TEST REPORT
IEC 60598-2-3
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number..... :	68.140.22.0362.01
Date of issue ..... :	2022-07-08
Total number of pages ..... :	60 (not including attachments)
Name of Testing Laboratory preparing the Report ..... :	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Applicant's name..... :	AOK Industrial Company Limited
Address..... :	1/F of 1#Building, East Block of 3/F of Building 1, And 2/F of Building 4, ST Georce's Science and Technology, Industrial Park, Northside of Xinyu Road, Xiangshan Community, Xianqiao Street Baoan District, 518000 Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Test specification:	
Standard ..... :	IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017
Test procedure..... :	UKCA marking
Non-standard test method..... :	N/A
Test Report Form No. ..... :	IEC60598_2_3L
Test Report Form(s) Originator.... :	Intertek Semko AB
Master TRF ..... :	Dated 2018-03-09

This report is not valid as a CB Test Report unless signed by an approved CB 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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Test item description .....:	LED Garden Light
Trade Mark .....:	AOK
Manufacturer.....:	Same as applicant
Model/Type reference .....:	AOK-20WiP-NV-L3-00-XX70-BN-P-I; AOK-25WiP-NV-L3-00-XX70-BN-P-I; AOK-30WiP-NV-L3-00-XX70-BN-P-I; AOK-40WiP-NV-L3-00-XX70-BN-P-I; AOK-50WiP-NV-L3-00-XX70-BN-P-I; AOK-60WiP-NV-L3-00-XX70-BN-P-I; AOK-75WiP-NV-L3-00-XX70-BN-P-I; AOK-120WiP-NV-L3-00-XX70-BN-P-I; AOK-20WiP-NV-L3-00-XX80-BN-P-I; AOK-25WiP-NV-L3-00-XX80-BN-P-I; AOK-30WiP-NV-L3-00-XX80-BN-P-I; AOK-40WiP-NV-L3-00-XX80-BN-P-I; AOK-50WiP-NV-L3-00-XX80-BN-P-I; AOK-60WiP-NV-L3-00-XX80-BN-P-I; AOK-75WiP-NV-L3-00-XX80-BN-P-I; AOK-120WiP-NV-L3-00-XX80-BN-P-I; AOK-25WiPS-NVM-L3-00-XX70-BN-P; AOK-25WiPS-NVM-L3-00-XX80-BN-P; AOK-50WiPS-NVM-L3-00-XX70-BN-P; AOK-50WiPS-NVM-L3-00-XX80-BN-P; AOK-60WiPS-NVM-L3-00-XX70-BN-P; AOK-60WiPS-NVM-L3-00-XX80-BN-P; AOK-20WiPS-NVS-L3-00-XX70-BN-P; AOK-20WiPS-NVS-L3-00-XX80-BN-P; AOK-25WiPS-NVS-L3-00-XX70-BN-P; AOK-25WiPS-NVS-L3-00-XX80-BN-P; AOK-50WiPS-NVS-L3-00-XX70-BN-P; AOK-50WiPS-NVS-L3-00-XX80-BN-P; AOK-60WiPS-NVS-L3-00-XX70-BN-P; AOK-60WiPS-NVS-L3-00-XX80-BN-P ('XX' stands for CCT of LED, can be any numbers from 27 to 65, e.g. 27=2700K, 65=6500K; 'BN' stands for type of LED lens, can be T4 and T5; 'P' stands for internal code, can be 'A' or 'D')
Ratings .....:	Rated Voltage: See 'General product information' for details Rated Frequency: 50/60Hz Rated Power: See 'General product information' for details Protection Class: I Degree of Protection: IP66 Blue Light Risk Group: RG1 ta: See 'General product information' for details

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ **Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch	
Testing location/ address ..... :	Building 12&13, Zhiheng Wisdomland Business Park Nantou Checkpoint Road 2, Nanshan District 518052 Shenzhen CHINA	
Tested by (name, function, signature) ..... :	Steven Tian Project Handler	
Approved by (name, function, signature) .. :	Kevin Liu Designated Reviewer	
☐ **Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :		
Tested by (name, function, signature) ..... :		
Approved by (name, function, signature) .. :		
☐ **Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :		
Tested by (name + signature) ..... :		
Witnessed by (name, function, signature). :		
Approved by (name, function, signature) .. :		
☐ **Testing procedure: CTF Stage 3:**		
☐ **Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :		
Tested by (name, function, signature) ..... :		
Witnessed by (name, function, signature). :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		

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

Attachment No.1:	EU Group Differences and National differences (1 page);
Attachment No.2:	IEC 61347-2-13:2014, IEC 61347-2-13:2014/ AMD1:2016 used in conjunction with IEC 61347-1:2015, IEC 61347-1:2015/AMD1:2017– d.c. or a.c. supplied electronic controlgear for LED modules (30 pages);
Attachment No.3:	Hearting test measurement of LED driver (2 pages)
Attachment No.4:	IEC 62031:2018: LED modules for general lighting – Safety specifications (19 pages);
Attachment No.5:	IEC TR 62778:2014 –blue light hazard to light sources and luminaires (7 pages);
Attachment No.6:	IEC 62493:2015-Assessment of lighting equipment related to human exposure to electromagnetic field (7 pages)
Attachment No.7:	Photo documentation (22 pages)

Summary of testing:

Tests performed (name of test and test clause):

- IEC 60598-1:2014
- IEC 60598-1:2014/AMD1:2017
- IEC 60598-2-3:2002
- IEC 60598-2-3:2002/AMD1:2011
- EN 60598-2-3:2003+A1:2011
- EN 60598-1:2015+A1:2018
- EN 62493:2015

The LED driver SS-50VP-56DH was tested with appliance the requirements of
IEC 61347-2-13:2014
IEC 61347-2-13:2014/AMD1:2016
IEC 61347-1:2015
IEC 61347-1:2015/AMD1:2017
EN 61347-2-13:2014+A1:2017
EN 61347-1:2015+A1:2021
The LED modules in products were found to comply with the requirements of
IEC 62031:2018
EN IEC 62031:2020+A11:2021
The submitted samples were classified as RG1 LED products according to IEC TR 62778:2014;

The submitted samples were LED-light-source technology, they were found to comply with the requirement IEC 62493:2015 and EN 62493:2015 without test.
The submitted samples were found to comply with the above specifications.

Testing location:

Building 12&13, Zhiheng Wisdomland Business Park Nantou Checkpoint Road 2, Nanshan District 518052 Shenzhen CHINA

Summary of compliance with National Differences:

– UK and European Group difference and national difference

The product fulfils the requirements of below standards:

- EN 60598-2-3:2003+A1:2011
- EN 60598-1:2015+A1:2018
- EN 62493:2015

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.

Representative label

Location: Sticking on external rear metal enclosure

Location: sticking on glass cover. (Caution, risk of electric shock for models suffix 'Xi LP' series LED drivers, the height of the symbol at least 15mm.)

Remark:

- The label for other models are same as the above label except that the model number, ta value, rated voltage, rated power and CCT are different.
- Height of CE mark at least 5mm, height of WEEE mark at least 7mm, height of letters and numerals at least 2mm, height of other marks at least 5mm.
- According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Test item particulars .....:	Luminaires for road and street lighting
Classification of installation and use ..... :	LED Garden Light suitable for indoor/outdoor use
Supply Connection..... :	Supply cord without plug
Protection Class ..... :	I
Degree of Protection ..... :	IP66
Blue Light Risk Group ..... :	RG1
ta ..... :	See 'Genera product information' for details
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 ..... :	2018-12-20; 2019-04-28; 2019-08-19; 2020-03-16; 2022-03-08; 2022-06-29
Date (s) of performance of tests..... :	2018-12-20 to 2019-04-03; 2019-04-28 to 2019-06-03; 2019-08-19 to 2019-09-02; 2020-03-16 to 2020-04-01; 2022-03-08 to 2022-04-01; 2022-06-29 to 2022-07-08
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.** **Clause numbers between brackets refer to clauses in IEC 60598-1**	
Name and address of factory (ies).....:	Same as applicant

General product information:

The manufacturer/ Importer has to ensure the appliance placing on the EU market conforms to the applicable EU directives which provide the affixing of the CE marking, such as LVD, EMC, RoHS, ErP, and so on.

The products named LED Garden Light covered in this report are class I LED street lights,
- Suitable for indoor and outdoor use,
- Equipped with non-user replaceable light source,
- All models are non-dimmable and have similar construction.
- Mounting height: not more than 12m

Model list for luminaires:

Model no.	Rated input		ta (°C)	Driver model code	LED Qty. (pcs)	Size D*H (mm)	Weight (kg)	Max project area (m^2)
	Voltage (VAC)	Power (W)						
AOK-20WiP-NV-L3-00-XX70-BN-P-I	100-240	20	50	A, F	140	Φ460*80	7,6	0,14
AOK-25WiP-NV-L3-00-XX70-BN-P-I		25	50		140	Φ460*80	7,6	0,14
AOK-30WiP-NV-L3-00-XX70-BN-P-I		30	50		140	Φ460*80	7,6	0,14
AOK-40WiP-NV-L3-00-XX70-BN-P-I		40	50		140	Φ460*80	7,6	0,14
AOK-50WiP-NV-L3-00-XX70-BN-P-I		50	50		140	Φ460*80	7,6	0,14
AOK-60WiP-NV-L3-00-XX70-BN-P-I	100-240	60	50	B	140	Φ460*80	7,6	0,14
	220-240	60	50	D	140	Φ460*80	7,6	0,14
AOK-75WiP-NV-L3-00-XX70-BN-P-I	100-240	75	50	B, G	140	Φ460*80	7,6	0,14
	220-240	75	50	D	140	Φ460*80	7,6	0,14
AOK-120WiP-NV-L3-00-XX70-BN-P-I	100-240	120	40	C	196	Φ460*80	7,6	0,14
	220-240	120	50	E	196	Φ460*80	7,6	0,14
AOK-20WiP-NV-L3-00-XX80-BN-P-I	100-240	20	50	A, F	140	Φ460*80	7,6	0,14
AOK-25WiP-NV-L3-00-XX80-BN-P-I		25	50		140	Φ460*80	7,6	0,14
AOK-30WiP-NV-L3-00-XX80-BN-P-I		30	50		140	Φ460*80	7,6	0,14
AOK-40WiP-NV-L3-00-XX80-BN-P-I		40	50		140	Φ460*80	7,6	0,14
AOK-50WiP-NV-L3-00-XX80-BN-P-I		50	50		140	Φ460*80	7,6	0,14
AOK-60WiP-NV-L3-00-XX80-BN-P-I	100-240	60	50	B	140	Φ460*80	7,6	0,14
	220-240	60	50	D	140	Φ460*80	7,6	0,14
AOK-75WiP-NV-L3-00-XX80-BN-P-I	100-240	75	50	B, G	140	Φ460*80	7,6	0,14
	220-240	75	50	D	140	Φ460*80	7,6	0,14
AOK-120WiP-NV-L3-00-XX80-BN-P-I	100-240	120	40	C	196	Φ460*80	7,6	0,14
	220-240	120	50	E	196	Φ460*80	7,6	0,14
AOK-25WiPS-NVM-L3-00-XX70-BN-P	220-240	25	50	A	140	Φ410*71	5,8	0,11

AOK-25WiPS-NVM-L3-00-XX80-BN-P	220-240	25	50	A	140	Φ410*71	5,8	0,11
AOK-50WiPS-NVM-L3-00-XX70-BN-P	220-240	50	50	A	140	Φ410*71	5,8	0,11
AOK-50WiPS-NVM-L3-00-XX80-BN-P	220-240	50	50	A	140	Φ410*71	5,8	0,11
AOK-60WiPS-NVM-L3-00-XX70-BN-P	220-240	60	50	B	140	Φ410*71	5,8	0,11
AOK-60WiPS-NVM-L3-00-XX80-BN-P	220-240	60	50	B	140	Φ410*71	5,8	0,11
AOK-20WiPS-NVS-L3-00-XX70-BN-P	100-240	20	50	H	140	Φ410*71	5,8	0,11
AOK-20WiPS-NVS-L3-00-XX80-BN-P	100-240	20	50	H	140	Φ410*71	5,8	0,11
AOK-25WiPS-NVS-L3-00-XX70-BN-P	100-240	25	50	H	140	Φ410*71	5,8	0,11
AOK-25WiPS-NVS-L3-00-XX80-BN-P	100-240	25	50	H	140	Φ410*71	5,8	0,11
AOK-50WiPS-NVS-L3-00-XX70-BN-P	100-240	50	50	I	140	Φ410*71	5,8	0,11
AOK-50WiPS-NVS-L3-00-XX80-BN-P	100-240	50	50	I	140	Φ410*71	5,8	0,11
AOK-60WiPS-NVS-L3-00-XX70-BN-P	100-240	60	50	J	140	Φ410*71	5,8	0,11
AOK-60WiPS-NVS-L3-00-XX80-BN-P	100-240	60	50	J	140	Φ410*71	5,8	0,11

Remark:
- 'XX' stands for CCT of LED, can be any numbers from 27 to 65, e.g. 27=2700K, 65=6500K;
- 'BN' stands for type of LED lens, can be T4 and T5
- 'P' stands for internal code, can be 'A' or 'D'
- Dimming cord ends of LED driver covered by heat-shrink tube, can't be used in the products covered in this report

Model list for LED drivers:

Code	Model No.	Rated input	Rated output	ta (°C)	tc (°C)	Certificate
A	XLG-50-AB	100-240VAC; 50/60Hz; 0,62A	22-54VDC; SELV; CC; Max. 2,1A; U_{out}:57VDC; P_{rated}:50W; IP67	50 (100-200VAC) 60 (200-240VAC)	90	DEKRA 35-106403*
B	XLG-75-H-AB	100-240VAC; 50/60Hz; 1,0A	27-56VDC; SELV; CC; Max. 2,1A; U_{out}:60VDC; P_{rated}:75,6W; IP67	50 (100-200VAC) 60 (200-240VAC)	90	TÜV Rheinland HN 69262055*
C	XLG-150-H-AB	100-240VAC; 50/60Hz; 2,0A	27-56VDC; SELV; CC; 2,68-4,17A; U_{out}:60VDC; P_{rated}:150W; IP67	40 (100-200AC) 55 (200-240VAC)	90	DEKRA 35-108587*
D	Xi LP 100W 0.3-1.05A S1 230V 1175	220-240VAC; 50/60Hz; 0,45-0,51A	46-143VDC; Separating; CC; 0,3-1,05A; U_{out}:220VDC; P_{rated}:100W; IP67	50	80	DEKRA 31-102283*
E	Xi LP 150W 0.3-1.05A S1 230V 1175	220-240VAC; 50/60Hz; 0,6-0,7A	72-214VDC; Separating; CC; 0,3-1,05A; U_{out}:320VDC; P_{rated}:150W; IP67	50	80	DEKRA 31-102283*
F	SS-50VP-56DH	100-240VAC; 50/60Hz; 0,7A	22-56VDC; SELV; CC; 0,35-1,56A; U_{out}:60VDC;	60	90	Test with appliance#

			P_{rated}:50W; IP67			
G	SS-75VP-56DH	100-240VAC; 50/60Hz; 1,0A	22-56VDC; SELV; CC; 0,35-2,4A; U_{out}:60VDC; P_{rated}:75W; IP67	60	90	DEKRA 35-111150*
H	SS-30VA-56B	100-240VAC; 50/60Hz; 0,5A	CC; 22-56VDC; 0,45-0,95A; U_{out}:60VDC; P_{rated}:30W; IP67; SELV	60	90	DEKRA ENEC CERT: 35-112032
I	SS-50VA-56B	100-240VAC; 50/60Hz; 0,6A	CC; 22-56VDC; 0,75-1,55A; U_{out}:60VDC; P_{rated}:50W; IP67; SELV	60	90	
J	SS-60VA-L50B	100-240VAC; 50/60Hz; 0,8A	CC; 28-50VDC; 0,96-1,66A; U_{out}:60VDC; P_{rated}:60W; IP67; SELV	60	90	DEKRA ENEC CERT: 35-117065
Remark: dimming cord ends of LED driver covered by heat-shrink tube, can't be used in the products covered in this report						

All models have two mounting bracket, see photo document for details.
Unless otherwise specified, the model AOK-120WiP-NV-L3-00-6570-T5-D-I was chosen as representative model to perform all tests, the model AOK-120WiP-NV-L3-00-6570-T5-D-I and AOK-120WiP-NV-L3-00-6580-T4-D-I were chosen as representative models to perform blue light risk assessment.

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	**GENERAL TEST REQUIREMENTS**		—
3.2 (0.3)	More sections applicable.....:	Yes ☐ No ☒	—
3.2 (0.5)	Components	(see Annex 1)	—
3.2 (0.7)	**Information for luminaire design in light sources standards**		—
3.2 (0.7.2)	Light source safety standard .....:	IEC/EN IEC 62031	—
	Luminaire design in the light source safety standard		P
3.4 (2)	**CLASSIFICATION**		—
3.4 (2.2)	Type of protection .....:	Class I	—
3.4 (2.3)	Degree of protection .....:	IP66	—
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....:	Yes ☒ No ☐	—
3.4 (2.5)	Luminaire for normal use .....:	Yes ☒ No ☐	—
	Luminaire for rough service .....:	Yes ☐ No ☒	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes ☒ No ☐ With lamp arm mounting bracket	—
	b) on a mast arm	Yes ☐ No ☒	—
	c) on a post top	Yes ☐ No ☒	—
	d) on span or suspension wires	Yes ☒ No ☐ With lifting scaffold mounting bracket	—
	e) on a wall	Yes ☐ No ☒	—
3.5 (3)	**MARKING**		—
3.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions	English	P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
3.5 (3.3.3)	Operating temperature		N/A
3.5 (3.3.4)	Symbol or warning notice		N/A
3.5 (3.3.5)	Wiring diagram		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current		N/A
3.5 (3.3.10)	Suitability for use indoors		P
3.5 (3.3.11)	Luminaires with remote control		N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply		P
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	P
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
3.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided	Non-user replaceable light sources	P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		P
3.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		P
	e) Cross-sectional area of wires if applicable		P
	f) Suitability for indoors use		P

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Clause	Requirement + Test	Result - Remark	Verdict
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		P
3.6 (4)	**CONSTRUCTION**		—
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	**Lampholders**		**N/A**
3.6 (4.4.1)	Integral lampholder		N/A
3.6 (4.4.2)	Wiring connection		N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N) .....:		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) .....:		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	**Starter holders**		**N/A**
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	**Terminal blocks**		**N/A**
	Tails		N/A
	Unsecured blocks		N/A
3.6 (4.7)	**Terminals and supply connections**		**P**
3.6 (4.7.1)	Contact to metal parts		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
3.6 (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
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (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
3.6 (4.9)	**Insulating lining and sleeves**		**P**
3.6 (4.9.1)	Retainment		P
	Method of fixing .....:	Heat shrinkable tube	—
3.6 (4.9.2)	Insulated linings and sleeves:		P
	Resistant to a temperature > 20 °C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) .....:		N/A
3.6 (4.10)	**Double or reinforced insulation**		**N/A**
3.6 (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
	Interference suppression capacitors according to IEC 60384-14		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (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
1.6 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
3.6 (4.11)	**Electrical connections and current-carrying parts**		**P**
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		P
3.6 (4.11.6)	Electro-mechanical contact systems		P
3.6 (4.12)	**Screws and connections (mechanical) and glands**		**P**
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part .....:	Screw for glass cover: 1,2Nm	P
	Torque test: torque (Nm); part .....:	Screw for earthing: 1,2Nm	P
	Torque test: torque (Nm); part .....:	Screw for lens: 0,5Nm	P
	Torque test: torque (Nm); part .....:	Screw for metal enclosure: 2,0Nm	P
	Torque test: torque (Nm); part .....:	Screw for lifting scaffold mounting bracket: 8,0Nm	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part .....:	Screw for lamp arm mounting bracket: 2,0Nm	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm).....:		N/A
	- lampholder; torque (Nm).....:		N/A
	- push-button switches; torque 0,8 Nm.....:		N/A
3.6 (4.12.5)	Screwed glands; force (Nm) .....:	6,25Nm (when luminaire with lifting scaffold mounting bracket)	P
3.6 (4.13)	**Mechanical strength**		**P**
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....:	For models with 'XLG' and 'SS' series LED driver: Glass cover: 0,5Nm	P
	- other parts; energy (Nm) .....:	Metal enclosure for all models: 0,7Nm; For models with 'Xi LP' series LED driver: Glass cover: 0,7Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		P
3.6 (4.13.3)	Straight test finger		P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	**Suspensions, fixings and means of adjusting**		**P**
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) .....:		—
	Stress in conductors (N/mm²) .....:		N/A
	Mass (kg) of semi-luminaire .....:		—
	Bending moment (Nm) of semi-luminaire .....:		N/A
3.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles .....:		N/A
	- strands broken .....:		N/A
	- electric strength test afterwards		N/A
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	**Flammable materials**		**P**
	- glow-wire test 650°C.....:	See Test Table 3.15 (13.3.2)	P
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
3.6 (4.16)	**Luminaires for mounting on normally flammable surfaces**		**N/A**
	No lamp control gear .....:	Electronic control gear is exempt from the requirements of this clause.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	**Drain holes**		**N/A**
	Clearance at least 5 mm		N/A
3.6 (4.18)	**Resistance to corrosion**		**P**
3.6 (4.18.1)	- rust-resistance		N/A
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Igniters compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	**Protective shield**		**N/A**
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	**Photobiological hazards**		**P**
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 .....:	RG1	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2...:		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
3.6 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
3.6 (4.26)	**Short-circuit protection**		**N/A**
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		**N/A**
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
3.6 (4.28)	**Fixing of thermal sensing control**		**N/A**
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C).....:		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	**Luminaires with non-replaceable light source**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (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
	Minimum two fixing means	For models with ‘Xi LP’ series LED driver	P
3.6 (4.31)	**Insulation between circuits**		**P**
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		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		N/A
3.6 (4.31.1)	SELV circuits		P
	Used SELV source	For models with ‘XLG’ and ‘SS’ series LED driver	P
	Voltage ≤ ELV		P
	Insulating of SELV circuits from LV supply		P
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		P
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	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 enter socket-outlets of other voltage systems		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1	For models with 'Xi LP' series LED driver	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 of above		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
3.6 (4.32)	**Overvoltage protective devices**		P
	Comply with IEC 61643-11		P
	External to controlgear and connected to earth:		P
	- only in fixed luminaires		P
	- only connected to protective earth		P
3.6.1 (-)	At least IP X3 or X5 respectively. IP .....:	IP66	P
	Column-integrated luminaires:		N/A
	- parts below 2,5 m. IP .....:		N/A
	- parts above 2,5 m. IP .....:		N/A
3.6.2 (-)	Suspension on span wires		P
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		P
3.6.3.1 (-)	Static load test		P
	- drag coefficient .....:	1,2	P
	- loaded area (m²) .....:	0,14	P
	- used load (N) .....:	279N	P
	- measured deformation (cm/m) .....:	1,2 (limit 2cm/m)	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or	IK08 test was passed	P
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40 ..... :		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		P
3.6.5.2.1 (-)	Glass covers have high mechanical strength		P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample		P
3.6.5.2.2 (-)	Glass covers not break into large pieces		P
	- test according 3.6.5.1, number of particles is more than 20 ..... :	Min.50pcs	P
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A
3.6.7 (-)	Compliance with ISO standard or other..... :		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		N/A
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		N/A
	- dimension of the cable entry slot (mm) ..... :		N/A
	- cable path from the slot to the connection compartment (mm) ..... :		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		—
3.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according Annex U		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.8 (7)	**PROVISION FOR EARTHING**		—
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω .....:	0,076Ω	P
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	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
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
3.8 (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
3.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
3.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P

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Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
3.8.1 (-)	Attachment prevented from rotation		P
3.9 (14)	**SCREW TERMINALS**		—
	Separately approved; component list .....:	(see Annex 1)	P
	Part of the luminaire.....:	(see Annex 3)	N/A
3.9 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		—
	Separately approved; component list .....:	(see Annex 1)	P
	Part of the luminaire.....:	(see Annex 4)	N/A
3.10 (5)	**EXTERNAL AND INTERNAL WIRING**		—
3.10 (5.2)	**Supply connection and external wiring**		**P**
3.10 (5.2.1)	Means of connection.....:	Supply cord without plug	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
3.10 (5.2.2)	Type of cable .....:	H05RN-F	P
	Nominal cross-sectional area (mm²).....:	3X1,0mm²	P
	Cables equal to IEC 60227 or IEC 60245	IEC 60245	P
3.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y	P
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N).....:	60 (according to clause 3.10.1 of IEC/EN 60598-2-3)	P
	- torque test: torque (Nm) .....:	0,25 (according to clause 3.10.1 of IEC/EN 60598-2-3)	P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
3.10 (5.2.11)	External wiring passing into luminaire		P
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
3.10 (5.3)	**Internal wiring**		**P**
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A).....:		N/A
	- temperatures .....:	(see Annex 2)	N/A
	Green-yellow for earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²).....:	See Annex 1	P
	Insulation thickness		P
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
3.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV current-carrying parts	For models with 'XLG' and 'SS' series LED drivers	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (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
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		P
3.10 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		**N/A**
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N)..... :	60	P
	- torque test: torque (Nm) ..... :	0,25	P

3.11 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		—
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lampholders and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (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
3.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- touch current .....:		N/A
	- no-load voltage .....:		N/A
	- touch current if applicable (mA) .....:		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage .....:		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
3.11 (8.2.6)	Covers reliably secured		P
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μF not exceed 50 V 1 min after disconnection		P
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Other plu Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection g connected luminaire with capacitor		N/A
3.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		**P**
3.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 3.13		—
3.12 (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)	—
3.12 (12.3)	Endurance test:		P
	a) mounting-position .....:	As in normal use	—
	b) test temperature (°C).....:	60 [models with ta=50°C] 50 [models with ta=40°C]	—
	c) total duration (h) .....:	240	—
	d) supply voltage (V).....:	264	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) .....:		—
	e) luminaire ceases to operate		—
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) .....:		—
	- case of abnormal conditions.....:		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .....:		—
	- measured mounting surface temperature (°C) at 1,1 Un .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- calculated mounting surface temperature (°C) .....:		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions.....:		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C).....:		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W .....:		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions.....:		—
	- Ballast failure at supply voltage (V) .....:		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions.....:		—
	- measured winding temperature (°C): at 1,1 Un.....:		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C).....:		—
	Ball-pressure test..... :	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions.....:		—
	- measured winding temperature (°C): at 1,1 Un.....:		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:		—
	- calculated temperature of fixing point/exposed part (°C).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ball-pressure test.....:	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions.....:		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link .....:	Yes ☐ No ☐	—
	- manual reset cut-out.....:	Yes ☐ No ☐	—
	- auto reset cut-out.....:	Yes ☐ No ☐	—
	- case of abnormal conditions.....:		—
	- highest measured temperature of fixing point/ exposed part (°C):.....:		—
	Ball-pressure test:.....:	See Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		N/A
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		P

3.13 (9)	**RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE**		—
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		—
	- classification according to IP.....:	IP66	—
	- mounting position during test .....:	As in normal use	—
	- fixing screws tightened; torque (Nm) .....:	0,8Nm [Screw for glass cover]; 4,2Nm [Screw for metal gland]; 1,3Nm [Screw for metal enclosure]; 1,3Nm [Screw for lamp arm mounting bracket]; 5,3Nm [Screw for lifting scaffold mounting bracket]	—
	- tests according to clauses.....:	9.2.2 and 9.2.7	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P

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Clause	Requirement + Test	Result - Remark	Verdict
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		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		P
3.13 (9.3)	Humidity test 48 h	25°C; R.H. 93%	P
3.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		—
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :		—
	Insulation resistance (MΩ) ..... :		—
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface ..... :	100MΩ (required: 1MΩ) [for models with 'XLG' and 'SS' series LED driver]	P
	- between current-carrying parts and metal parts of the luminaire ..... :	100MΩ (required: 1MΩ) [for models with 'XLG' and 'SS' series LED driver]	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		P
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :	100MΩ (required: 2MΩ)	P
	- between live parts and metal parts ..... :	100MΩ (required: 2MΩ)	P
	- between live parts of different polarity through action of a switch ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts ..... :	100MΩ (required: 2MΩ)	P
	- Insulation bushings as described in Section 5 ..... :		N/A
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V) ..... :		N/A
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface ..... :	500V [for models with 'XLG' and 'SS' series LED driver]	P
	- between current-carrying parts and metal parts of the luminaire ..... :	500V [for models with 'XLG' and 'SS' series LED driver]	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		P
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :	1) Live parts (L/N) and mounting surface:1480V; 2) Live parts (driver output +/-) and mounting surface: For models with 'Xi LP' series separating LED drivers: 1440V [U_{out}:220V]; 1640V [U_{out}:320V]	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts and metal parts ..... :	1) Live parts (L/N) and earthing metal enclosure:1480V; 2) Live parts (driver output +/-) and earthing metal enclosure: For models with 'Xi LP' series separating LED drivers: 1440V [U_{out}:220V]; 1640V [U_{out}:320V] 3) Live parts (driver output +/-) to glass cover For models with 'Xi LP' series separating LED drivers: 1920V [240V+U_{out}:220V]; 2120V [240V+U_{out}:320V]	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
3.14 (10.3)	Touch current or protective conductor current (mA) :	Touch current: Max. 0,02mA (limit : 0,7mA) [Glass cover for models with 'Xi LP' series separating LED drivers]; Protective conductor current : Max. 0,47mA (limit 3,5mA) [for earthing enclosure]	P

3.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		—
3.15 (13.2.1)	Ball-pressure test ..... :	See Test Table 3.15 (13.2.1)	P
3.15 (13.3.1)	Needle-flame test (10 s) ..... :	See Test Table 3.15 (13.3.1)	P
3.15 (13.3.2)	Glow-wire test (650°C) ..... :	See Test Table 3.15 (13.3.2)	N/A
3.15 (13.4)	Proof tracking test (IEC 60112) ..... :	See Test Table 3.15 (13.4)	N/A

3.7 (11.2)	**TABLE I: Creepage distances and clearances**						**P**
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						**P**
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:	B	6,0	1,5	11.1.B	6,0	2,5	11.1.A

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Clause	Requirement + Test				Result - Remark		Verdict
Distance 2:	B	10,0	1,5	11.1.B	10,0	2,5	11.1.A
Distance 3:	B	3,5	3,0	11.1.B	3,5	3,2	11.1.A
Distance 4:	B	10,0	1,5	11.1.B	10,0	2,5	11.1.A
Distance 5:	B	3,0	0,5	11.1.B	3,0	1,3	11.1.A
Working voltage (V) ..... :					240VAC for distance 1/2 320VDC for distance 3/4 60VDC for distance 5		—
PTI..... :					< 600 ☒ ≥ 600 ☐		—
Pulse voltage if applicable (kV) ..... :					--		—
Supplementary information: minimum value was recorded. Distance 1: L to N before fuse Distance 2: Live part of terminal block (screw or screwless) for supply cord to accessible metal part Distance 3: Current carry part of LED module for models with 'XI' series LED driver to accessible metal part. Distance 4: Live parts of fuse and accessible metal part. Distance 5: Current carrying parts of LED module for models with 'SS' and 'XLG' series LED driver to accessible metal part.							

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

3.7 (11.2)	TABLE II: Creepage distances and clearances						N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages							
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2							
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:	--	--	--	--	--	--	--
Working voltage (V) ..... :					--		—
Frequency if applicable (kHz) ..... :					--		—
PTI ..... :					< 600 ☐	≥ 600 ☐	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :							—
Supplementary information: --							

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

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) ..... :		2 mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Terminal block for internal wire	WAGO KONTAKTTECHNIK GMBH & CO KG	125	1,0
SMD connector on LED module	Wago-Kontakttechnik GmbH & Co. KG	125	1,0
Supplementary information: --			

3.15 (13.3.1)	**TABLE: Needle-flame test (IEC 60695-11-5)**				**P**
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Terminal block for internal wire	WAGO KONTAKTTECHNIK GMBH & CO KG	0	No	0	Pass
SMD connector on LED module	Wago-Kontakttechnik GmbH & Co. KG	0	No	0	Pass
Supplementary information: --					

3.15 (13.3.2)	**TABLE: Glow-wire test (IEC 60695-2-11)**				**P**
Glow wire temperature ..... :	650°C				—
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
Lens	IDEMITSU KOSAN CO LTD	0	No	0	Pass
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No) ..... :					Yes
Supplementary information: --					

3.15 (13.4)	**TABLE: Proof tracking test (IEC 60112)**				**N/A**
Test voltage PTI ..... :	600V				—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
--	--	--	--	--	--
Supplementary information: --					

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1])**
LED driver	B	Mean Well Enterprise Co., Ltd.	XLG series	Independent SELV type; Class I; With H05RN-F, 3x1,0mm^2 for supply cord; H05RN-F, 2x1,0mm^2 for output cord; Min. 0,5mm^2 for dimming cord, other rating see 'General product information' for details	IEC/EN 61347-1 IEC/EN 61347-2-13	See 'General product information' for details
LED driver	B	Philips Lighting B.V.	Xi LP series	Independent separating type; Class I; With H05RN-F, 3x1,0mm^2 for supply cord; H05RN-F, 2x1,0mm^2 for output cord; Min. 0,5mm^2 for dimming cord, other rating see 'General product information' for details	IEC/EN 61347-1 IEC/EN 61347-2-13	See 'General product information' for details
LED driver	B	ShenZhen City SOSEN Electronics Co., Ltd.	SS series	Independent separating type; Class I; With H05RN-F, 3x1,0mm^2 for supply cord; H05RN-F, 2x1,0mm^2 for output cord; Min. 4x0,5mm^2 for dimming cord, other rating see 'General product information' for details	IEC/EN 61347-1 IEC/EN 61347-2-13	See 'General product information' for details

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Clause	Requirement + Test	Result - Remark	Verdict

Fuse	B	XC Electronics (Shen Zhen) Corp. Ltd.	3F	250V; T3,15A	DIN EN 60127-1 DIN EN 60127-3	VDE 40019636*
Terminal block for supply cord (when luminaire with lamp arm mounting bracket)	B	Heavy Power Co., Ltd.	PA9	Screw type; 450VAC; 24A; 1,0…2,5mm^2; T110	DIN EN 60998-2-1 DIN EN 60998-1	VDE 40016425*
Terminal block for supply cord (when luminaire with lifting scaffold mounting bracket)	B	WAGO KONTAKTTECHNIK GMBH & CO KG	222-412; 222-413	Screwless type; 450VAC; 0,2…2,5mm^2; T85	DIN EN 60998-1 DIN EN 60998-2-2	UL ENEC-01360*
Supply cord and input cord of LED driver and input/output cord of SPD	B	Ningbo Liansheng Wire & Cable Co., Ltd.	H05RN-F	3x1,0mm^2	DIN EN 50525-2-21	VDE 40033764*
Alt.	B	Queshan Yuqiang Cable Co., Ltd.	H05RN-F	3x1,0mm^2	DIN EN 50525-2-21	VDE 40044073*
Alt.	B	Dongguan Wandu Cable Co.,Ltd.	H05RN-F H07RN-F	3×1,0mm^2	DIN EN 50525-2-21	VDE 40052148*
Alt.	B	Zhejiang Jinniu Cable Co., Ltd	H05RN-F	3×1,0mm^2	DIN EN 50525-2-21	VDE 40028195*
Alt.	B	Zhongshancity Defang Wire & Cable Co., Ltd.	H05RN-F H07RN-F	3×1,0mm^2	DIN EN 50525-2-21	VDE 40049745*
Output cord of LED driver	B	Ningbo Liansheng Wire & Cable Co., Ltd.	H05RN-F	2x1,0mm^2	DIN EN 50525-2-21	VDE 40033764*
Alt.	B	Queshan Yuqiang Cable Co., Ltd.	H05RN-F	2x1,0mm^2	DIN EN 50525-2-21	VDE 40044073*
Surge Protection Device	B	Shenzhen Zhongyuan Technology Co., Ltd.	ZY-LSP10-S	Uc: 320VAC; 50/60Hz; rated load current: 5A; IP67; In: 5kA; Uoc: 10kV; Up: 1,2kV; Ambient: -45°C to 85°C	IEC/EN 61643-11	TÜV Rheinland R 50413220*

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Clause	Requirement + Test	Result - Remark	Verdict

Internal wire for LED module and earthing wire	B	JIAXING TITION WIRE CO LTD	3173	600V; 125°C; 18AWG	UL 758 + IEC/EN 60598-2-3 IEC/EN 60598-1	UL E320271* + Tested with appliance#
Alt.	B	DONGGUAN ZHIHE ELECTRICAL CABLE TECH CO LTD	1332	200°C; 300VAC; 18AWG	UL 758 + IEC/EN 60598-2-3 IEC/EN 60598-1	UL E258239*+ Tested with appliance#
Alt.	B	APPLIANCE WIRING MATERIAL	1015	105°C; 600VAC; 18AWG	UL 758 + IEC/EN 60598-2-3 IEC/EN 60598-1	UL E328945*+ Tested with appliance#
Alt.	B	SHENZHEN MYSUN INSULATION MATERIALS CO LTD	1332	200°C; 300VAC; Min. 20AWG	UL 758 + IEC/EN 60598-2-5 IEC/EN 60598-1	UL E239689*+ Tested with appliance#
Earthing wire (Alt.)	B	AOK Industrial Company Limited	--	300VAC; 1,0mm^2	IEC/EN 60598-2-3 IEC/EN 60598-1	Tested with appliance#
Heat-shrinkable tube	B	GUANGZHOU KAIHENG NEW MATERIAL CO LTD	K-102	600V; 125°C	UL 224 + IEC/EN 60598-2-3 IEC/EN 60598-1	UL E321827* + Tested with appliance#
Terminal block for internal wire	B	WAGO KONTAKTTECHNIK GMBH & CO KG	222-412; 222-413	Screwless type; 450VAC; 0,2…2,5mm^2; T85	DIN EN 60998-1 DIN EN 60998-2-2	UL ENEC-01360*
LED module PCB	B	SHENZHEN MINGSIHAI ELECTRONIC TECHNOLOGY CO LTD	MSH-L	Single Layer Metal Base Printed Wiring Boards; V-0; 130°C	UL 796 + IEC/EN 60598-2-3 IEC/EN 60598-1	UL E495831* + Tested with appliance#
LED (3030)	B	LUMILEDS	LUXEON3030 2D	V_F: 5,8-6,6V; I_F: 240mA; CCT: 2700-6500K; viewing angle: 140°	IEC TR 62778	Tested with appliance#

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

SMD connector on LED module (For models with 'SS' series and 'XLG' series LED driver)	B	Wago-Kontakttechnik GmbH & Co. KG	2060-452	320V pollution degree 2; 9A; 0,25…0,75mm²	IEC/EN 60947-7-1 IEC/EN 60598-2-3 IEC/EN 60598-1	DEKRA 2193943.01* + Tested with appliance#
Lens	B	IDEMITSU KOSAN CO LTD	LEV2200KL(f1)	PC; HB; 130°C	UL 746A + IEC/EN 60598-2-3 IEC/EN 60598-1	UL E48268* + tested with appliance#
Glass cover	B	AOK Industrial Company Limited	Glass	Glass; -40°C to 240°C; ΔT: 200°C	IEC/EN 60598-2-3 IEC/EN 60598-1	Tested with appliance#
For LED driver SS-50VP-56DH						
Supply cord	B	Dong Guan Ever United Electric Wire & Cable Co., Ltd.	H05RN-F; H07RN-F	3x1,0 mm²	DIN EN 50525-2-21	VDE 40016757*
Alt.	B	Dong Guan Recheer Electric Wire & Cable Co., Ltd.	H05RN-F; H07RN-F	3x1,0 mm²	DIN EN 50525-2-21	VDE 40015173*
Alt.	B	Ningbo Dabu Electric Appliance Co., Ltd.	H05RN-F; H07RN-F	3x1,0 mm²	DIN EN 50525-2-21	VDE 40030691*
Alt.	B	Yuyao Jingyi Electronics Co., Ltd.	H05RN-F; H07RN-F	3x1,0 mm²	DIN EN 50525-2-21	VDE 40017356*
Alt.	B	Guangdong Rifeng Electrical Cable Co., Ltd.	H05RN-F; H07RN-F	3x1,0 mm²	DIN EN 50525-2-21	VDE 40015999*
Output cord	B	Dong Guan Ever United Electric Wire & Cable Co., Ltd.	H05RN-F; H07RN-F	2x1,0 mm²	DIN EN 50525-2-21	VDE 40016757*
Alt.	B	Dong Guan Recheer Electric Wire & Cable Co., Ltd.	H05RN-F; H07RN-F	2x1,0 mm²	DIN EN 50525-2-21	VDE 40015173*
Alt.	B	Ningbo Dabu Electric Appliance Co., Ltd.	H05RN-F; H07RN-F	2x1,0 mm²	DIN EN 50525-2-21	VDE 40030691*

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Alt.	B	Yuyao Jingyi Electronics Co., Ltd.	H05RN-F; H07RN-F	2x1,0 mm^2	DIN EN 50525-2-21	VDE 40017356*
Alt.	B	Guangdong Rifeng Electrical Cable Co., Ltd.	H05RN-F; H07RN-F	2x1,0 mm^2	DIN EN 50525-2-21	VDE 40015999*
Dimming cord	B	DONGGUAN KUNZE ELECTRONICS CO LTD	SJTW, SJT	4x20AWG; 300VAC; 105°C	UL 62 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E351056* + Tested with appliance#
Alt.	B	DONGGUAN EVER UNITED ELECTRIC WIRE & CABLE CO LTD	SJOW, SJO	4x18AWG; 300VAC; 105°C	UL 62 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E156549* + Tested with appliance#
Alt.	B	DONG GUAN RECHEER ELECTRIC WIRE & CABLE CO LTD	SJOW, SJO	4x18AWG; 300VAC; 105°C	UL 62 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E252733* + Tested with appliance#
Driver PCB	B	T & K P C B CO LTD	14A	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E141872* + Tested with appliance#
Alt.	B	HING KEUNG PRINTED CIRCUITS BOARD LTD	HK-003	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E237456* + Tested with appliance#
Alt.	B	MILORD TECHNOLOGY LTD	3A	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E176756* + Tested with appliance#
Alt.	B	HUI ZHOU DINGCHENG YIXIN CIRCUIT CO LTD	DCYX-1	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E493823* + Tested with appliance#
Alt.	B	GUANGDONG HETONG TECHNOLOGY CO LTD	CEM1; FR-4	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E243157* + Tested with appliance#

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Alt.	B	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	GDM-R1, ILM-R1	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E330731* + Tested with appliance#
Alt.	B	SHANDONG JINBAO TECH-INNOV CORPORATION	ZD-16F	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E141940* + Tested with appliance#
Alt.	B	GUANGDE LONGTAI ELECTRONIC SCI-TECH CO LTD	LT140/LT140P	V-0; 130°C	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E357246* + Tested with appliance#
Potting material	B	MIANYANG WELLS ELECTRONIC MATERIALS CO LTD	WR7306	V-0; 150°C	UL 746A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E223455* + Tested with appliance#
Alt.	B	SHENZHEN SISUN SILICONE TECHNOLOGY CO LTD	XS1110	V-0; 150°C	UL 746A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E248811* + Tested with appliance#
Alt.	B	LINKTECH SILICONE MATERIAL CO LTD	EncapSil 1400	V-0; 150°C	UL 746A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E502051* + Tested with appliance#
Alt.	B	SHENZHENSHI HUATIANQI TECHNOLOGY CO LTD	CS-9812	V-0; 105°C	UL 746A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E341692* + Tested with appliance#
Alt.	B	SHANGHAI FUMING SEALING MATERIAL CO LTD	FM-700(FLP)	V-0; 110°C	UL 746A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E350185* + Tested with appliance#
Alt.	B	SHENZHEN SUNYES NEW MATERIAL CO LTD	SLD-8160	V-0; 105°C	UL 746A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E342885* + Tested with appliance#

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Insulation sheet	B	DUPONT HONGJI FILMS FOSHAN CO LTD	AP	PET; VTM-2; min. 105°C	UL 746 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E241830* + Tested with appliance#
Alt.	B	SABIC INNOVATIVE PLASTICS US L L C	FR6	PC; V-0; 125°C	UL 746 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E121562* + Tested with appliance#
Alt.	B	SHENZHEN BORNSUN INDUSTRIAL CO LTD	BN-ZD16; BN-ZD19	PP; V-0; 115°C	UL 746 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E256822* + Tested with appliance#
Alt.	B	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	DFR117ECO	PC; V-0; 130°C	UL 746 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E199019* + Tested with appliance#
Alt.	B	SABIC JAPAN L L C	EXSP982	PC; V-0; 130°C	UL 746 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E207780* + Tested with appliance#
Fuse (F1)	B	Dongguan Better Electronics Technology Co., Ltd.	932	250VAC; T6,3A	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40033369*
Alt.	B	XC Electronics (Shen Zhen) Corp. Ltd.	5TE	300VAC; T6,3A	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40036821*
Alt.	B	Shenzhen Lanson Electronics Co. Ltd.	SMT	250VAC; T6,3A	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40012592*
Alt.	B	Shenzhen Lanson Electronics Co. Ltd.	SMT	250VAC; T6,3A	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40013102*
Alt.	B	Conquer Electronics Co., Ltd.	MST	250VAC; T6,3A	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40017118*
Alt.	B	Dongguan Hongda Electronic Technology Co., Ltd.	2009	300VAC; T6,3A	IEC/EN 60127-1 IEC/EN 60127-3	VDE 40028260*

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Varistor (MOV1)	B	Thinking Electronic Industrial Co., Ltd.	TVR14561-M	560V; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40036061*
Alt.	B	BESTBRIGHT ELECTRONICS CO LTD	561KD14	560V; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV SUD B18 0396048 006*
Alt.	B	Thinking Electronic Industrial Co., Ltd.	TVR14561	560V; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV Rheinland J 50411784*
Alt.	B	Xi'an Xiwuer Electronics & Information Co., Ltd.	MYG3-14K360	350V; 460 Vdc; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40008528*
Alt.	B	EPCOS OHG	SNF14K*	560V; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40027582*
Alt.	B	THERMISTOR-MOV ELECTRONICS CO LTD	HVR14D561	560V; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV Rh J 50420597*
Varistor (MOV2)	B	Thinking Electronic Industrial Co., Ltd.	TVR10561-M	560VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40036061*
Alt.	B	Thinking Electronic Industrial Co., Ltd	TVR10561	560VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005944*
Alt.	B	EPCOS OHG	SNF10K*	560VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40027582*
Alt.	B	BESTBRIGHT ELECTRONICS CO LTD	561KD10	560VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV SUD B18 0396048 006*
Alt.	B	Xi'an Xiwuer Electronics & Information Co., Ltd.	MYG3-10K561	560VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40008528*
Alt.	B	THERMISTOR-MOV ELECTRONICS CO LTD	HVR10D561	560VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV Rh J 50420593*

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Varistor (MOV4)	B	Thinking Electronic Industrial Co., Ltd.	TVR10391-M	390VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40036061*
Alt.	B	Thinking Electronic Industrial Co., Ltd	TVR10391	390VAC; 105°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005944*
Alt.	B	EPCOS OHG	SNF10K*	390VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40027582*
Alt.	B	BESTBRIGHT ELECTRONICS CO LTD	391KD10	390VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV SUD B18 0396048 006*
Alt.	B	Xi'an Xiwuer Electronics & Information Co., Ltd.	MYG3-10K390	390VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40008528*
Alt.	B	THERMISTOR-MOV ELECTRONICS CO LTD	HVR10D391	390VAC; 125°C	IEC/EN 61051-1 IEC 61051-2 IEC 61051-2-2	TUV Rh J 50420593*
Gas tube (FDG1)	B	EPCOS TAIWAN CO LTD A TDK GROUP CO	EM3600X	3600V	IEC/EN 61347-1 IEC/EN 61347-2-13	UL E319264* + Tested with appliance#
Alt.	B	SHENZHEN BENCENT ELECTRONIC CO LTD	BC3600	3600V	IEC/EN 61347-1 IEC/EN 61347-2-13	UL E337906* + Tested with appliance#
Alt.	B	SHENZHEN LANSON ELECTRONICS CO LTD	5DL3600J	3600V	IEC/EN 61347-1 IEC/EN 61347-2-13	UL E49258* + Tested with appliance#
Alt.	B	BRIGHTKING (SHENZHEN) CO LTD	2RK3600L	3600V	IEC/EN 61347-1 IEC/EN 61347-2-13	UL E327997* + Tested with appliance#
X capacitor (CX1)	B	Shenzhen Yimanfeng Science And Technology Co., Ltd.	MPX	X1 type; 0,33µF; min. 280VAC, T100	IEC/EN 60384-14	VDE 40028516*

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Alt.	B	Shenzhen Sincerity Technology Co., Ltd.	MKP/MPX	X1 type; min. 300VAC; T110	IEC/EN 60384-14	VDE 40025029*
Alt.	B	Cheng Tung Industrial Co Ltd	CTX	X1 type; min. 310VAC; T110	IEC/EN 60384-14	Intertek ENEC SE/12010-1*
Y capacitor (CY1; CY2; CY4; CY901)	B	TDK Corporation	CD	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	VDE 40017931*
Alt.	B	TDK Corporation	CD	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	VDE 40029780*
Alt.	B	Dongguan City Dafu Electronics Co. Ltd.	CT7	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	VDE 40041523*
Alt.	B	Haohua Electronic Co.	CT7	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	VDE 40003902*
Alt.	B	Walsin Technology Corp.	AH	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	VDE 40001804*
Alt.	B	JYA-NAY CO LTD	JN	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	TUV Rh. R 50232059*
Alt.	B	Success Electronics Co., Ltd.	SF	Y1 type; 1500pF; min. 500VAC; T125	IEC/EN 60384-14	VDE 40019457*
Alt.	B	Dongguan Easy-gather Electronic Co., Ltd.	DCF	Y1 type; 1500pF; min. 400VAC; T125	IEC/EN 60384-14	VDE 40022942*
Y capacitor (CY501; CY503; CY301; CY302)	B	TDK Corporation	CS	Y2 type; 2200pF min. 300VAC, T125	IEC/EN 60384-14	VDE 40017930*
Alt.	B	Success Electronics Co., Ltd.	SB	Y2 type; 2200pF min. 300VAC, T125	IEC/EN 60384-14	VDE 40037213*
Alt.	B	Walsin Technology Corp.	AC	Y2 type; 2200pF min. 300VAC, T125	IEC/EN 60384-14	VDE 40001829*
Alt.	B	JYA-NAY CO LTD	JN	Y2 type; 2200pF min. 250VAC, T125	IEC/EN 60384-14	TUV Rh R 50232059*
Alt.	B	Haohua Electronic Co.	CT7	Y2 type; 2200pF min. 300VAC, T125	IEC/EN 60384-14	VDE 40013601*

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Alt.	B	Dongguan City Dafu Electronics Co. Ltd.	CT7	Y2 type; 2200pF min. 300VAC, T125	IEC/EN 60384-14	VDE 40041521*
Alt.	B	Dongguan Easy-gather Electronic Co., Ltd.	DCF	Y2 type; 2200pF min. 250VAC, T125	IEC/EN 60384-14	VDE 40015758*
Optocoupler (U202)	B	Everlight Electronics Co., Ltd.	EL1018	DTI≥ 0,4mm; T110; Reinforced insulation	IEC/EN 60747-5-5	VDE 40028391*
Optocoupler (U902)	B	Everlight Electronics Co., Ltd.	EL817	DTI≥ 0,4 mm, Min.T110, Reinforced insulation	IEC/EN 60747-5-5	VDE 132249*
Alt.	B	Bright Led Electronics Corp.	BPC-817	DTI≥ 0,4 mm, Min.T110, Reinforced insulation	IEC/EN 60747-5-5	VDE 40007240*
Alt.	B	Everlight Electronics Co., Ltd.	EL817	DTI≥ 0,4 mm, Min.T110, Reinforced insulation	IEC/EN 60747-5-5	VDE 132249*
Optocoupler (OP1, OP2, OP3, OP4)	B	Everlight Electronics Co., Ltd.	EL357N	DTI≥ 0,4mm; T110; Reinforced insulation	IEC/EN 60747-5-5	VDE 132249*
Transformer (T1)	B	ShenZhen City SOSEN Electronics Co., Ltd.	EPD2618	Class 130	IEC/EN 61347-1 IEC/EN 61347-2-13	Tested with appliance#
Transformer (T901)	B	ShenZhen City SOSEN Electronics Co., Ltd.	EE13	Class 130	IEC/EN 61347-1 IEC/EN 61347-2-13	Tested with appliance#
- Magnet wire	B	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEF1/U	180°C	UL 1446 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E201757* + Tested with appliance#
- Triple insulated wire	B	Dah Jin Technology Co., Ltd.	TLW-B	130°C	IEC/EN 62368-1	VDE 40008834*
- Bobbin	B	CHANG CHUN PLASTICS CO LTD	T375J	PMC; 150°C, V-0	UL 94 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E59481* + Tested with appliance#

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

- Insulating tape	B	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT* (b)(g)	130°C	UL 510A + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E165111* + Tested with appliance#
- Tube	B	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-TT-S	200°C	UL 224 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E180908* + Tested with appliance#
Alt.	B	ZEUS INDUSTRIAL PRODUCTS INC	TFE-LW-150	200°C	UL 224 + IEC/EN 61347-1 IEC/EN 61347-2-13	UL E64007* + Tested with appliance#

Supplementary information:

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

* License available upon request.

Please refer summary of testing in TRF for the test standard publication year.

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 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference..... :	AOK-120WiP-NV-L3-00-6570-T5-D-I	—
	Lamp used ..... :	LED	—
	Lamp control gear used..... :	Xi LP 150W 0.3-1.05A S1 230V I175	—
	Mounting position of luminaire..... :	As in normal use	—
	Supply wattage (W) ..... :	122,3W [240VAC, 50Hz]	—
	Supply current (A)..... :	0,517A [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	50°C	—
	- abnormal operating mode ..... :	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage ..... :	240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	1,06x240=254,4V	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current..... :	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord (separation)	50	--	69,0	--	90	--	--
Terminal block	50	--	71,6	--	85	--	--
tc of LED driver	50	81,8	--	--	80+5	--	--
Ambient of SPD	50	--	72,0	--	85	--	--
Internal cord for SPD	50	--	66,5	--	90	--	--
Internal cord for LED driver	50	--	74,7	--	90	--	--
Internal wire for LED module	50	--	80,8	--	105	--	--
Terminal block for internal wire	50	--	74,7	--	Ref.	--	--

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Metal enclosure (outside)	50	--	77,1	--	Ref.	--	--	
Lens	50	--	87,7	--	Ref.	--	--	
LED module PCB	50	--	84,8	--	130	--	--	
Mounting surface	50	--	51,5	--	90	--	--	
Lighted object (10cm)	50	--	52,8	--	90	--	--	
Glass cover	50	--	67,0	--	240	--	--	
Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.								

	Type reference.....:	AOK-120WiP-NV-L3-00-6570-T5-D-I	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	XLG-150-H-AB	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	119,8W [240VAC, 50Hz]	—
	Supply current (A).....:	0,527A [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	40°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	40	83,9	--	--	90	--	--
Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.							

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Type reference.....:	AOK-50WiP-NV-L3-00-6570-T5-D-I	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	XLG-50-AB	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W) .....:	49,3W [240VAC, 50Hz]; 51,2W [100VAC, 60Hz]	—
	Supply current (A).....:	0,214A [240VAC, 50Hz]; 0,512A [100VAC, 60Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	77,0	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-75WiP-NV-L3-00-6570-T5-D-I	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	Xi LP 100W 0.3-1.05A S1 230V 1175	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W) .....:	77,0W [240VAC, 50Hz]	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Supply current (A).....:	0,329 [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	76,1	--	--	80	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-75WiP-NV-L3-00-6570-T5-D-I	—
	Lamp used .....:	LED	—
	Lamp control gear used.....:	XLG-75-H-AB	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W) .....:	74,6W [240VAC, 50Hz]	—
	Supply current (A).....:	0,318A [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	82,6	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-50WiP-NV-L3-00-6570-T4-D-I	—
	Lamp used .....:	LED	—
	Lamp control gear used.....:	SS-50VP-56DH	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W) .....:	50,2W [100VAC, 60Hz]; 49,5W [240VAC, 50Hz]	—
	Supply current (A).....:	0,504A [100VAC, 60Hz]; 0,244A [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	82,6	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-75WiP-NV-L3-00-6570-T4-D-I	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	SS-75VP-56DH	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	76,6W [100VAC, 60Hz]; 74,1W [240VAC, 50Hz]	—
	Supply current (A).....:	0,764A [100VAC, 60Hz]; 0,339A [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	76,0	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Type reference.....:	AOK-50WiPS-NVM-L3-00-6580-BN-D	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	XLG-50-AB	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	49,3W [240VAC, 50Hz];	—
	Supply current (A).....:	0,214A [240VAC, 50Hz];	—
	Temperatures in test 1 - 4 below are corrected for ta (°C).....:	50°C	—
	- abnormal operating mode.....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage.....:	240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test.....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	83,2	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-60WiPS-NVM-L3-00-6580-BN-D	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	XLG-75-H-AB	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	59,5W [240VAC, 50Hz]	—
	Supply current (A).....:	0,26A [240VAC, 50Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C).....:	50°C	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	84,8	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-25WiPS-NVS-L3-00-6580-BN-D	—
	Lamp used .....:	LED	—
	Lamp control gear used.....:	SS-30VA-56B	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W) .....:	27,4W [240VAC, 50Hz]; 26,7W [100VAC, 60Hz]	—
	Supply current (A).....:	0,146A [240VAC, 50Hz]; 0,269A [100VAC, 60Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V 1,1x100=106V	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
tc of LED driver	50	76,8	--	--	90	--	--

Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.

	Type reference.....:	AOK-50WiPS-NVS-L3-00-6580-BN-D	—
	Lamp used .....:	LED	—
	Lamp control gear used.....:	SS-50VA-56B	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W) .....:	49,2W [240VAC, 50Hz]; 50,1W [100VAC, 60Hz]	—
	Supply current (A).....:	0,26A [240VAC, 50Hz]; 0,50A [100VAC, 60Hz]	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:	50°C	—
	- abnormal operating mode .....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
3.12 (12.4)	- test 1: rated voltage .....:	100/240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:	--	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:	--	—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:	1,1x240=264V 1,1x100=106V	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Temperature measurements, (°C)								
Part		Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
			test 1	test 2	test 3	limit	test 4	limit
tc of LED driver		50	85,2	--	--	90	--	--
Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.								
	Type reference.....:		AOK-60WiPS-NVS-L3-00-6580-BN-D					—
	Lamp used.....:		LED					—
	Lamp control gear used.....:		SS-60VA-L50B					—
	Mounting position of luminaire.....:		As in normal use					—
	Supply wattage (W).....:		59,0W [240VAC, 50Hz]; 59,6W [100VAC, 60Hz]					—
	Supply current (A).....:		0,42A [240VAC, 50Hz]; 0,60A [100VAC, 60Hz]					—
	Temperatures in test 1 - 4 below are corrected for ta (°C) .....:		50°C					—
	- abnormal operating mode .....:		LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test					—
3.12 (12.4)	- test 1: rated voltage .....:		100/240V					—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current .....:		--					—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....:		--					—
	Through wiring or looping-in wiring loaded by a current of A during the test .....:		--					—
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current.....:		1,1x240=264V 1,1x100=106V					—

Temperature measurements, (°C)								
Part		Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
			test 1	test 2	test 3	limit	test 4	limit
tc of LED driver		50	86,5	--	--	90	--	--
Supplementary: Product suitable for indoor and outdoor use, maximum temperature values were recorded.								

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		—
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) .....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm).....:		N/A
	Torque (Nm) .....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N) .....:		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	**Screwless terminals (part of the luminaire)**		N/A
(15)	**SCREWLESS TERMINALS**		—
(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
(15.5.1)	Terminals internal wiring		N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)..... :		N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)..... :		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples)..... :		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples) ..... :		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples) ..... :		N/A
	After ageing, voltage drop (mV) after 25th alt. 25th cycle (4 samples)..... :		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
(15.6)	Terminals external wiring		N/A
	Terminal size and rating		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) ..... :		N/A
	Pull test pin or tab terminals (4 samples); pull (N) ..... :		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

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

Attachment No. 1

IEC60598_2_3L - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT
IEC 60598-2-3
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Differences according……..: EN 60598-2-3:2003, AMD1:2011 used in conjunction with EN 60598-1:2015, AMD1:2018

Annex Form No.....: EU_GD_IEC60598_2_3L

Annex Form Originator.....: Intertek Semko AB

Master Annex Form.....: 2018-12-07

	CENELEC COMMON MODIFICATIONS (EN)		—
3.6 (4)	**CONSTRUCTION**		—
3.6 (4.11.6)	Electro-mechanical contact systems		P
3.10 (5)	**EXTERNAL AND INTERNAL WIRING**		—
3.10 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – Supply cord		P
3.12 (12)	**ENDURANCE TESTS AND THERMAL TESTS**		—
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		—
(3.3)	DK: power supply cords of class I luminaires 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)**		—
(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
	- 650°C for indoor luminaires		N/A
	GB: Requirements according to United Kingdom Building Regulation		N/A

Attachment No. 2

TEST REPORT
IEC 61347-2-13
Part 2: Particular requirements:
Section 13 – d.c. or a.c. supplied electronic controlgear for LED modules

Report Number..... :	68.140.22.0362.01
Date of issue ..... :	See main report of IEC 60598-2-3
Total number of pages ..... :	30
Name of Testing Laboratory preparing the Report ..... :	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Applicant's name..... :	See main report of IEC 60598-2-3
Address ..... :	See main report of IEC 60598-2-3
Test specification:	
Standard ..... :	IEC 61347-2-13:2014, AMD1:2016 used in conjunction with IEC 61347-1:2015, AMD1:2017
Test procedure..... :	See main report of IEC 60598-2-3
Non-standard test method..... :	N/A
Test Report Form No. ..... :	IEC61347_2_13G
Test Report Form(s) Originator.... :	Intertek Semko AB
Master TRF ..... :	2017-12-01

This report is not valid as a CB Test Report unless signed by an approved CB 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.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

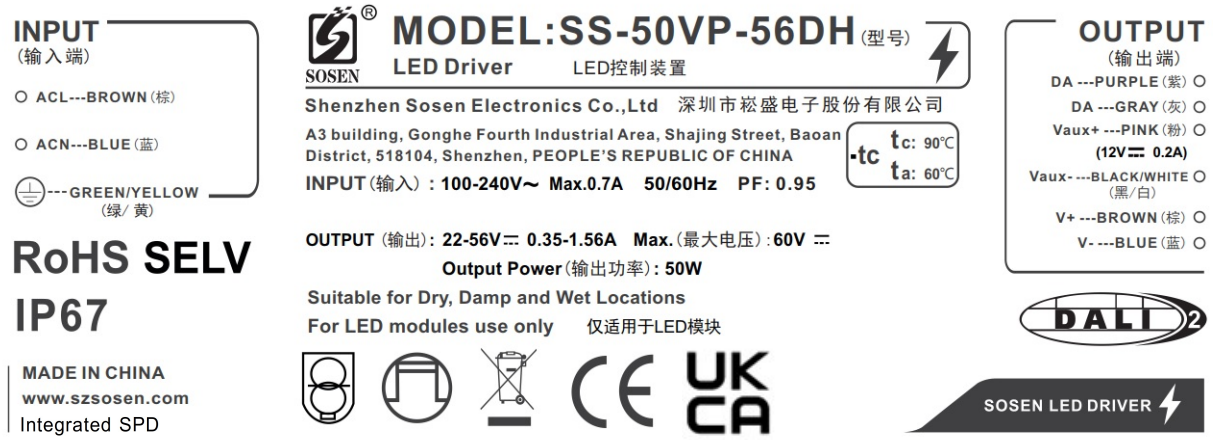
Test item description .....:	LED Driver
Trade Mark .....:	SOSEN®
Manufacturer.....:	Same as applicant
Model/Type reference .....:	SS-50VP-56DH
Ratings .....:	100-240VAC; 50/60Hz Other ratings see 'General product information' for details

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd, Shenzhen Branch	
Testing location/ address ..... :		Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China	
Tested by (name, function, signature) ..... :		See main report of IEC 60598-2-3	
Approved by (name, function, signature) .. :		See main report of IEC 60598-2-3	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment):	
--	
Summary of testing:	
Tests performed (name of test and test clause): See main report of IEC 60598-2-3	**Testing location:** Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China
Summary of compliance with National Differences: See main report of IEC 60598-2-3	

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.



Location: sticking on the top enclosure (Size: L110 x W40 mm)

Remark: Height of CE mark at least 5mm, height of WEEE mark at least 7mm, height of other marks at least 5mm, height of letters and numerals at least 2mm.

Test item particulars ..... :	LED Driver
Classification of installation and use ..... :	Independent
Supply Connection ..... :	Supply cord without plug
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 .....:	See main report of IEC 60598-2-3
Date of receipt of test item .....:	See main report of IEC 60598-2-3
Date (s) of performance of tests .....:	See main report of IEC 60598-2-3
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.** **Clause numbers between brackets refer to clauses in IEC 60598-1**	
Name and address of factory (ies) .....:	See main report of IEC 60598-2-3
General product information: The LED drivers covered in this report are suitable for operation with LED modules only. Internal components of LED driver are encapsulated in a potting material. Reinforced insulation is maintained between LV circuit and dimming circuit/SELV output circuits. Supplementary insulation is maintained between dimming circuit and SELV output circuit. **Warnings:** Supply cord provided, the wire connection should be installed by professional person, reinforced insulation between L/N terminals and accessible part should be fulfilled.	

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
4 (4)	**GENERAL REQUIREMENTS**		—
- (4)	Insulation materials for double or reinforced insulation according requirements in Annex N of IEC 61347-1	(see Annex N)	N/A
- (4)	Compliance of independent controlgear enclosure with IEC 60598-1		P
- (4)	Built-in electronic controlgear with double or reinforced insulation comply with Annex O of IEC 61347-1	(see Annex O)	N/A
4 (4)	SELV controlgear comply with Annex I of this part 2 and Annex L of IEC 61347-1	(see Annex L)	P
4 (-)	Transformer comply with IEC 61558		P
	Dielectric strength test of insulated winding wires is limited to 3 kV if input voltage ≤ 300 V		P
6 (6)	**CLASSIFICATION**		—
	Built-in controlgear ..... :	Yes ☐ No ☒	—
	Independent controlgear ..... :	Yes ☒ No ☐	—
	Integral controlgear ..... :	Yes ☐ No ☒	—
6 (-)	Auto-wound controlgear ..... :	Yes ☐ No ☒	—
	Separating controlgear ..... :	Yes ☐ No ☒	—
	Isolating controlgear ..... :	Yes ☐ No ☒	—
	SELV controlgear ..... :	Yes ☒ No ☐	—
7 (7)	**MARKING**		—
7.1 (7.1)	**Mandatory markings**		P
	a) mark of origin	SOSEN®	P
	b) model number or type reference	SS-50VP-56DH	P
	c) symbol for independent controlgear, if applicable		P
	d) correlation between interchangeable parts and controlgear marked		N/A
	e) rated supply voltage (V)	100-240VAC	P
	supply frequency (Hz)	50/60Hz	P
	supply current (A)	Max. 0,7A	P

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Clause	Requirement + Test	Result - Remark	Verdict
	f) earthing symbol	⏚	P
	k) wiring diagram		P
	l) value of tc	90°C	P
	m) symbol for declared temperature		N/A
	t) LUM earthing symbol		N/A
	u) if not SELV maximum working voltage U_{out} between:		N/A
	- output terminals (V) ..... :		N/A
	- output terminals and earth (V) ..... :		N/A
7.1 (-)	Constant voltage type:	Yes ☐ No ☒	—
	- rated output power P_{rated} (W) ..... :		N/A
	- rated output voltage U_{rated} (V) ..... :		N/A
	Constant current type:	Yes ☒ No ☐	—
	- rated output power P_{rated} (W) ..... :	50W	P
	- rated output current I_{rated} (A) ..... :	0,35-1,56A	P
	Indication if for LED modules only		P
7.1 (7.2)	Marking durable and legible		P
	Rubbing 15 s water, 15 s petroleum; marking legible		P
7.2 (7.1)	**Information to be provided, if applicable**		P
	h) declaration of protection against accidental contact		N/A
	i) cross-section of conductors (mm²)		N/A
	j) number, type and wattage of lamp(s)	For LED modules only	P
	s) SELV symbol		P
7.2 (-)	- declaration of mains connected windings		N/A

8 (10)	**PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS**		—
- (10.1)	Controlgear protected against accidental contact with live parts		P
- (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
- (10.1)	Lacquer or enamel not used for protection or insulation		P
	Adequate mechanical strength on parts providing protection		P

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Clause	Requirement + Test	Result - Remark	Verdict
- (10.2)	Capacitors > 0,5 μF: voltage after 1 min (V): < 50 V .....:	Max. 14,3V after 5s	P
- (10.3)	**Controlgear providing SELV**		**P**
	Accessible conductive parts are insulated from live parts by double or reinforced insulation in SELV controlgear		P
	No connection between output circuit and the body or protective earthing circuit		P
	No possibility of connection between output circuit and the body or protective earthing circuit through other conductive parts		P
	SELV outputs separated by at least basic insulation		P
	ELV conductive parts insulated as live parts		N/A
	Tests according Annex L of IEC 61347-1	(see Annex L)	P
- (10.4)	**Accessible conductive parts in SELV circuits**		P
	Output voltage under load ≤ 25 V r.m.s. or ≤ 60 V d.c.		P
	If output voltage > 25 V r.m.s. or > 60 V d.c.; No load output ≤ 35 V peak or ≤ 60 V d.c and touch current does not exceed 0,7 mA (peak) or 2 mA d.c. .....:		N/A
	One conductive part is insulated if output voltage or current exceeding the values above and withstand test voltage 500 V		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor	Y1 capacitor used	P
	Y1 or Y2 capacitors comply with IEC 60384-14		P
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A

9 (8)	**TERMINALS**		—
- (8.1)	**Integral terminals**		**N/A**
	Screw terminals according section 14 of IEC 60598-1:		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the controlgear	(see Annex 2)	N/A
	Screwless terminals according section 15 of IEC 60598-1:		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the controlgear	(see Annex 3)	N/A

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
- (8.2)	**Terminals other than integral terminals**		N/A
	Comply with relevant IEC standard	(see Annex 1)	N/A
	Suit the conditions		N/A
	Satisfy additional relevant requirements of this standard		N/A
10 (9)	**PROVISION FOR PROTECTIVE EARTHING**		—
- (9.1)	**Provisions for protective earthing**		P
	Terminal complying with clause 8		P
	Locked against loosening and not possible to loosen by hand		P
	Not possible to loosen clamping means unintentionally on screwless terminals		P
	All parts of material minimizing the danger of electrolytic corrosion		P
	Made of brass or equivalent material		P
	Contact surface bare metal		P
	Test according 7.2.3 of IEC 60598-1		P
- (9.2)	**Provision for functional earthing**		N/A
	Comply with clause 8 and 9.1		N/A
	Functional earth insulated from live parts by double or reinforced insulation		N/A
- (9.3)	**Lamp controlgear with conductors for protective earthing by tracks on printed circuit board**		P
	Test with a current of 25 A between earthing terminal or earthing contact and each of the accessible metal parts; measured resistance (Ω) at ≥ 10 A according 7.2.3 of IEC 60598-1: < 0,5 Ω ..... :	0,014Ω	P
- (9.4)	**Earthing of built-in lamp controlgear**		N/A
	Earth by means of fixing to earthed metal of luminaire in compliance of 7.2 of IEC 60598-1		N/A
	Earthing terminal only for earthing the built-in controlgear		N/A
- (9.5)	**Earthing via independent controlgear**		N/A
- (9.5.1)	Earth connection to other equipment		N/A
	Looping or through connection, conductor min. 1,5 mm² and of copper or equivalent		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Protective earthing wires in line with 5.3.1.1 and clause 7 of IEC 60598-1		N/A
- (9.5.2)	Earthing of the lamp compartments powered via the independent lamp controlgear		N/A
	Test with a current of 25 A between input and output earth terminals; measured resistance (Ω) between earthing terminal or earthing contact and each of the accessible metal parts at ≥ 10 A according 7.2.3 of IEC 60598-1: < 0,5 Ω ..... :		N/A
	Output earthing terminal marked as in 7.1 t) of IEC 61347-1		N/A
11 (11)	**MOISTURE RESISTANCE AND INSULATION**		—
- (11)	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance:		P
	For basic insulation ≥ 2 MΩ ..... :	100MΩ	P
	For double or reinforced insulation ≥ 4 MΩ ..... :	100MΩ	P
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		P
12 (12)	**ELECTRIC STRENGTH**		—
- (12)	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V	SELV output circuits and enclosure	P
	Working voltage ≤ 50 V, test voltage 500 V		N/A
	Working voltage > 50 V ≤ 1000 V, test voltage (V):		P
	Basic insulation, 2U + 1000 V	Between L and N: 1480V	P
	Supplementary insulation, 2U + 1000 V	Between dimming circuit and SELV output circuit: 1480V	P
	Double or reinforced insulation, 4U + 2000 V	Between Live parts (L/N) to output circuits: 3000V; Between Transformer primary and secondary: 3000V	P
	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

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Clause	Requirement + Test	Result - Remark	Verdict
14 (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		N/A
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	P
- (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)	P
- (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)	P
- (14.5)	Short-circuit across electrolytic capacitors	(see appended table)	P
	Short-circuit or interruption of SPDs	(see appended table)	P
14 (-)	Reversed voltage polarity if d.c. supplied control gear	(see appended table)	N/A
- (14.6)	After the tests has been carried out on three samples:		P
	The insulation resistance ≥ 1 MΩ ..... :	100MΩ	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		P
- (14.7)	Relevant fault condition tests with high-power a.c. supply and in turn to a d.c. supply		—
14 (-)	Temperature declared thermally protected lamp controlgear fulfil requirements in Annex C		N/A

15 (-)	**TRANSFORMER HEATING**		—
15.1	**General**		**P**
	Transformer comply with clause L.6 and L.7 of IEC 61347-1		P

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
	Output voltage of SELV controlgear not exceed limits in 10.4 of IEC 61347-1 during the test of 15.1 and 15.2		P
15.2 (-)	**Normal operation**		**P**
	Comply with clause L.6 of IEC 61347-1	See Attachment No. 3	P
15.3 (-)	**Abnormal operation**		**P**
	Comply with clause L.7 of IEC 61347-1	See Attachment No. 3	P
	Double LED modules or equivalent load connected in parallel to the output terminals of constant voltage type		N/A
	Double LED modules or equivalent load connected in serial to the output terminals of constant current type	See Attachment No. 3	P
15 (-)	During and at the end of the tests no defect impairing safety, nor any smoke or flammable gases produced		**P**
16 (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**		**P**
	Printed circuits used as internal connections complies with clause 14		P
- (15.3)	**Plugs and socket-outlets used in SELV or ELV circuits**		N/A
	No dangerous compatibility between output socket-outlet and a plug for socket-outlets for input circuit in relation to installation rules, voltages and frequencies		N/A
	Plugs and socket-outlets for SELV comply with IEC 60906-3 and IEC 60884-2-4		N/A
	Plugs and socket-outlets for SELV ≤ 3 A, ≤ 25 V r.m.s. or ≤ 60 V d.c. and ≤ 72 W comply with IEC 60906-3 and IEC 60884-2-4 or:		N/A
	- plugs not able to enter socket-outlets of other standardised system		N/A
	- socket-outlets not admit plugs of other standardised system		N/A
	- socket-outlets without protective earth		N/A
- (15.4)	**Insulation between circuits and accessible parts**		**P**
- (15.4.2)	SELV circuits		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Source used to supply SELV circuits:		P
	- safety isolating transformer in accordance with relevant part 2 of IEC 61558		N/A
	- controlgear providing SELV in accordance with relevant part 2 of IEC 61347		P
	- another source		N/A
	Voltage in the circuit not higher than ELV		P
	SELV circuits insulated from LV by double or reinforced insulation		P
	SELV circuits insulated from non SELV circuits by double or reinforced insulation		N/A
	SELV circuits insulated from FELV circuits by supplementary insulation		P
	SELV circuits insulated from other SELV circuits by basic insulation		N/A
	SELV circuits insulated from accessible conductive parts according Table 6 in 15.4.5		P
- (15.4.3)	FELV circuits		P
	Source used to supply FELV circuits:		P
	- separating transformer in accordance with relevant part 2 of IEC 61558		N/A
	- separating controlgear providing basic insulation between input and output circuits in accordance with relevant part 2 of IEC 61347		N/A
	- another source		N/A
	- source in circuits separated by the LV supply by basic insulation		P
	Voltage in the circuit not higher than ELV		P
	FELV circuits insulated from LV supply by at least basic insulation		P
	FELV circuits insulated from other FELV circuits if functional purpose		N/A
	FELV circuits insulated from accessible conductive parts according Table 6 in 15.4.5		P
	Plugs and socket-outlets for FELV system comply with:		N/A
	- plugs not able to enter socket-outlets of other voltage systems		N/A
	- socket-outlets not admit plugs of other voltage systems		N/A
	- socket-outlets have a protective conductor contact		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
- (15.4.4)	Other circuits		N/A
	Insulation between circuits other than SELV or FELV and accessible conductive parts in according Table 6 in 15.4.5.		N/A
- (15.4.5)	Insulation between circuits and accessible conductive parts		P
	Accessible conductive parts insulated from active parts of electric circuits by insulating according Table 6		P
	Requirements for Class II construction with equipotential bonding for protection against indirect contact with live parts:		N/A
	- all conductive parts are connected together		N/A
	- conductive parts are reliably connected together according test of IEC 60598-1 cl. 7.2.3		N/A
	- conductive parts comply with requirements of Annex A in case of insulation fault		N/A
17 (16)	**CREEPAGE DISTANCES AND CLEARANCES**		—
- (16.1)	**General**		**P**
	Creepage distances and clearances according to 16.2 and 16.3		P
	Controlgears providing SELV comply with additional requirements in Annex L		P
	Insulating lining of metallic enclosures		P
	Controlgear protected against pollution comply with Annex P	(see Annex P)	N/A
- (16.2)	**Creepage distances**		**P**
- (16.2.2)	Minimum creepage distances for working voltages		P
	Creepage distances according to Table 7	(see appended table)	P
- (16.2.3)	Creepage distances for working voltages with frequencies above 30 kHz		P
	Creepage distances according to Table 8	(see appended table)	P
- (16.3)	**Clearances**		P
- (16.3.2)	Clearances for working voltages		P
	Clearances distances according to Table 9	(see appended table)	P
- (16.3.3)	Clearances for ignition voltages and working voltages with higher frequencies		P
	Clearances distances for basic or supplementary insulation according to Table 10	(see appended table)	N/A
	Clearances distances for reinforced insulation according to Table 11	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict
18 (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)		P
(4.11)	**Electrical connections**		**P**
(4.11.1)	Contact pressure		P
(4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
(4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
(4.11.4)	Material of current-carrying parts		P
(4.11.5)	No contact to wood or mounting surface		P
(4.11.6)	Electro-mechanical contact systems		N/A
(4.12)	**Mechanical connections and glands**		P
(4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part ..... :	Screw fixing enclosure and earthing terminal: 0,5Nm	P
	Torque test: torque (Nm); part ..... :		N/A
	Torque test: torque (Nm); part ..... :		N/A
(4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
(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
(4.12.5)	Screwed glands; force (Nm) ..... :		N/A

19 (18)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		—
- (18.1)	Ball-pressure test ..... :	See Test Table 19 (18.1)	P
- (18.2)	Test of printed boards ..... :	See Test Table 19 (18.2)	N/A
- (18.3)	Glow-wire test ..... :	See Test Table 19 (18.3)	N/A
- (18.4)	Needle flame test ..... :	See Test Table 19 (18.4)	P
- (18.5)	Tracking test ..... :	See Test Table 19 (18.5)	P

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Clause	Requirement + Test	Result - Remark	Verdict

20 (19)	**RESISTANCE TO CORROSION**		—
	- test according 4.18.1 of IEC 60598-1		N/A
	- adequate varnish on the outer surface		N/A

21 (-)	**MAXIMUM WORKING VOLTAGE (Uout) IN ANY LOAD CONDITION**		—
	Not exceed declared maximum working voltage U_{out} in any load condition		P

14	**TABLE: tests of fault conditions**	**P**
Part	Simulated fault	Hazard
Output (+/-)	100/240VAC; short circuit; unit shut down, recoverable.	NO
Dimming output (+/-)	100/240VAC; short circuit; unit shut down, recoverable.	NO
T1 (6-7)	100/240VAC; short circuit; unit shut down, recoverable.	NO
T1 (8-9)	100/240VAC; short circuit; unit shut down, recoverable.	NO
U202 (3-4)	100/240VAC; short circuit; unit shut down, recoverable	NO
U202 (1-2)	100/240VAC; short circuit; Fuse (F1) open, R250 broken down	NO
T901 (6-7)	100/240VAC; short circuit; unit shut down, recoverable	NO
T901 (8-9)	100/240VAC; short circuit; unit shut down, recoverable	NO
Q201 (b-e)	100/240VAC; short circuit; unit shut down, recoverable	NO
Q201 (c-e)	100/240VAC; short circuit; unit shut down, unrecoverable	NO
Q201 (b-c)	100/240VAC; short circuit; unit shut down, unrecoverable	NO
CE1	100/240VAC; short circuit; Fuse (F1) open, unrecoverable	NO
U201 (2-5)	100/240VAC; short circuit; Fuse (F1) open, unrecoverable	NO
BD1 (1-3)	100/240VAC; short circuit; Fuse (F1) open, unrecoverable	NO
MOV4	100/240VAC; short circuit; Fuse (F1) open, unrecoverable	NO
FDG1	100/240VAC; short circuit; normal working	NO

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Clause	Requirement + Test	Result - Remark	Verdict

17 (16)	TABLE: clearance and creepage distance measurements (mm)							P
Applicable part of IEC 61347-1 Table 7 – 11*								
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:	B	2,8	1,5	9	2,8	2,5	7	
Distance 2:	B	2,8	1,5	9	2,8	2,5	7	
Distance 3:	B	3,0	1,5	9	3,0	2,5	7	
Distance 4:	R	7,8	3,0	9	7,8	5,0	7	
Distance 5:	R	8,0	3,0	9	8,0	5,0	7	
Distance 6:	R	7,8	3,0	9	7,8	5,0	7	
Distance 7:	R	7,0	3,0	9	7,0	5,0	7	
Distance 8:	R	6,0	3,0	9;11	6,0	5,0	7;8	
Distance 9:	R	6,0	3,0	9;11	6,0	5,0	7;8	
Distance 10:	R	5,4	3,0	9;11	6,0	5,0	7;8	
Distance 11:	B	3,0	1,5	9	3,0	2,5	7	
Distance 12:	B	2,7	1,5	9	2,7	2,5	7	
Working voltage (V) ..... :					240VAC			—
Frequency if applicable (kHz) ..... :					75kHz/103kHz for distance 8 to 10; 50/60Hz for other distances			—
PTI ..... :					< 600 ☒ ≥ 600 ☐			—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) ..... :					--			—
Pulse voltage if applicable (kV) ..... :					--			—

Supplementary information: Min. value was record

Distance 1: Between two ends of fuse (F1);
Distance 2: Between L and N;
Distance 3: Between live part and metal enclosure;
Distance 4: Between Primary to secondary of Y1 capacitor (CY4);
Distance 5: Between Primary to secondary of opto-coupler (U202);
Distance 6: Between Primary to secondary of Y1 capacitor (CY901);
Distance 7: Between Primary to secondary of opto-coupler (U902);
Distance 8: Between Primary to secondary track on PCB of transformer (T1/T901);
Distance 9: Between Transformer (T1/T901) primary and secondary pins;
Distance 10: Between Transformer (T1/T901) primary to secondary components;
Distance 11: Between SELV circuit and dimming circuit;
Distance 12: Between dimming circuit and metal enclosure
Frequency for transformer parts: 61kHz (T1); 103kHz (T901)

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

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Clause	Requirement + Test	Result - Remark	Verdict

19 (18.1)	TABLE: Ball Pressure Test			P
Allowed impression diameter (mm) ..... :		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Transformer bobbin	CHANG CHUN PLASTIC CO., LTD	134,0	0,84	
Supplementary information: --				

19 (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:					

19 (18.3)	TABLE: Glow-wire test			N/A
Glow wire temperature..... :		650°C		—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (s)	Verdict
--	--	--	--	--
Supplementary information: --				

19 (18.4)	TABLE: Needle-flame test				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (s)	Ignition of specified layer Yes/No	Duration of burning (s)	Verdict
Transformer bobbin	CHANG CHUN PLASTIC CO., LTD	10	No	0	P
Supplementary information: --					

19 (18.5)	TABLE: Proof tracking test				P
Test voltage PTI ..... :		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Transformer bobbin	CHANG CHUN PLASTIC CO., LTD	Yes	Yes	Yes	P

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Clause	Requirement + Test	Result - Remark	Verdict

PCB	T & K P C B CO LTD	Yes	Yes	Yes	P
PCB	HING KEUNG PRINTED CIRCUITS BOARD LTD	Yes	Yes	Yes	P
PCB	MILORD TECHNOLOGY LTD	Yes	Yes	Yes	P
PCB	HUI ZHOU DINGCHENG YIXIN CIRCUIT CO LTD	Yes	Yes	Yes	P
PCB	GUANGDONG HETONG TECHNOLOGY CO LTD	Yes	Yes	Yes	P
PCB	GOLDENMAX INTERNATIONAL TECHNOLOGY (ZHUHAI) LTD	Yes	Yes	Yes	P
PCB	SHANDONG JINBAO TECH-INNOV CORPORATION	Yes	Yes	Yes	P
PCB	GUANGDE LONGTAI ELECTRONIC SCI-TECH CO LTD	Yes	Yes	Yes	P
Insulation sheet	DUPONT HONGJI FILMS FOSHAN CO LTD	Yes	Yes	Yes	P
Insulation sheet	SABIC INNOVATIVE PLASTICS US L L C	Yes	Yes	Yes	P
Insulation sheet	SHENZHEN BORNSUN INDUSTRIAL CO LTD	Yes	Yes	Yes	P
Insulation sheet	SICHUAN DONGFANG INSULATING MATERIAL CO LTD	Yes	Yes	Yes	P
Insulation sheet	SABIC JAPAN L L C	Yes	Yes	Yes	P
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

(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 V d.c ..... :	Max. 24,2V (peak) (max. value is recorded)	P
(A.3)	If voltage measured according Clause A.2 exceeds the limit value; touch current does not exceed 0,7 mA (peak) or 2 mA d.c. ..... :		N/A
	Comply with Annex G.2 of IEC 60598-1		N/A

(C)	**ANNEX C – PARTICULAR REQUIREMENTS FOR ELECTRONIC LAMP CONTROLGEAR WITH MEANS OF PROTECTION AGAINST OVERHEATING**		—
(C3)	**GENERAL REQUIREMENTS**		N/A
(C3.1)	Thermal protection means integral with the convertor, protected against mechanical damage		N/A
	Renewable only by means of a tool		N/A
	If function depending on polarity, for cord-connected equipment protection means in both leads		N/A
	Thermal links comply with IEC 60691		N/A
	Electrical controls comply with IEC 60730-2-3		N/A
(C3.2)	No risk of fire by breaking (clause C7)	Electric circuit design	N/A
(C5)	**CLASSIFICATION**		N/A
	a) automatic resetting type		—
	b) manual resetting type		—
	c) non-renewable, non-resetting type		—
	d) renewable, non-resetting type		—
	e) other type of thermal protection; description .. :		—
(C6)	**MARKING**		N/A
(C6.1)	Symbol for temperature declared thermally protected ballasts		N/A
(C6.2)	Declaration of the type of protection provided		N/A
(C7)	**LIMITATION OF HEATING**		N/A
(C7.1)	**Preselection test:**		N/A
	Test sample placed for at least 12 h in an oven having temperature (t_c - 5) K		N/A
	No operation of the protection device		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
(C7.2)	**Functioning of protection means:**		N/A
	Normal operation of the sample in a test enclosure according to Annex D at an ambient temperature such that (t_c +0; -5) °C is obtained		N/A
	No operation of the protection device		N/A
	Introducing of the most onerous test condition determined during test of clause 14.2 to 14.5		N/A
	Output of windings connected to the mains supply short-circuited, and other part of the controlgear operated under normal conditions		N/A
	Increasing of the current through the windings continuously until operation of the protection means		N/A
	Continuous measuring of the highest surface temperature		N/A
	Ballasts according to C5 a) or C5 e) operated until stable conditions are achieved		N/A
	Automatic-resetting thermal protectors working 3 times		N/A
	Ballasts according to C5 b) working 6 times		N/A
	Ballasts according to C5 c) and C5) d) working once		N/A
	Highest temperature does not exceed the marked value		N/A
	Any overshoot of 10% over the marked value within 15 min		N/A
	After 15 min value not exceed marked value		N/A
(D)	**ANNEX D – REQUIREMENTS FOR CARRY OUT THE HEATING TESTS OF THERMALLY PROTECTED LAMP CONTROLGEAR**		—
	Tests in C7 performed in accordance with Annex D, if applicable		N/A
(F)	**ANNEX F – DRAUGHT-PROOF ENCOSURE**		—
	Draught-proof enclosure in accordance with the description		P
	Dimensions of the enclosure		P
	Other design; description		N/A
(H)	**ANNEX H - TESTS**		—

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Clause	Requirement + Test	Result - Remark	Verdict
	All tests performed in accordance with the advice given in Annex H, if applicable		P
I (L)	**ANNEX I IN THIS PART 2 – PARTICULAR ADDITIONAL REQUIREMENTS FOR SELV D.C. OR A.C. SUPPLIED ELECTRONIC CONTROLGEARS FOR LED MODULES**		—
(L.3)	**Classification**		P
	Class I	Yes ☒ No ☐	—
	Class II	Yes ☐ No ☒	—
	Class III	Yes ☐ No ☒	—
	non-inherently short circuit proof controlgear	Yes ☒ No ☐	—
	inherently short circuit proof controlgear	Yes ☐ No ☒	—
	fail safe controlgear	Yes ☐ No ☒	—
	non-short-circuit proof controlgear	Yes ☐ No ☒	—
(L.4)	**Marking**		P
	Adequate symbols are used		P
(L.5)	**Protection against electric shock**		P
	Comply with clause 9.2 of IEC 61558-1		P
(L.6)	**Heating**		P
	No excessive temperatures in normal use	See attachment No. 3	P
	Value if capacitor t_c marked .....:	X capacitor: 110°C Y capacitor: 125°C	—
	Winding insulation classified as Class .....:	Class 130 (B)	—
	Comply with tests of clause 14 of IEC 61558-1 with adjustments		P
(L.7)	**Short-circuit and overload protection**		P
	Comply with tests of clause 15 of IEC 61558-1 with adjustments	See attachment No. 3	P
(L.8)	**Insulation resistance and electric strength**		P
(L.8.1)	Conditioned 48 h between 91 % and 95 %		P
(L.8.2)	Insulation resistance		P
	Between input- and output circuits not less than 5 MΩ .....:	100MΩ	P
	Between metal parts of class II convertors which are separated from live parts by basic insulation only and the body not less than 5 MΩ .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Between metal foil in contact with the inner and outer surfaces of enclosures of insulating material not less than 2 MΩ ..... :		N/A
(L.8.3)	Electric strength		P
	1) Between live parts of input circuits and live parts of output circuits ..... :	3000V	P
	2) Over basic or supplementary insulation between:		P
	a) live parts having different polarity ..... :	1500V	P
	b) live parts and body if intended to be connected to protective earth ..... :	1500V	P
	c) accessible metal parts and a metal rod of the same diameter as the flexible cable or cord ..... :		N/A
	d) live parts and an intermediate metal part ..... :		N/A
	e) intermediate metal parts and the body ..... :		N/A
	f) each input circuit and all other input circuits ... :		N/A
	3) Over reinforced insulation between the body and live parts ..... :		N/A
(L.9)	**Construction**		P
(L.9.1)	Transformer comply with 19.12 of IEC 61558-1 and 19 of IEC 61558-2-6		P
	HF transformer comply with 19 of IEC 61558-2-16		P
(L.10)	**Components**		P
	Protective devices comply with 20.6 – 20.11 of IEC 61558-1		P
(L.11)	**Creepage distances, clearances and distances through insulation**		P
	Creepage distances and clearances not less than in Clause 16		P
	Distance through insulation according Table L.5 in IEC 61347-1		P
	1) Basic distance through insulation		N/A
	Required distance (mm) ..... :		—
	Measured (mm) ..... :		N/A
	Supplementary information		—
	2) Supplementary distance through insulation		P
	Required distance (mm) ..... :	0,13mm	—
	Measured (mm) ..... :	0,15mm	P
	Supplementary information	Insulation tape	—
	3) Reinforced distance through insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Required distance (mm) ..... :		—
	Measured (mm) ..... :		N/A
	Supplementary information		—
J (-)	**ANNEX J IN THIS PART 2 – PARTICULAR ADDITIONAL SAFETY REQUIREMENTS FOR A.C., A.C./D.C. OR D.C. SUPPLIED ELECTRONIC CONTROLGEAR FOR EMERGENCY LIGHTING**		—
J.1	**General**		**N/A**
	Intended for centralized emergency power supply	Yes ☐ No ☐	—
J.2	**Marking**		**N/A**
J.2.1	Mandatory markings		N/A
	a) symbol EL		N/A
	b) rated emergency supply voltage (V)		N/A
J.2.2	Information to be provided if applicable		N/A
	a) Limits of ambient temperature		N/A
	b) Emergency output factor (EOF_X)		N/A
	c) Information if intended for use in luminaires for high-risk task area lighting		N/A
J.3	General notes on tests		N/A
	Length of output cable in tests..... :		N/A
	Load instead of LED lamps/modules..... :		N/A
J.4	Starting conditions		N/A
	Start rated load in emergency mode without adversely affecting the performance		N/A
J.5	Operating condition		N/A
	Comply with the requirements of 7.2 of IEC 62384 at 90% and 110% of rated emergency supply voltage		N/A
J.6	Emergency supply current		N/A
	Emergency supply current not differ more than ±15 %		N/A
	Supply of low impedance and low inductance		N/A
J.7	EMC immunity		N/A
	Comply with the requirements of IEC 61547		N/A
J.8	Pulse voltage from central battery systems		N/A
	Withstand pulses according Table J.1		N/A
J.9	Tests for abnormal conditions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Comply with the requirements of 12 of IEC 62384		N/A
J.10	Comply with the requirements of 13 of IEC 62384		N/A
J.11	Functional safety (EOF_x)		N/A
	Declared emergency output factor (EOF_x) achieved during emergency operation		N/A
(N)	**ANNEX N: REQUIREMENTS FOR INSULATION MATERIALS USED FOR DOUBLE OR REINFORCED INSULATION**		—
(N.4)	**General requirements**		N/A
(N.4.1)	Material comply with IEC 60085 and IEC 60216 series		N/A
(N.4.2)	**Solid insulation**		N/A
	Electric strength test at least 5 kV or 1,35 x test voltage in Table N.1		N/A
	If not classified according IEC 60085 and IEC 60216 series: Electric strength test increased 10 % to 5,5 kV or 1,5 x test voltage in Table N.1		N/A
(N.4.3)	**Thin sheet insulation**		N/A
(N.4.3.1)	Thickness and composition of thin sheet insulation		N/A
	- Inside the ballast and not subjected to handling or abrasion during the production and during maintenance		N/A
	- Non-separated layers: Min. 3 layers and fulfil mandrel test of 150N		N/A
	- Separated layers: Min. 2 layers and each layer fulfil mandrel test of 50N		N/A
	- Separated layers (alternative): Min. 3 layers and 2/3 of the layers fulfil mandrel test of 100N		N/A
(N.4.3.2)	Mandrel test (electric strength test during mechanical stress)		N/A
	Electric strength test after mandrel test:		N/A
	- Non-separated layers: min. 5 kV or 1,35 x test voltage in Table N.1		N/A
	- 2/3 of min. 3 separated layers: min. 5 kV or 1,25 x test voltage in Table N.1	5kV	N/A
	- one of 2 separated layers: min. 5 kV or 1,25 x test voltage in Table N.1		N/A
	No flashover or breakdown occurred		N/A
(O)	**ANNEX O: ADDITIONAL REQUIREMENTS FOR BUILT-IN ELECTRONIC CONTROLGEAR WITH DOUBLE OR REINFORCED INSULATION**		—

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Clause	Requirement + Test	Result - Remark	Verdict
(O.6)	**Marking**		N/A
	Marking according clause 7 (7)	See clause 7	N/A
	Special symbol		N/A
	Meaning of the special symbol explained in catalogue		N/A
(O.7)	**Protection against accidental contact with live parts**		N/A
	Requirements of clause 8 (10)	See clause 8	N/A
	Test finger not possible to make contact with basic insulated metal parts		N/A
(O.8)	**Terminals**		N/A
	Clause 9 (8)	See clause 9	N/A
(O.9)	**Provision for earthing**		**N/A**
	Functional earthing terminals comply with clause 9 of part 1		N/A
	No protective earthing terminal		N/A
(O.10)	**Moisture resistance and insulation**		N/A
	Clause 11 (11)	See clause 11	N/A
(O.11)	**Electric strength**		N/A
	Clause 12 (12)	See clause 12	N/A
(O.13)	**Fault conditions**		N/A
	Clause 14 (14)	See clause 14	N/A
	End of test, between live part and accessible metal parts or external parts of insulating material in contact with the supporting surface comply with dielectric strength test according clause 12 reduced to 35 % of values according Table 3 in part 1		N/A
	Insulation resistance according to O.10 between live part and accessible metal parts or external parts of insulating material in contact with the supporting surface not less than 4 MΩ		N/A
(O.14)	**Construction**		N/A
	Clause 17 (15)	See clause 17	N/A
	Accessible metal parts insulated from live parts by double or reinforced insulation		N/A
	Live part insulated from supporting surface in contact with external faces by double or reinforced insulation		N/A
(O.15)	**Creepage distances and clearances**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Clause 18 (16)	See clause 18	N/A
	Comply with corresponding values for luminaries in IEC 60598-1		N/A
(O.16)	**Screws, current-carrying parts and connections**		N/A
	Clause 19 (17)	See clause 19	N/A
(O.17)	**Resistance to heat and fire**		N/A
	Clause 20 (18)	See clause 20	N/A
(O.18)	**Resistance to corrosion**		**N/A**
	Clause 21 (19)	See clause 21	N/A
(P)	**Creepage distances and clearances and distance through isolation (DTI) for lamp controlgear which are protected against pollution by the use of coating or potting**		—
(P.1)	**General**		N/A
	P.2 applies if creepage distances less than the minimum in Table 7 and 8		N/A
	P.3 applies if clearance less than the minimum in Table 9, 10 and 11		N/A
(P.2)	**Creepage distances**		N/A
(P.2.2)	Minimum creepage distances for working voltages and rated voltages with frequencies up to 30 kHz (Table P.1)		N/A
	Basic or supplementary insulation:		N/A
	Required creepage ..... :		—
	Measured ..... :		—
	Supplementary information		—
	Reinforced insulation:		N/A
	Required creepage ..... :		—
	Measured ..... :		—
	Supplementary information		—
(P.2.3)	Creepage distances for working voltages with frequencies above 30 kHz (Table P.2)		N/A
	Voltage $\hat{U}_{out}$ kV ..... :		—
	Frequency ..... :		—
	Required distance ..... :		—
	Measured ..... :		N/A
	Supplementary information		—

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Clause	Requirement + Test	Result - Remark	Verdict

(P.2.4)	Compliance with the required creepage distances		N/A
(P.2.4.1)	Compliance in accordance with 16.3.3 and test according P.2.4.2		N/A
(P.2.4.3)	Electrical tests after conditioning		N/A
(P.2.4.3.1)	Insulation resistance and electric strength according Clause 11 and 12		N/A
(P.3)	**Distance through isolation**		N/A
(P.3.4)	Electrical tests after conditioning		N/A
(P.3.4.1)	Insulation resistance and electric strength according Clause 11 and 12		N/A
(P.3.4.2)	Impulse voltage dielectrical test		N/A
	Basic or supplementary insulation:		N/A
	Working/rated voltage .....:		—
	Impulse voltage.....:		—
	Supplementary information		—
	Reinforced insulation:		N/A
	Working/rated voltage .....:		—
	Impulse voltage.....:		N/A
	Supplementary information		—

ANNEX 1	**TABLE: Critical components information**	P

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]
Description:	**See Annex 1 of main report of IEC 60598-2-3.**					

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 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		—
(14.2)	Type of terminal ..... :		—
	Rated current (A) ..... :		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²) ..... :		—
(14.3.3)	Conductor space (mm) ..... :		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread)..... :	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) ..... :		N/A
	Torque (Nm)..... :		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)..... :		N/A
(14.4.8)	Without undue damage		N/A

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	**Screwless terminals (part of the luminaire)**		N/A
(15)	**SCREWLESS TERMINALS**		—
(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		NA
	Terminal size and rating		NA

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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									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV).....:	N/A								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV).....:	N/A								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV).....:									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV).....:	N/A								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

Attachment No. 3

IEC 61347_2_13G ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

L.6	TABLE: transformer heating---normal operation		P
	Type reference.....:	SS-50VP-56DH	—
	Mounting position.....:	As in normal use	—
	Test voltage .....:	A: 0,94x100V=94V B: 1,06x240V=254,4V	—

temperature (°C) of part	Test A (°C)	Test B (°C)	Limit(°C)
Supply cord	78,4	75,1	90
Varistor (MOV2)	87,3	80,3	125
X capacitor (CX1)	93,3	84,1	100
Y capacitor (CY2)	92,9	84,1	125
Varistor (MOV4)	108,7	88,4	125
LF2 winding	93,8	84,3	130
E capacitor (CE1)	98,8	86,7	105
Y capacitor (CY901) on dimming board	93,4	86,3	125
Optocoupler (U902) on dimming board	96,6	89,4	100
Winding of transformer; T901; Class 130	101,9	93,6	110
Winding of transformer; T1; Class 130	108,3	99,9	110
Y capacitor (CY4)	101,0	93,3	125
PCB	111,4	100,3	130
E capacitor (CE303)	109,5	102,9	105
Optocoupler	88,2	82,5	110
Y capacitor (CY503)	87,3	82,2	125
Y capacitor (CY302)	88,4	83,7	125
Output cord	82,4	78,7	90
tc point	89,1	84,8	90
Support under transformer T1	87,8	81,4	90
Ambient	60,0	60,0	--
Remark: tested with output load (50W; 1,56A)			

IEC 61347_2_13G ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

L.7	TABLE: Heating - abnormal operation (short-circuit and over-loads)		P
	Type reference.....:	SS-50VP-56DH	—
	Ambient.....:	ta: 60°C	—
	Mounting position.....:	As in normal use	—
	Test voltage(V) .....:	A: 0,9x100V=90V B: 1,1x240V=264V	—

Temperature (°C) of part	Test (°C)		Limit (°C)
	A	B	
Supply cord	84,0	/	85
Winding of transformer; T901; Class 130	114,2	/	175
Winding of transformer; T1; Class 130	117,9	/	175
Output cord	83,4	/	85
tc point	100,5	/	105
Support	97,3	/	105

15.3	TABLE: transformer heating—abnormal condition (double LED modules)		P
	Type reference.....:	SS-50VP-56DH	—
	Ambient.....:	ta: 60°C	—
	Mounting position.....:	As in normal use	—
	Test voltage .....:	0,9x100V=90V 1,1x240V=264V	—

temperature rise (°C) of part	Test (°C)	Limit(°C)
Supply cord	—	—
Winding of transformer; T901; Class 130	—	—
Winding of transformer; T1; Class 130	—	—
Output cord	—	—
tc point	—	—
Support	—	—

1. Double LED modules or equivalent load connected in series to the output terminals of constant current type
2. Output shut down immediately after abnormal test, the temperature rise of components are lower than temperature rise of components at normal heating test, so no temperature rise are recorded.

Attachment No. 4

TEST REPORT
IEC TR 62778
Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires

Report Number. ..... :	68.140.22.0362.01
Date of issue ..... :	See main report of IEC 60598-2-3
Total number of pages ..... :	7
Name of Testing Laboratory preparing the Report ..... :	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Applicant's name ..... :	See main report of IEC 60598-2-3
Address ..... :	See main report of IEC 60598-2-3
Test specification:	
Standard ..... :	IEC TR 62778:2014 (Second Edition)
Test procedure ..... :	See main report of IEC 60598-2-3
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC62778A
Test Report Form(s) Originator .... :	TÜV SÜD Product Service GmbH
Master TRF ..... :	Dated 2016-02

This report is not valid as a CB Test Report unless signed by an approved CB 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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Attachment No. 4

Test item description ..... :		See main report of IEC 60598-2-3	
Trade Mark ..... :		See main report of IEC 60598-2-3	
Manufacturer ..... :		See main report of IEC 60598-2-3	
Model/Type reference ..... :		See main report of IEC 60598-2-3	
Ratings ..... :		See main report of IEC 60598-2-3	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch	
Testing location/ address ..... :		Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China	
☐	**Associated Testing Laboratory:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :		See main report of IEC 60598-2-3	
Approved by (name, function, signature) .. :		See main report of IEC 60598-2-3	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) .. :			
Supervised by (name, function, signature) :			

Attachment No. 4

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

Tests performed (name of test and test clause):	**Testing location:**
See main report of IEC 60598-2-3	Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China

Summary of compliance with National Differences (List of countries addressed):
See main report of IEC 60598-2-3

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.
See main report of IEC 60598-2-3

Test item particulars ..... :	See main report of IEC 60598-2-3
Product evaluated ..... :	☐ **LED package** ☐ **LED module** ☐ **Lamp** ☒ **Luminaire**
Rated voltage (V) ..... :	See main report of IEC 60598-2-3
Rated current (mA) ..... :	--
Rated CCT (K) ..... :	--
Rated Luminance (Mcd/m^2) ..... :	--
Component report data used ..... :	☒ **Not applicable** ☐ **LED package** ☐ **LED module** ☐ **Lamp** Report number:
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 ..... :	See below
Date of receipt of test item ..... :	See main report of IEC 60598-2-3
Date (s) of performance of tests ..... :	See main report of IEC 60598-2-3
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.**	
Name and address of factory (ies) ..... :	See main report of IEC 60598-2-3
General product information: See main report of IEC 60598-2-3	

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

7	**MEASUREMENT INFORMATION FLOW**		—
7.1	**Basic flow**		**P**
	'Law of conservation of luminance' applied		P
	Use of only true luminance/radiance values		P
	In case of luminaire: The light source is operated in the luminaire under similar conditions as when tested as a component		P
	In case E_{thr} value for RG2 was established the peak value was derived from angular light distribution		N/A
7.2	**Conditions for the radiance measurement**		**P**
	Standard condition applied (200mm distance, 0,011rad field of view)		P
	Non-standard condition applied		N/A
7.3	**Special cases (I): Replacement by a lamp or LED module of another type**		**N/A**
	Light source is a white light source		N/A
	Evaluation done based on highest luminance		N/A
	Evaluation done based on CCT value		N/A
7.4	**Special cases (II): Arrays and clusters of primary light sources**		**N/A**
	LED package is evaluated as ..... :	☐ RG0 unlimited ☐ RG1 unlimited	N/A
	E_{thr} of LED package applies to array		N/A
8	**RISK GROUP CLASSIFICATION**		—
	Risk group achieved:		P
	- .. Risk Group 0 unlimited		N/A
	- .. Risk Group 1 unlimited		P
	- E_{thr} ..... (lx) : Distance to reach RG1 ..... (m) :		N/A

Attachment No. 4

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Spectroradiometric measurement		**P**
	Measurement performed on:	☐ LED package ☐ LED module ☐ Lamp ☒ Luminaire	
	Model number……:	1) AOK-120WiP-NV-L3-00-6570-T5-D-I; 2) AOK-120WiP-NV-L3-00-6580-T4-D-I	
	Test voltage (V)……..:	240VAC	—
	Test current (A)……....:	--	—
	Test frequency (Hz)……...:	50Hz	—
	Ambient, t (°C)……:	24,5°C	—
	Measurement distance……:	☒ 20 cm ☐ ... cm	—
	Source size ……:	☒ Non-small ☐ Small: .... mm	—
	Field of view ……...:	☐ 100 mrad ☒ 11 mrad ☐ 1,7 mrad (for small sources)	—

Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	--	--
x/y colour coordinates			--	--
Blue light hazard radiance	L_B	W/(m²•sr¹)	1) 1,10E+03; 2) 8,45E+02	RG1
Blue light hazard irradiance	E_B	W/m²	--	--
Luminance	L	cd/m²	1) 5,48E+05; 2) 1,18E+06	--
Illuminance	E	lx	--	--

Supplementary information:

Measurement uncertainty statement for IEC TR 62778:2014			
Risk		Units	Expanded Uncertainty; coverage factor (k)
L_B	Blue light hazard radiance	W/(m²•sr¹)	*U*= 4,70%; k=2

Attachment No. 4

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Angular light distribution	**N/A**

Attachment No. 5

TEST REPORT
IEC 62031
LED modules for general lighting – Safety specifications

Report Number. .....:	68.140.22.0362.01
Date of issue .....:	See main report of IEC 60598-2-3
Total number of pages.....	19
Name of Testing Laboratory preparing the Report.....:	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Applicant's name .....:	See main report of IEC 60598-2-3
Address .....:	See main report of IEC 60598-2-3
Test specification:	
Standard.....:	IEC 62031:2018
Test procedure .....:	See main report of IEC 60598-2-3
Non-standard test method .....:	N/A
Test Report Form No. .....:	IEC62031F
Test Report Form(s) Originator ....:	Intertek Semko AB
Master TRF.....:	2018-06-14

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Attachment No. 5

Test item description ..... :	LED module		
Trade Mark ..... :	--		
Manufacturer ..... :	See main report of IEC 60598-2-3		
Model/Type reference ..... :	See main report of IEC 60598-2-3		
Ratings ..... :	See main report of IEC 60598-2-3		
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch	
Testing location/ address..... :		Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China	
Tested by (name, function, signature)..... :		See main report of IEC 60598-2-3	
Approved by (name, function, signature)... :		See main report of IEC 60598-2-3	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address..... :			
Tested by (name, function, signature)..... :			
Approved by (name, function, signature)... :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature)... :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address..... :			
Tested by (name, function, signature)..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature)... :			
Supervised by (name, function, signature) :			

Attachment No. 5

List of Attachments (including a total number of pages in each attachment): --	
Summary of testing:	
Tests performed (name of test and test clause): See main report of IEC 60598-2-3	**Testing location:** Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China
Summary of compliance with National Differences: List of countries addressed See main report of IEC 60598-2-3	

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.

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Test item particulars.....:	LED module
Classification of installation and use.....:	Integral module
Supply Connection.....:	Lead wire for all models SMD connector for models with 'SS' series and 'XLG' series LED driver
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.....:	See below
Date of receipt of test item .....:	See main report of IEC 60598-2-3
Date (s) of performance of tests.....:	See main report of IEC 60598-2-3

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.

Clause numbers between brackets refer to clauses in IEC 61347-1

Name and address of factory (ies).....: See main report of IEC 60598-2-3

General product information:
The manufacturer/ Importer has to ensure the appliance placing on the EU market conforms to the applicable EU directives which provide the affixing of the CE marking, such as LVD, EMC, RoHS, ErP, and so on.
The integral module is tested with the product.

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict

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**		—
6.2	**Contents of marking for built-in and for independent LED modules**		**N/A**
	a) mark of origin		N/A
	b) model number, type reference		N/A
	c1) constant voltage module; rated supply voltage and supply frequency		N/A
	c2) constant current module; rated supply current and supply frequency		N/A
	d) rated power		N/A
	e) indication of connections, wiring diagram		N/A
	f) value of t_c and place on the module		N/A
	g) *E*thr if required		N/A
	h) symbol for built-in modules		N/A
	i) heat transfer temperature t_d		N/A
	j) power for heat-conduction P_d		N/A
	k) working voltage for insulation		N/A
6.3	**Location of marking for built-in LED modules**		**N/A**
	- marking of a) and b) in 6.2 on the modules		N/A
	- marking of other applicable items in 6.2 on the modules or in data sheet, leaflet or website		N/A
6.4	**Location of marking for independent LED modules**		**N/A**
	- marking of a), b), c) and f) in 6.2 on the modules		N/A
	- marking of other applicable items in 6.2 on the modules or in data sheet, leaflet or website		N/A
6.5	**Marking of integral LED modules**		**N/A**

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	- information in 6.2 a) to g) in data sheet, leaflet or website		N/A
6.6	**Durable and legibility of marking**		**N/A**
	- marking on the LED module legible after test with water		N/A
	- marking not on the LED module legible		N/A
7	**TERMINALS**		—
7.1	**Integral terminals**		**N/A**
	Screw terminals comply with section 14 of IEC 60598-1	(see Annex 3)	N/A
	Screwless terminals comply with section 15 of IEC 60598-1	(see Annex 4)	N/A
7.2	**Terminals other than integral terminals**		**P**
	Separately approved; component list	(see Annex 2)	P
	Ratings suit the conditions		N/A
	Satisfy additional relevant requirements of this standard		N/A
8 (9)	**EARTHING**		—
- (9.1)	**Provisions for protective earthing**		**N/A**
	Terminal complying with clause 8		N/A
	Locked against loosening and not possible to loosen by hand		N/A
	Not possible to loosen clamping means unintentionally on screwless terminals		N/A
	Earthing via means of fixing		N/A
	Earthing terminal only used for the earthing of the control gear		N/A
	All parts of material minimizing the danger of electrolytic corrosion		N/A
	Made of brass or equivalent material		N/A
	Contact surface bare metal		N/A
	Test according 7.2.3 of IEC 60598-1		N/A
- (9.2)	**Provision for functional earthing**		**N/A**
	Comply with clause 8 and 9.1		N/A
	Functional earth insulated from live parts by double or reinforced insulation		N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
- (9.3)	**Lamp controlgear with conductors for protective earthing by tracks on printed circuit board**		**N/A**
	Test with a current of 25 A between earthing terminal and each of the accessible metal parts; measured resistance (Ω) at ≥ 10 A according 7.2.3 of IEC 60598-1: < 0,5 Ω .....:		N/A
- (9.4)	**Earthing of built-in lamp controlgear**		**N/A**
	Earth by means of fixing to earthed metal of luminaire in compliance of 7.2 of IEC 60598-1		N/A
	Earthing terminal only for earthing the built-in controlgear		N/A
- (9.5)	**Earthing via independent controlgear**		**N/A**
- (9.5.1)	Earth connection to other equipment		N/A
	Looping or through connection, conductor min. 1,5 mm² and of copper or equivalent		N/A
	Protective earthing wires in line with 5.3.1.1 and clause 7		N/A
- (9.5.2)	Earthing of the lamp compartments powered via the independent lamp controlgear		N/A
	Test with a current of 25 A between input and output earth terminals; measured resistance (Ω) between earthing terminal and each of the accessible metal parts at ≥ 10 A according 7.2.3 of IEC 60598-1: < 0,5 Ω .....:		N/A
	Output earthing terminal marked as in 7.1 t) of IEC 61347-1		N/A
9 (10)	**PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS**		—
- (10.1)	Controlgear protected against accidental contact with live parts	Rely on luminaire enclosure to against accidental contact with live parts	N/A
- (A2)	Voltage measured with 50 kΩ	(see Annex A)	N/A
- (A3)	Voltage > 35 V peak or > 60 V d.c. or protective impendance device	(see Annex A)	N/A
- (10.1)	Lacquer or enamel not used for protection or insulation		N/A
	Adequate mechanical strength on parts providing protection		N/A
- (10.2)	Capacitors > 0,5 μF: voltage after 1 min (V): < 50 V .....:		N/A
- (10.3)	Controlgear providing SELV		N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Accessible conductive parts are insulated from live parts by double or reinforced insulation in SELV controlgear		N/A
	No connection between output circuit and the body or protective earthing circuit		N/A
	No possibility of connection between output circuit and the body or protective earthing circuit through other conductive parts		N/A
	SELV outputs separated from earth by at least basic insulation		N/A
	ELV conductive parts insulated as live parts		N/A
	Tests according Annex L of IEC 61347-1		N/A
- (10.4)	Accessible conductive parts in SELV circuits		N/A
	Output voltage under load ≤ 25 V r.m.s. or ≤ 60 V d.c.		N/A
	If output voltage > 25 V r.m.s. or > 60 V d.c.; No load output ≤ 35 V peak or ≤ 60 V d.c and touch current does not exceed 0,7 mA (peak) or 2 mA d.c. ..... :		N/A
	One conductive part is insulated if output voltage or current exceeding the values above and withstand test voltage 500 V		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
10 (11)	**MOISTURE RESISTANCE AND INSULATION**		—
	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MΩ):		P
	For basic insulation ≥ 2 MΩ ..... :	Live parts of LED module to metal enclosure: 100 MΩ	P
	For double or reinforced insulation ≥ 4 MΩ ..... :		N/A
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		N/A
11 (12)	**ELECTRIC STRENGTH**		—
	Immediately after clause 11 electric strength test for 1 min		P

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation for SELV, test voltage 500 V	For models with 'XLG' and 'SS' series SELV LED drivers	P
	Working voltage ≤ 50 V, test voltage 500 V		N/A
	Working voltage > 50 V ≤ 1000 V, test voltage (V):		P
	Basic insulation, 2U + 1000 V	Live part and metal enclosure: For models with 'Xi LP' series separating LED drivers: 1440V [U_{out}:220V]; 1640V [U_{out}:320V]	P
	Supplementary insulation, 2U + 1000 V	Live part and glass cover: For models with 'Xi LP' series separating LED drivers: 1920V [240V+U_{out}:220V]; 2120V [240V+U_{out}:320V]	P
	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:		N/A
	- does not emit flames or molten material		N/A
	- does not produce flammable gases		N/A
	- protection against accidental contact not impaired		N/A
	Thermally protected controlgear does not exceed the marked temperature value		N/A
	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)	N/A
- (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:		N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	The insulation resistance ≥ 1 MΩ .....:		N/A
	No flammable gases		N/A
	No accessible parts have become live		N/A
	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		P
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**		**P**
	Printed circuits used as internal connections complies with clause 14		P
15 (16)	**CREEPAGE DISTANCES AND CLEARANCES**		—
- (16.1)	**General**		P
	Creepage distances and clearances according to 16.2 and 16.3		P
	Controlgears providing SELV comply with additional requirements in Annex L		N/A
	Insulating lining of metallic enclosures		P
	Controlgear protected against pollution comply with Annex P		N/A
- (16.2)	**Creepage distances**		P
- (16.2.2)	Minimum creepage distances for working voltages		P
	Creepage distances according to Table 7	(see appended table)	P
- (16.2.3)	Creepage distances for working voltages with frequencies above 30 kHz		N/A
	Creepage distances according to Table 8	(see appended table)	N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
- (16.3)	**Clearances**		P
- (16.3.2)	Clearances for working voltages		P
	Clearances distances according to Table 9	(see appended table)	P
- (16.3.3)	Clearances for ignition voltages and working voltages with higher frequencies		N/A
	Clearances distances for basic or supplementary insulation according to Table 10		N/A
	Clearances distances for reinforced insulation according to Table 11		N/A
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)		—
(4.11)	**Electrical connections**		**P**
(4.11.1)	Contact pressure		P
(4.11.2)	Screws:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
(4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
(4.11.4)	Material of current-carrying parts		P
(4.11.5)	No contact to wood or mounting surface		P
(4.11.6)	Electro-mechanical contact systems		N/A
(4.12)	**Mechanical connections and glands**		N/A
(4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
(4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
(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
(4.12.5)	Screwed glands; force (Nm).....:		N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
17 (18)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		—
- (18.1)	Ball-pressure test .....:	See Test Table 17 (18.1)	N/A
- (18.2)	Test of printed boards .....:	See Test Table 17 (18.2)	N/A
- (18.3)	Glow-wire test (650°C) .....:	See Test Table 17 (18.3)	N/A
- (18.4)	Needle-flame test (10 s) .....:	See Test Table 17 (18.4)	N/A
- (18.5)	Proof tracking test .....:	See Test Table 17 (18.5)	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**
	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
22	**PHOTOBIOLOGICAL SAFETY**		—
22.1	**UV radiation**		**N/A**
	Luminous radiation not exceed 2mW/klm		N/A
22.2	**Blue light hazard**		**P**
	Assessed according to IEC TR 62778	RG1	P
22.3	**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

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict

12 (14)	TABLE: tests of fault conditions	N/A
Part	**Simulated fault**	**Hazard**
--	--	--

15 (16)	TABLE: clearance and creepage distance measurements (mm)						P
Applicable part of IEC 61347-1 Table 7 – 11*							
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) ..... :					--		—
Pulse voltage if applicable (kV) ..... :					--		—
Supplementary information: See main report of IEC 60598-2-3							

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

17 (18.1)	TABLE: Ball Pressure Test of Thermoplastics			N/A
Allowed impression diameter (mm) ..... :		≤ 2mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
--	--	--	--	
Supplementary information: --				

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: --						

17 (18.3)	TABLE: Glow-wire test				N/A
Glow wire temperature ..... :		650°C			—
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

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict

--	--	--	--	--	--
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No) ..... :					--
Supplementary information: --					

17 (18.4)	**TABLE: Needle-flame test**				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: --					

17 (18.5)	**TABLE: Proof tracking test**				**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: --					

(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		N/A
(A.2)	Voltage ≤ 35 V peak or ≤ 60 V d.c .....:		N/A
(A.3)	If voltage measured according Clause A.2 exceeds the limit value; touch current does not exceed 0,7 mA (peak) or 2 mA d.c. .....:		N/A
	Comply with Annex G.2 of IEC 60598-1		N/A

ANNEX 1	**LED MODULES WITH INTEGRAL CONTROLGEAR PROVIDING SELV**		—
(L.5)	**Protection against electric shock**		N/A
	Comply with 9.2 of IEC 61558-1		N/A
(L.6)	**Heating**		N/A
	No excessive temperatures in normal use		N/A
	Value if capacitor tc marked .....:		—
	Winding insulation classified as Class .....:		—

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Comply with tests of clause 14 of IEC 61558-1 with adjustments		N/A
(L.7)	**Short-circuit and overload protection**		N/A
	Comply with tests of clause 15 of IEC 61558-1 with adjustments		N/A
(L.8)	**Insulation resistance and electric strength**		N/A
(L.8.1)	Conditioned 48 h between 91 % and 95 %		N/A
(L.8.2)	Insulation resistance		N/A
	Between input- and output circuits not less than 5 MΩ .....:		N/A
	Between metal parts of class II convertors which are separated from live parts by basic insulation only and the body not less than 5 MΩ .....:		N/A
	Between metal foil in contact with the inner and outer surfaces of enclosures of insulating material not less than 2 MΩ .....:		N/A
(L.8.3)	Electric strength		N/A
	1) Between live parts of input circuits and live parts of output circuits .....:		N/A
	2) Over basic or supplementary insulation between:		N/A
	a) live parts having different polarity .....:		N/A
	b) live parts and body if intended to be connected to protective earth .....:		N/A
	c) accessible metal parts and a metal rod of the same diameter as the flexible cable or cord .....:		N/A
	d) live parts and an intermediate metal part .....:		N/A
	e) intermediate metal parts and the body .....:		N/A
	f) each input circuit and all other input circuits .....:		N/A
	3) Over reinforced insulation between the body and live parts .....:		N/A
(L.9)	**Construction**		N/A
(L.9.1)	Transformer comply with 19.12 of IEC 61558-1 and 19 of IEC 61558-2-6		N/A
	HF transformer comply with 19 of IEC 61558-2-16		N/A
(L.10)	**Components**		N/A
	Protective devices comply with 20.6 – 20.11 of IEC 61558-1		N/A
(L.11)	**Creepage distances, clearances and distances through insulation**		N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Creepage distances and clearances not less than in Clause 16		N/A
	Distance through insulation according Table L.5 in IEC 61347-1		N/A
	1) Basic distance through insulation		N/A
	Required distance (mm) .....:		—
	Measured (mm) .....:		N/A
	Supplementary information		—
	2) Supplementary distance through insulation		N/A
	Required distance (mm) .....:		—
	Measured (mm) .....:		N/A
	Supplementary information		—
	3) Reinforced distance through insulation		N/A
	Required distance (mm) .....:		—
	Measured (mm) .....:		N/A
	Supplementary information		—

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Critical components information					P
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
See 'ANNEX 1 TABLE: Critical components information' in main report of IEC 60598-2-3 for details.						

ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	**SCREW TERMINALS**		—
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread).....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) .....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	**Screwless terminals (part of the luminaire)**		N/A
(15)	**SCREWLESS TERMINALS**		—
(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
(15.5.1)	Terminals internal wiring		N/A
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples) .....:		N/A
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples) .....:		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples).....:		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....:		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....:		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A

IEC 62031			
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									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :	--								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :	--								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	---	--	--
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :	--								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :	--								—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
Supplementary information: --										

Attachment No. 6

TEST REPORT
IEC 62493
Assessment of lighting equipment related to human exposure to electromagnetic fields

Report Number. ..... :	68.140.22.0362.01
Date of issue ..... :	See main report of IEC 60598-2-3
Total number of pages ..... :	7
Name of Testing Laboratory preparing the Report ..... :	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Applicant's name ..... :	See main report of IEC 60598-2-3
Address ..... :	See main report of IEC 60598-2-3
Test specification:	
Standard ..... :	IEC 62493 (ed.2)
Test procedure ..... :	See main report of IEC 60598-2-3
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC62493B
Test Report Form(s) Originator .... :	Intertek Semko AB
Master TRF ..... :	2016-04

This report is not valid as a CB Test Report unless signed by an approved CB 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.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Attachment No. 6

Test item description ..... :	See main report of IEC 60598-2-3
Trade Mark ..... :	See main report of IEC 60598-2-3
Manufacturer ..... :	See main report of IEC 60598-2-3
Model/Type reference ..... :	See main report of IEC 60598-2-3
Ratings ..... :	See main report of IEC 60598-2-3

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch	
Testing location/ address ..... :		Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China	
☐	**Associated Testing Laboratory:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :		See main report of IEC 60598-2-3	
Approved by (name, function, signature) ... :		See main report of IEC 60598-2-3	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) ... :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) ... :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) ... :			
Supervised by (name, function, signature) :			

Attachment No. 6

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

Tests performed (name of test and test clause): See main report of IEC 60598-2-3	**Testing location:** Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China

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

See main report of IEC 60598-2-3

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.
See main report of IEC 60598-2-3

Attachment No. 6

Test item particulars.....:	See main report of IEC 60598-2-3
Classification of installation and use.....:	See main report of IEC 60598-2-3
Supply Connection.....:	See main report of IEC 60598-2-3
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	See below
Date of receipt of test item .....:	See main report of IEC 60598-2-3
Date (s) of performance of tests.....:	See main report of IEC 60598-2-3
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.**	
Name and address of factory (ies).....:	See main report of IEC 60598-2-3

General product information:		
Description of the EUT ..... :	☒	Luminaire
		Self-ballasted lamp
		Built-in electronic control gear
		Independent electronic control gear
		Others:
Control Gear ..... :		Magnetic control gear / transformer
	☒	Electronic control gear
		Others:
Lamp technology used ..... :		Fluorescent lamp
		High pressure discharge lamp (HID)
	☒	Light emitting diode (LED)
		Tungsten halogen lamp
		Incandescent lamp
		Others:
Model Number ..... :	See main report of IEC 60598-2-3	
Brand ..... :	See main report of IEC 60598-2-3	
Rated Voltage/Frequency..... :	☒	AC: See main report of IEC 60598-2-3
		DC:
		AC/DC:
Rated Power..... :	See main report of IEC 60598-2-3	
Protection Class ..... :	See main report of IEC 60598-2-3	
Number of phases ..... :	See main report of IEC 60598-2-3	
Accessories ..... :	--	

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict
4	**LIMITS**		—
4.1	**General**		P
	Comply with Van der Hoofden test limit in 4.2.3 or inherently compliant in 4.2.2 and pass assessment procedure for intentional radiators in 4.3		P
4.2	**Unintentional radiating part of lighting equipment**		P
4.2.2	Lighting equipment deemed to comply with the Van der Hoofden test without testing		P
	1) electronic controlgear	Yes ☐ No ☒	—
	2) incandescent-lamp technology	Yes ☐ No ☒	—
	3) LED-light-source technology	Yes ☒ No ☐	—
	4) OLED-light-source technology	Yes ☐ No ☒	—
	5) high-pressure discharge lamp LED-light-source technologies	Yes ☐ No ☒	—
	6) low-pressure discharge lamp technologies with exposure distance ≥ 50 cm	Yes ☐ No ☒	—
	7) independent auxiliary	Yes ☐ No ☒	—
	Not fulfil any of 1-7 above subject to 4.2.3		—
4.2.3	Applications of limits		N/A
	Not fulfil any of 1-7 in 4.2.2 but the compliance factor F is ≤ 1		N/A
4.3	**Intentional radiating part of lighting equipment**		**N/A**
	Comply with one of methods in Clause 7 if intentional radiator		N/A

5	**GENERAL**		—
5.1	**Measurand**		**N/A**
	Test head, measuring instrumentation and measuring conditions according Clause 5.1 – 5.8		N/A

6	**MEASUREMENT PROCEDURE FOR THE VAN DER HOOFDEN TEST**		—
6.1	**General**		**N/A**
	Measurements carried out under conditions according Clause 6.1 – 6.6	See Table 6	N/A

7	**ASSESSMENT PROCEDURE INTENTIONAL RADIATORS**		—
7.2	**Low-power exclusion method**		**N/A**
7.2.1	Input $P_{int,rad}$ ..... :		—
	Exclusion level P_{max} ..... :		—

Attachment No. 6

IEC 62493			
Clause	Requirement + Test	Result - Remark	Verdict

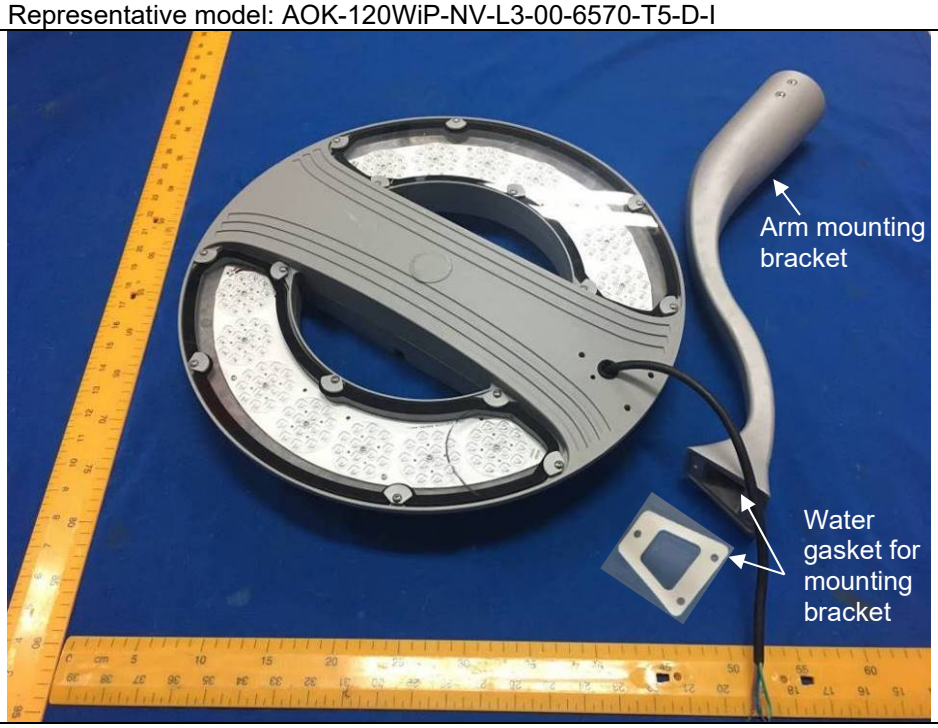
7	**ASSESSMENT PROCEDURE INTENTIONAL RADIATORS**		—
7.2	**Low-power exclusion method**		**N/A**
	Input power $P_{int,rad}$ < exclusion level P_{max}		N/A
7.3	**Application of the EMF product standard for body worn-equipment**		N/A
	If not Clause 7.2 is met and expose distance ≤ 0.05 m, comply with IEC 62209-2		N/A
7.4	**Application of the EMF product standard for base stations**		N/A
	If not Clause 7.2 is met and if intentional radiator is base station, comply with IEC 62232		N/A
7.5	**Application of another EMF standard**		N/A
	If not Clause 7.2 is met and if intentional radiator cannot be considered as in Clause 7.3 or 7.4, comply with IEC 62311		N/A

6	**TABLE: Measurement results with Van der Hoofden test head**			
Location of EuT	Measuring distance	Result (*F*)	Limit (*F*)	Verdict
--	--	--	--	--

6	**TABLE: Equipment used during test with Van der Hoofden test head**		
Equipment	Manufacturer	Type	Id. No.
Van der Hoofden test head	--	--	--
Measurement receiver	--	--	--

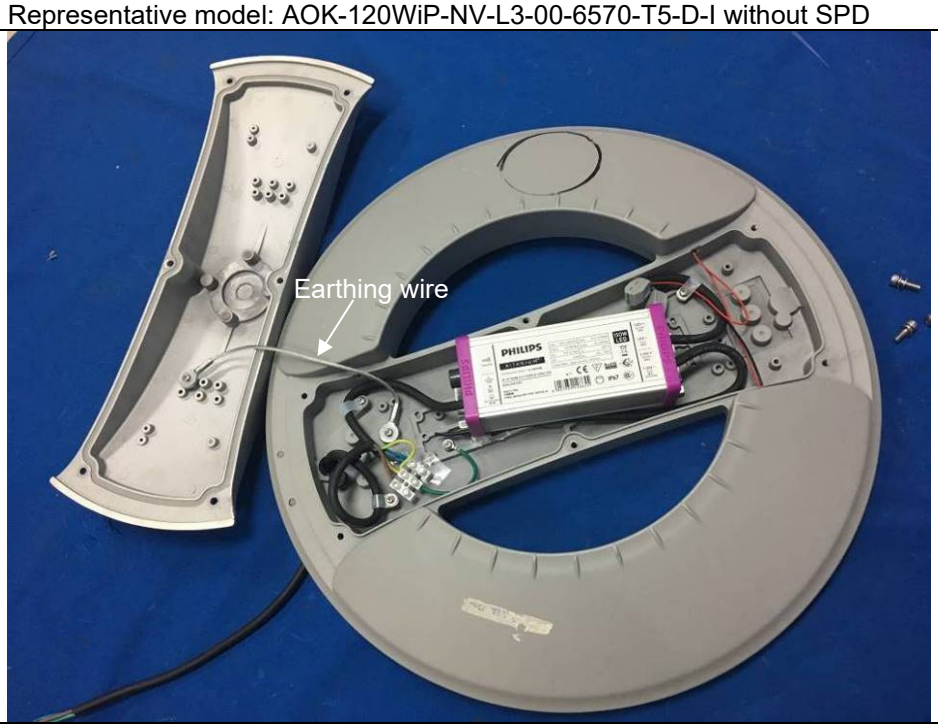
Attachment No. 7

Details of: Outlook with lamp arm mounting bracket for all models (Product size: Φ460*80)
Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I

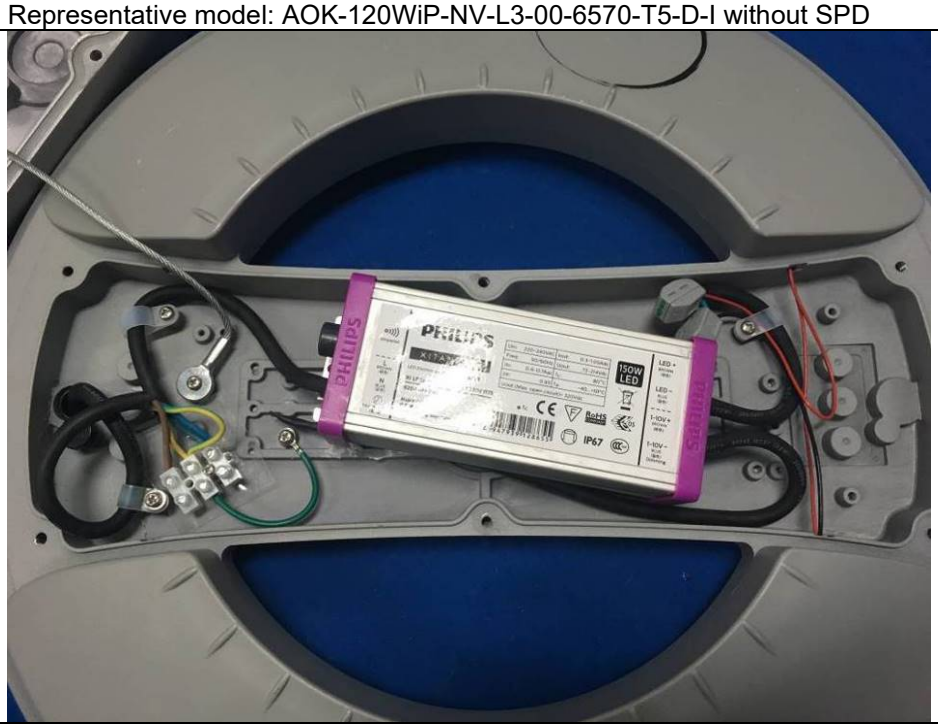


Details of: Back view with lamp arm mounting bracket for all models (Product size: Φ460*80)
Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I

Details of: Internal view with lamp arm mounting bracket for all models
Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I without SPD

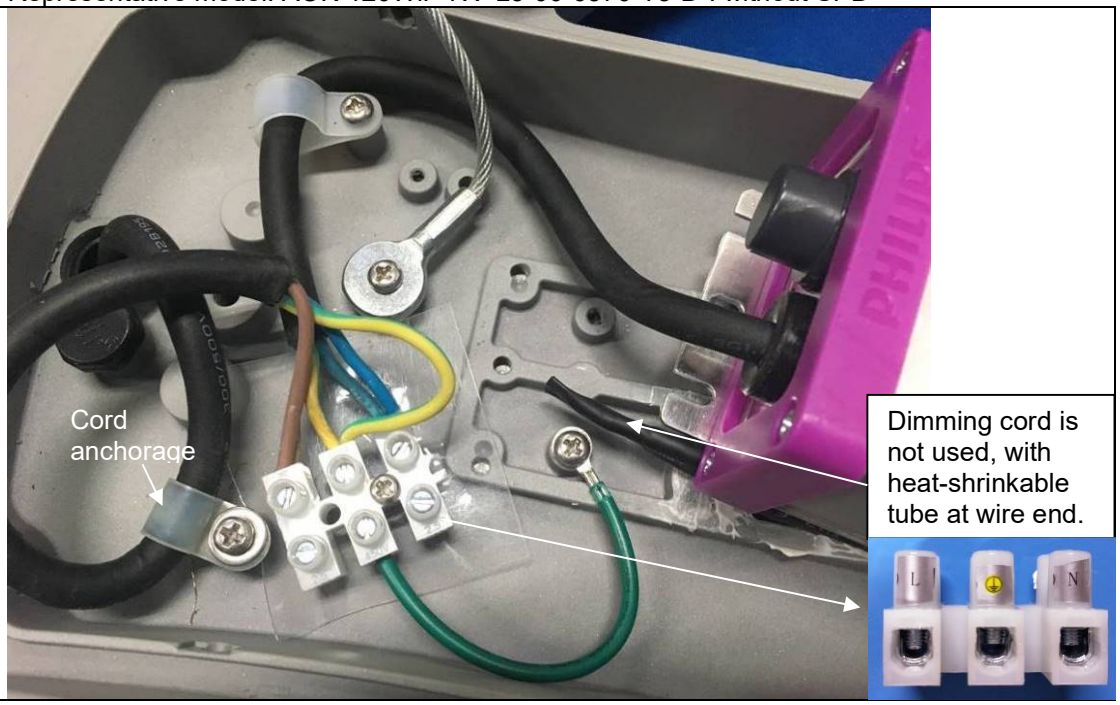


Details of: Internal view with lamp arm mounting bracket for all models
Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I without SPD



Details of: Internal view with lamp arm mounting bracket for all models

Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I without SPD

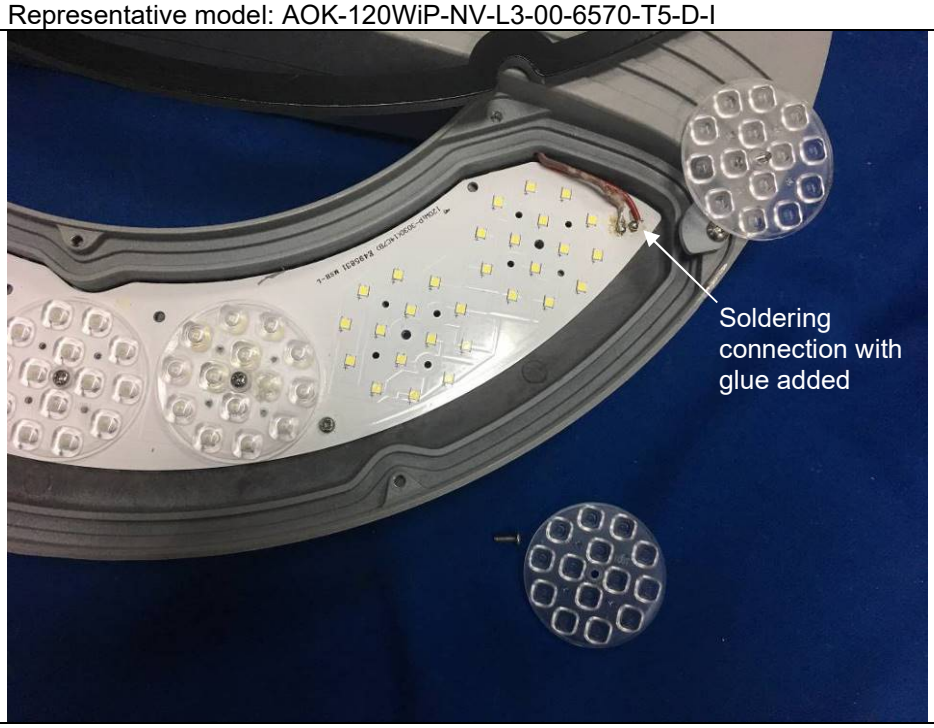


Details of: LED module view for all models

Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I

Details of: LED module view for all models
Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I

Details of: LED module view for all models
Representative model: AOK-120WiP-NV-L3-00-6570-T5-D-I



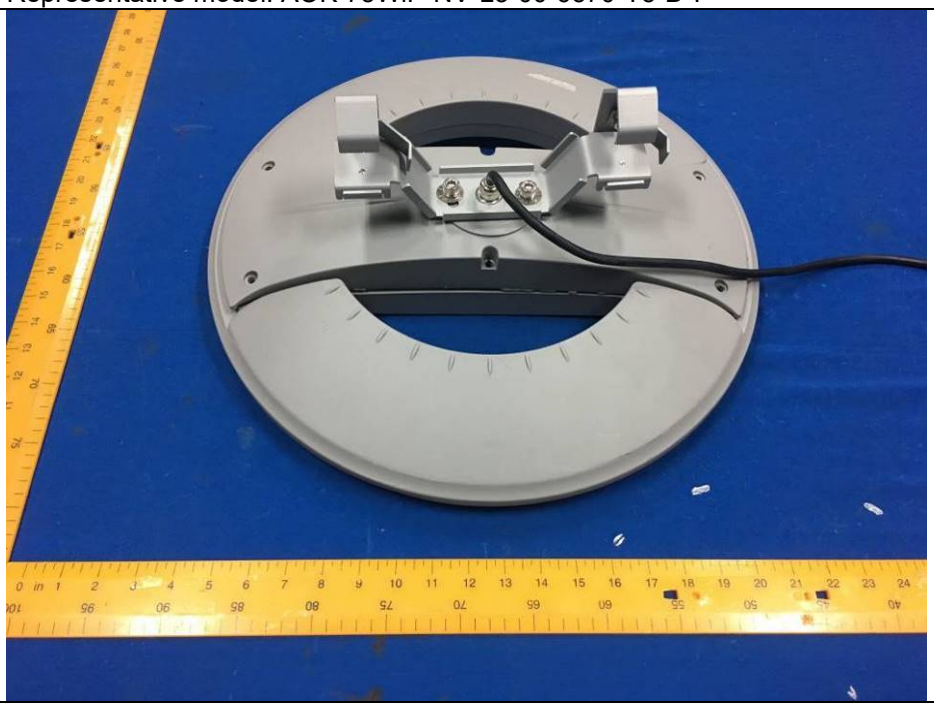
Details of: LED module view (Alternative construction with SMD connector for models with ‘SS’ series and ‘XLG’ series LED driver)

Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I

Details of: Outlook with lifting scaffold mounting bracket for all models (Product size: Φ460*80)

Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I

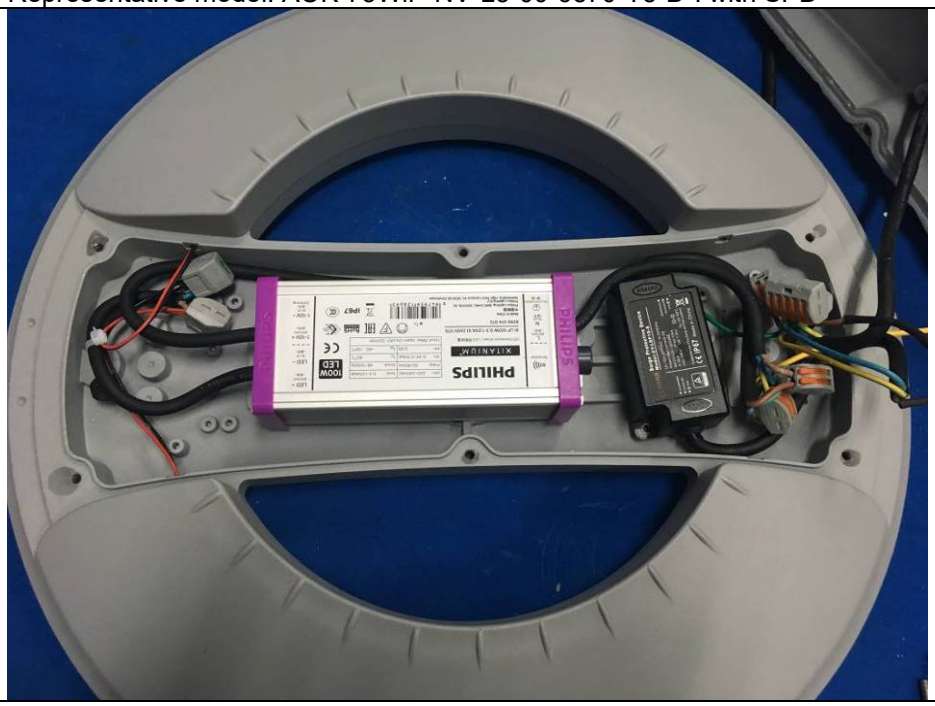
Details of: Back view with lifting scaffold mounting bracket for all models (Product size: Φ460*80)
Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I



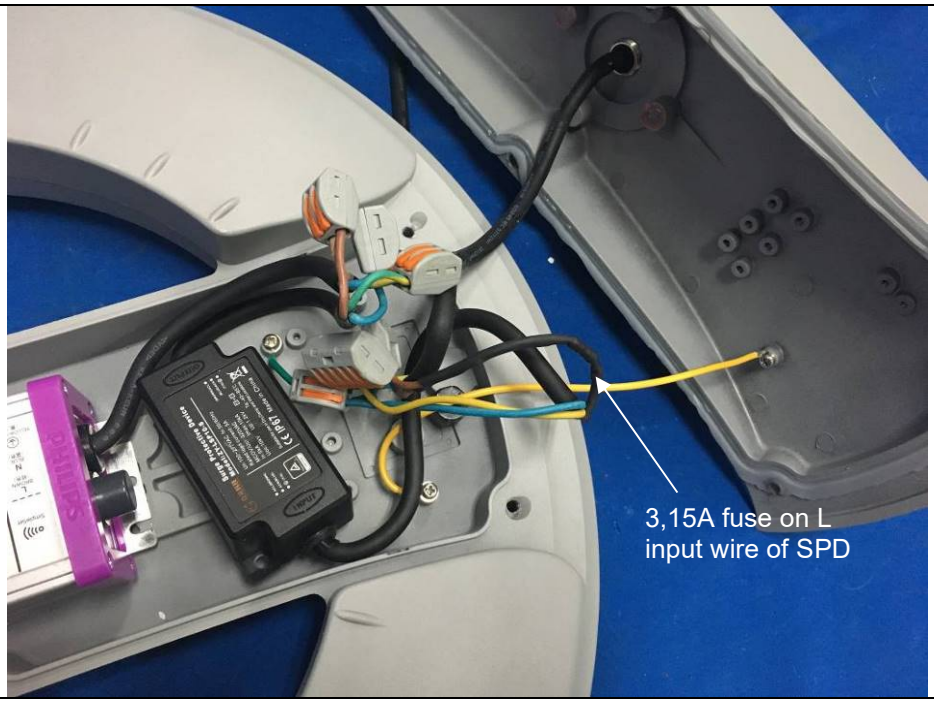
Details of: Gland as cord anchorage with lifting scaffold mounting bracket for all models
Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I

Details of: Internal view with lifting scaffold mounting bracket for all models
Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I with SPD

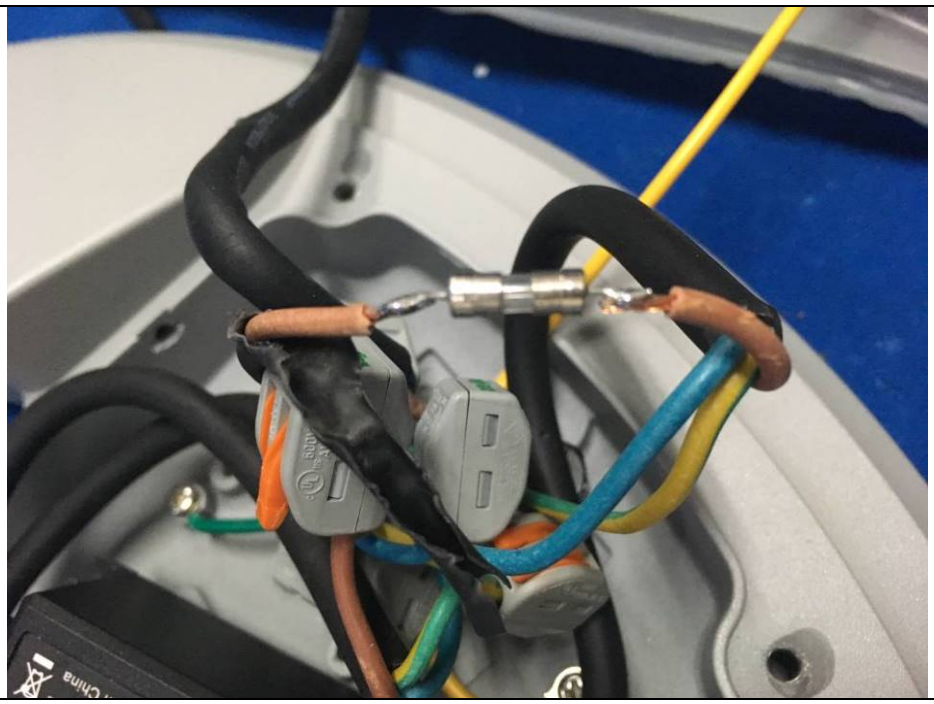
Details of: Internal view with lifting scaffold mounting bracket for all models
Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I with SPD



Details of: SPD view and earthing connection



Details of: Fuse before SPD

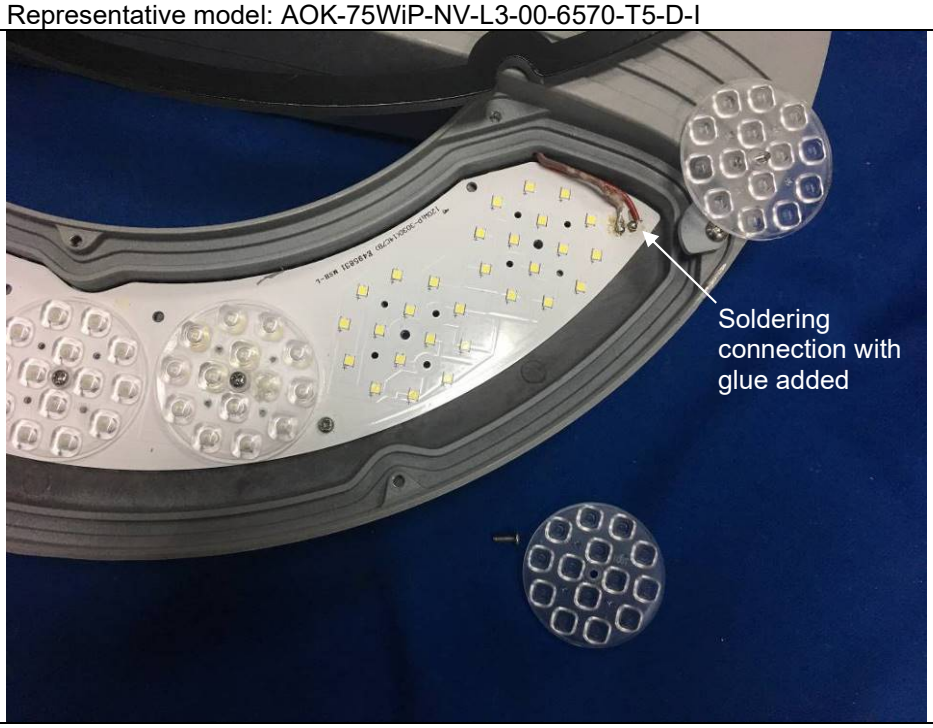


Details of: LED module view

Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I

Details of: LED module view for all models

Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I



Details of: LED module view (Alternative construction with SMD connector for models with ‘SS’ series and ‘XLG’ series LED driver)

Representative model: AOK-75WiP-NV-L3-00-6570-T5-D-I

Details of: LED driver view

Xi LP 150W 0.3-1.05A S1 230V 1175

Details of: LED driver view
Xi LP 100W 0.3-1.05A S1 230V 1175

Details of: LED driver view
LED driver XLG-50-AB

Details of: LED driver view

LED driver XLG-75-H-AB

Details of: LED driver view

XLG-150-H-AB

Details of: LED driver view
SS-75VP-56DH

Details of: LED driver view
SS-50VP-56DH

Details of: LED driver view (SS-30VA-56B)

Details of: LED driver view (SS-50VA-56B)

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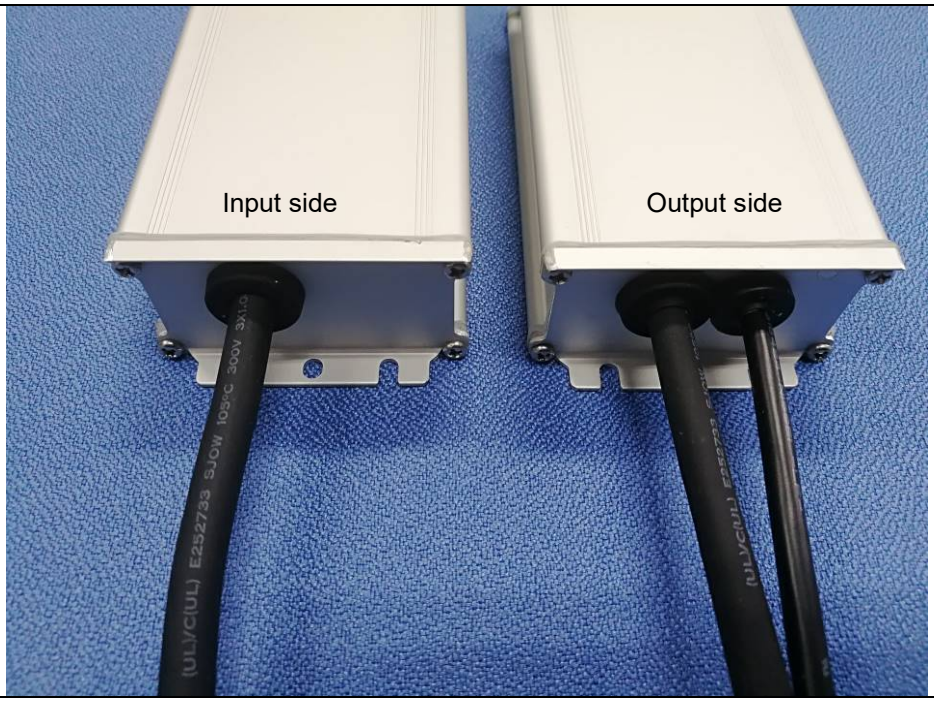
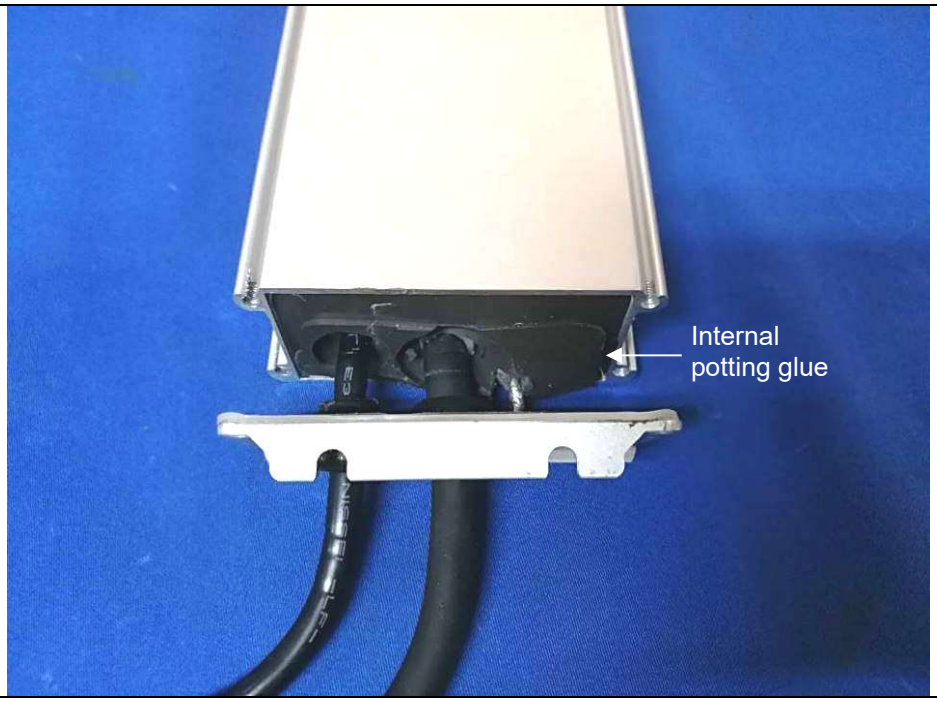
Details of: LED driver view (SS-60VA-L50B)

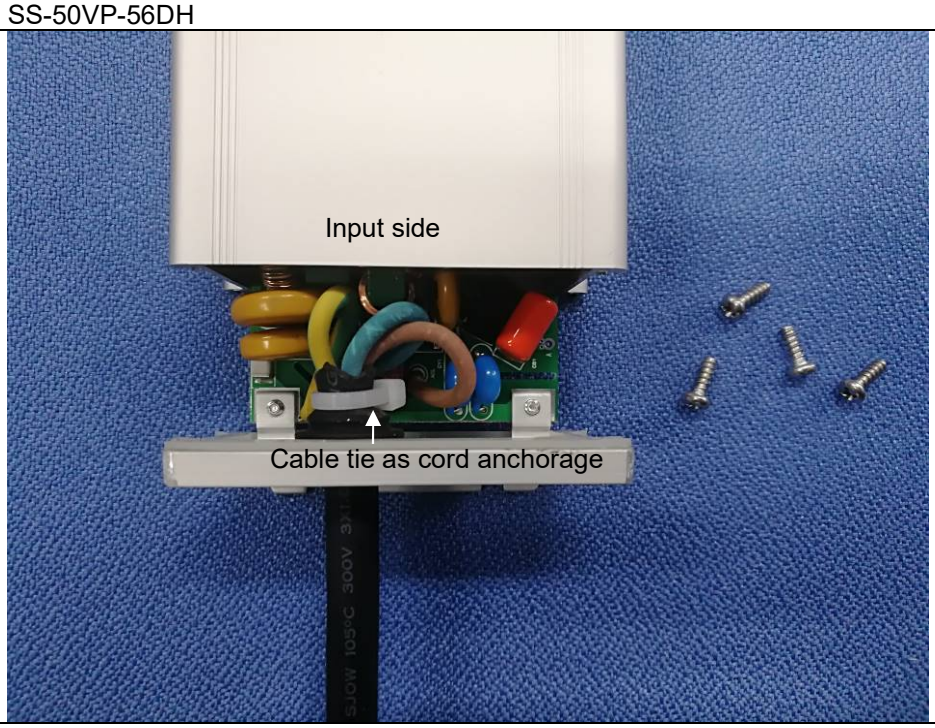
Details of: LED driver view
SS-50VP-56DH



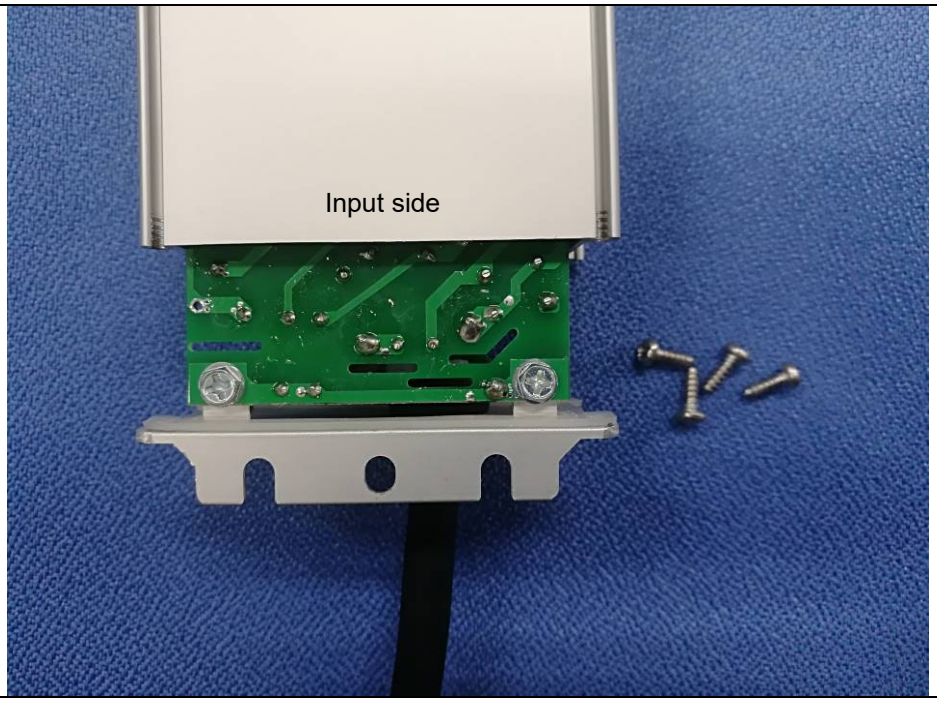
Details of: LED driver view
SS-50VP-56DH



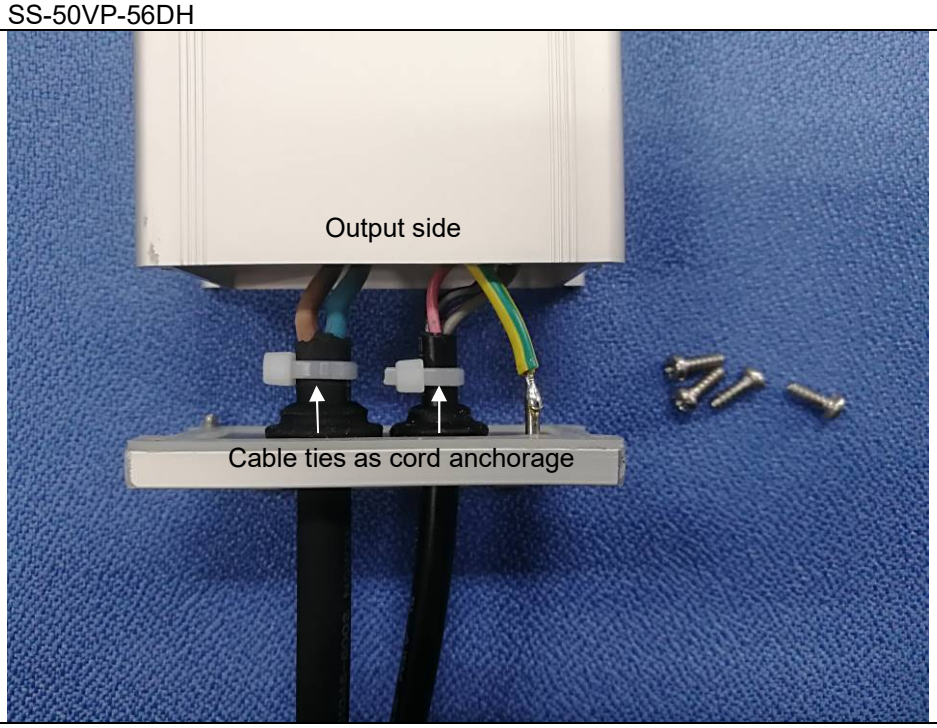
Details of: LED driver view
SS-50VP-56DH



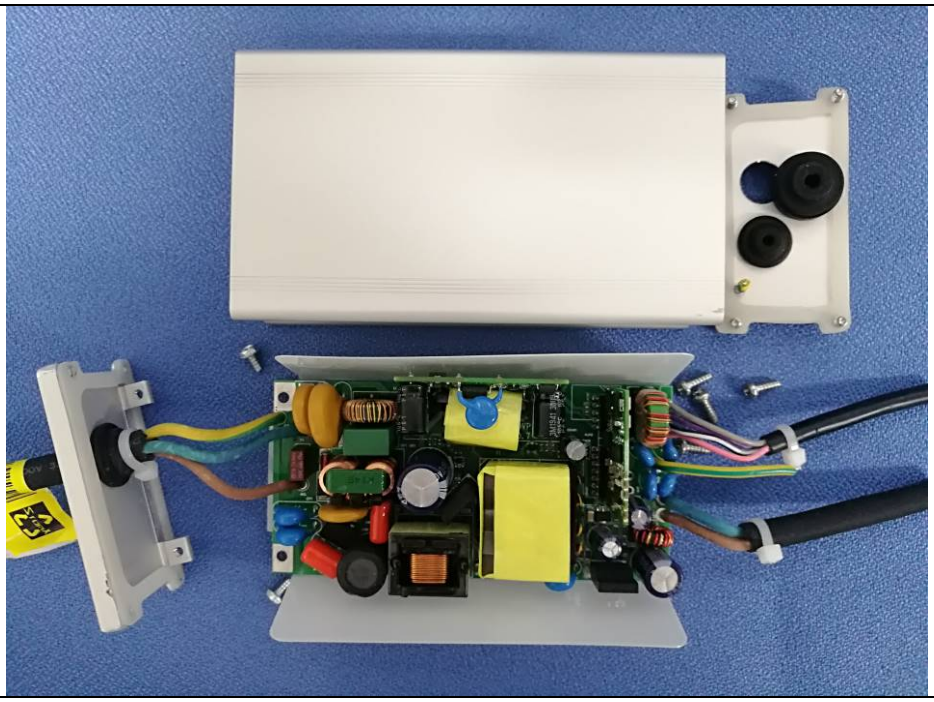
Details of: LED driver view
SS-50VP-56DH



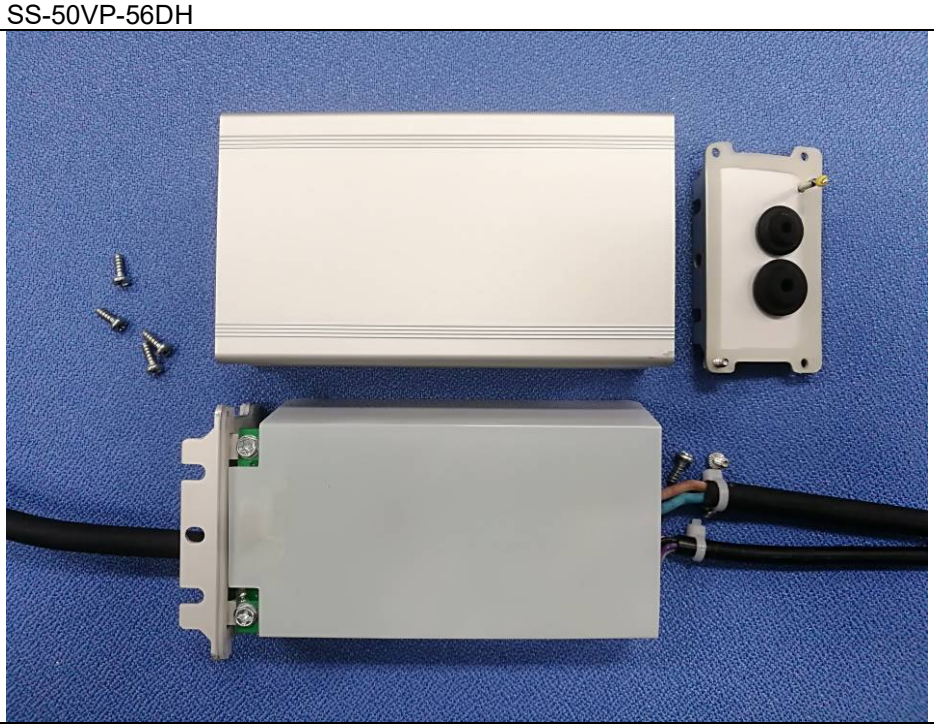
Details of: LED driver view
SS-50VP-56DH



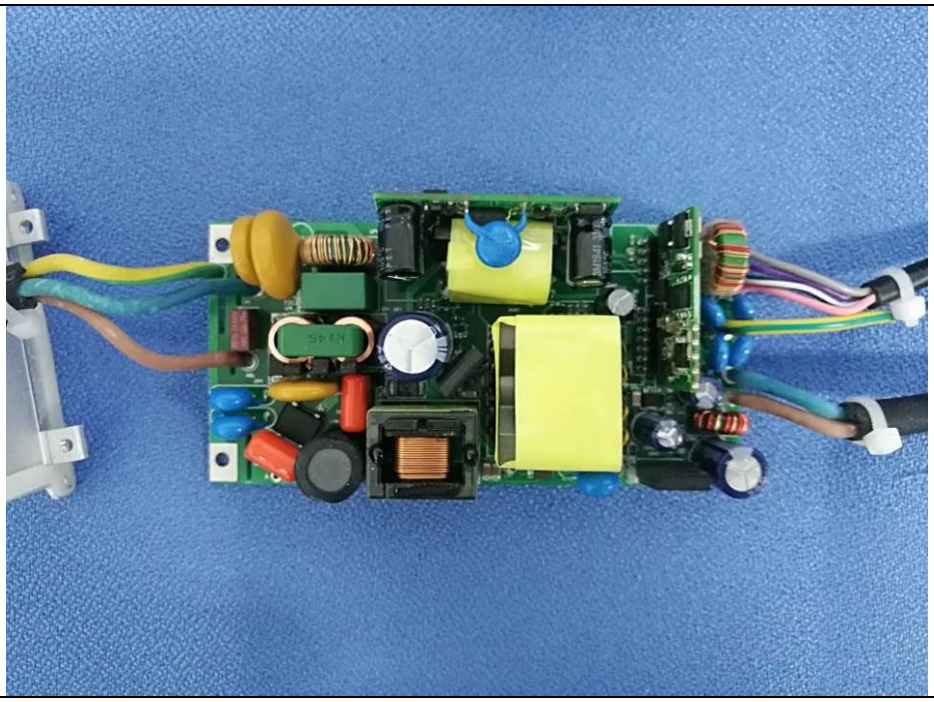
Details of: LED driver view
SS-50VP-56DH



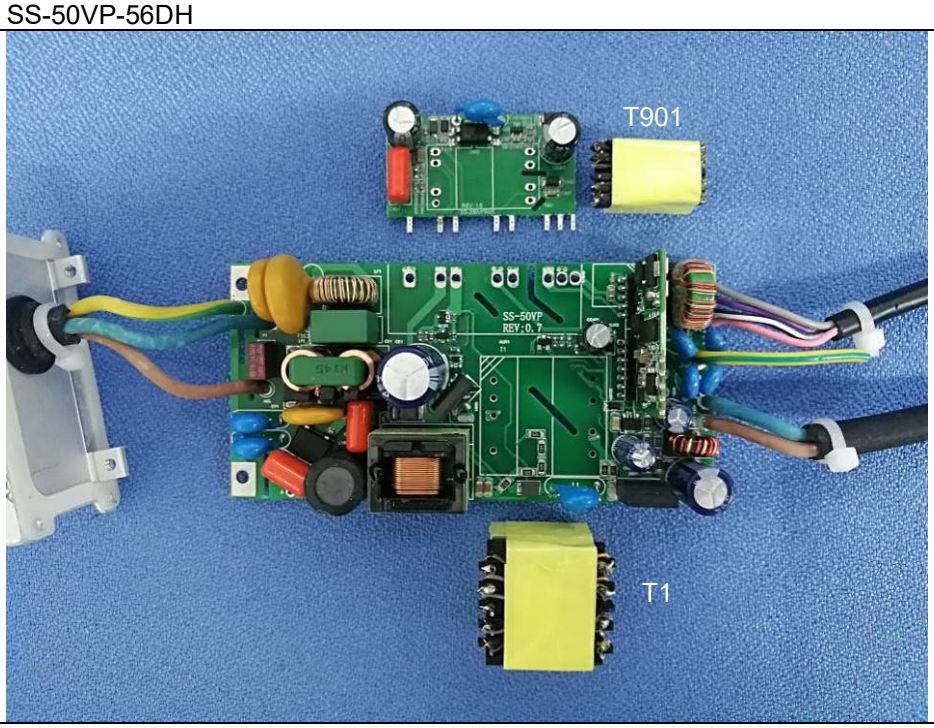
Details of: LED driver view
SS-50VP-56DH



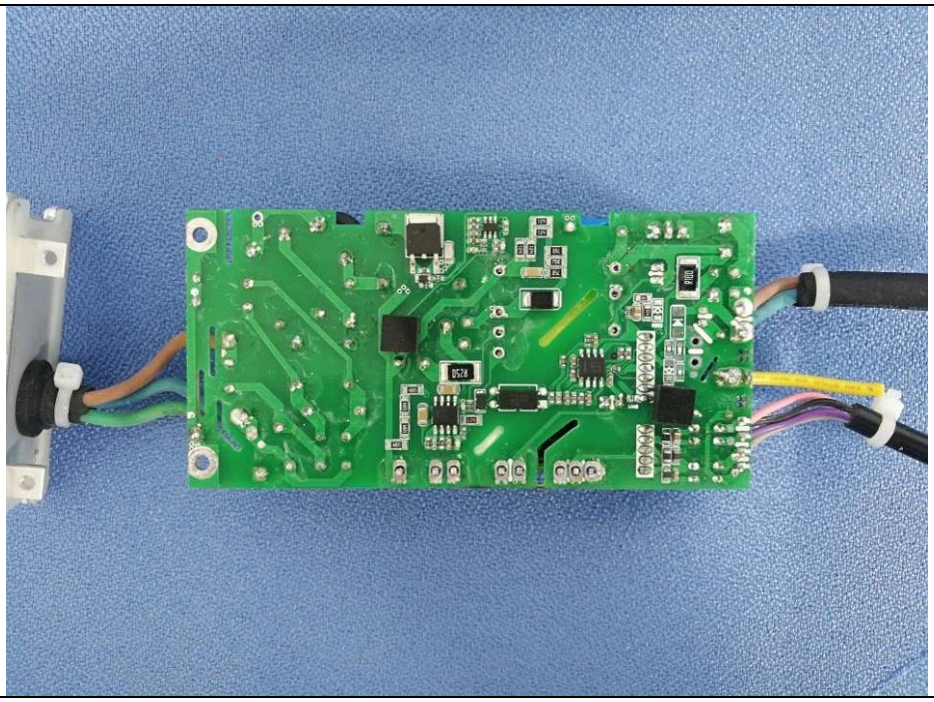
Details of: LED driver view
SS-50VP-56DH



Details of: LED driver view
SS-50VP-56DH



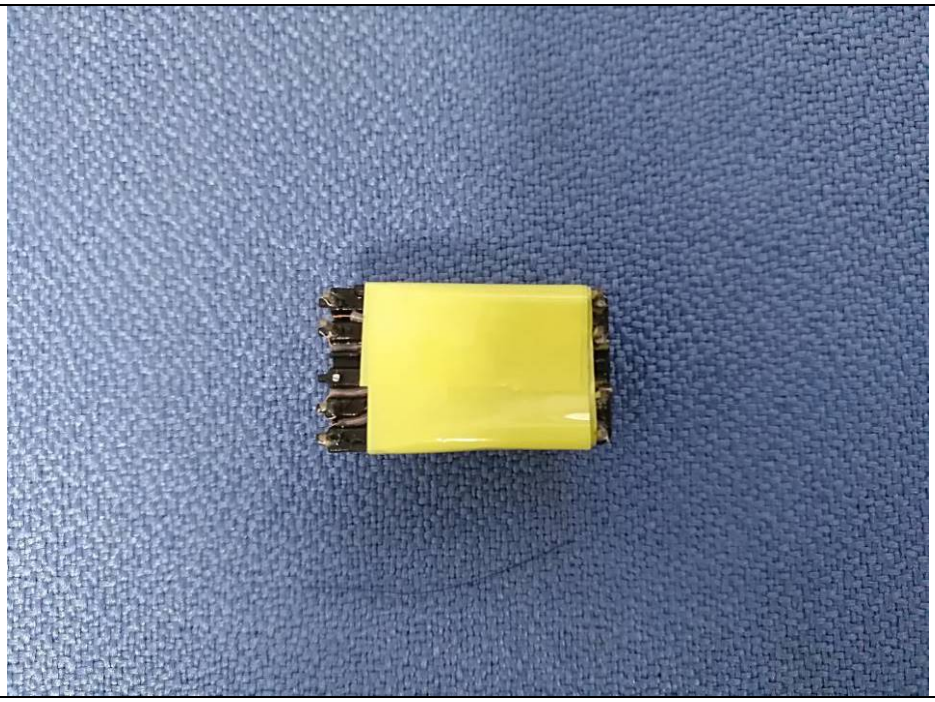
Details of: LED driver view
SS-50VP-56DH



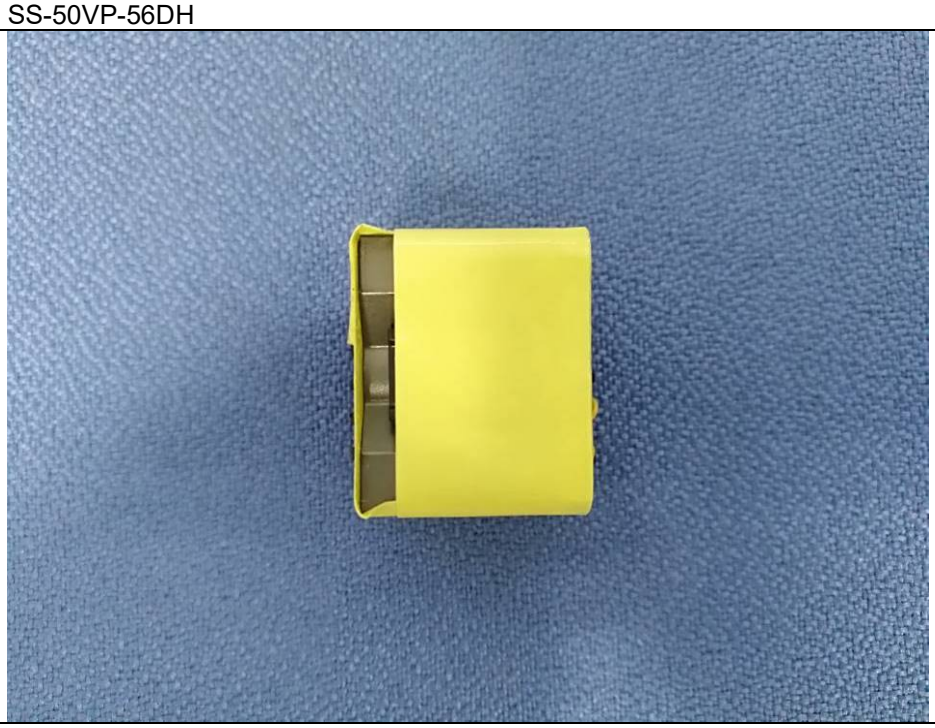
Details of: Transformer (T901) view
SS-50VP-56DH

Attachment No. 7

Details of: Transformer (T901) view
SS-50VP-56DH

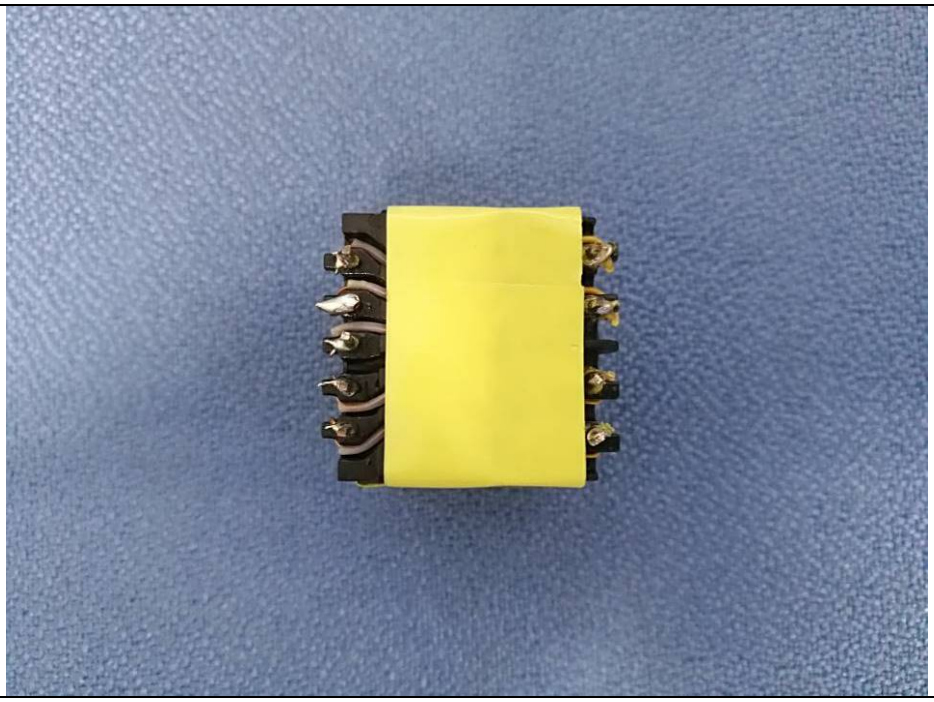


Details of: Transformer (T1) view
SS-50VP-56DH



Attachment No. 7

Details of: Transformer (T1) view
SS-50VP-56DH



End of report