							
Distance 13:	B	8,0	1,5	11.1.B	8,3	2,4	11.1.A
Working voltage (V) ..... :					240V AC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between terminal block and conductive parts (KBLPA04D39ABS + KPRFX10XXXXBS)							
Distance 14:	B	4,7	1,5	11.1.B	4,8	2,4	11.1.A
Working voltage (V) ..... :					240V AC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between AC connector and conductive parts (KBLPA04D39ABS + KPRFX10XXXXBS)							
Distance 15:	B	--	N/A	11.1.B	--	N/A	11.1.A
Working voltage (V) ..... :					32,1V DC		—
PTI ..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV) ..... :					N/A		—
Supplementary information: Between LED module and conductive parts. SELV convertor (KBLPA04D39ABS + KPRFX10XXXXBS)							

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

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Clause	Requirement + Test	Result - Remark	Verdict

2.8 (11.2)	**TABLE II: Creepage distances and clearances**							**N/A**
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages								
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2								
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:								
Working voltage (V) ..... :								.
Frequency if applicable (kHz) ..... :								.
PTI ..... :					< 600 ☐	≥ 600 ☐		.
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :								.
Supplementary information:								
Distance 2:								
Working voltage (V) ..... :								.
Frequency if applicable (kHz) ..... :								.
PTI ..... :					< 600 ☐	≥ 600 ☐		.
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :								.
Supplementary information:								
Distance 3:								
Working voltage (V) ..... :								.
Frequency if applicable (kHz) ..... :								.
PTI ..... :					< 600 ☐	≥ 600 ☐		.
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :								.
Supplementary information:								

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

2.16 (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**			**N/A**
Allowed impression diameter (mm) ..... :		2		.
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (· C)	Impression diameter (mm)	
Supplementary information:				

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Clause	Requirement + Test	Result - Remark	Verdict

2.16 (13.3.1)	**TABLE: Needle-flame test (IEC 60695-11-5)**				**N/A**
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:					

2.16 (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
Diffuser (LNEEA28D39AWS)	-	No	No burning	P
Lens (KDT1A10D33DBS + KPRFX05XXXXBS)	-	No	No burning	P
Lens (KFC4A40D32ABS + KPRFX05XXXXBS)	-	No	No burning	P
Lens (KTB2A25D32ABS + KPRFX05XXXXBS)	-	No	No burning	P
Supplementary information: -				

2.16 (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:				

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	**TABLE: Critical components information**					
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
LED module	B	Vossloh	566773	42,4W. 700mA. 60,5V DC. RG1. tc 80ºC.	EN 62031	VDE (40047874)
LED module	B	Vossloh	570744	16,9W. 700mA. 24,1V DC. RG1. tc 80ºC.	EN 62031	VDE (40052799)
LED module	B	Vossloh	570736	8,4W. 700mA. 12,1V DC. RG1. tc 80ºC.	EN 62031	VDE (40052799)
LED module	B	Vossloh	DMS124	35,9V DC. 500mA. 18W. tc 110ºC. RG1.	EN 62031	VDE (40046013)
LED module	C	Bridgelux	BXKH-30G0500-A	36,8V DC. 3,1W. tc 105ºC. RG1.	IEC 60598-1 EN 62471	Tested with appliance CANDELTEC (IE210178)
LED	C	Samsung Electronics	LH351B	2,8V. 1,5A. RG2.	IEC 62471 IEC 60598-1	Samsung (15-04-01) Tested with appliance
LED	C	Cree	XHP50A-00-0000-0D0HG430G	12V DC. 3A. RG2.	UL 8750 EN 62471 IEC 60598-1	UL (E349212) Tested with appliance
PCB	C	Alanod	MIRO-SILVER 17 COM HPSP	12x12x1mm. 235W/(m·K) thermal conductivity.	IEC 60598-1	Tested with appliance
PCB	C	Cipsacircuits	PCB02.385	V-0	UL94 IEC 60598-1	UL (160716) Tested with appliance
PCB	C	Cipsacircuits	PCB02.381	V-0	UL94 IEC 60598-1	UL (160716) Tested with appliance
PCB	C	Cipsacircuits	PCB02.647	V-0	UL94 IEC 60598-1	UL (160716) Tested with appliance
PCB terminals	B	Wago	2060-452/998-404	130V. 9A. T105.	EN 60998-1 EN 60998-2-2	DEKRA (71-109040) Tested with appliance

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

Convertor	B	Vossloh	186855	In: 220-240V AC. 50/60Hz. Out: 30-130V DC. 400-800mA. 12-85W. tc 70ºC.	EN 61347-1 EN 61347-2-13	VDE (40050333)
Convertor	B	Vossloh	187061	In: 120-240V AC. 50/60Hz. Out: 35-93V DC. 450mA.42W. tc 75ºC.	EN 61347-1 EN 61347-2-13	VDE (40050760)
Convertor	B	Vossloh	186853	In: 220-240V AC. 50/60Hz. Out: 30-70V DC max. 400-800mA. 12-40W. tc 70ºC.	EN 61347-1 EN 61347-2-13	VDE (40050333)
Convertor	B	Vossloh	187053	In: 220-240V AC. 50/60Hz. Out: 59V DC max. 250-700mA. 26W. tc 80ºC.	EN 61347-1 EN 61347-2-13	ENEC 05 (81-112360)
Convertor	B	Vossloh	186923	In: 220-240V AC. 50/60Hz. Out: 27-38V DC. 300mA. 12W. tc 75ºC.	EN 61347-1 EN 61347-2-13	ENEC 18 (HN 69290010)
Convertor	B	Vossloh	186852	In: 220-240V AC. 50/60Hz. Out: 30-120V DC. 100-400mA. 3-40W. tc 65ºC.	EN 61347-1 EN 61347-2-13	VDE (40050333)
Convertor	B	TCI	127573	In: 220-240V AC. 50/60Hz. Out: 44V DC max. 350-725mA. 32W. tc 85ºC.	EN 61347-1 EN 61347-2-13	DEKRA (81-119153)
Wire	B	Vercavi	H05V2-U	PVC. 300/500V. T90.	EN 50525-2-31	HAR (DAT95005315)
Wire cord	B	Conductores Eléctricos Cemi	H03VV-F	2x0,22mm^2. PVC. 300/300V. T70.	EN 50525-2-11	EU Declaration for Conformity
Wire	B	Dong Guan Shen Pai Electric Wire & Cable	H05V-K	300/300V. 0,75mm^2. T70.	EN 50525-2-31	VDE (40053466)
Wire	B	Colosio	FEP	300/500V. 0,25mm^2. T180.	DIN 5725	VDE (107602)

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

Wire	C	Dongguan Nistar Transmitting Technology	PVC	300V. T105.	UL 758 IEC 60598-1	UL (E214184) Tested with appliance
Wire	C	Xingda electronics wire & cable	1007	18AWG. T80. 300V. PVC.	UL758 IEC 60598-1	UL (E187208) Tested with appliance
Terminal block	B	Electro terminal	SKL 3	450V. 24A. T85.	EN 60998-2-2	VDE (40020823)
Terminal block	B	Electro terminal	SKL 5	450V. 24A. T85.	EN 60998-1 EN 60998-2-2	ENEC 11 (163-009)
Terminal block	B	BJB	46.412	450V. 24A. T85.	EN 60998-1 EN 60998-2-2	VDE (40020580)
Connection box	B	Arditi	145	250V. T90.	EN 60998-1 EN 60998-2-1	ENEC 03 (CA02.0239 3)
Connector	B	Zhejiang Hongxing Electrical	HX42000-3P	5A. 250V. T80.	EN 61984	TÜV SUD (B 079214 0001 Rev. 01)
Connector	B	Zhejiang Hongxing Electrical	HX42000-2P	5A. 250V. T80.	EN 61984	TÜV SUD (B 079214 0001 Rev. 01)

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

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

ANNEX 2	**TABLE: Thermal tests of Section 12**		—
	Type reference ..... :	LNEEA28D39AWS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	54,1	—
	Supply current (A) ..... :	0,3	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor 1 (tc)	25,0	42,3	-	-	70	-	-
Convertor 2 (tc)	25,0	41,9	-	-	70	-	-
LED module 1 (tc) (ref 570736)	25,0	45,1	-	-	80	-	-
LED module 2 (tc) (ref 570744)	25,0	44,3	-	-	80	-	-
LED module 3 (tc) (ref 570744)	25,0	45,2	-	-	80	-	-
LED module 4 (tc) (ref 570736)	25,0	44,1	-	-	80	-	-
LED module 5 (tc) (ref 570744)	25,0	42,2	-	-	80	-	-
LED module 6 (tc) (ref 570744)	25,0	44,1	-	-	80	-	-
Supply cable	25,0	-	33,8	-	90	-	-
Terminal block	25,0	-	35,2	-	85	-	-
AC connector	25,0	-	34,6	-	85	-	-
LED module wire	25,0	-	40,5	-	80	-	-
Diffuser	25,0	-	34,5	-	80	-	-

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

Mounting surface		25,0	-	26,9	-	90	-	-
Illuminated object distance (10cm)		25,0	-	25,6	-	90	-	-
Supplementary information:								

	Type reference .....:	LNEEA28N39AWS	—
	Lamp used .....:	(see Annex 1)	—
	Lamp control gear used .....:	(see Annex 1)	—
	Mounting position of luminaire .....:	(according Instructions)	—
	Supply wattage (W).....:	54,1	—
	Supply current (A) .....:	0,23	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) .....:	25	—
	- abnormal operating mode.....:	N/A	—
1.12 (12.4)	- test 1: rated voltage .....:	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	N/A	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor 1 (tc)	25,0	45,7	-	-	75	-	-
Convertor 2 (tc)	25,0	45,0	-	-	75	-	-
LED module 1 (tc) (ref 570736)	25,0	46,6	-	-	80	-	-
LED module 2 (tc) (ref 570744)	25,0	48,1	-	-	80	-	-
LED module 3 (tc) (ref 570744)	25,0	46,9	-	-	80	-	-
LED module 4 (tc) (ref 570736)	25,0	45,6	-	-	80	-	-
LED module 5 (tc) (ref 570744)	25,0	46,9	-	-	80	-	-
LED module 6 (tc) (ref 570744)	25,0	45,4	-	-	80	-	-
Supplementary information:							

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

	Type reference ..... :	LNEEA22D39AWS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	43,7	—
	Supply current (A) ..... :	0,2	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	N/A	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor 1 (tc)	25,0	41,9	-	-	70	-	-
Convertor 2 (tc)	25,0	42,6	-	-	70	-	-
LED module 1 (tc) (ref 570736)	25,0	43,5	-	-	80	-	-
LED module 2 (tc) (ref 570736)	25,0	45,2	-	-	80	-	-
LED module 3 (tc) (ref 570744)	25,0	45,0	-	-	80	-	-
LED module 4 (tc) (ref 570736)	25,0	46,2	-	-	80	-	-
LED module 5 (tc) (ref 570736)	25,0	42,2	-	-	80	-	-
LED module 6 (tc) (ref 570744)	25,0	43,3	-	-	80	-	-
Supplementary information:							

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

	Type reference ..... :	KDT1A10D33DBS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	24,2	—
	Supply current (A) ..... :	0,1	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	64,0	-	-	80	-	-
LED module 1 (tc)	25,0	69,4	-	-	80	-	-
LED module 2 (tc)	25,0	70,1	-	-	80	-	-
Supply cable	25,0	-	31,3	-	90	-	-
AC connector	25,0	-	41,7	-	85	-	-
Terminal block	25,0	-	47,1	-	85	-	-
LED module wire	25,0	-	56,1	-	90	-	-
Mounting surface	25,0	-	38,5	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	26,3	-	90	-	-

Supplementary information:

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Type reference ..... :	KDT1A10N33DBS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	23,6	—
	Supply current (A) ..... :	0,1	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	N/A	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	63,3	-	-	85	-	-
LED module 1 (tc)	25,0	67,9	-	-	80	-	-
LED module 2 (tc)	25,0	67,1	-	-	80	-	-

Supplementary information:

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

	Type reference ..... :	KFC5AN34BBS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	14,0	—
	Supply current (A) ..... :	0,06	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	46,6	-	-	85	-	-
LED module (tc)	25,0	108,8	-	-	110	-	-
Supply cable	25,0	-	34,4	-	90	-	-
Wire DC	25,0	-	37,1	-	90	-	-
LED module wire	25,0	-	91,6	-	180	-	-
LED module wire (Clause 5.4 max. output current 700mA)	25,0	-	25,3	-	180	-	-
LED module wire (Clause 5.4 short- circuit)	25,0	-	27,8	-	180	-	-
Diffusor	25,0	-	78,7	-	80	-	-
Adjusting means	25,0	-	50,4	-	60	-	-
Mounting surface	25,0	-	31,4	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	28,2	-	90	-	-

Supplementary information:

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

	Type reference ..... :	KFC5AD34BBS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	10,5	—
	Supply current (A) ..... :	0,05	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	46,0	-	-	85	-	-
LED module (tc)	25,0	104,0	-	-	110	-	-
Supply cable	25,0	-	33,1	-	90	-	-
Wire DC	25,0	-	36,4	-	90	-	-
LED module wire	25,0	-	90,7	-	180	-	-
LED module wire (Clause 5.4 max output current 700mA)	25,0	-	25,3	-	180	-	-
LED module wire (Clause 5.4 short-circuit)	25,0	-	27,8	-	180	-	-
Diffusor	25,0	-	77,9	-	80	-	-
Adjusting means	25,0	-	49,7	-	60	-	-
Mounting surface	25,0	-	30,4	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	27,5	-	90	-	-

Supplementary information:

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

	Type reference ..... :	KFC4A40D32ABS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	11,2	—
	Supply current (A) ..... :	0,05	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	43,2	-	-	80	-	-
LED module (tc)	25,0	75,3	-	-	80	-	-
Supply cable	25,0	-	32,6	-	90	-	-
Terminal block	25,0	-	29,8	-	85	-	-
AC connector	25,0	-	25,6	-	85	-	-
LED module wire	25,0	-	57,1	-	180	-	-
LED module wire (Clause 5.4 max output current 700mA)	25,0	-	26,9	-	180	-	-
LED module wire (Clause 5.4 short-circuit)	25,0	-	27,0	-	180	-	-
Diffusor	25,0	-	68,2	-	90	-	-
Adjusting means	25,0	-	52,9	-	60	-	-
Mounting surface	25,0	-	28,1	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	25,6	-	90	-	-

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

Supplementary information:

	Type reference .....:	KFC2A25N32ABS + KPRFX05XXXXBS	—
	Lamp used .....:	(see Annex 1)	—
	Lamp control gear used .....:	(see Annex 1)	—
	Mounting position of luminaire .....:	(according Instructions)	—
	Supply wattage (W).....:	12,3	—
	Supply current (A) .....:	0,06	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) .....:	25	—
	- abnormal operating mode.....:	N/A	—
1.12 (12.4)	- test 1: rated voltage .....:	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	254,4V = 240V x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	44,6	-	-	75	-	-
LED module 1 (tc)	25,0	62,2	-	-	105	-	-
LED module 2 (tc)	25,0	64,6	-	-	105	-	-
LED module wire (Clause 5.4 max output current 300mA)	25,0	-	28,0	-	105	-	-
LED module wire (Clause 5.4 short-circuit)	25,0	-	27,9	-	105	-	-

Supplementary information:

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

	Type reference ..... :	KTB2A25D32ABS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	20,7	—
	Supply current (A) ..... :	0,09	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	45,6	-	-	80	-	-
LED module 1 (tc)	25,0	72,6	-	-	110	-	-
LED module 2 (tc)	25,0	71,0	-	-	110	-	-
Supply cable	25,0	-	29,9	-	90	-	-
Terminal block	25,0	-	31,7	-	85	-	-
AC connector	25,0	-	33,7	-	85	-	-
Connection box	25,0	-	39,3	-	90	-	-
LED module wire	25,0	-	68,4	-	180	-	-
LED module wire (Clause 5.4 max output current 700mA)	25,0	-	27,1	-	180	-	-
LED module wire (Clause 5.4 short-circuit)	25,0	-	27,0	-	180	-	-
Mounting surface	25,0	-	24,2	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	29,5	-	90	-	-

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

Supplementary information:

	Type reference ..... :	KLR1A10D39ABS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	16,5	—
	Supply current (A) ..... :	0,08	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	46,8	-	-	65	-	-
LED module (tc)	25,0	59,6	-	-	80	-	-
Supply cable	25,0	-	36,9	-	90	-	-
Terminal block	25,0	-	38,3	-	85	-	-
AC connector	25,0	-	25,2	-	85	-	-
LED module wire	25,0	-	44,8	-	80	-	-
Diffuser	25,0	-	41,2	-	90	-	-
Mounting surface	25,0	-	39,7	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	25,3	-	90	-	-

Supplementary information:

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

	Type reference ..... :	KBLPA04D39ABS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	11,3	—
	Supply current (A) ..... :	0,05	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	45,2	-	-	80	-	-
LED module (tc)	25,0	59,6	-	-	80	-	-
Supply cable	25,0	-	27,1	-	90	-	-
Terminal block	25,0	-	26,7	-	85	-	-
LED module wire	25,0	-	58,9	-	180	-	-
LED module wire (Clause 5.4 max output current 490mA)	25,0	-	27,3	-	180	-	-
LED module wire (Clause 5.4 short-circuit)	25,0	-	27,2	-	180	-	-
Mounting surface	25,0	-	28,7	-	90	-	-
Illuminated objects distance (10cm)	25,0	-	25,3	-	90	-	-

Supplementary information:

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

	Type reference ..... :	KBLUA04D39ABS + KPRFX05XXXXBS	—
	Lamp used ..... :	(see Annex 1)	—
	Lamp control gear used ..... :	(see Annex 1)	—
	Mounting position of luminaire ..... :	(according Instructions)	—
	Supply wattage (W)..... :	11,3	—
	Supply current (A) ..... :	0,05	—
	Temperatures in test 1 - 4 below are corrected for ta (ºC) ..... :	25	—
	- abnormal operating mode..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	240V = 240V x 1,0	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254,4V = 240 x 1,06	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	N/A	—

Temperature measurements (ºC)

Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Convertor (tc)	25,0	50,1	-	-	80	-	-
LED module (tc)	25,0	46,3	-	-	80	-	-
LED module wire (Clause 5.4 max output current 490mA)	25,0	-	24,7	-	180	-	-
LED module wire (Clause 5.4 short-circuit)	25,0	-	24,7	-	180	-	-

Supplementary information:

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

ANNEX 3	**Screw terminals (part of the luminaire)**		**P**
(14)	**SCREW TERMINALS**		**P**
(14.2)	Type of terminal.....:	Lug terminal	—
	Rated current (A).....:	Earth terminal	—
(14.3.2.1)	One or more conductors	Only one conductor	P
(14.3.2.2)	Special preparation		P
(14.3.2.3)	Terminal size		P
	Cross-sectional area (mm²).....:	0,75	—
(14.3.3)	Conductor space (mm).....:	Lug terminal	N/A
(14.4)	Mechanical tests		P
(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) ...:	M5	P
	External wiring		N/A
	No soft metal		P
(14.4.5)	Corrosion		P
(14.4.6)	Nominal diameter of thread (mm) .....:	5,1	P
	Torque (Nm).....:	2,0	P
(14.4.7)	Between metal surfaces		P
	Lug terminal		P
	Mantle terminal		P
	Pull test; pull (N).....:	40	P
(14.4.8)	Without undue damage		P

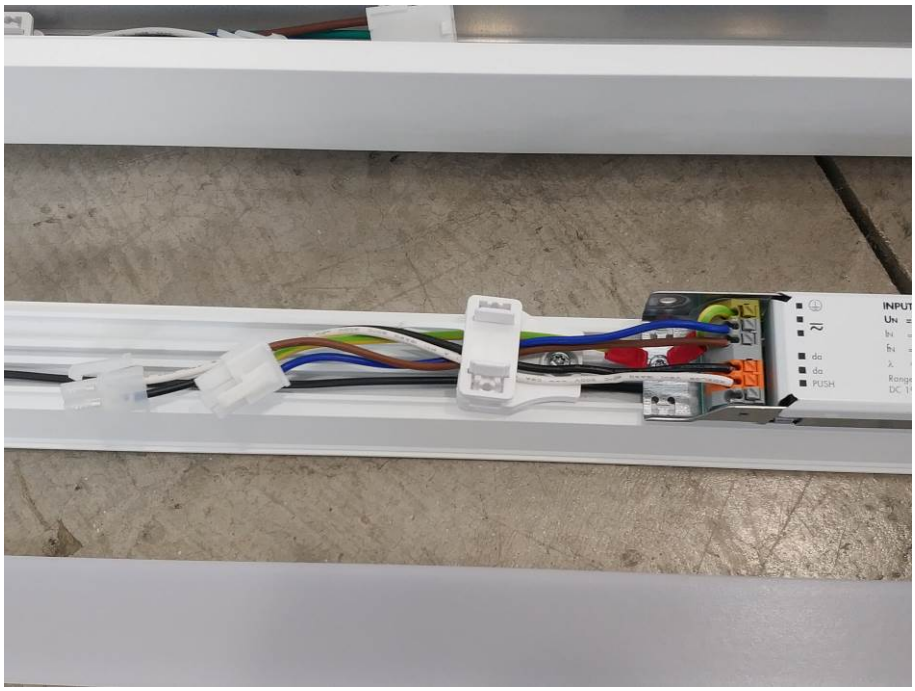
IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict

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
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) ..... :		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)..... :		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		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 and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A

IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) ..... :		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) ..... :		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

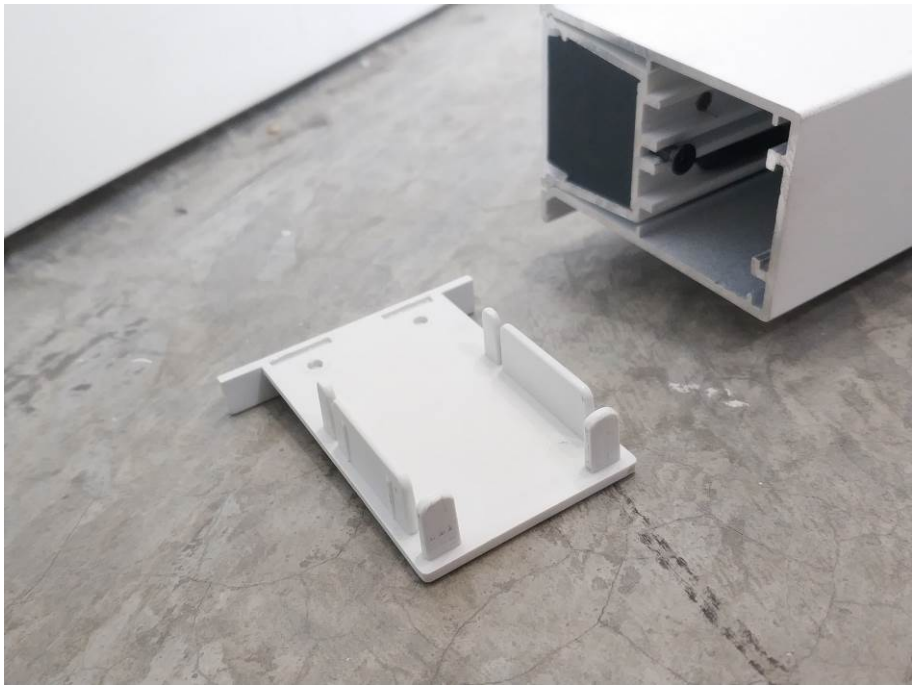
(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									**N/A**
	Voltage drop (mV) after 1 h									.
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage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

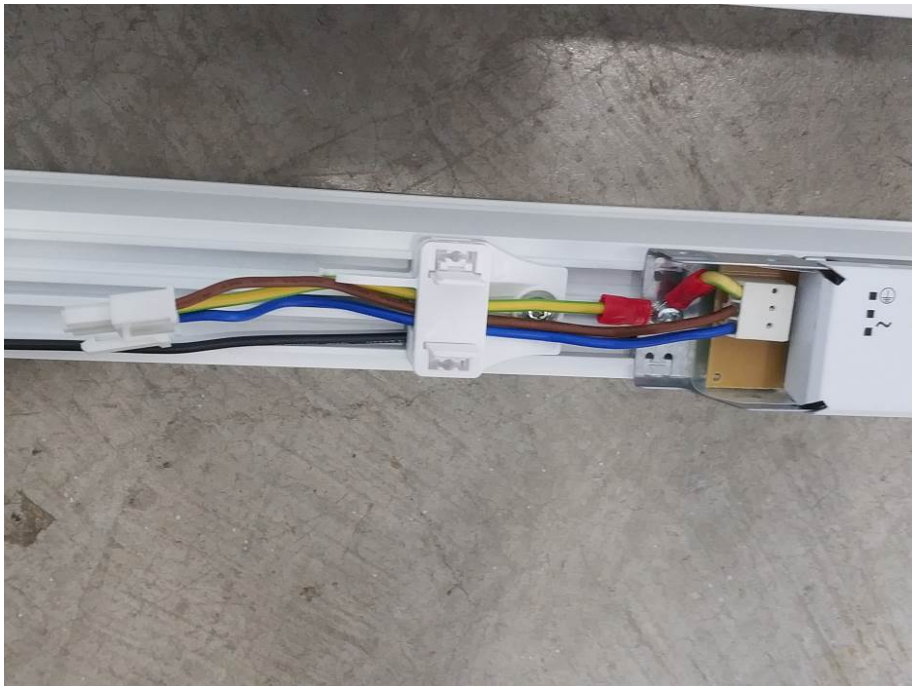
Attachment No. 1	Photo document	Reference: LNEEA28D39AWS	.




INPUT
LIGHTING SOLUTIONS
OUTPUT
DALI
PUSH
Non isolated

	Photo document	Reference: LNEEA28N39AWS	.






INPUT
LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Hohe Steinert 8, D-58509 Lüdenscheid
Electronic converter for LED
Type ECXe 600.442
Made in Serbia (Europe)
Non isolated

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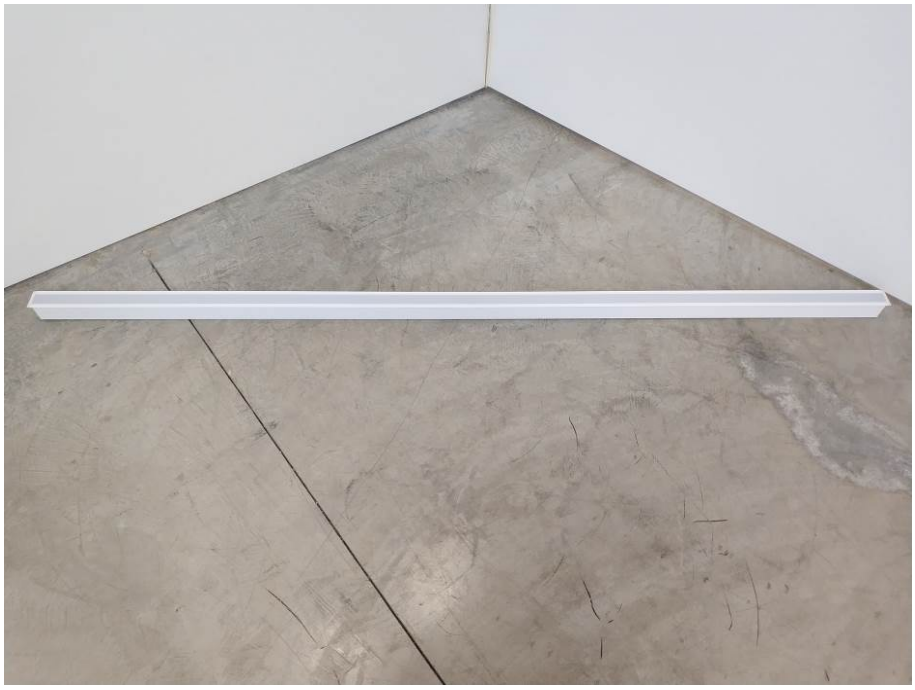
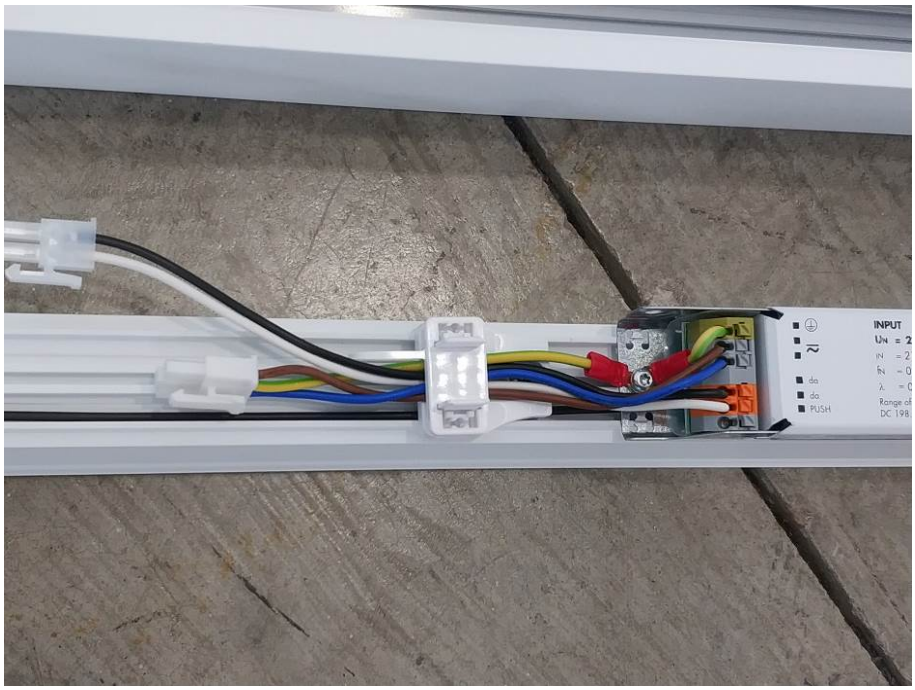



INPUT
LIGHTING SOLUTIONS
DALI
PUSH
OUTPUT
Non isolated


INPUT
PUSH

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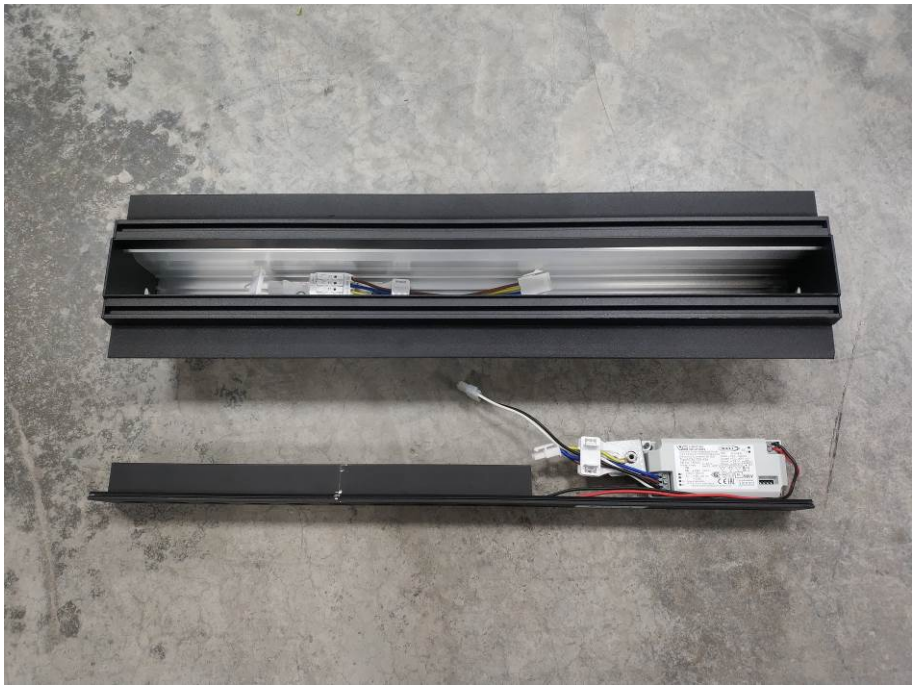
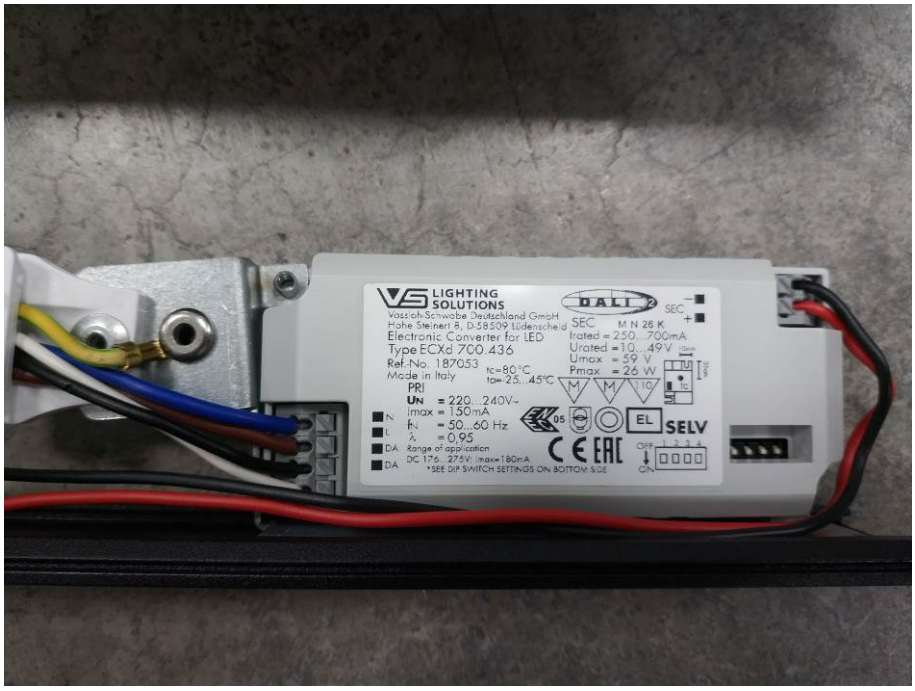
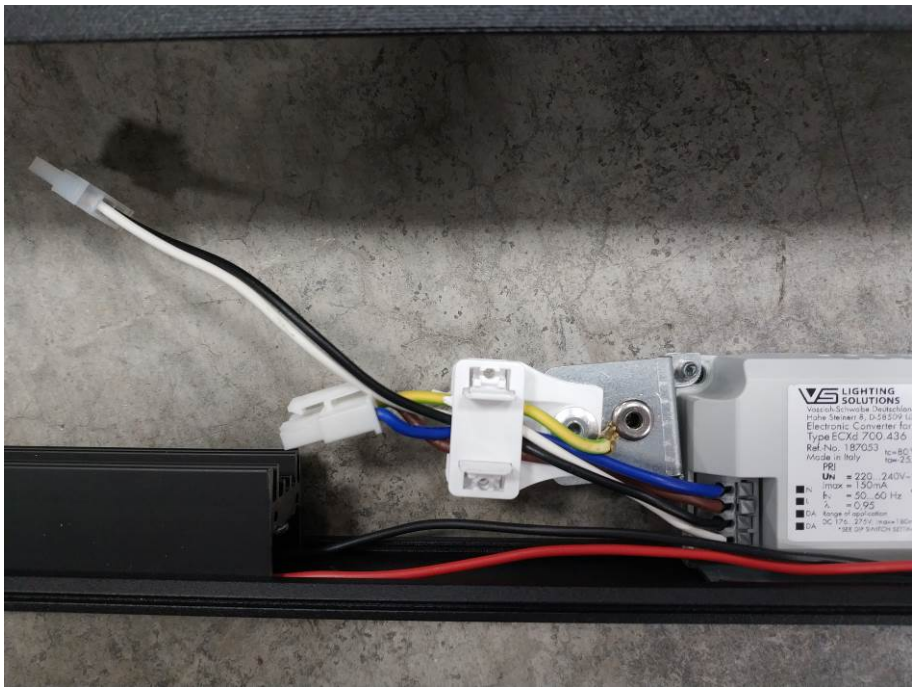
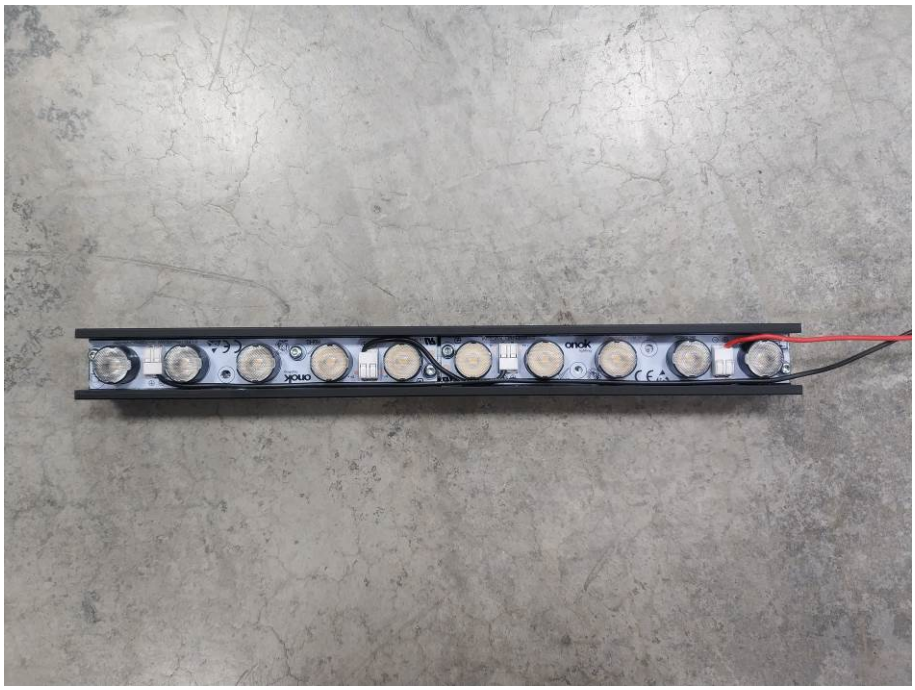
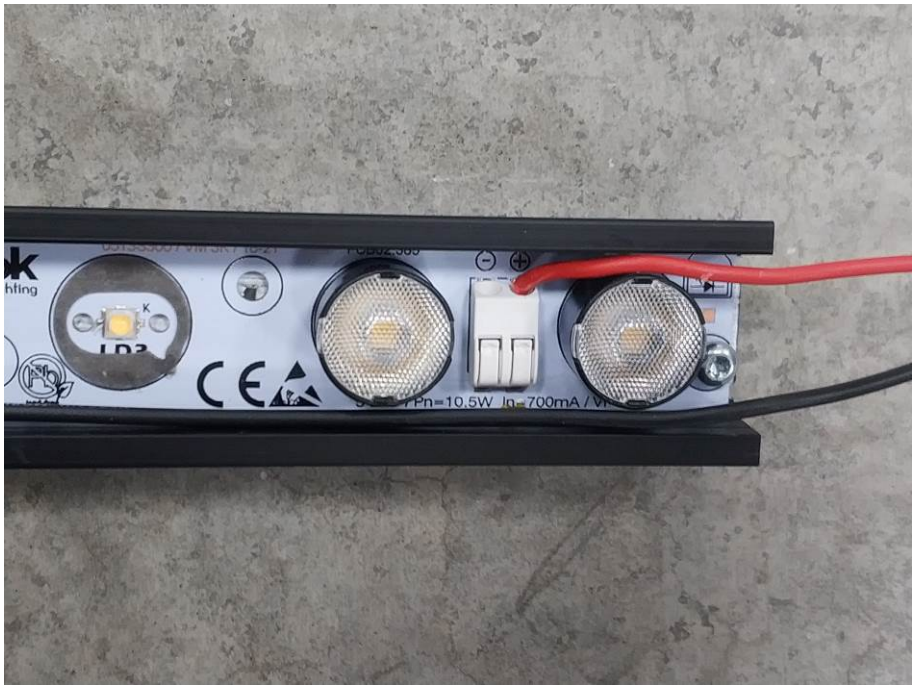



LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Hohe Steinert 8, D-58509 Lüdenscheid
Electronic Converter for LED
Type ECXd 700.436
Ref.-No. 187053
Made in Italy
tc=80°C
ta=-25...45°C
PRI
UN = 220...240V~
Imax = 150mA
fN = 50...60 Hz
λ = 0,95
Range of application
DC 176...275V, Imax=180mA
*SEE DIP SWITCH SETTINGS ON BOTTOM SIDE
DALI
SEC
M N 26 K
Irated = 250...700mA
Urated = 10...49 V
Umax = 59 V
Pmax = 26 W
EL
SELV
OFF
ON






LD3
Pn=10.5W In=700mA

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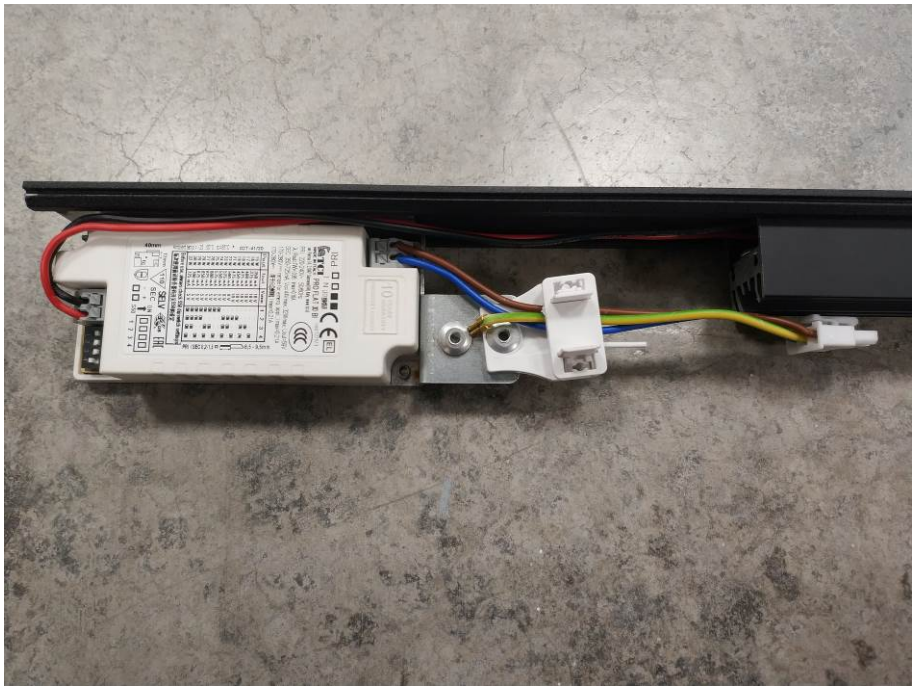


LD4
5 LED / Pn=10.5W In=700mA / Vf=15V

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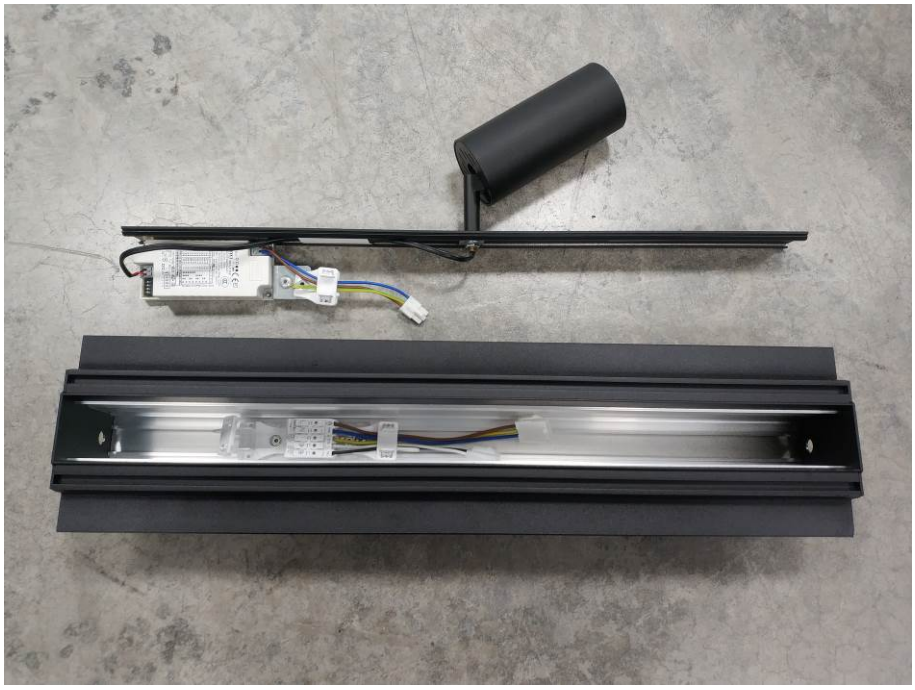


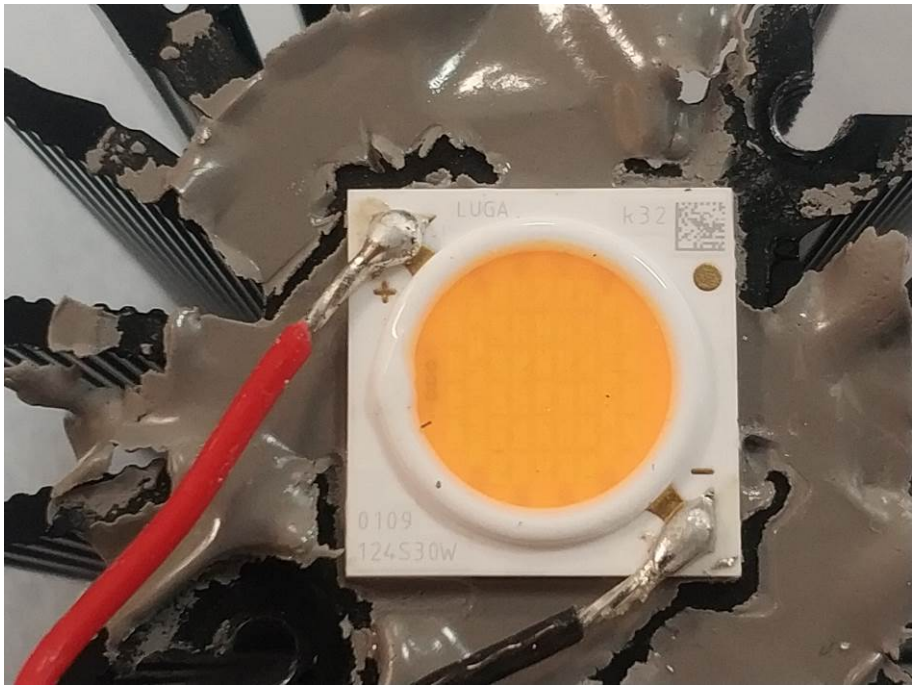
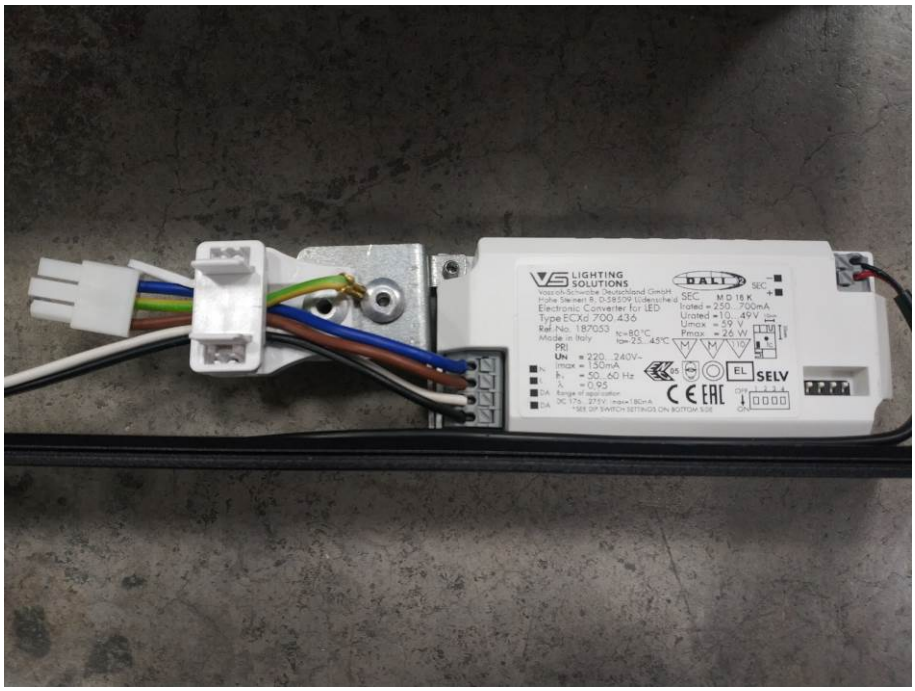
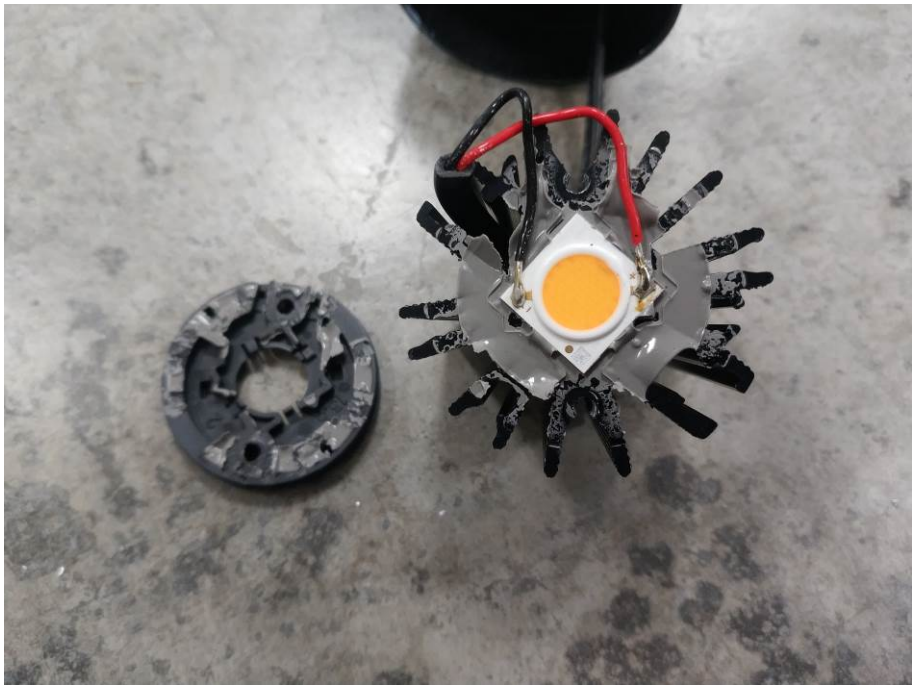

LUGA
k32
0109
124S30W

	Photo document	Reference: KFC5AD34BBS + KPRFX05XXXXBS	.


LIGHTING SOLUTIONS
Electronic Converter for LED
Type ECXd 700.436
DALI
SELV



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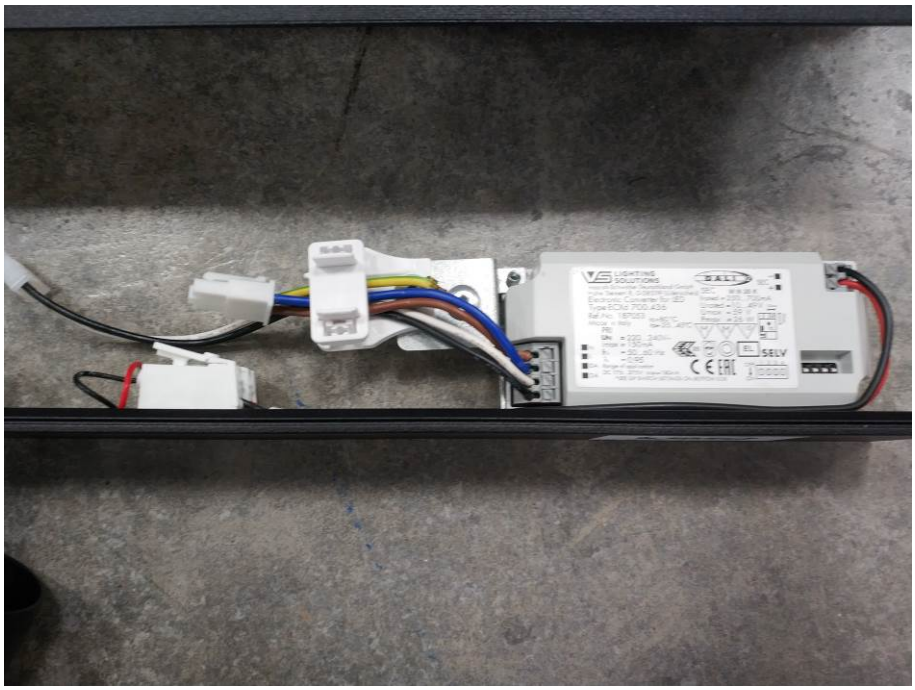
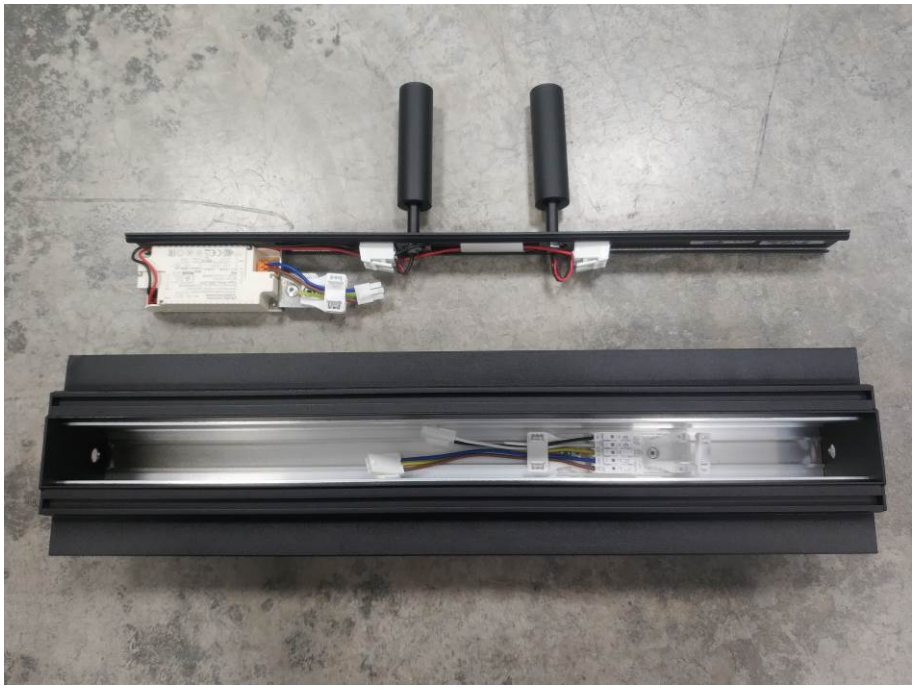
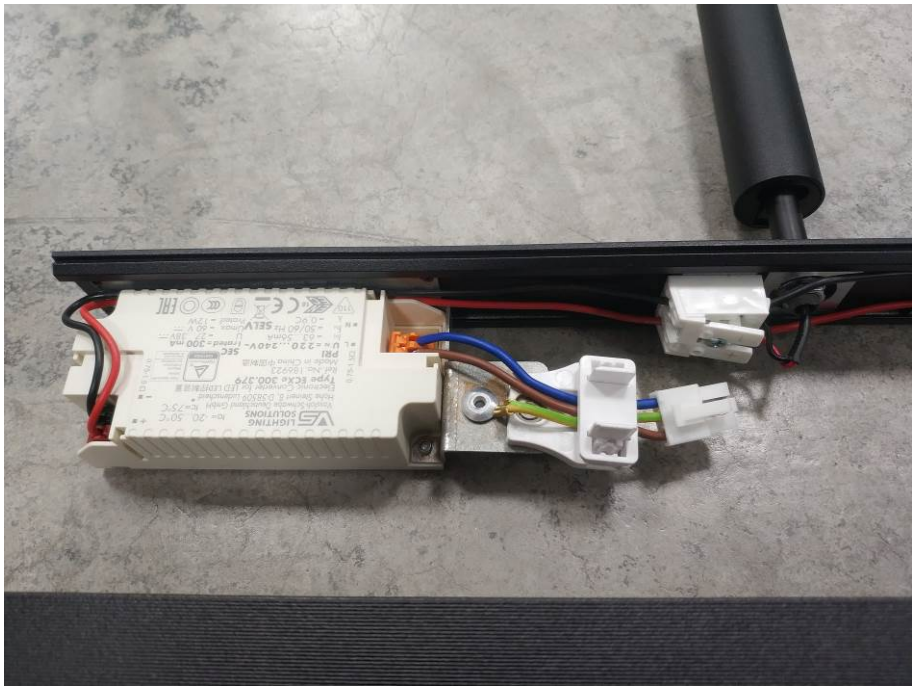
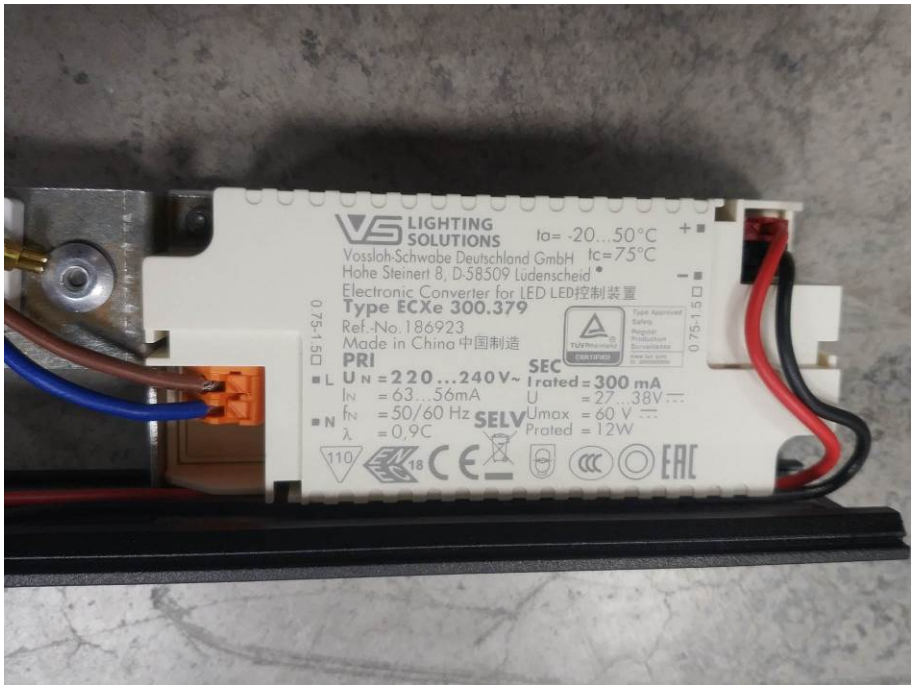



LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Hohe Steinert 8, D-58509 Lüdenscheid
Electronic Converter for LED
Type ECXd 700.436
Ref.-No. 187053
Made in Italy
tc=80°C
ta=-25...45°C
PRI
UN = 220...240V~
Imax = 150mA
fN = 50...60 Hz
λ = 0,95
Range of application
DC 176...276V, Imax=180mA
*SEE DIP SWITCH SETTINGS ON BOTTOM SIDE
DALI
SEC
M N 26 K
Irated = 250...700mA
Urated = 10...49 V
Umax = 59 V
Pmax = 26 W
EL
SELV

	Photo document	Reference: KFC2A25N32ABS + KPRFX05XXXXBS	.






LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Hohe Steinert 8, D-58509 Lüdenscheid
Electronic Converter for LED LED控制装置
Type ECXe 300.379
Ref.-No. 186923
Made in China 中国制造
PRI
U N = 220...240V~
I N = 63...56mA
f N = 50/60 Hz
λ = 0,9C
SEC
I rated = 300 mA
U = 27...38V
Umax = 60 V
Prated = 12W
SELV
ta= -20...50°C
tc=75°C
0,75-1,5
0,75-1,5


IMQ

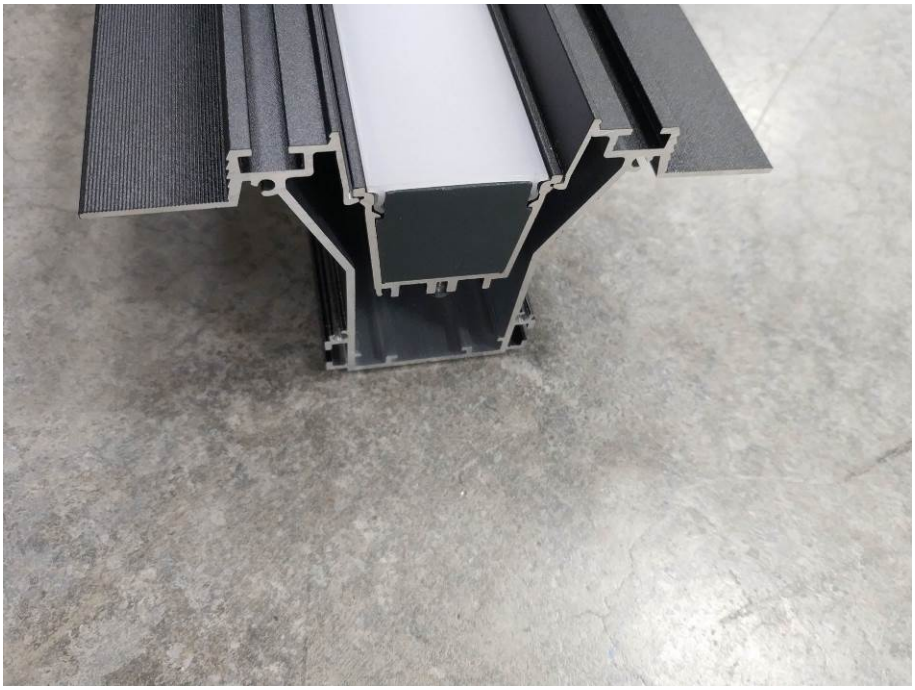

blx

	Photo document	Reference: KTB2A25D32ABS + KPRFX05XXXXBS	.

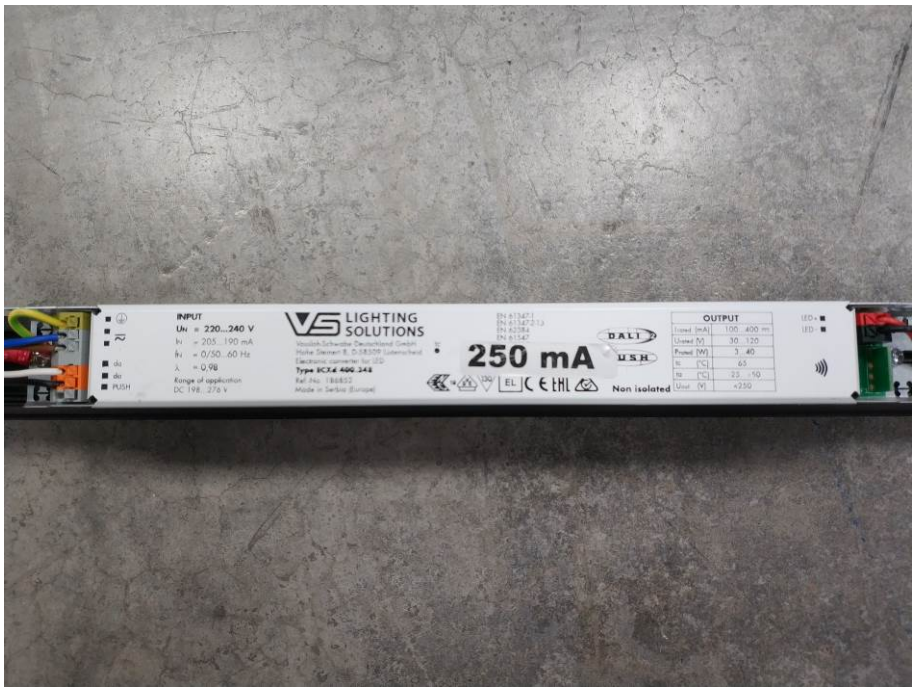

onok

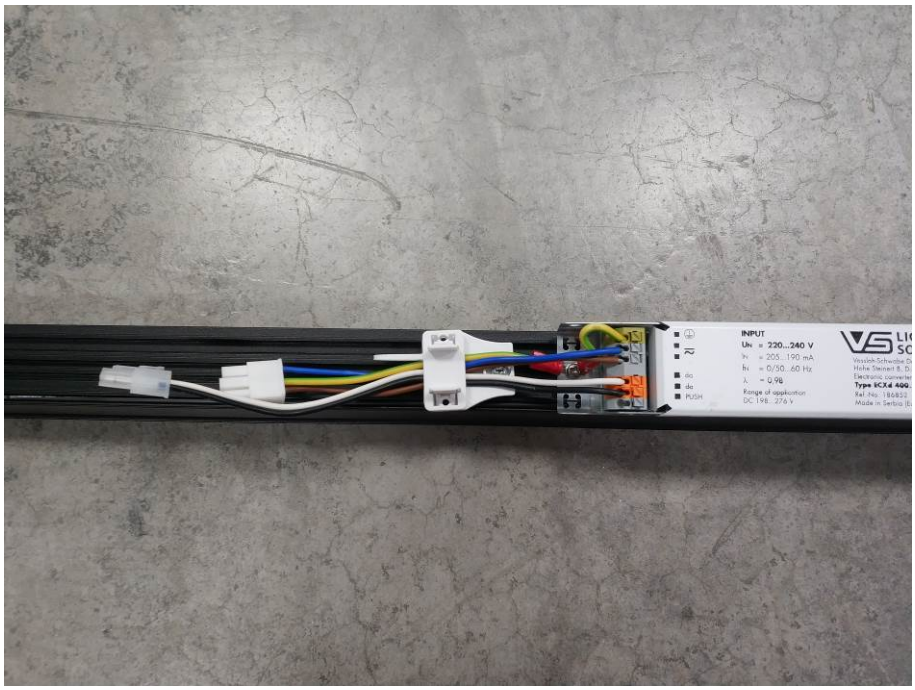

27K CRI90 F2
17/21
PCB 02.381

	Photo document	Reference: KLR1A10D39ABS + KPRFX05XXXXBS	.



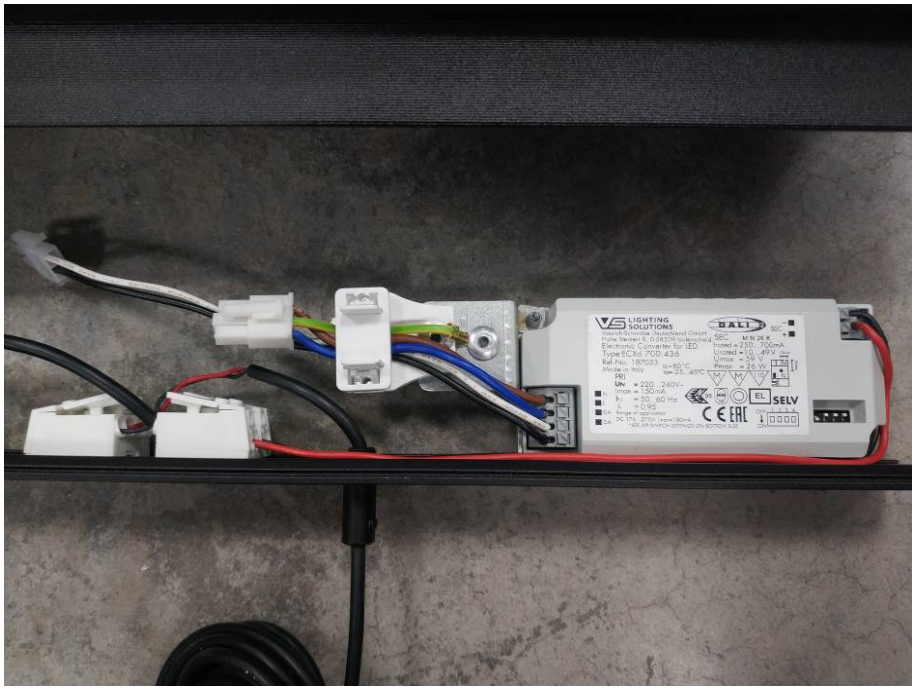

250 mA


INPUT
LIGHTING SOLUTIONS
250 mA
DALI
PUSH
OUTPUT
Non isolated


INPUT
Uin = 220...240 V
Range of application
DC 198...276 V
PUSH

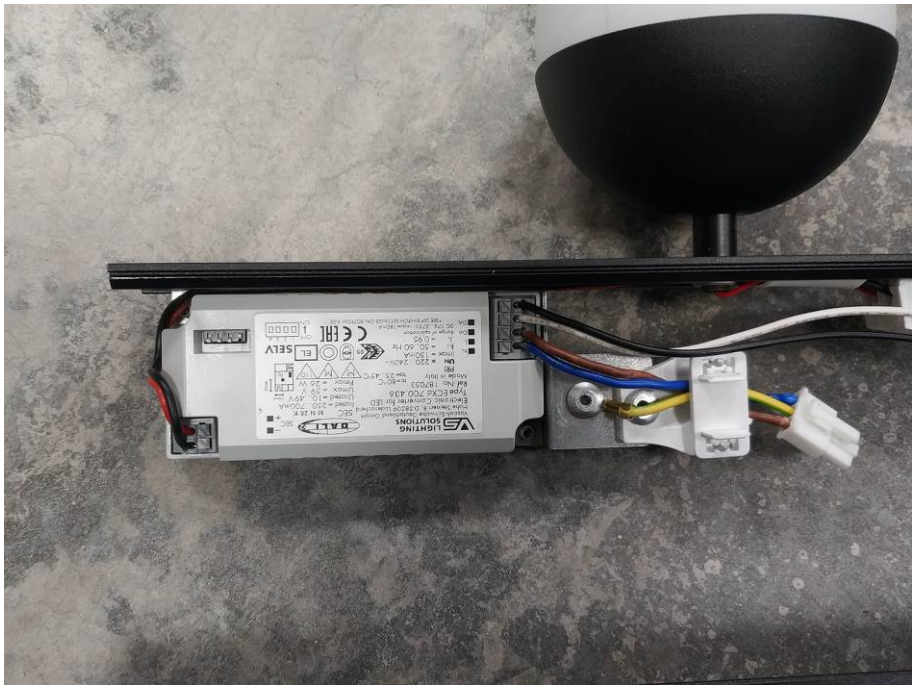

Made in Serbia (Europe)

	Photo document	Reference: KBLPA04D39ABS + KPRFX05XXXXBS	.


LIGHTING SOLUTIONS
DALI
SELV


LD4
PCB:02.647
VM 3K
onok
lighting

	Photo document	Reference: KBLUA04D39ABS + KPRFX05XXXXBS	.




LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Hohe Steinert 8, D-58509 Lüdenscheid
Electronic Converter for LED
Type ECXd 700.436
Ref.-No. 187053
Made in Italy
PRI
UN = 220...240V~
Imax = 150mA
fN = 50...60 Hz
λ = 0.95
Range of application
DC 175...275V, Imax = 180mA
*SEE DIP SWITCH SETTINGS ON BOTTOM SIDE
tc=80°C
ta=25...45°C
DALI
SEC
MN 28 K
Irated = 250...700mA
Urated = 10...49V
Umax = 59 V
Pmax = 26 W
EL
SELV
CE EAC


LD4
PCB:02.847
07/20
LD1
LD3
LD2
LD5
VM 3K
onok
lighting

IEC60598_2_1H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 60598-2-1:2020** **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** LUMINAIRES Part 2: Particular requirements Section 1: Fixed general purpose luminaires			
Differences according to.....:	EN 60598-2-1:2021 used in conjunction with EN 60598-1:2021 + A11:2022		
TRF template used .....:	IECEE OD-2020-F2:2020, Ed. 1.1		
Attachment Form No.....:	EU_GD_IEC60598_2_1H		
Attachment Originator .....:	UL(Demko)		
Master Attachment.....:	2022-04-08		
	CENELEC COMMON MODIFICATIONS (EN)		—
1.7 (4)	**CONSTRUCTION**		**N/A**
1.7 (4.11.6)	Electro-mechanical contact systems		N/A
1.11 (5)	**EXTERNAL AND INTERNAL WIRING**		**P**
1.11 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – Supply cord		P
1.13 (12)	**ENDURANCE TESTS AND THERMAL TESTS**		**P**
1.13 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		**N/A**
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, GB: type of plug		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings *(Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)* Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A

IEC60598_2_1H ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	- 650°C for indoor luminaires		N/A
	GB: Requirements according to United Kingdom Building Regulation		N/A

Attachment No. 3	**LED modules for general lighting – Safety specifications Test according to IEC 62031:2018 (Second edition) & EN IEC 62031:2020. (clauses number between brackets refer to clause in IEC 61347-1)**	—

4	**GENERAL REQUIREMENTS**		—
4.2	Classification		—
	Built-in module .....:	Yes ☒ No ☐	—
	Independent module.....:	Yes ☒ No ☐	—
	Integral module .....:	Yes ☐ No ☒	—
4.6	Independent modules comply with requirements in IEC 60598-1:2014/AMD1:2017		N/A
4.8	Modules with integrated controlgear providing SELV comply with requirements according to IEC 61347-1:2015/AMD1:2017 clause L.5 to L.11.	(see Annex 1)	N/A

6	**MARKING**		—
6.5	**Marking of integral LED modules**		**P**
	- information in 6.2 a) to g) in data sheet, leaflet or website		P

7	**TERMINALS**	—
	Evaluated in final product	P

8 (9)	**EARTHING**	—
	Evaluated in final product	N/A

9 (10)	**PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS**		—
- (10.1)	Controlgear protected against accidental contact with live parts		N/A
- (A2)	Voltage measured with 50 kΩ	(see Annex A)	P
- (A3)	Voltage > 35 V peak or > 60 V d.c. or protective impendance device	(see Annex A)	N/A

10 (11)	**MOISTURE RESISTANCE AND INSULATION**	—
	Evaluated in final product	P

11 (12)	**ELECTRICAL STRENGTH**		—
	Immediately after clause 11 electric strength test for 1 min		P

	Basic insulation for SELV, test voltage 500 V	Refer to main report subclause 2.15 (10.2.2)	P
	Working voltage ≤ 50 V, test voltage 500 V		N/A
	Working voltage > 50 V ≤ 1000 V, test voltage (V):		N/A
	Basic insulation, 2U + 1000 V		N/A
	Supplementary insulation, 2U + 1000 V		N/A
	Double or reinforced insulation, 4U + 2000 V		N/A
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A

12 (14)	**FAULT CONDITIONS**		—
- (14.1)	When operated under fault conditions the controlgear:		P
	- does not emit flames or molten material		P
	- does not produce flammable gases		P
	- protection against accidental contact not impaired		P
	Thermally protected controlgear does not exceed the marked temperature value		P
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	N/A
- (14.2)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (after any reduction in 14.2 - 14.5)	(see appended table)	N/A
- (14.3)	Short-circuit or interruption of semiconductor devices	(see appended table)	P
- (14.4)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	N/A
- (14.5)	Short-circuit across electrolytic capacitors	(see appended table)	N/A
	Short-circuit or interruption of SPDs	(see appended table)	N/A
- (14.6)	After the tests has been carried out on three samples:		P
	The insulation resistance ≥ 1 MΩ .....:	>1,3MΩ	P
	No flammable gases		P
	No accessible parts have become live		P

	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		N/A
- (14.7)*	Relevant fault condition tests with high-power a.c. supply and in turn to a d.c. supply		—
12.2	**Overpower condition**		**P**
	Module withstands overpower condition >15 min.		P
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		N/A

14 (15)	**CONSTRUCTION**		—
- (15.1)	**Wood, cotton, silk, paper and similar fibrous material**		**P**
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P
- (15.2)	**Printed circuits**		**N/A**
	Printed circuits used as internal connections complies with clause 14		N/A

15 (16)	**CREEPAGE DISTANCES AND CLEARANCES**	—
	Evaluated in final product	P

16 (17)	**SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS**	—
	Screws, current-carrying parts and connections in compliance with IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)	—
	Evaluated in final product	—

17 (18)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		—
- (18.2)	Test of printed boards ..... :	See Test Table 17 (18.2)	N/A

18	**RESISTANCE TO CORROSION**		—
	Comply with requirements according 4.18 of IEC 60598-1		N/A

20	**HEAT MANAGEMENT**	—
20.1	**General**	**N/A**

* The tests marked with * are not enshrined by ENAC accreditation.

	Fulfil clause 20 if replaceable LED module and when heat conducting thermal interface is needed.		N/A
20.2	**Thermal interface material**		**N/A**
	Thermal interface material delivered with the module if necessary		N/A
20.3	**Heat protection**		**N/A**
	Not impair safety when operated under poor heat-conduction conditions according Annex D		N/A

21	**PHOTOBIOLOGICAL SAFETY**		—
21.1	**UV radiation**		**N/A**
	Luminous radiation not exceed 2mW/klm		N/A
21.2	**Blue light hazard**		**P**
	Assessed according to IEC TR 62778	RG1 (KFC2A25N32ABS + KPRFX05XXXXBS) (KTB2A25D32ABS + KPRFX05XXXXBS) RG2 1450lux (KDT1A10D33DBS + KPRFX05XXXXBS) (KFC4A40D32ABS + KPRFX05XXXXBS) (KBLPA04D39ABS + KPRFX05XXXXBS) (KBLUA04D39ABS + KPRFX05XXXXBS)	P
21.3	**Infrared radiation**		**N/A**
	Requirements for infrared radiation when required		N/A

A	**ANNEX A - TESTS**		—
	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable		P

12 (14)	**TABLE: tests of fault conditions**	—
Part	Simulated fault	Hazard
LED3 (LD3)	Open circuit (KDT1A10D33DBS + KPRFX05XXXXBS)	~~YES~~ / NO
LED3 (LD3)	Short circuit (KDT1A10D33DBS + KPRFX05XXXXBS)	~~YES~~ / NO
LED	Open circuit (KFC4A40D32ABS + KPRFX05XXXXBS)	~~YES~~ / NO
LED	Short circuit (KFC4A40D32ABS + KPRFX05XXXXBS)	~~YES~~ / NO
LED2 (LD2)	Open circuit (KBLPA04D39ABS + KPRFX05XXXXBS)	~~YES~~ / NO
LED2 (LD2)	Short circuit (KBLPA04D39ABS + KPRFX05XXXXBS)	~~YES~~ / NO
LED2 (LD2)	Open circuit (KBLUA04D39ABS + KPRFX05XXXXBS)	~~YES~~ / NO
LED2 (LD2)	Short circuit (KBLUA04D39ABS + KPRFX05XXXXBS)	~~YES~~ / NO

17 (18.2)	**TABLE: Test of printed boards**				**N/A**
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (s)	Ignition of specified layer Yes/No	Duration of burning (s)	Verdict
Supplementary information:					

(A)	**ANNEX A - TEST TO ESTABLISH WHETHER A CONDUCTIVE PART IS A LIVE PART WHICH MAY CAUSE AN ELECTRIC SHOCK**		—
(A.1)	Comply with A.2 or A.3		P
(A.2)	Voltage ≤ 35 V peak or ≤ 60 Vd.c ..... :	0V DC; 8,3V AC (KDT1A10D33DBS + KPRFX05XXXXBS) 0V DC; 5,7V AC (KFC4A40D32ABS + KPRFX05XXXXBS) 0V DC; 2,4V AC (KFC2A25N32ABS + KPRFX05XXXXBS) 0V DC: 2,3V AC (KTB2A25D32ABS + KPRFX05XXXXBS) 0V DC: 2,4V AC (KBLPA04D39ABS + KPRFX05XXXXBS) 0V DC; 2,1V AC (KBLUA04D39ABS + KPRFX05XXXXBS)	P
(A.3)	If voltage > 35 V peak or > 60 Vd.c. or protective impedance device; touch current does not exceed 0,7 mA (peak) or 2 mAd.c. ..... :		N/A
	Comply with annex G of IEC 60598-1		P

ANNEX 1	**LED MODULES WITH INTEGRAL CONTROLGEAR PROVIDING SELV**	—
	Evaluated in final product	N/A