



Test Report issued under the responsibility of:



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

Report Number.....: GZES190601843401

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Name of Testing Laboratory preparing the Report.....: SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Applicant's name.....: Leadsun Technology Co., Ltd.

Address.....: D zone, 3/F., No.1 plant, No.15 Pingbei 2nd Road, Nanping Science and Industrial Park, Xiangzhou, Zhuhai, China

Test specification:

Standard.....: IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017

Test procedure.....: CB Scheme + Deviation for European group

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

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Test item description..... :	LED street luminaires (LEADSUN KV Series LED solar street light)	
Trade Mark..... :	LEADSUN	
Manufacturer	Same as applicant	
Model/Type reference	See model list in 'General product information'	
Ratings	Battery: 12,8 V dc; non-user replaceable LED; IP66; Class III; Ta: 45 °C; other see model list in 'General product information'	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch
Testing location/ address..... :		198 Kezhu Road, Science City, Economic & Technology Development Area, Guangzhou, Guangdong, China
Tested by (name, function, signature)		Freddy Chen/ Project Engineer <i>Freddy Chen</i>
Approved by (name, function, signature)...		Ivory Lu/ Reviewer <i>Ivory Lu</i>
☐	Testing procedure: CTF Stage 1:	N/A
Testing location/ address..... :		
Tested by (name, function, signature)		
Approved by (name, function, signature)...		
☐	Testing procedure: CTF Stage 2:	N/A
Testing location/ address..... :		
Tested by (name + signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature)...		
☐	Testing procedure: CTF Stage 3:	N/A
☐	Testing procedure: CTF Stage 4:	N/A
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 1: 1 page of European group differences and national differences of EN 60598-2-3

Attachment 2: 6 pages of IEC/EN 62031

Attachment 3: 7 pages of IEC/EN 61347-2-11

Attachment 4: 1 page of Additional requirements of EN 62493

Attachment 5: 3 pages of schematic circuit diagram and PCB layout

Attachment 6: 14 pages of photo documentations

Summary of testing:

1. The submitted appliances were found to be compliance with the requirements of IEC 60598-2-3: 2002 + A1: 2011, IEC 60598-1: 2014 + A1: 2017, EN 60598-2-3: 2003 + A1: 2011 and EN 60598-1: 2015 + A1: 2018.
 2. The LED module has been tested according to standard IEC 62031: 2008 + A1: 2012 + A2: 2014 and EN 62031: 2008 + A1: 2013 + A2: 2015 and the results are positive.
 3. The LED products were judged as low risk group LED product according to IEC TR 62778: 2014.
 4. The sensor and battery box were tested according to IEC 61347-2-11: 2001+A1:2017 and EN 61347-2-11: 2001, and test result was positive.
 5. The submitted appliance with lighting source was found to be in compliance with the standard EN 62493: 2015 according to the clause 4.2.2.
 6. The switch was found to be in compliance with EN 61058-1: 2002 + A2: 2008, sub-clause 17.
- After view, model KV260W- RS100, KV260W- VEGA 100 and KV26080W have been selected for full test as the maximum power, model KV180U- VEGA 100 was performed Screwed glands bending test, Four times weight, Endurance test and Thermal test for normal operation, other models were performed construction check.

Tests performed (name of test and test clause):

- 3.5 Marking
- 3.6 Construction
- 3.10 External and internal wiring
- 3.12 Endurance test and thermal test
- 3.13 Resistance to dust, solid objects and moisture
- 3.14 Insulation resistance and electric strength
- 3.15 Resistance to heat, fire and tracking

Testing location:

198 Kezhu Road, Science City, Economic & Technology Development Area, Guangzhou, Guangdong, China

Summary of compliance with National Differences:

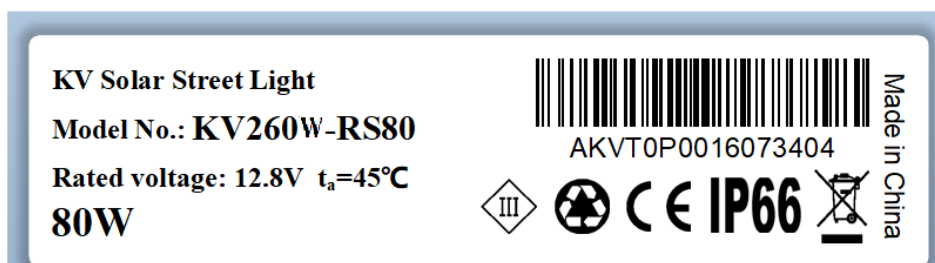
Difference of European group

☒ **The product fulfils the requirements of EN 60598-2-3: 2003 + A1: 2011 and EN 60598-1: 2015 + A1: 2018.**

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:



Trade Mark: **LEADSUN**

Location: attached to the enclosure of luminaire

Remark:

1. The height of graphical symbols, IP number and CE logo are not less than 5 mm are not less than 5 mm;
2. The height of letters and numerals is not less than 2 mm;
3. The height of WEEE symbol is not less than 7 mm;
4. According to the standard, warning and text required by the standard should be written in the official language(s) of the country in which the appliance is to be sold. The applicant should ensure that the samples in future production fulfill the requirement;
5. As declared by the applicant, the importer **(and manufacturer, if it is different)**'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities;
6. Marking on the packaging or in a document accompanying the electrical equipment is only acceptable if it is not possible to place such markings on the product.
7. Other models have similar label as above, just model no. and wattage are different.

Test item particulars.....:	
Classification of installation and use.....: Fixed	
Supply Connection Connector	
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 2020-02-18	
Date (s) of performance of tests 2020-02-18 to 2020-04-10	
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. When determining for test conclusion, measurement uncertainty of tests has been considered. Clause numbers between brackets refer to clauses in IEC 60598-1. This document is issued by the Company subject to its General Conditions of Service, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided:	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies) : Same as applicant

General product information:

LED street luminaires, supplied by the battery box, solar panel was used for charging the battery box, light sensor used for adjusting the light output, non-user replaceable LED used, SELV operated, Class III. All models have similar construction, electrical connection and the same IP classification except the size, and power.

Model list

No.	Model name	Rated wattage (W)	Size (mm)	Battery capacity (Wh)
1	KV180U-RS40	40	1522 × 676 × 191	921 Wh
2	KV180U-RS50	50		
3	KV180U-RS60	60		
4	KV180U-RS80	80		
5	KV180U-RS100	100		
6	KV260W-RS40	40	1562 × 993 × 191	
7	KV260W-RS50	50		
8	KV260W-RS60	60		
9	KV260W-RS80	80		
10	KV260W-RS100	100		
11	KV180U-VEGA 40	40	1522 × 676 × 191	
12	KV180U-VEGA 50	50		
13	KV180U-VEGA 60	60		
14	KV180U-VEGA 80	80		
15	KV180U-VEGA 100	100		
16	KV260W-VEGA 40	40	1562 × 993 × 191	
17	KV260W-VEGA 50	50		
18	KV260W-VEGA 60	60		
19	KV260W-VEGA 80	80		
20	KV260W-VEGA 100	100		
21	KV18060U	60	1522 × 676 × 191	

22	KV26080W	80	1562×993×191		
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IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	GENERAL TEST REQUIREMENTS		P
3.2 (0.3)	More sections applicable..... :	Yes ☒ No ☐ Section/s: IEC/EN 62031	—
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 62031	—
	Luminaire design in the light source safety standard		P

3.4 (2)	CLASSIFICATION OF LUMINAIRES		
3.4 (2.2)	Type of protection	Class III	P
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 ☒	—
	b) on a mast arm	Yes ☒ No ☐	—
	c) on a post top	Yes ☒ No ☐	—
	d) on span or suspension wires	Yes ☐ No ☒	—
	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		P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz		P
3.5 (3.3.3)	Operating temperature		P
3.5 (3.3.5)	Wiring diagram		N/A
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
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		N/A
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		N/A
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		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		N/A
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		N/A
	e) Cross-sectional area of wires if applicable		N/A
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height	15 M	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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7.1)	Contact to metal parts		P
3.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
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		N/A
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		P
	- adequate rating		P
	- adequate fixing		P
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		P
3.6 (4.9)	Insulating lining and sleeves		N/A
3.6 (4.9.1)	Retainment		N/A
	Method of fixing :		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) :		N/A
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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
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
3.6 (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		N/A
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..... :	2,5 Nm; screw for mounting bracket	P
	Torque test: torque (Nm); part..... :	1,2 Nm; screw for battery box	P
	Torque test: torque (Nm); part..... :	0,5 Nm; screw for LED cover	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part..... :	0,5 Nm; Screw for Infrared sensor	P
	Torque test: torque (Nm); part..... :	0,5 Nm; Screw for switch	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)..... :	3,25	P
	Screwed glands; force (Nm)..... :		N/A
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)		N/A
	- other parts; energy (Nm)	Metal enclosure; 0,7 Nm	P
	- other parts; energy (Nm)	LED cover; 0,7 Nm	P
	- other parts; energy (Nm)	DC connector; 0,7 Nm	P
	- other parts; energy (Nm) :	Solar panel; 0,7 Nm	P
	1) live parts		N/A
	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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	A) four times the weight	KV260W- RS100: 43,18 x 4 = 172,72 Kg; KV260W- VEGA 100: 42,42 x 4 = 169,68 Kg; KV26080W: 35,57 x 4 = 142,28 Kg; KV180U- VEGA 100: 33,32 x 4 = 133,28 Kg	P
	B) torque 2,5 Nm		P
	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/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
	No lamp control gear :	(compliance with Section 12)	P
	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		P
3.6 (4.18.3)	- corrosion of aluminium		N/A
3.6 (4.19)	Ignitors 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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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		—
	Luminaires with E_{thr} :		P
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2 .. :	RG1	P
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	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
	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:		N/A
	Minimum two fixing means		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		P
	Voltage ≤ ELV		P
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		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

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Clause	Requirement + Test	Result - Remark	Verdict
	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 $\leq$ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- 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		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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).....:	Max. 1,98	P
	- used load (N).....:	2704 (V = 52 m/s)	P
	- measured deformation (cm/m)	< 2	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		N/A
	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		N/A
	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	38	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
	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	N/A
	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	N/A
	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		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance $< 0,5 \Omega$:		N/A
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	Protective earthing of the luminaire not via built-in control gear		N/A
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
3.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
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		N/A
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
3.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
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		N/A
	Length of earth conductor		N/A
3.8.1 (-)	Attachment prevented from rotation		N/A
3.9 (14)	SCREW TERMINALS		
	Separately approved; component list		N/A
	Part of the luminaire		N/A
3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		
	Separately approved; component list..... :		N/A
	Part of the luminaire :		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 :	Battery operated	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 :	2661; 2464	P
	Nominal cross-sectional area (mm ²) :	0,5-2,5 mm ²	P
	Cables equal to IEC 60227 or IEC 60245		P

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
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
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		P
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- pull test: 25 times; pull (N) :	60	P
	- torque test: torque (Nm) :	0,25	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		N/A
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
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		P
	No unsafe compatibility		P
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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		N/A
	Cross-sectional area (mm ²)..... :		N/A
	Insulation thickness (mm) :		N/A
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²)..... :		N/A
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		N/A
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.		P
	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		N/A
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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- pull test: 25 times; pull (N)		N/A
	- torque test: torque (Nm)		N/A
3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		
3.11 (8.2.1)	Live parts not accessible		N/A
	Basic insulated parts not used on the outer surface without appropriate protection		N/A
	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		N/A
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		N/A
	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
	- voltage under load (V)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- no-load voltage (V)..... :		N/A
	- touch current if applicable (mA) :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V) :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		N/A
3.11 (8.2.6)	Covers reliably secured		N/A
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

3.12 (12)	ENDURANCE TEST AND THERMAL TEST		
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 :	Mounting on post top	—
	b) test temperature (°C) :	55	—
	c) total duration (h) :	240	—
	d) supply voltage (V) :	Supplied by battery box	—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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)		N/A
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
	- 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

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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 Test 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)		—
	Ball-pressure test	See Test 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 Test 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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.13 (9)	RESISTANCE TO DUST 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:		P
	- classification according to IP..... :	IP66	—
	- mounting position during test..... :	Mounting on post top	—
	- fixing screws tightened; torque (Nm) :	Screw for battery box; 0,8 Nm; Screw for LED cover; 0,33 Nm; Screw for Infrared sensor; 0,33 Nm; Screw for switch; 0,33 Nm;	—
	- tests according to clauses..... :	9.2.2 and 9.2.7 of IEC 60598-1	—
	- 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
	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; 93% Rh	P

5.13 (9)	RESISTANCE TO DUST AND MOISTURE(IEC 60598-2-15:2015)		N/A
5.13 (-)	If IP > IP 20 the order of tests as specified in clause 5.12		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	Covered by metal foil	—
	Insulation resistance (MΩ)		—
	SELV		P
	- between current-carrying parts of different polarity :	> 20 MΩ	P
	- between current-carrying parts and mounting surface	> 20 MΩ	P
	- between current-carrying parts and metal parts of the luminaire	> 20 MΩ	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		N/A
	- between live parts of different polarity		N/A
	- between live parts and mounting surface		N/A
	- between live parts and metal parts		N/A
	- 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 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)		P
	SELV		P
	- between current-carrying parts of different polarity :	500 V	P
	- between current-carrying parts and mounting surface	500 V	P
	- between current-carrying parts and metal parts of the luminaire	500 V	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 :		N/A
	Other than SELV		N/A
	- between live parts of different polarity :		N/A
	- between live parts and mounting surface :		N/A
	- between live parts and metal parts :		N/A
	- 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):		N/A

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)	P
3.15 (13.4)	Proof tracking test (IEC 60112) :	See Test Table 3.15 (13.4)	P

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)	
PCB for control module	See Annex 1	125	0,75	
Switch	See Annex 1	125	0,85	
Plastic box on solar panels	See Annex 1	125	1,78	
Supplementary information: —				

IEC 60598-2-3					
Clause	Requirement + Test			Result - Remark	Verdict
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
PCB for control module	See Annex 1	10	No	0	P
Quick connector	See Annex 1	10	No	0	P
Switch	See Annex 1	10	No	0	P
DC connector for input wire	See Annex 1	10	No	0	P
Infrared sensor	See Annex 1	10	No	0	P
Plastic box on solar panels	See Annex 1	10	No	0	P
Supplementary information: —					

3.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				
Glow wire temperature :			650°C		—
Object/ Part No./ Material	Manufacturer/ trademark		Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
LED cover	See Annex 1		No	0	P
Gasket for LED cover	See Annex 1		No	0	P
Supplementary information: —					

3.15 (13.4)	TABLE: Proof tracking test (IEC 60112)				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
PCB for control module	See Annex 1	P	P	P	P
Quick connector	See Annex 1	P	P	P	P
Switch	See Annex 1	P	P	P	P
DC connector for input wire	See Annex 1	P	P	P	P
Infrared sensor	See Annex 1	P	P	P	P
Plastic box on solar panels	See Annex 1	P	P	P	P

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

Supplementary information: —

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

ANNEX 1	TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
LED	B	OSRAM	GW.series	3000-5700 K; IF max.= 800 mA; VF=5,55 V	IEC 62031: 2018 EN IEC 62031: 2020	Tested with appliance	
LED PCB	B	Leadsun (Zhuhai) Pohtoelectric Technology Co., Ltd.	—	Metal base	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
LED wire	B	Dongguan Fuyu Wire Co., Ltd.	2464	20 AWG, 80 °C, 300 V	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
External wire	B	Tuv	2PFG 1169	2,5 mm², PVC	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
	D	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K	2,5 mm²	EN 50618: 2014	TUV R50318681	

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

ANNEX 1	TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
	D	Dongguan Bolan Electronic Technology Co., Ltd.	2661	16 AWG; 105 °C, 300 V	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E328867 & Tested with appliance	
	D	Sinseader Electronic Co., Ltd.	2464	18 AWG; 105 °C; 300 V	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E469107 & Tested with appliance	
	D	Dongguan Bolan Electronic Technology Co., Ltd.	2661	20 AWG; 300 V	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E328867 & Tested with appliance	

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

ANNEX 1	TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Connection wire for Infrared sensor	B	Dongguan Bolan Electronic Technology Co., Ltd.	2661	22 AWG; 80 °C; 300 V	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E328867 & Tested with appliance	
Internal wire	B	Guangdong Yongroi Cable Technology Co., Ltd.	1015	22 AWG; 600 V; 80 °C	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E204893 & Tested with appliance	
	D	Dongguan Cheng Xing Electronic Co., Ltd.	1015	16 AWG; 600 V; 105 °C	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E249743 & Tested with appliance	

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

ANNEX 1	TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
	D	Dongguan Wenchang Electronic Co., Ltd.	1015	14 AWG; 600 V; 105 °C	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E214500 & Tested with appliance	
	D	Dongguan Wenchang Electronic Co., Ltd.	1015	16 AWG; 600 V; 105 °C	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E214500 & Tested with appliance	
PCB for control module	B	Sunking Circuits Electronic Technology Co., Ltd.	SK-01, SK-02	Multilayer fiberboard	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018 UL 758	UL E326765 & Tested with appliance	
Battery	B	Leadsun Technology Co., Ltd.	B1845	12,8 Vdc, 72Ah (921,6 Wh) Ta 45	IEC 62133-2: 2017	SGS Test report SZES 1909015512 01	

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

ANNEX 1	TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Plastic used in USB port, programming port and switch USB	B	Risedone Electronic	—	PBT	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
Connector on PCB	B	Dongguan City Hexie Electronic Technology	XT30	PA	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
DC connector for input wire	B	Leadsun (Zhuhai) Pohtoelectric Technology Co., Ltd.	—	PVC	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
Quick connector	B	Shenzhen Lilutong Connector Corp., Ltd.	M16	PA	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	

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

ANNEX 1	TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Plastic box on solar panels	B	Qixian	006/007	PA	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
	D	Zjrh	SP10X	PA	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
LED cover	B	Teijin Chemicals Plastic Compounds Shanghai Ltd	L-1250	PC	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
Infrared sensor	B	Shanghai Nicera Sensor Co., Ltd.	P906B	PE	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	

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

ANNEX 1		TABLE: Critical components information					
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
	D	Panasonic	EKMC160311 1	PE	IEC 60598-2-3: 2002 + A1: 2011 IEC 60598-1: 2014 + A1: 2017 EN 60598-2-3: 2003 + A1: 2011 EN 60598-1: 2015 + A1: 2018	Tested with appliance	
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component							

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

ANNEX 2	TABLE: Thermal tests of Section 12						
	Type reference	KV260W- RS100		—			
	Lamp used.....	Non-user replaceable LED		—			
	Lamp control gear used.....	—		—			
	Mounting position of luminaire	Mounting on post top		—			
	Supply wattage (W)	—		—			
	Supply current (A)	—		—			
	Calculated power factor.....	—					
	Table: measured temperatures corrected for ta = 45°C:			—			
	- abnormal operating mode	—		—			
	- test 1: rated voltage.....	—		—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	Supplied by battery box		—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	—		—			
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	—		—			
	Through wiring or looping-in wiring loaded by a current of A during the test	—		—			
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Inner surface of LED lens	45,6	—	81,4	—	Ref.	—	—
LED wire	45,6	—	61,1	—	90	—	—
LED	45,6	—	82,3	—	Ref.	—	—
PCB for LED	45,6	—	72,1	—	Ref.	—	—
Battery	45,6	—	51,2	—	Ref.	—	—
Internal wire	45,6	—	53,2	—	90	—	—
Wire be clamped	45,6	—	50,2	—	75	—	—
External wire	45,6	—	48,3	—	90	—	—
Plastic used in switch	45,6	—	49,2	—	Ref.	—	—
Plastic box on solar panels	45,6	—	53,5	—	Ref.	—	—
Plastic used in USB port	45,6	—	50,3	—	Ref.	—	—

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Clause	Requirement + Test			Result - Remark			Verdict
Plastic used in Program port	45,6	—	50,5	—	Ref.	—	—
Quick connector	45,6	—	51,9	—	Ref.	—	—
Internal wire in battery box	45,6	—	47,2	—	90	—	—
PCB for control module	45,6	—	85,3	—	Ref.	—	—
The enclosure for Infrared sensor	45,6	—	65,2	—	Ref.	—	—
Mounting surface	45,6	—	47,4	—	90	—	—
Lighted object (0,1 m)	45,6	—	49,6	—	90	—	—
Supplementary information: —							

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

ANNEX 2	TABLE: Thermal tests of Section 12						
	Type reference	KV260W- VEGA 100	—				
	Lamp used.....	Non-user replaceable LED	—				
	Lamp control gear used.....	—	—				
	Mounting position of luminaire	Mounting on post top	—				
	Supply wattage (W)	—	—				
	Supply current (A)	—	—				
	Calculated power factor.....	—					
	Table: measured temperatures corrected for ta = 45°C:		—				
	- abnormal operating mode	—	—				
	- test 1: rated voltage.....	—	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	Supplied by battery box	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	—	—				
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	—	—				
	Through wiring or looping-in wiring loaded by a current of A during the test	—	—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Inner surface of LED lens	45,3	—	97,6	—	Ref.	—	—
LED wire	45,3	—	69,0	—	90	—	—
LED	45,3	—	103,5	—	Ref.	—	—
PCB for LED	45,3	—	70,9	—	Ref.	—	—
Battery	45,3	—	55,4	—	Ref.	—	—
Internal wire	45,3	—	55,6	—	90	—	—
Wire be clamped	45,3	—	47,1	—	75	—	—
External wire	45,3	—	48,3	—	90	—	—
Plastic used in switch	45,3	—	48,9	—	Ref.	—	—
Plastic box on solar panels	45,3	—	45,6	—	Ref.	—	—
Plastic used in USB port	45,3	—	48,9	—	Ref.	—	—

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
Plastic used in Program port	45,3	—	48,5	—	Ref.	—	—
Quick connector	45,3	—	45,9	—	Ref.	—	—
Internal wire in battery box	45,3	—	49,4	—	90	—	—
PCB for control module	45,3	—	74,4	—	Ref.	—	—
The enclosure for Infrared sensor	45,3		45,4		Ref.		
DC connector for input wire	45,3		47,9		Ref.		
Mounting surface	45,3	—	44,1	—	90	—	—
Lighted object (0,1 m)	45,3	—	46,2	—	90	—	—
Supplementary information: —							

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

ANNEX 2	TABLE: Thermal tests of Section 12						
	Type reference	KV26080W	—				
	Lamp used.....	Non-user replaceable LED	—				
	Lamp control gear used.....	—	—				
	Mounting position of luminaire	Mounting on post top	—				
	Supply wattage (W)	—	—				
	Supply current (A)	—	—				
	Calculated power factor.....	—					
	Table: measured temperatures corrected for ta = 45°C:		—				
	- abnormal operating mode	—	—				
	- test 1: rated voltage.....	—	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	Supplied by battery box	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	—	—				
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	—	—				
	Through wiring or looping-in wiring loaded by a current of A during the test	—	—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Inner surface of LED lens	45,8	—	98,5	—	Ref.	—	—
LED wire	45,8	—	58,9	—	90	—	—
LED	45,8	—	99,8	—	Ref.	—	—
PCB for LED	45,8	—	98,7	—	Ref.	—	—
Battery	45,8	—	51,6	—	Ref.	—	—
Internal wire	45,8	—	53,2	—	90	—	—
Wire be clamped	45,8	—	46,5	—	75	—	—
External wire	45,8	—	46,4	—	90	—	—
Plastic used in switch	45,8	—	49,8	—	Ref.	—	—
Plastic box on solar panels	45,8	—	48,1	—	Ref.	—	—
Plastic used in USB port	45,8	—	49,9	—	Ref.	—	—

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
Plastic used in Program port	45,8	—	50,3	—	Ref.	—	—
Quick connector	45,8	—	45,8	—	Ref.	—	—
Internal wire in battery box	45,8	—	51,5	—	90	—	—
PCB for control module	45,8		75,4		Ref.		
Mounting surface	45,8	—	51,3	—	90	—	—
Lighted object (0,1 m)	45,8	—	52,1	—	90	—	—
Supplementary information: —							

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

ANNEX 2	TABLE: Thermal tests of Section 12						
	Type reference	KV180U- VEGA 100	—				
	Lamp used.....	Non-user replaceable LED	—				
	Lamp control gear used.....	—	—				
	Mounting position of luminaire	Mounting on post top	—				
	Supply wattage (W)	—	—				
	Supply current (A)	—	—				
	Calculated power factor.....	—					
	Table: measured temperatures corrected for ta = 45°C:		—				
	- abnormal operating mode	—	—				
	- test 1: rated voltage.....	—	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	Supplied by battery box	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	—	—				
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	—	—				
	Through wiring or looping-in wiring loaded by a current of A during the test	—	—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Battery	45,8	—	52,8	—	Ref.	—	—
Internal wire	45,8	—	49,7	—	90	—	—
Wire be clamped	45,8	—	48,3	—	75	—	—
External wire	45,8	—	49,4	—	90	—	—
Plastic used in switch	45,8	—	48,2	—	Ref.	—	—
Plastic box on solar panels	45,8	—	47,4	—	Ref.	—	—
Plastic used in USB port	45,8	—	49,8	—	Ref.	—	—
Plastic used in Program port	45,8	—	50,0	—	Ref.	—	—
Quick connector	45,8	—	50,4	—	Ref.	—	—
Internal wire in battery box	45,8	—	49,6	—	90	—	—
PCB for control module	45,8	—	55,1	—	Ref.	—	—

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

Supplementary information: —

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	Screw terminals (part of the luminaire)		N/A
ANNEX 4	Screwless terminals (part of the luminaire)		N/A

---End of Main report---

Attachment 1: European group differences and national differences for IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4)	CONSTRUCTION		P
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		N/A
3.10 (5.2.2)	Cables equal to EN 50525		N/A
	Replace table 5.1 – Supply cord		N/A
3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS		N/A
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		N/A
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 <i>(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)</i> 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

--- End of Attachment 1 ---

Attachment 2: IEC/EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		
4.4	Integral modules tested assembled in the luminaire		P
4.5	Independent modules complies with requirements in IEC 60598-1		N/A
5	GENERAL TEST REQUIREMENTS		
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13		N/A
	General conditions for tests in Annex A	(see Annex A)	P
6	CLASSIFICATION		
	Built-in module.....:	Yes ☐ No ☒	—
	Independent module.....:	Yes ☐ No ☒	—
	Integral module.....:	Yes ☒ No ☐	—
	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.		—
8	TERMINALS		N/A
9 (9)	PROVISION FOR PROTECTIVE EARTHING		N/A
10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		N/A
- (10.1)	Controlgear protected against accidental contact with live parts		N/A
- (A2)	The current flowing between the part concerned and earth is measured and does not exceed 0,7 mA (peak) or 2 mA d.c.:		N/A
- (A2)	For frequencies above 1 kHz, the current does not exceed 0,7 mA (peak) multiplied by the value of the frequency in kilohertz or 70 mA (peak):		N/A
- (A3)	The voltage between the part concerned and any accessible part is measured and does not exceed 34 V (peak).....:		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

Attachment 2: IEC/EN 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 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

11 (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 (M Ω):		P
	For basic insulation ≥ 2 M Ω	20 M Ω	P
	For double or reinforced insulation ≥ 4 M Ω		N/A
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		N/A

12 (12)	ELECTRIC STRENGTH		
	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V		P
	Working voltage ≤ 50 V, test voltage 500 V		P

Attachment 2: IEC/EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Working voltage $> 50 \text{ V} \leq 1000 \text{ V}$, test voltage (V):		N/A
	Basic insulation, $2U + 1000 \text{ V}$		N/A
	Supplementary insulation, $2U + 1000 \text{ V}$		N/A
	Double or reinforced insulation, $4U + 2000 \text{ V}$		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
13 (14)	FAULT CONDITIONS		
- (14)	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		N/A
- (14.1)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (except between live parts and accessible metal parts)		N/A
	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3		N/A
- (14.2)	Short-circuit or interruption of semiconductor devices	(see appended table)	P
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile		N/A
- (14.4)	Short-circuit across electrolytic capacitors		P
- (14.5)	After the tests has been carried out on three samples:		P
	The insulation resistance $\geq 1 \text{ M}\Omega$	20 $\text{M}\Omega$	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
- (14.6)	Relevant fault condition tests with high-power supply		N/A
13.2	Overpower condition		
	Module withstands overpower condition $>15 \text{ min.}$		P

Attachment 2: IEC/EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		N/A
15	CONSTRUCTION		
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P
16 (16)	CREEPAGE DISTANCES AND CLEARANCES		
- (16)	Creepage and distances and clearances in compliance with IEC 61347-1	(see appended table)	N/A
	Insulating lining of metallic enclosures		N/A
	Basic insulation on printed boards tested according to clause 14		N/A
	Distances subjected to both sinusoidal voltage as non-sinusoidal pulses not less than value in Table 16		N/A
	Creepage distances not less than minimum clearance		N/A
16 (-)	Conductive accessible parts in compliance with applicable parts of IEC 60598-1		N/A
17 (17)	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS		
	Cl. 17 refer to Cl. 17 of IEC 61347-1 which refer to Cl. 4.11 and 4.12 of IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)		P
18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
- (18.1)	Ball-pressure test		N/A
- (18.2)	Test of printed boards		N/A
- (18.3)	Glow-wire test (650°C)	See Test Table 18 (18.3)	P
- (18.4)	Needle-flame test (10 s)		N/A
- (18.5)	Proof tracking test	See Test Table 18 (18.5)	P
19 (19)	RESISTANCE TO CORROSION		N/A
20	INFORMATION FOR LUMINAIRE DESIGN		N/A
21	HEAT MANAGEMENT		N/A

Attachment 2: IEC/EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict

16 (16)	TABLE: clearance and creepage distance measurements (mm)	N/A
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17 (18.1)	TABLE: Ball Pressure Test of Thermoplastics	N/A
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17 (18.2)	TABLE: Test of printed boards	P
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18 (18.3)	TABLE: Glow-wire test					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	
LED cover	See Annex 1	30	No	0	P	
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) :					No	
Supplementary information: —						

18 (18.4)	TABLE: Needle-flame test	N/A
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18 (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
LED cover	See Annex 1	P	P	P	P
Supplementary information: —					

22	PHOTOBIOLOGICAL SAFETY	
22.1	UV radiation	P
	Luminous radiation not exceed 2mW/klm	P
22.2	Blue light hazard	P
	Assessed according to IEC TR 62778	RG1
22.3	Infrared radiation	N/A
	Requirements for infrared radiation when required	N/A

Attachment 2: IEC/EN 62031			
Clause	Requirement + Test	Result - Remark	Verdict
A	ANNEX A - TESTS		
	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable		P
13 (14)	TABLE: tests of fault conditions		
Part	Simulated fault		Hazard
One LED	Short circuit		No
One LED	Open circuit		No
ANNEX 1	SELV-operated LED modules		N/A

--- End of Attachment 2 ---

Attachment 3: IEC/EN 61347-2-11

Clause	Clause	Clause	Clause
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4 (4)	GENERAL REQUIREMENTS		
- (4)	<u>Insulation materials</u> according requirements in Annex N of IEC 61347-1		N/A
- (4)	Compliance of <u>independent controlgear enclosure</u> with IEC 60 598-1		N/A
- (4)	<u>Built-in electronic controlgear</u> with double or reinforced insulation comply with Annex O of IEC 61347-1		N/A
- (4)	<u>SELV controlgear</u> comply with Annex L of IEC 61347-1		N/A

6 (6)	CLASSIFICATION		
	Built-in controlgear	Yes ☐ No ☒	—
	Independent controlgear	Yes ☐ No ☒	—
	Integral controlgear	Yes ☒ No ☐	—

7 (7)	MARKING	N/A
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8 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS	N/A
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9 (8)	TERMINALS	N/A
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10 (9)	PROVISION FOR PROTECTIVE EARTHING	N/A
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11 (11)	MOISTURE RESISTANCE AND INSULATION		
	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance:		P
	For basic insulation $\geq 2 \text{ M}\Omega$	$> 20 \text{ M}\Omega$	P
	For double or reinforced insulation $\geq 4 \text{ M}\Omega$		N/A
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		N/A

12 (12)	ELECTRIC STRENGTH		
	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V		P
	Working voltage $\leq 50 \text{ V}$, test voltage 500 V		P
	Working voltage $> 50 \text{ V} \leq 1000 \text{ V}$, test voltage (V):		N/A
	Basic insulation, $2U + 1000 \text{ V}$		N/A

Attachment 3: IEC/EN 61347-2-11

Clause	Clause	Clause	Clause
	Supplementary insulation, 2U + 1000 V		N/A
	Double or reinforced insulation, 4U + 2000 V		N/A
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A

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	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) 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)	N/A
- (14.3)	Short-circuit or interruption of semiconductor devices	(see appended table) P
- (14.4)	Short-circuit across insulation consisting of lacquer, enamel or textile	N/A
- (14.5)	Short-circuit across electrolytic capacitors	(see appended table) P
- (14.6)	After the tests has been carried out on three samples:	P
	The insulation resistance $\geq 1 \text{ M}\Omega$: 20 $\text{M}\Omega$	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	—

15 (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

Attachment 3: IEC/EN 61347-2-11			
Clause	Clause	Clause	Clause
	Printed circuits used as internal connections complies with clause 14		P
- (15.3)	Plugs and socket-outlets used in SELV or ELV circuits		P
	No dangerous compatibility between output socket-outlet and a plug for socket-outlets for input circuit in relation to installation rules, voltages and frequencies		P
	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		P
	- socket-outlets without protective earth		P
- (15.4)	Insulation between circuits and accessible parts		P
- (15.4.2)	SELV circuits		P
	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		N/A
	SELV circuits insulated from non SELV circuits by double or reinforced insulation		N/A
	SELV circuits insulated from FELV circuits by supplementary insulation		N/A
	SELV circuits insulated from other SELV circuits by basic insulation		P
	SELV circuits insulated from accessible conductive parts according Table 6 in 15.4.5		N/A
- (15.4.3)	FELV circuits		N/A
	Source used to supply FELV circuits:		N/A
	- 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

Attachment 3: IEC/EN 61347-2-11

Clause	Clause	Clause	Clause
	- source in circuits separated by the LV supply by basic insulation		N/A
	Voltage in the circuit not higher than ELV		N/A
	FELV circuits insulated from LV supply by at least basic insulation		N/A
	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		N/A
	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
- (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		N/A
	Accessible conductive parts insulated from active parts of electric circuits by insulating according Table 6		N/A
	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

16 (16)	CREEPAGE DISTANCES AND CLEARANCES	N/A
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17 (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

Attachment 3: IEC/EN 61347-2-11

Clause	Clause	Clause	Clause
(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		P
	Torque test: torque (Nm); part	0,5 Nm; screw for LED cover	P
	Torque test: torque (Nm); part	1,2 Nm; screw for battery box	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

18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		
- (18.1)	Ball-pressure test:		P
	- part tested; temperature (°C)	PCB; 125	P
	- part tested; temperature (°C)	Switch; 125	P
- (18.2)	Test of printed boards:		P
	- part tested	PCB	P
	- part tested		N/A
- (18.3)	Glow-wire test (650°C):		P
	- part tested	LED cover	P
	- part tested		N/A
- (18.4)	Needle flame test (10 s):		P
	- part tested	PCB	P
	- part tested	Quick connector	P
	- part tested	Switch	P
	- part tested	USB port	P
	- part tested	DC connector	P
	- part tested	Programming port	P

Attachment 3: IEC/EN 61347-2-11

Clause	Clause	Clause	Clause
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	- part tested..... :	Daylight sensor	P
- (18.5)	Tracking test:		P
	- part tested..... :	PCB	P
	- part tested..... :	Quick connector	P
	- part tested..... :	Switch	P
	- part tested..... :	USB port	P
	- part tested..... :	DC connector	P
	- part tested..... :	Programming port	P
	- part tested..... :	Daylight sensor	P

19 (19)	RESISTANCE TO CORROSION		
	- test according 4.18.1 of IEC 60598-1		P
	- adequate varnish on the outer surface		P

20 (-)	ANNEXES		
	Comply with appropriate annexes of IEC 61347-1	(see Annexes)	P

14	TABLE: tests of fault conditions		P
Part	Simulated fault		Hazard
U5	Short-circuited;		NO
D1	Short-circuited;		NO
C15	Short-circuited;		NO
MOS 10	Short-circuited;		NO

Attachment 3: IEC/EN 61347-2-11			
Clause	Clause	Clause	Clause

(A)	ANNEX A - TEST TO ESTABLISH WHETHER A CONDUCTIVE PART IS A LIVE PART WHICH MAY CAUSE AN ELECTRIC SHOCK	N/A
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(C)	ANNEX C – PARTICULAR REQUIREMENTS FOR ELECTRONIC LAMP CONTROLGEAR WITH MEANS OF PROTECTION AGAINST OVERHEATING	N/A
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(D)	ANNEX D – REQUIREMENTS FOR CARRY OUT THE HEATING TESTS OF THERMALLY PROTECTED LAMP CONTROLGEAR	N/A
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(F)	ANNEX F - DRAUGHT-PROOF ENCLOSURE	
	Draught-proof enclosure in accordance with the description	P
	Dimensions of the enclosure	P
	Other design; description	N/A

(H)	ANNEX H - TESTS	
	All tests performed in accordance with the advice given in Annex H, if applicable	P

(L)	ANNEX L: PARTICULAR ADDITIONAL REQUIREMENTS FOR CONTROLGEARS PROVIDING SELV	N/A
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Remark: supplied by approved SELV approved LED driver

(N)	ANNEX N: REQUIREMENTS FOR INSULATION MATERIALS USED FOR DOUBLE OR REINFORCED INSULATION	N/A
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(O)	ANNEX O: ADDITIONAL REQUIREMENTS FOR BUILT-IN ELECTRONIC CONTROLGEAR WITH DOUBLE OR REINFORCED INSULATION	N/A
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(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	N/A
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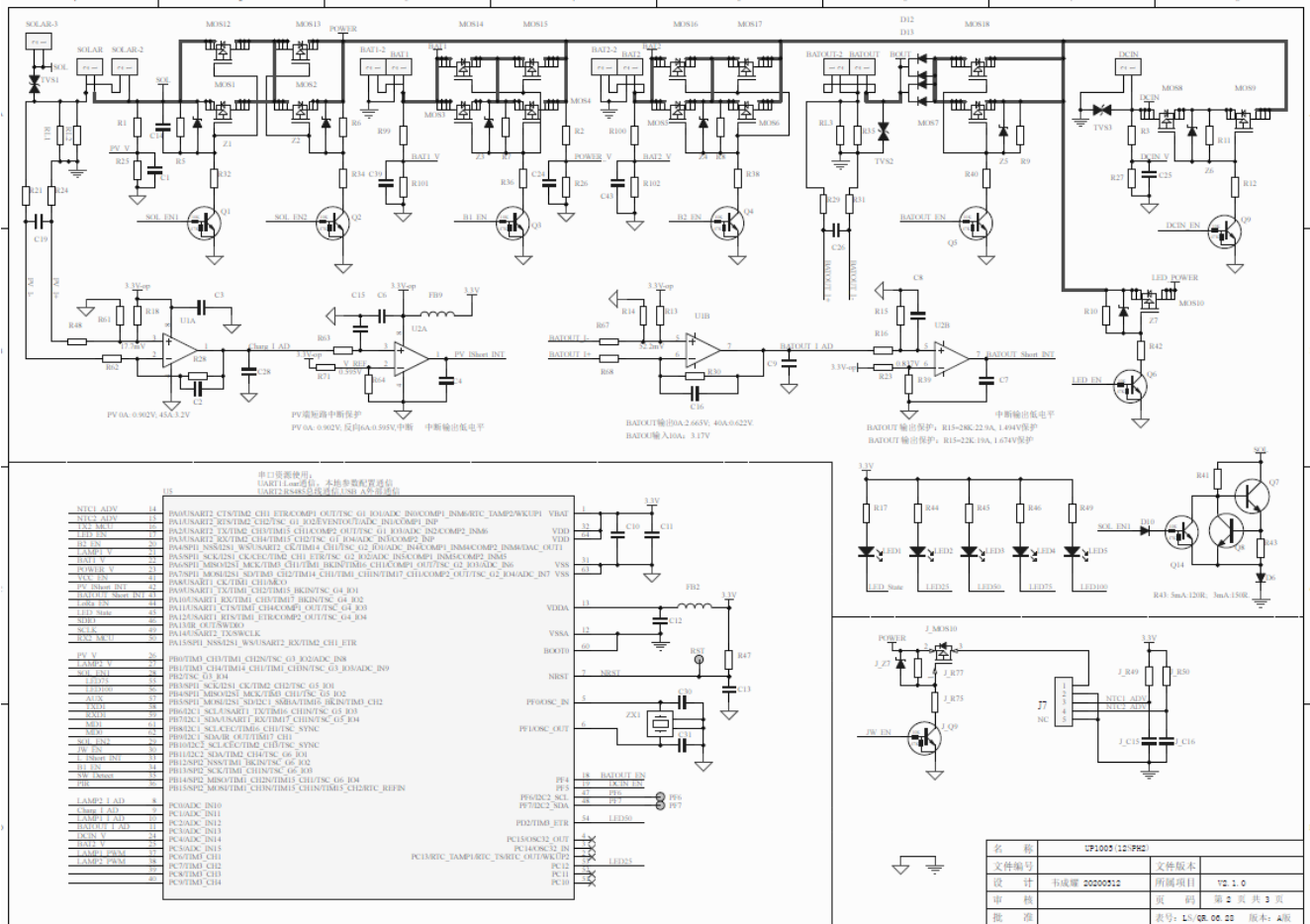
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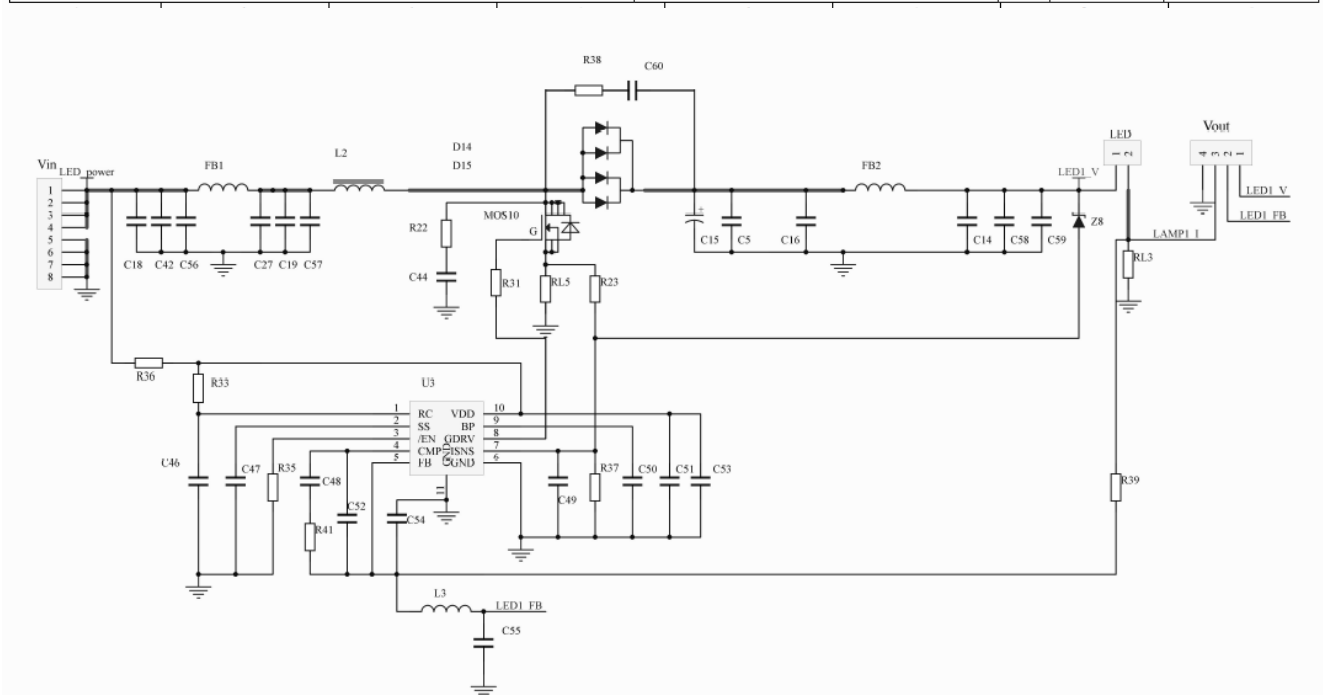
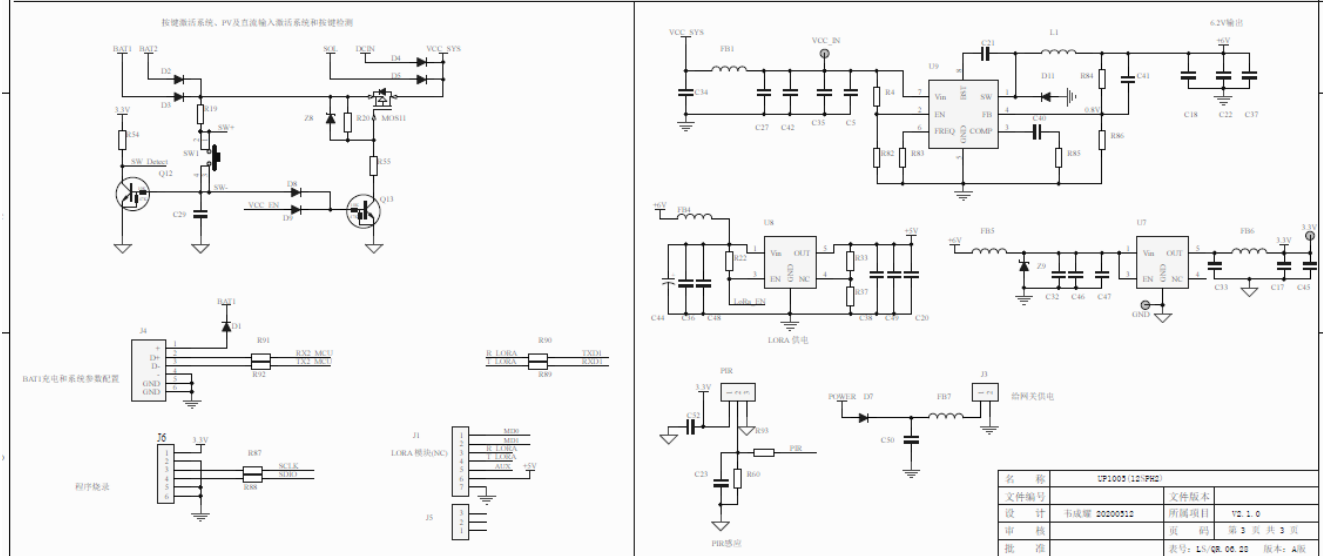
Attachment 4: Additional requirements of EN 62493			
Clause	Requirement + Test	Result - Remark	Verdict
4	LIMITS (Test summary)		P
4.2.2	Lighting equipment deemed to comply with the Van der Hoofden test without testing		P
4.2.3	Unintentional radiating part of lighting equipment	factor $F \leq 1$	N/A
4.3	Intentional radiating part of lighting equipment	No intentional radiating from EUT	N/A

--- End of Attachment 4---

Attachment 5: schematic circuit diagram and PCB layout

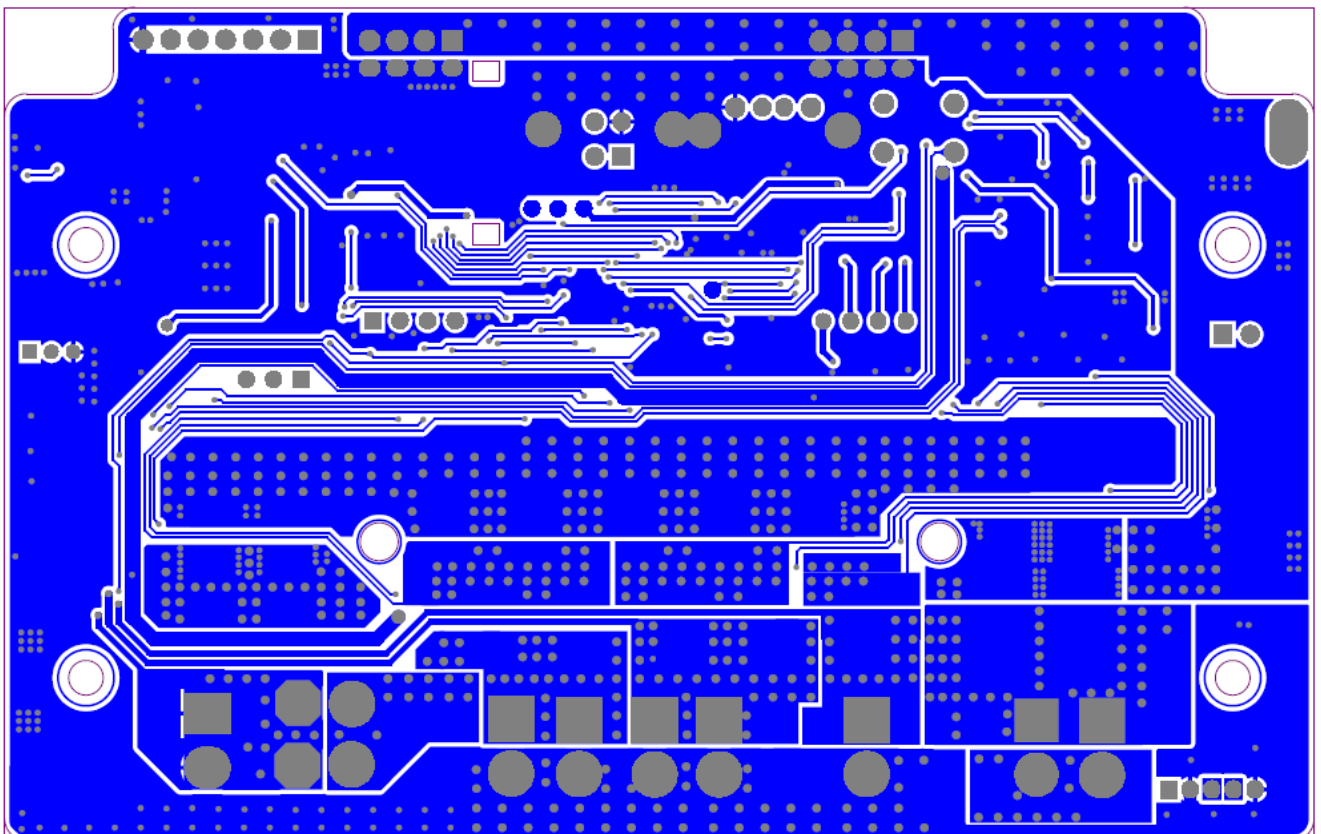
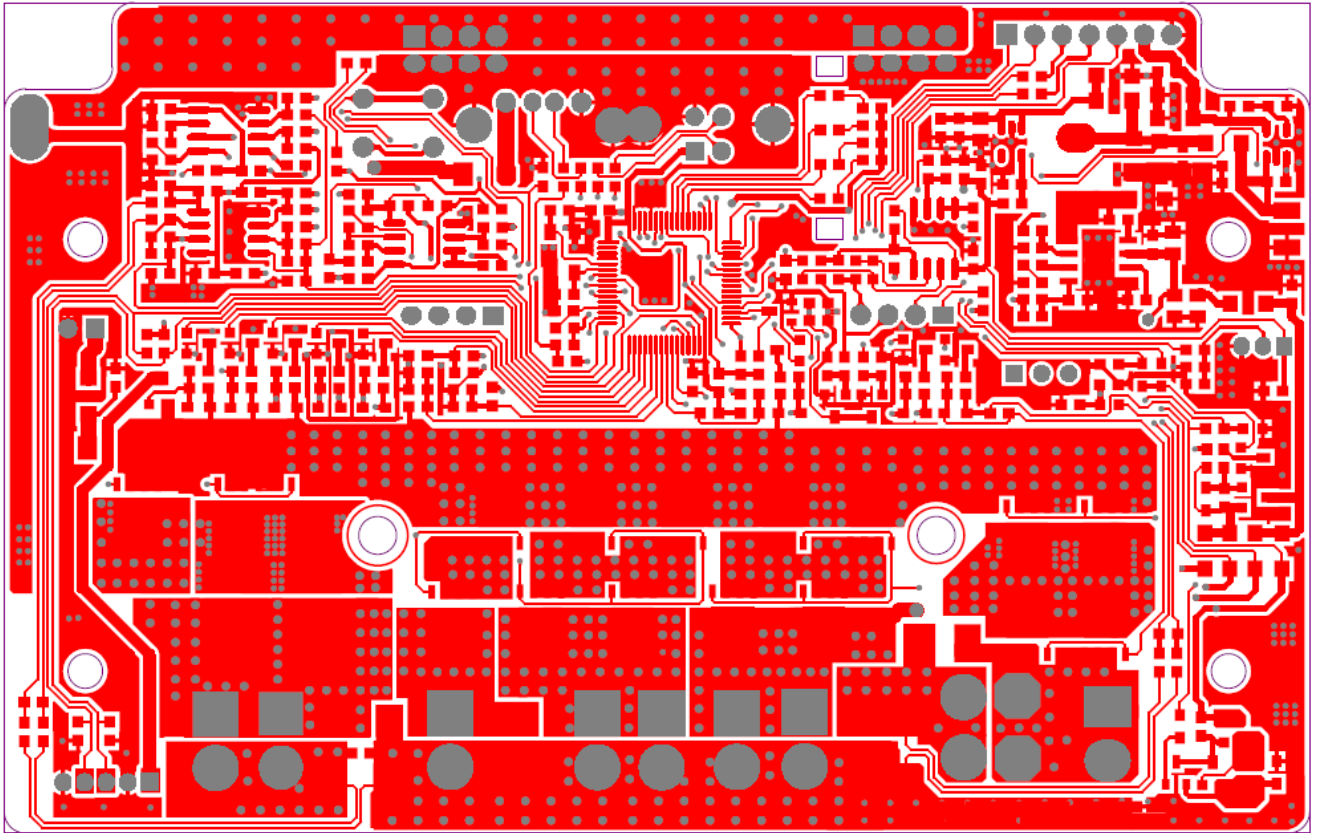
Schematic circuit diagram for battery box:





Attachment 5: schematic circuit diagram and PCB layout

PCB layout for battery box



--- End of attachment 5 ---

Attachment 6: photo documentations

Details of: General view for KV26080W similar to KV9030P, KV13040R, KV18060U.

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Luminaire part for KV260W- VEGA 100 similar to KVxxxx-VEGA xx (detail model name see model list in 'General product information').

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Attachment 6: photo documentations

Details of:

Solar panels for KV260W- RS100 and KV260W- VEGA 100 similar to KV xxxx-VEGA xx and KV xxxx-RS xx, except for KV180U- VEGA xx and KV180U- RS xx (detail model name see model list in 'General product information').

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of:

Solar panels for KV180U- VEGA 100 and KV180U- RS 100 similar to KV180U- VEGA xx and KV180U- RS xx (detail model name see model list in 'General product information').

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Attachment 6: photo documentations

Details of: Luminaire part for KV260W- RS100 similar to KV xxxx-RS xx (detail model name see model list in 'General product information').

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Cover for battery box

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



water-proof
gasket



Attachment 6: photo documentationsDetails of: Cover for battery box (another end)

View:

☒ general☐ front☐ rear☐ right☐ left☐ top☐ bottomDetails of: Inlet view for all models (Solar panels)

View:

☒ general☐ front☐ rear☐ right☐ left☐ top☐ bottom

Attachment 6: photo documentations

Details of: Connector for all models, except KV180U- VEGA xx and KV180U- RS xx(detail model name see model list in 'General product information').

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Connection box for all models, except KV180U- VEGA xx and KV180U- RS xx (all installation gaps are sealed by glue).

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Attachment 6: photo documentations

Details of: Inlet view for KV180U- VEGA xx and KV180U- RS xx (detail model name see model list in 'General product information')..

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Connection box for KV180U- VEGA xx and KV180U- RS xx (detail model name see model list in 'General product information')..

View:

☒ general

☐ front

☐ rear

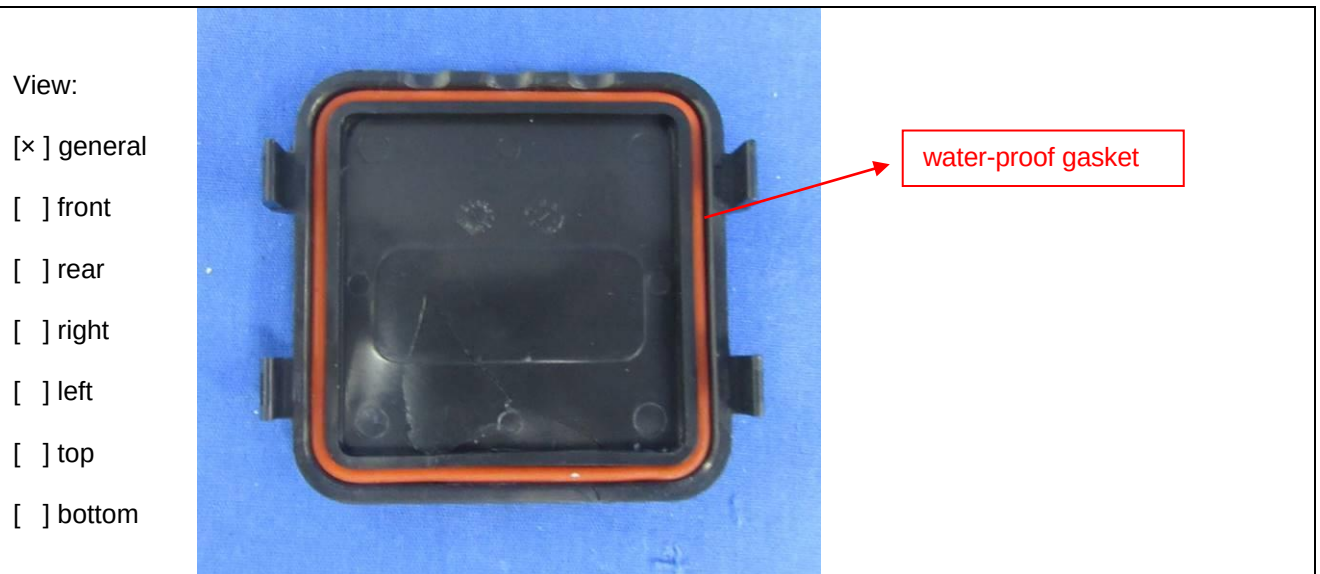
☐ right

☐ left

☐ top

☐ bottom



Attachment 6: photo documentationsDetails of: Cover for connection boxDetails of: Connector for KV180U- VEGA xx and KV180U- RS xx (detail model name see model list in 'General product information')..

Attachment 6: photo documentations

Details of: LED module for KV xxxx-RS xx (detail model name see model list in 'General product information'), with water-proof gasket.

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: LED module for KV xxxx-VEGA xx (detail model name see model list in 'General product information'), with water-proof gasket.

View:

☒ general

☐ front

☐ rear

☐ right

☐ left

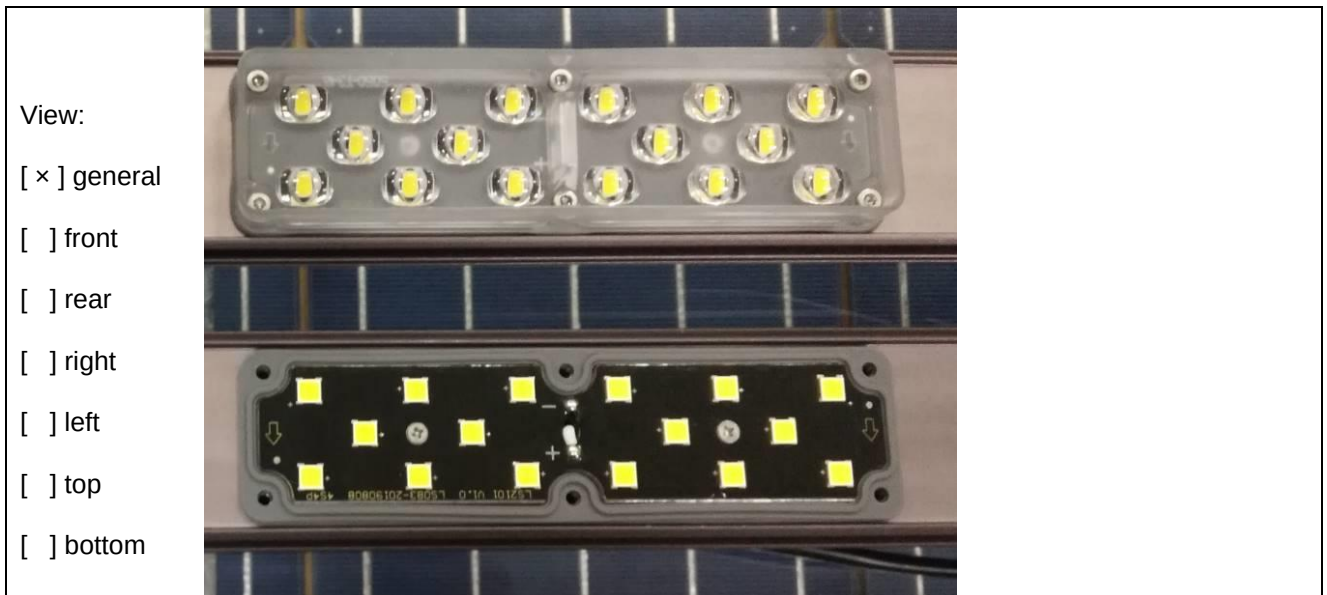
☐ top

☐ bottom



Attachment 6: photo documentations

Details of: LED module for KV26080W, KV9030P, KV13040R and KV18060U, with water-proof gasket.



Details of: Infrared sensor for KV xxxx-VEGA xx (detail model name see model list in 'General product information').



Attachment 6: photo documentations

Details of: Internal view for Infrared sensor, sealed by glue

View:

☐ general

☐ front

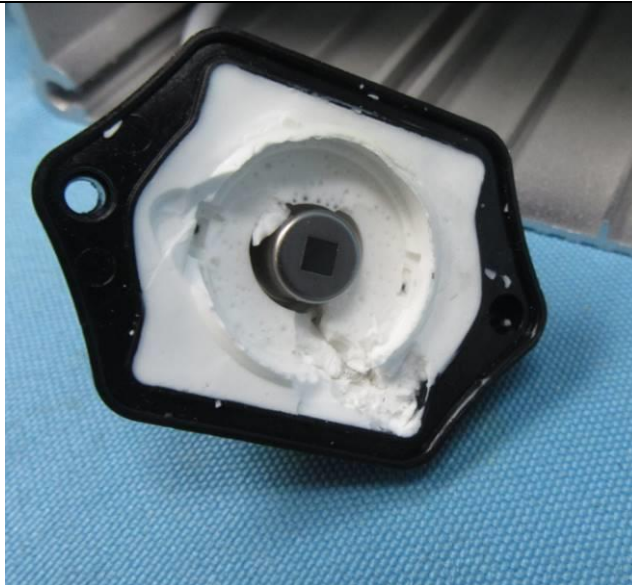
☒ rear

☐ right

☐ left

☐ top

☐ bottom



Details of: Inlet view for KV xxxx-VEGA xx (Luminaire part).

View:

☒ general

☐ front

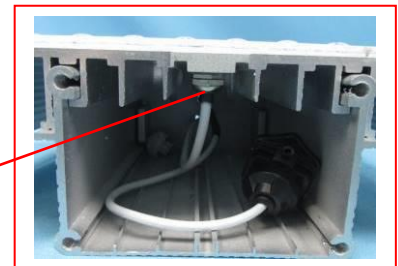
☐ rear

☐ right

☐ left

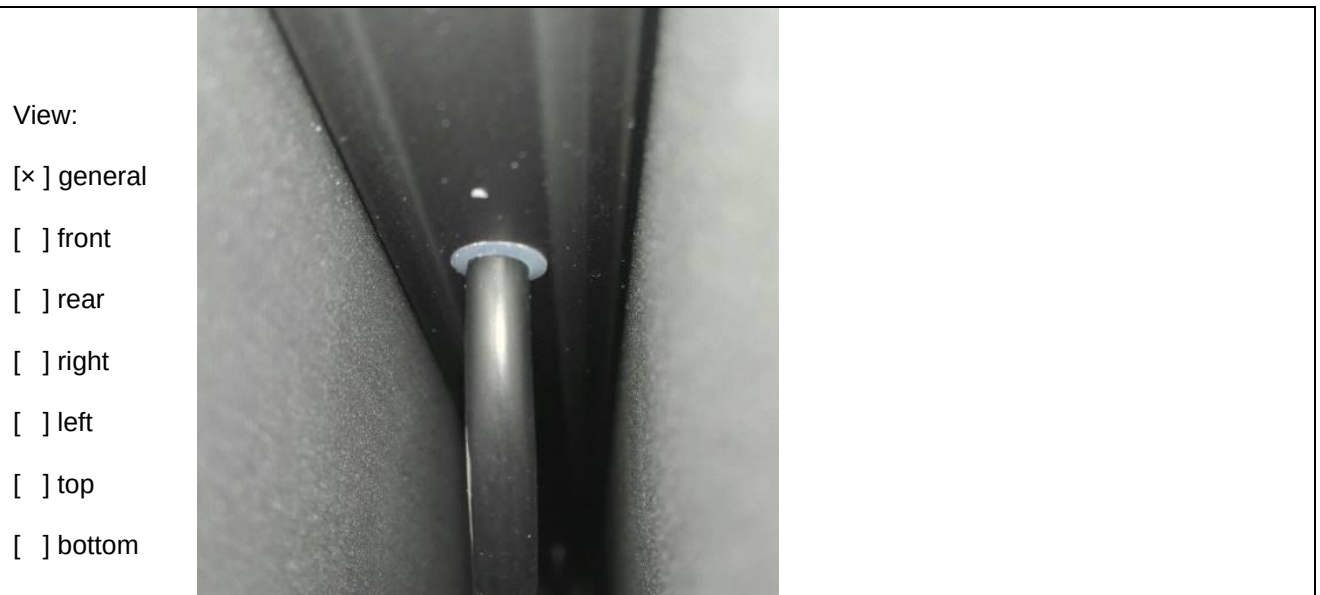
☐ top

☐ bottom



Attachment 6: photo documentations

Details of: Inlet view for all model except KV xxxx-VEGA xx (Luminaire part).

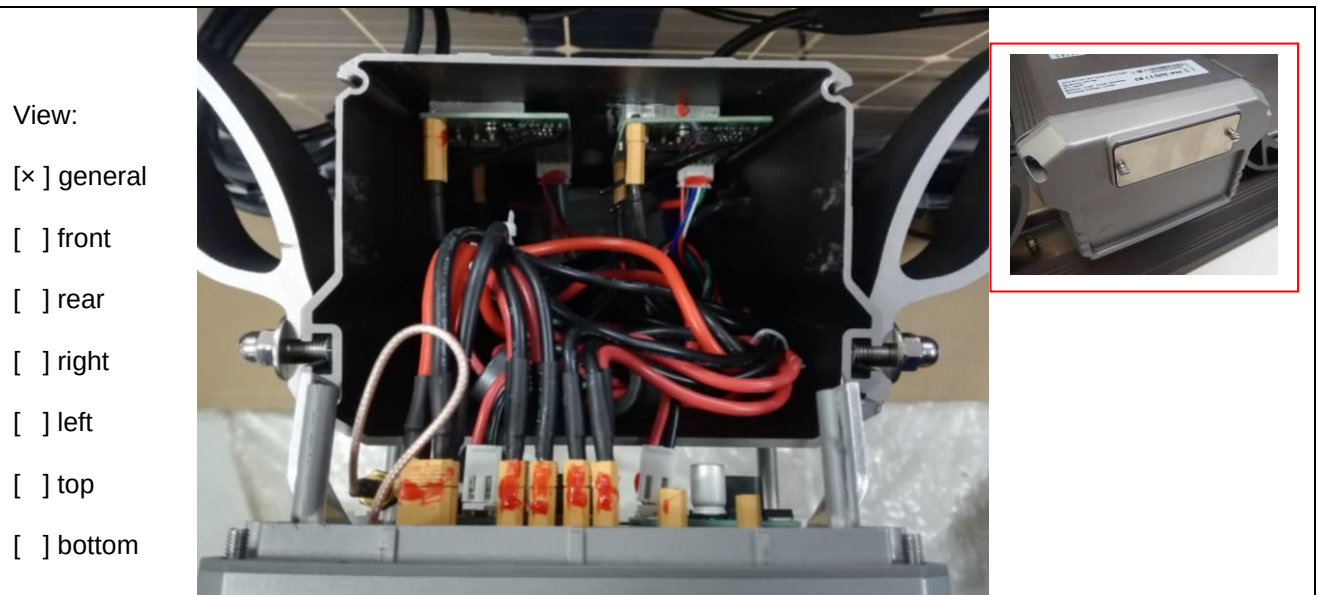


Details of: Connector for all models, except KV9030P, KV13040R, KV18060U.

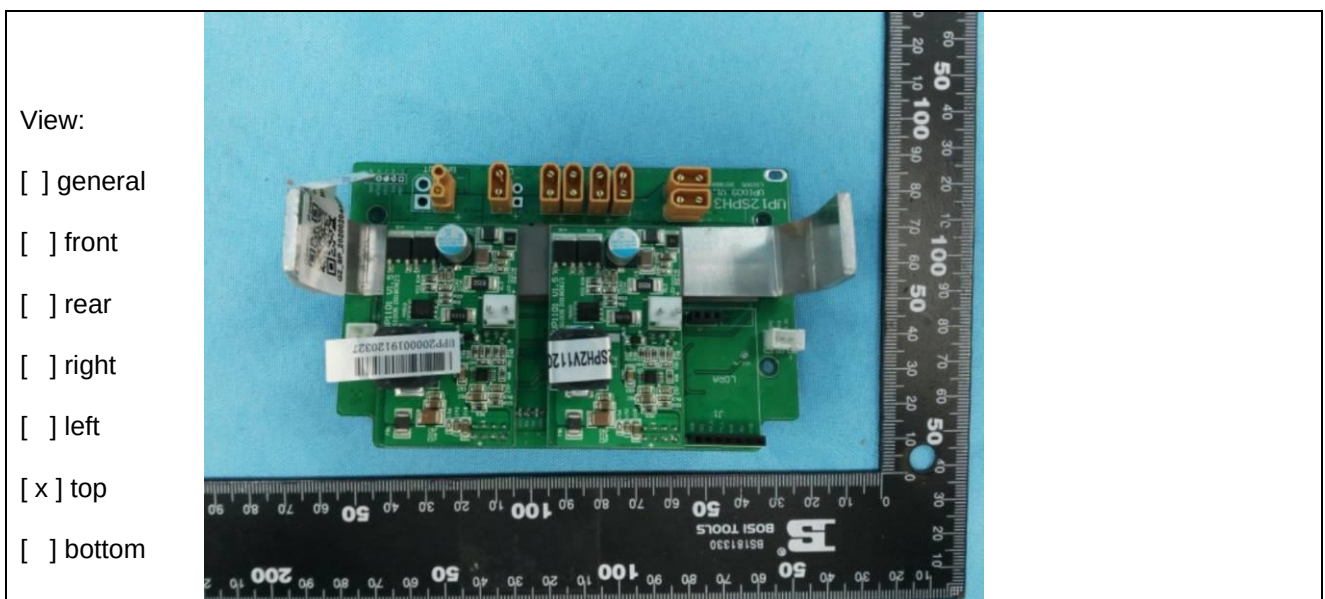


Attachment 6: photo documentations

Details of: Internal view for all models.



Details of: PCB view for all models

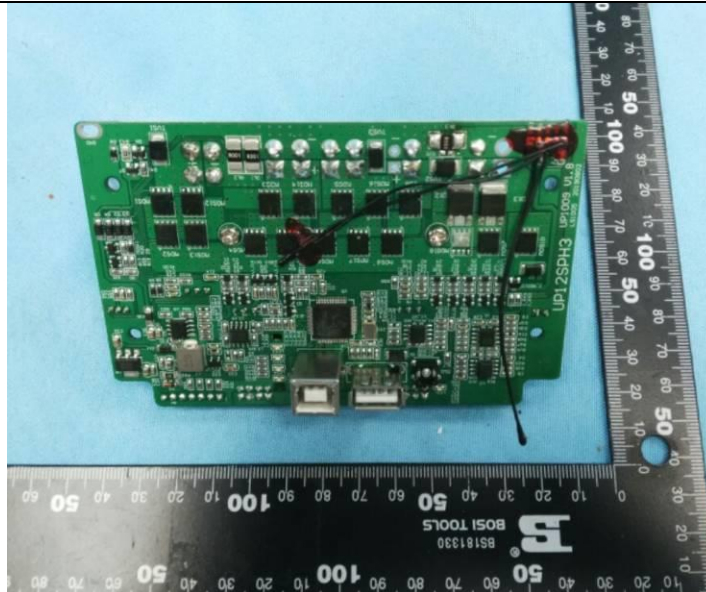


Attachment 6: photo documentations

Details of: PCB view for all models.

View:

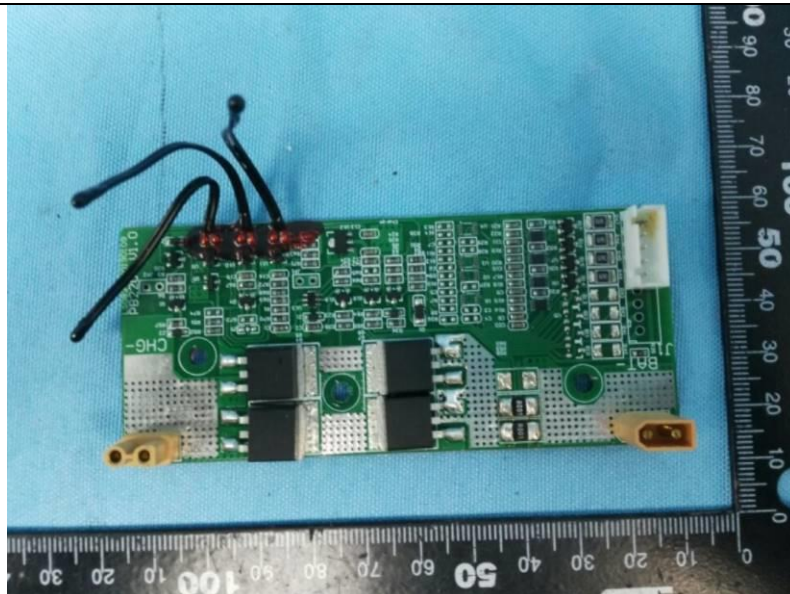
- ☐ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☐ top
- ☒ bottom



Details of: PCB view for all models

View:

- ☐ general
- ☐ front
- ☐ rear
- ☐ right
- ☐ left
- ☒ top
- ☐ bottom



Attachment 6: photo documentations

Details of: PCB view for all models

View:

☐ general

☐ front

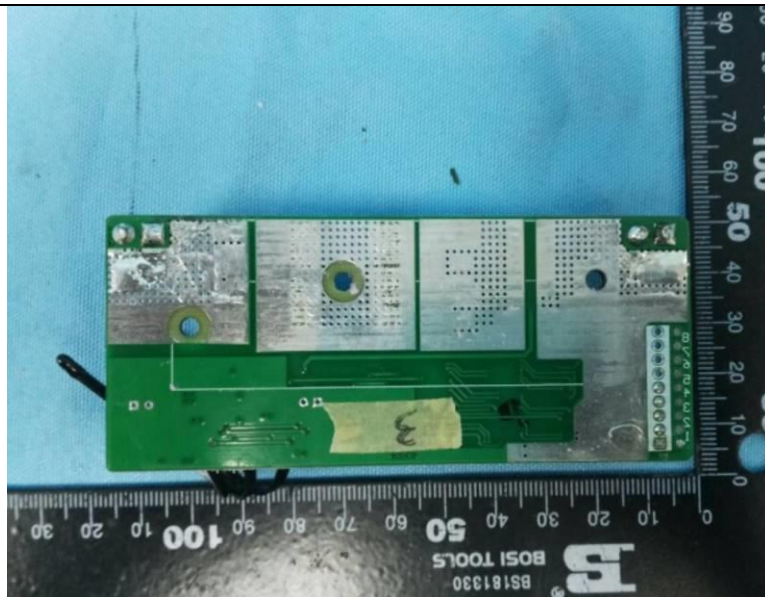
☐ rear

☐ right

☐ left

☐ top

☒ bottom



Details of: Battery view for all models

View:

☒ general

☐ front

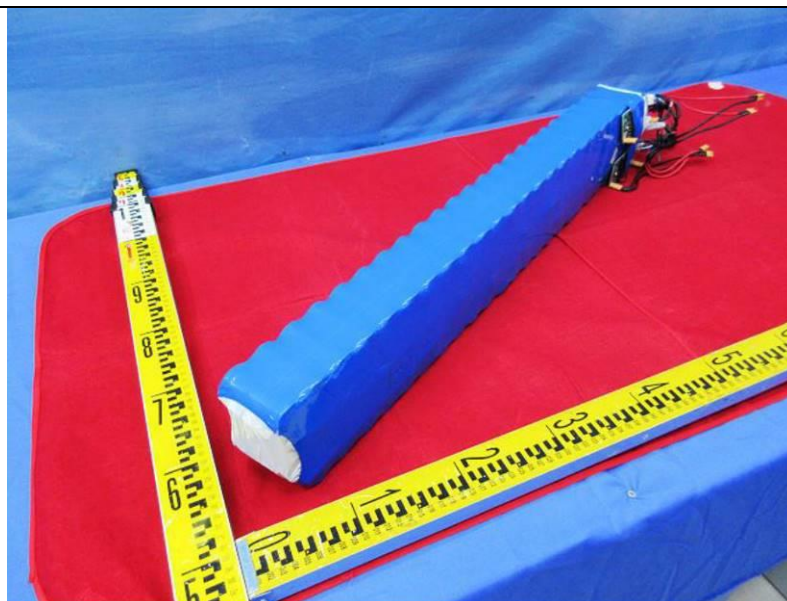
☐ rear

☐ right

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--- End of attachment 6 ---