Test Report

Client Name	:	**FOSHAN KAICHENG LIGHTING CO.,LTD**
Client Address	:	**No.16 Xingye West Road, Shishan Town, Nanhai District, Foshan City, Guangdong Province, China.**
Product Name	:	**Solar Flood Light**
Date	:	**Jan. 03, 2025**

Shenzhen Anbotek Compliance Laboratory Limited

TEST REPORT
IEC 60598-2-5
Part 2: Particular requirements: Section Five – Floodlights

Report		
Report reference No.	:	1818C40084612101
Compiled by	:	Rick Long
Approved by	:	Jeff Zhu
Date of issue	:	Jan. 03, 2025
Contents	:	60 pages report
Testing laboratory		
Name	:	Shenzhen Anbotek Compliance Laboratory Limited
Address	:	Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.
Testing location	:	Location 1: Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China. Location 2: Zone South, 1/F., Building 2, Hengchangrong High-Tech Industrial Park, Huangtian, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
Applicant		
Name	:	FOSHAN KAICHENG LIGHTING CO.,LTD
Address	:	No.16 Xingye West Road, Shishan Town, Nanhai District, Foshan City, Guangdong Province, China.
Test specification		
Standard	:	IEC 60598-2-5:2015 used in conjunction with IEC 60598-1:2020
Procedure deviation	:	Type test
Non-standard test method	:	N/A

Test item Description	
Product name..... :	Solar Flood Light
Trademark ..... :	N/A
Manufacturer..... :	FOSHAN KAICHENG LIGHTING CO.,LTD
Address..... :	No.16 Xingye West Road, Shishan Town, Nanhai District, Foshan City, Guangdong Province, China.
Factory..... :	FOSHAN KAICHENG LIGHTING CO.,LTD
Address..... :	No.16 Xingye West Road, Shishan Town, Nanhai District, Foshan City, Guangdong Province, China.
Model and/or type reference ..... :	TK-N 300W, TK-N 30W, TK-N 50W, TK-N 80W, TK-N 100W, TK-N 120W, TK-N 150W, TK-N 200W, TK-N 250W, TK-N-A(PIR/CCT/RGBW), TK-N-B(PIR/CCT/RGBW), TK-N-C(PIR/CCT/RGBW), TK-N-D(PIR/CCT/RGBW)
Rating(s) ..... :	3.2VDC, 300W

Test item particulars	
Classification of installation and use .....:	Fixed luminaires
Supply connection .....:	Solar panel
Protection class..... :	Class III
Ta .....:	40°C
Degree of protection .....:	IP65
Test case verdicts	
Test case does not apply to the test object .....:	N(N/A)
Test item does meet the requirement .....:	P(ass)
Test item does not meet the requirement .....:	F(ail)
Testing	
Date of receipt of test item.....:	Nov. 29, 2024
Date(s) of performance of test .....:	Nov. 29, 2024 to Dec. 10, 2024

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.
The test results presented in this report relate only to the item tested.
Clause numbers between brackets refer to clauses in IEC 60598- 1.
"(see remark #)" refers to a remark appended to the report.
"(see Annex #)" refers to an annex appended to the report.
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.

Summary of testing

Tests performed

- EN IEC 60598-1:2021+A11:2022
- EN 60598-2-5:2015
- EN IEC 62031:2020+A11:2021

The submitted samples were found to comply with the requirement of EN 62493:2015 without testing because they are LED-lightsource technology.

The submitted samples were found to comply with the above specification.

List of Attachments

Attachment 1: Test report of EN IEC 62031:2020+A11:2021

Attachment 2: European differences according to EN 60598-2-5:2015

Attachment 3: Photo documentation

Copy of marking plate

Solar Flood Light
Model No.:TK-N 300W
Rating:3.2VDC, 300W





FOSHAN KAICHENG LIGHTING CO.,LTD
No.16 Xingye West Road, Shishan Town, Nanhai District, Foshan City, Guangdong Province, China.

Location: Sticking on the enclosure.

Remark: height of WEEE symbol at least 7mm; height of other symbols at least 5mm, height of letters and numbers at least 2mm.
Rating labels for other models are same except the model name and rating.

General product information

All models are same except for model numbers.

Unless otherwise specified, models TK-N 300W were selected as representative models to perform all tests.

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.4 (0+2)	**CLASSIFICATION OF LUMINAIRES**		
5.4 (0.1)	Information for luminaire design considered.....:	Yes ☒ No ☐ Lamp standard:	
5.4 (0.3)	More sections applicable.....:	Yes ☐ No ☒ Section/s:	
(0.7.2)	Light source safety standard .....:		
	Luminaire design in the light source safety standard		P
5.4 (2.2)	Type of protection .....:	Class III	P
5.4 (2.3)	Degree of protection.....:	IP65	P
5.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces.....:	Yes ☒ No ☐	
5.4 (2.5)	Luminaire for normal use .....:	Yes ☒ No ☐	
	Luminaire for rough service .....:	Yes ☐ No ☒	

5.5 (3)	**MARKING**		
5.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
5.5 (3.3)	Additional information		P
	Language of instructions	English	P
5.5 (3.3.1)	Combination luminaires		N/A
5.5 (3.3.2)	Nominal frequency in Hz		N/A
5.5 (3.3.3)	Operating temperature		N/A
5.5 (3.3.4)	Symbol or warning notice		N/A
5.5 (3.3.5)	Wiring diagram		N/A
5.5 (3.3.6)	Special conditions		N/A
5.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
5.5 (3.3.8)	Limitation for semi-luminaires		N/A
5.5 (3.3.9)	Power factor and supply current		N/A
5.5 (3.3.10)	Suitability for use indoors		N/A
5.5 (3.3.11)	Luminaires with remote control		N/A
5.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
5.5 (3.3.13)	Specifications of protective shields		N/A
5.5 (3.3.14)	Symbol for nature of supply		P
5.5 (3.3.15)	Rated current of socket outlet		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.5 (3.3.16)	Rough service luminaire		N/A
5.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Supply for solar panel	N/A
5.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
5.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
5.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
5.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	Non replaceable light sources	P
	Cautionary symbol		P
5.5 (3.3.22)	Controllable luminaires, insulation		N/A
(3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component		N/A
(3.3.24)	If not supplied with terminal block, information on the packaging		P
(3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
(3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
5.5 (3.4)	Test with water	Rubbed lightly for 15 s	P
	Test with hexane	For a further 15 s	P
	Legible after test		P
	Label attached		P
5.5 (-)	Additional necessary marking		P
	Operation position		P
	Weight and dimensions		P
	Maximum protected area		P
	Range of mounting heights		N/A
	Suitability for indoor use		N/A

5.6 (4)	**CONSTRUCTION**		—
5.6 (4.2)	Components replaceable without difficulty		N/A
5.6 (4.3)	Wireways smooth and free from sharp edges		P
5.6 (4.4)	Lampholders		N/A
5.6 (4.4.1)	Integral lampholder		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (4.4.2)	Wiring connection		N/A
5.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
5.6 (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 (Nm) .....:		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
5.6 (4.4.5)	Peak pulse voltage		N/A
5.6 (4.4.6)	Centre contact		N/A
5.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
5.6 (4.4.8)	Lamp connectors		N/A
5.6 (4.4.9)	Caps and bases correctly used		N/A
5.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
5.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
5.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
5.6 (4.7)	Terminals and supply connections		P
5.6 (4.7.1)	Contact to metal parts		N/A
5.6 (4.7.2)	Test 8 mm live conductor		N/A
	Test 8 mm earth conductor		N/A
5.6 (4.7.3)	Terminals for supply conductors		P
5.6 (4.7.3.1)	Welded connections:		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.8.2		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	- electrical test according to 15.9		N/A
	- heat test according to 15.9.2.3 and 15.9.2.4		N/A
5.6 (4.7.4)	Terminals other than supply connection		P
5.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
5.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
5.6 (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
5.6 (4.9)	Insulating lining and sleeves		N/A
5.6 (4.9.1)	Retainment		N/A
	Method of fixing.....:		—
5.6 (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
5.6 (4.10)	Double or reinforced insulation		P
5.6 (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
5.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
5.6 (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
5.6 (4.11)	Electrical connections and current-carrying parts		P

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (4.11.1)	Contact pressure		P
5.6 (4.11.2)	Screws:		P
	- self-tapping screws		P
	- thread- cutting screws		N/A
5.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
5.6 (4.11.4)	Material of current-carrying parts		P
5.6 (4.11.5)	No contact to wood or mounting surface		P
5.6 (4.11.6)	Electro-mechanical contact systems		N/A
5.6 (4.12)	Screws and connections (mechanical) and glands		P
5.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:	Fixed enclosure 2.98mm, 0.5Nm	P
	Torque test: torque (Nm); part.....:	Fixed mounting bracket 5.86mm, 2.5Nm	P
	Torque test: torque (Nm); part.....:		N/A
5.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
5.6 (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
5.6 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
5.6 (4.13)	Mechanical strength		P
5.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)..... :	Lamp cover; 0.35Nm	P
	- other parts; energy (Nm).....:	Metal enclosure; 0.5Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
5.6 (4.13.3)	Straight test finger		P
5.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	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
5.6 (4.13.6)	Tumbling barrel		N/A
5.6 (4.14)	Suspensions, fixings and means of adjusting		P
5.6 (4.14.1)	Mechanical load:		P
	A) four times the weight	2.64*4=10.56kg	P
	B) torque 2,5 Nm	2.5Nm	P
	C) bracket arm; bending moment (Nm)..... :		P
	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
5.6 (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
5.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles..... :	150 cycles	P
	- strands broken..... :		N/A
	- electric strength test afterwards		P
5.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
5.6 (4.14.5)	Guide pulleys		N/A
5.6 (4.14.6)	Strain on socket-outlets		N/A
5.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 C..... :	See Test Table 5.15 (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

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	- thermal protection		N/A
	- electronic circuits exempted		N/A
5.6 (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
5.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear.....:	(compliance with Section 12)	N/A
5.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
5.6 (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
5.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
5.6 (4.17)	Drain holes		N/A
	Clearance at least 5 mm		N/A
5.6 (4.18)	Resistance to corrosion:		N/A
5.6 (4.18.1)	- rust- resistance		N/A
5.6 (4.18.2)	- season cracking in copper		N/A
5.6 (4.18.3)	- corrosion of aluminium		N/A
5.6 (4.19)	Igniters compatible with ballast		N/A
5.6 (4.20)	Rough service vibration		N/A
5.6 (4.21)	Protective shield:		N/A
5.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
5.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
5.6 (4.21.3)	No direct path		N/A
5.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment.....:	See Test Table 5.15 (13.3.2)	N/A
5.6 (4.22)	Attachments to lamps		N/A
5.6 (4.23)	Semi-luminaires comply Class II		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
5.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
5.6 (4.24.2)	Retinal blue light hazard		P
	Luminaires with E_{thr}		P
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2 .. :	RG0	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
5.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
5.6 (4.26)	Short-circuit protection:		N/A
5.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		P
5.6 (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
5.6 (4.27)	Terminal blocks with integrated screwlessearthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05		N/A
	Voltage drop test, resistance < 0,05		N/A
5.6 (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

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. temperature on adhesive material (C) ..... :		N/A
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
5.6 (4.29)	Luminaires with non-replaceable light source		P
	Not possible to replace light source		P
	Live part not accessible after parts have been opened by hand or tools		P
5.6 (4.30)	Luminaires with non-user replaceable light source		N/A
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
5.6 (4.31)	Insulation between circuits		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	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
5.6 (4.31.1)	SELV or PELV circuits		P
	Used SELV or PELV source		P
	Voltage ≤ ELV		P
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		P
	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
5.6 (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

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	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
5.6 (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 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
5.6 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11		N/A
	External to control gear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
(4.33)	**Luminaire powered via information technology communication cabling**		N/A
	Requirements for Class III luminaire		N/A
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		N/A
	Luminaire does not create any hazard from overvoltage	(see Annex 2)	N/A
(4.34)	**Electromagnetic fields (EMF)**		P
	No harmful electromagnetic fields	The submitted samples were LED-light-source technology, they were found to comply with the requirement of IEC 62493:2015 without test.	P
(4.35)	**Protection against moving fan blades**		N/A

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
	Test with a standard test finger		N/A
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		N/A
	-hardness less than D60 Shore		N/A
	-peripheral speed less than 15 m/s		N/A
	-input power of fan 2 W at rated voltage		N/A
(4.36)	**Track-mounted luminaires**		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		N/A
5.6.1 (-)	At least IPX3 if for outdoor use		P
5.6.2 (-)	Lampholder brackets and lamp supports		N/A
5.6.3 (-)	Adjusting means	See the instruction manual	P
5.6.4 (-)	Controlling components		N/A
5.6.5 (-)	Fixing device		P
	Wind force test		P
5.6.6 (-)	Locking of angular adjustment		P
5.6.7 (-)	Vibration resistance		P
5.6.8 (-)	Requirement on glass cover if mounting height > 5 m		P
	Method of protection .....:		
5.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		—
5.7 (11.2)	Creepage distances and clearances.....:	See Table 5.7 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	
5.8 (7)	**PROVISION FOR EARTHING**		—
5.8 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 .....:		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 screwlessearthing contacts tested according Annex V		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Built-in control gear		N/A
5.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
4.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal blocks with integrated screwlessearthing contacts tested according Annex V		N/A
5.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
5.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
5.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
5.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
5.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
5.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
(7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A
5.9 (14)	**SCREW TERMINALS**		—
	Separately approved; component list.....:	(see Annex 1)	N/A
	Part of the luminaire.....:	(see Annex 3)	N/A
5.9 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		—
	Separately approved; component list.....:	(see Annex 1)	N/A
	Part of the luminaire.....:	(see Annex 3)	N/A
5.10 (5)	**EXTERNAL AND INTERNAL WIRING**		—
5.10 (5.2)	Supply connection and external wiring		P
5.10 (5.2.1)	Means of connection.....:	Solar panel	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
5.10 (5.2.2)	Type of cable.....:		N/A
	Nominal cross-sectional area (mm²)..... :		N/A
	Cables equal to IEC 60227 or IEC 60245		—

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Clause	Requirement + Test	Result - Remark	Verdict
5.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
5.10 (5.2.5)	Type Z not connected to screws		N/A
5.10 (5.2.6)	Cable entries:		N/A
	- suitable for introduction		N/A
	- adequate degree of protection		N/A
5.10 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
5.10 (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
5.10 (5.2.9)	Locking of screwed bushings		N/A
5.10 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
5.10 (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
5.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
5.10 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe		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
	- displacement 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
(5.2.10.4)	Luminaire with/designed for use with supply cord with maximum current of 2A:		N/A
	- Ordinary Class III luminaire supplied with SELV 25V RMS/60V DC		N/A
	- Ordinary Class III luminaire supplied with PELV 12V RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage 12V RMS/30V DC		N/A
	Pull test of 30N		N/A
5.10 (5.2.11)	External wiring passing into luminaire		N/A
5.10 (5.2.12)	Looping- in terminals		N/A
5.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
5.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
5.10 (5.2.16)	Appliance inlets (IEC 60320)		P
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector		N/A
	Relevant IEC standard		N/A
5.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
1.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
5.10 (5.3)	Internal wiring		P
5.10 (5.3.1)	Internal wiring of suitable size and type		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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
5.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :		P
	Insulation thickness		P
	Extra insulation added where necessary		N/A
5.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
5.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
5.10 (5.3.1.4)	Conductors without insulation		N/A
5.10 (5.3.1.5)	SELV current-carrying parts		N/A
5.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
5.10 (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
5.10 (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
5.10 (5.3.4)	Joints and junctions effectively insulated		N/A
5.10 (5.3.5)	Strain on internal wiring		P
5.10 (5.3.6)	Wire carriers		N/A
5.10 (5.3.7)	Wire ends not tinned		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Wire ends tinned: no cold flow		N/A
(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
5.11 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		—
5.11 (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		N/A
	Lampholder 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
5.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
5.11 (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
5.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)..... :		N/A
	- touch current ..... :		N/A
	- no-load voltage..... :		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
(8.2.3.d)	PELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)……..... :		N/A
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)……..... :		N/A
	One pole insulated if required		N/A
5.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
5.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
5.11 (8.2.6)	Covers reliably secured		N/A
5.11 (8.2.7)	Discharging of capacitors 0,5 F		N/A
	Portable plug connected luminaire with capacitor		N/A
	Other plug connected luminaire with capacitor		N/A
	Discharge device on or within capacitor		N/A
	Discharge device mounted separately		N/A

5.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		—
	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and 12.7 after (9.2) before (9.3) specified in 5.13		P
5.12 (12.3)	Endurance test:		P
	- mounting- position..... :	As in normal use	
	- test temperature (°C)..... :	50°C	

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Clause	Requirement + Test	Result - Remark	Verdict
	- total duration (h).....:	240h	
	- supply voltage: Un factor; calculated voltage (V)...:	By Solar panel and Battery	
	- lamp used..... :	LED module	
5.12 (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
5.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
5.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
5.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
5.12 (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
5.12 (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
5.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
5.12 (12.7.1)	Luminaire without temperature sensing control		N/A
5.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W .....:		

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Clause	Requirement + Test	Result - Remark	Verdict
	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 5.15 (13.2.1)	N/A
5.12 (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 Table 5.15 (13.2.1)	N/A
5.12 (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
5.12 (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 5.15 (13.2.1)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.12.1 (-)	Reduction 10 C of measured temperatures if for outdoor use		N/A
5.12.2 (-)	Glass covers used within the thermal limits		N/A
5.13 (9)	**RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE**		—
5.13 (-)	If IP > IP 20 the order of tests as specified in clause 5.12		P
5.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		
	- classification according to IP..... :	IP65	
	- mounting position during test.....:	As in normal use	
	- fixing screws tightened; torque (Nm).....:	0.5Nm	
	- tests according to clauses.....:	Clause 9.2.2 & Clause 9.2.6	
	- 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 SELV parts or where it could become a hazard		P
	d) i) For luminaires without drain holes – no water entry		P
	d) ii) For luminaires with drain holes – no hazardous water entry		N/A
	e) no water in watertight luminaire		P
	f) no contact with live parts (IP 2X)		N/A
	f) no entry into enclosure (IP 3X and IP 4X)		N/A
	f) no contact with live parts (IP3X and IP4X)		N/A
	g) no trace of water on part of lamp requiring protection from splashing water		N/A
	h) no damage of protective shield or glass envelope		N/A
5.13 (9.3)	Humidity test 48 h	25 C; 93% R.H.	P
5.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		—
5.14 (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 (M):		
	SELV/PELV		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts of different polarity:	100M	P
	- between current-carrying parts and mounting surface.....:	100M	P
	- between current-carrying parts and metal parts of the luminaire.....:	100M	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV/PELV		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
5.14 (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):		
	SELV/PELV		P
	- between current-carrying parts of different polarity:	500V	P
	- between current-carrying parts and mounting surface.....:	500V	P
	- between current-carrying parts and metal parts of the luminaire.....:	500V	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV/PELV		N/A
	- between live parts of different polarity..... :		N/A
	- between live parts and mounting surface.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
5.14 (10.3)	Touch current or protective conductor current (mA).:	Touch current: 0.01mA (limit:0,7mA)	P

5.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		—
5.15 (13.2.1)	Ball-pressure test.....:	See Test Table 5.15 (13.2.1)	P
5.15 (13.3.1)	Needle-flame test (10 s).....:	See Test Table 5.15 (13.3.1)	P
5.15 (13.3.2)	Glow-wire test (650 C).....:	See Test Table 5.15 (13.3.2)	P
5.15 (13.4.1)	Proof tracking test (IEC 60112).....:	See Test Table 5.15 (13.4.1)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

EN IEC 60598_1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT **IEC 60598-1** **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** Luminaires			
Differences according to.....:	EN IEC 60598-1: A11: 2022		
TRF template used.....:	EN IEC 60598-1:2021 Ed. 1.1		
Attachment Form No..... : **Attachment Originator**.....: **Master Attachment**.....:	EU_GD_IEC 60598_1 Anbotek 2023-02-16		
	CENELEC COMMON MODIFICATIONS (EN)		
4	**CONSTRUCTION**		P
4.11.6	Following completion of these test…, add the following test: the test voltage however being reduced to 1500V		P
5	**EXTERNAL AND INTERNAL WIRING**		P
5.2.2	Replace “IEC 60227 (all parts) and IEC 60245 (all parts), by EN 50525 (all parts), and delete paragraph 2.		P
	Replace table 5.1 – by the following new table		P
12	**ENDURANCE TESTS AND THERMAL TESTS**		P
12.4.2c	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P
	In table 12.2 footnote add the following: -after European installation standards (HD 60364 all parts) and (HD 384 all parts) -after European cable standard (EN 50525 all parts)		P
ZB	**Addition of Annex ZB, Special national conditions and Annex ZC**		P

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Clause	Requirement + Test	Result - Remark	Verdict

EN IEC 60598_1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.3	Denmark: supply cords of class I luminaires which are delivered without a plug, shall be provided with a visible tag with the following text Vigtigt ! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket 		N/A
5.2.18	Denmark		N/A
	Socket-outlets intended for providing power to other appliances shall be in compliance with SD 60884-2-D1:2017		N/A
5.2.1	Cyprus		N/A
	Domestic luminaites intended for connection to a standard United Kingdom 13A socket must be pre-fitted with an approved plug complying with BS 1363		N/A
	Cord sets for domestic luminaires for connection with an appliance inlet must be pre-fitted with an approved plug complying with BS 1363 Plug must be fitted with the correct fuse		N/A
	Denmark		N/A
	Supply cords on single-phase portable luminaires having a rated current not exceeding 13A		N/A
	For luminaires having an aooliance inlet, the plug on the supply cord shall comply with te above requirements		N/A
	If multi-phase luminaires and single-phase luminaires having a rated current exceeding 13A are provided with a supply cord with a plug, the plug shall comply with the following table or EN 60309.		N/A
	Finland		N/A
	For luminaires provided with non-detachable flexible calbles and cords and a plug, the plug shall comply with the requirements of SFS 5610 and EN 50075, the Standard sheets to be applied being as follows		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

EN IEC 60598_1 ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex ZC	A-deviation : National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN-CENELEC national memner.		P
	This European Standard falls under Directive 2014/35/EU		P

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Clause	Requirement + Test	Result - Remark	Verdict

5.7 (11.2)	**TABLES: Creepage distances and clearances**	P
Table 11.1	**Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages**	N/A

RMS working voltage (V) not exceeding	50	150	250	500	750	1000
Creepage distances						
Required basic insulation, PTI [3] 600	0,6	0,8	1,5	3	4	5,5
Measured	--	--	--	--	--	--
Required basic insulation, PTI < 600	1,2	1,6	2,5	5	8	10
Measured	2.1	--	--	--	--	--
Required supplementary insulation PTI [3] 600	-	0,8	1,5	3	4	5,5
Measured	--	--	--	--	--	--
Required supplementary insulation PTI < 600	-	1,6	2,5	5	8	10
Measured	--	--	--	--	--	--
Required reinforced insulation	-	3,2	5	6	8	11
Measured	--	--	--	--	--	--
Clearances						
Required basic insulation	0,2	0,8	1,5	3	4	5,5
Measured	2.1	--	--	--	--	--
Required supplementary insulation	-	0,8	1,5	3	4	5,5
Measured	--	--	--	--	--	--
Required reinforced insulation	-	1,6	3	6	8	11
Measured	--	--	--	--	--	--

Table 11.2	**Minimum distances (mm) for non-sinusoidal pulse voltages**						
Rated pulse voltage (peak kV)	2,0	2,5	3,0	4,0	5,0	6,0	8,0
Required clearances	1,0	1,5	2	3	4	5,5	8
Measured	--	--	--	--	--	--	--
Rated pulse voltage (peak kV)	10	12	15	20	25	30	40
Required clearances	11	14	18	25	33	40	60
Measured	--	--	--	--	--	--	--
Rated pulse voltage (peak kV)	50	60	80	100	-	-	-
Required clearances	75	90	130	170	-	-	-
Measured	--	--	--	--	--	--	--

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Clause	Requirement + Test	Result - Remark	Verdict

5.15 (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**			P
Allowed impression diameter (mm) .....:		2mm		
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (C)	Impression diameter (mm)	
LED PCB	See the annex 1	125	0.7	
--	--	--	--	
--	--	--	--	
Supplementary information:--				

5.15 (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
LED PCB	See the annex 1	0	Yes	0	Pass
--	--	--	--	--	--
Supplementary information:--					

5.15 (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
LED PCB	See the annex 1	0s	No	0s	Pass
Plastic enclosure	See the annex 1	0s	No	0s	Pass
LED cover	See the annex 1	0s	No	0s	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: --					

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

5.15 (13.4)	**TABLE: Proof tracking test (IEC 60112)**					N/A
Test voltage PTI ..... :		175 V				
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens				Verdict
--	--	--	--	--		--
--	--	--	--	--		--
Supplementary information: --						

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Internal wire	ZHONGSHAN LONGFEI ELECTRICAL INDUSTRIAL CO.,LTD	H05RN-F	2x0.5-1.0mm²	EN50525-2-21	VDE 40015521
LED CHIP	DECHEN OPTOELECTRONICS CO.,LTD	5054	IF=60mA: V=2.5-2.7V; 5.0x5.4x0.75mm; 3000K, 4000K, 6500K	IEC TR 62778	Test with appliance
LED PCB	FOSHAN NANHAI XINGXIN COPPER & ALUMINIUM CO LTD	--	V-0; 288°C; Metalbase	UL 796	UL E466015
Battery cell	HEFEI GOTION HIGH-TECH POWER ENERGY CO LTD	IFR32700	3.2VDC, 5200mAh, 16Wh	IEC 62619	Test report:xxx
Solar panel	NINGBO RING ELECTRONICS CO.,LTD.	RL-15M-05	5V, 6A, 15W Dimension:390*235*17mm	IEC 61730	CE
External wire	ZHONGSHAN LONGFEI ELECTRICAL INDUSTRIAL CO.,LTD	H05RN-F	2x0.5-1.0mm²	EN50525-2-21	VDE 40015521

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 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference.....:	TK-N 300W	
	Lamp used.....:	LED	
	Lamp control gear used.....:	--	
	Mounting position of luminaire.....:	As in normal use	
	Supply wattage (W).....:	19.72W	
	Supply current (A)..... :	6.16A	
	Calculated power factor.....:	--	
	Table: measured temperatures corrected for ta = 40 C:		P
	- abnormal operating mode.....:	--	
	- test 1: rated voltage..... :	By Battery	
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:	--	
	- 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	Clause 12.4 – normal					Clause 12.5 – abnormal	
	Test 1	test 2	test 3	--	limit	test 4	limit
Plastic of solar panel	43.8	--	--	--	Ref.	--	--
Output cord of solar panel	46.7	--	--	--	75	--	--
Lead wire of battery package	48.2	--	--	--	90	--	--
Terminal	53.7	--	--	--	90	--	--
Internal wire	50.8	--	--	--	105	--	--
Battery surface	47.2	--	--	--	Ref.	--	--
LED	73.5	--	--	--	Ref.	--	--
LED PCB	59.1	--	--	--	130	--	--
Diffuser	49.3	--	--	--	Ref.	--	--
Enclosure surface	47.2	--	--	--	Ref.	--	--
Mounting surface	43.5	--	--	--	90	--	--

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

IEC 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		N/A
(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).....:		N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.1.6)	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 60598-2-5			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	**Screwless terminals (part of the luminaire)**		N/A
(15)	**SCREWLESS TERMINALS**		N/A
(15.2)	Type of terminal.....:		
	Rated current (A).....:		
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5.1)	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
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A

IEC 60598-2-5			
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
	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:--

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		P
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)	P

5	**GENERAL TEST REQUIREMENTS**		P
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	P
	General conditions for tests in Annex A	(see Annex A)	N/A

6	**MARKING**		
6.2	**Contents of marking for built-in and for independent LED modules**		N/A
	a) mark of origin		P
	b) model number, type reference		P
	c1) constant voltage module; rated supply voltage and supply frequency		P
	c2) constant current module; rated supply current and supply frequency		N/A
	d) rated power		P
	e) indication of connections, wiring diagram		P
	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		P
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**		**P**
	- information in 6.2 a) to g) in data sheet, leaflet or website		P
6.6	**Durable and legibility of marking**		**P**
	- marking on the LED module legible after test with water		P
	- marking not on the LED module legible		P

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**		N/A
	Separately approved; component list	(see Annex 2)	N/A
	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
- (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 ( ) at 10 A according 7.2.3 of IEC 60598-1: < 0,5 .....:		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
	Test with a current of 25 A between input and output earth terminals; measured resistance ( ) between earthing terminal and each of the accessible metal parts at 10 A according 7.2.3 of IEC 60598-1: < 0,5 .....:		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		P
- (A2)	Voltage measured with 50 k	(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
- (10.2)	Capacitors > 0,5 F: voltage after 1 min (V): < 50 V .....:		N/A
- (10.3)	Controlgear providing SELV		N/A
	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		P
	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 (M):		P
	For basic insulation 2 M ..... :	More than 100 M	P
	For double or reinforced insulation 4 M ..... :		N/A
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		P

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):		P
	For basic insulation 2 M ..... :		N/A
-(11.1)	For double or reinforced insulation 4 M ..... :	100 M	P
	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
	Basic insulation for SELV, test voltage 500 V		P
	Working voltage 50 V, test voltage 500 V		P
	Working voltage > 50 V 1000 V, test voltage (V):		N/A
	Basic insulation, 2U + 1000 V		N/A
	Supplementary insulation, 2U + 1000 V		N/A
	Double or reinforced insulation, 4U + 2000 V		N/A
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A

12 (14)	FAULT CONDITIONS		
- (14.1)	When operated under fault conditions the controlgear:		N/A
	- 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)	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:		P
	The insulation resistance 1 M .....:		P
	No flammable gases		P
	No accessible parts have become live		P
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		N/A
- (14.7)	Relevant fault condition tests with high-power a.c. supply and in turn to a d.c. supply		

12.2	**Overpower condition**		**P**
	Module withstands overpower condition >15 min.		P
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		P

14	**CONSTRUCTION**		N/A
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		N/A

15 (16)	**CREEPAGE DISTANCES AND CLEARANCES**		
- (16.1)	**General**		
	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		P
- (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
- (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**		
	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)		
(4.11)	**Electrical connections**		N/A
(4.11.1)	Contact pressure		N/A

(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

17 (18)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		**P**
- (18.1)	Ball-pressure test ..... :	See Test Table 18 (18.1)	P
- (18.3)	Glow-wire test (650 C) ..... :	See Test Table 18 (18.3)	P
- (18.4)	Needle-flame test (10 s) .....:	See Test Table 18 (18.4)	N/A
- (18.5)	Proof tracking test ..... :	See Test Table 18 (18.5)	N/A

18	**RESISTANCE TO CORROSION**		**P**
	- test according 4.18.1 of IEC 60598-1		P
	- adequate varnish on the outer surface		P

20	**HEAT MANAGEMENT**		
20.1	**General**		
	Fulfil clause 20 if replaceable LED module and when heat conducting thermal interface is needed.		P
20.2	**Thermal interface material**		**P**
	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		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		N/A

Attachment 2: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES according to EN 60598-2-5:2015 and EN 60598-1:2015			
Clause	Requirement + Test	Result - Remark	Verdict
	CENELEC COMMON MODIFICATIONS (EN)		
5.5 (3)	**MARKING**		
5.5 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package		P
5.6 (4)	**CONSTRUCTION**		
5.6 (4.11.6)	Electro-mechanical contact systems		N/A
5.10 (5)	**EXTERNAL AND INTERNAL WIRING**		
5.10 (5.2.1)	Connecting leads		N/A
	- without a means for connection to the supply		N/A
	- terminal block specified		N/A
	- relevant information provided		N/A
	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1		P
5.10 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – Supply cord		P
5.12 (12)	**ENDURANCE TESTS AND THERMAL TESTS**		
5.12 (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

Attachment 2: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES according to EN 60598-2-5:2015 and EN 60598-1:2015			
Clause	Requirement + Test	Result - Remark	Verdict
	FR: Safety requirements for high buildings (Arrêté du 30 décembre 2011 portant règlement de sécurité pour la construction des immeubles de grande hauteur et leur protection contre les risques d'incendie et de panique; Section VIII; Article GH 48, Eclairage) 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

4.2	**APPLICATION OF LIMITS (Test summary)**		
	Specific absorption rate (SAR)		
a)	CISPR 15 clause 4.3.1 Disturbance voltage mains terminals 20 kHz – 30 MHz	*)	P
b)	CISPR 15 clause 4.4 Radiated electromagnetic disturbances 100 kHz – 30 MHz	*)	P
c)	CISPR 15 clause 4.4.2 Radiated electromagnetic disturbances 30 MHz – 300 MHz	*)	P
*)	☒ See separate Test Report for measurements of a), b) and c) above ☐ Only measurement of d) below. See measurement results below. In this case this test report does not show compliance with IEC 62493.		
	Induced current density		N/A
d)	Induced current density 20 kHz – 10 MHz	See measurement results below	N/A
4.2.d	**INDUCED CURRENT DENSITY**		
	Power supply system utilised:		
	Voltage.....:		
	Frequency..... :		
	Environmental conditions:		
	Temperature ..... :		
	Humidity.....:		
	EuT operation mode:		
	☒ Normal operation		
	☐ Other operation:		
4.2.d	**MEASUREMENT RESULTS**		
	Measuring with “Van der Hoofden” test head		

Location of EuT	Measuring distance	Result (F)	Limit (F)	Verdict
Front of EuT	50 cm	--	0,85	N/A
Rear of EuT	50 cm	--	0,85	N/A
Side of EuT	50 cm	--	0,85	N/A

IEC TR 62778:2014			
Clause	Requirement + Test	Result – Remark	Verdict
5	Spectrum, colour temperature, and blue light hazard		P
5.1	Calculation of blue light hazard quantities and photometric quantities from emission spectra		P
5.2	Luminance and illuminance regimes that give rise to tmax values below 100s		P
7	**MEASUREMENT INFORMATION FLOW**		**P**
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		P
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	P
	E_{thr} of LED package applies to array		N/A
8	**RISK GROUP CLASSIFICATION**		**P**
	Risk group achieved:		P
	-... Risk Group 0 unlimited		P
	-... Risk Group 1 unlimited		N/A
	- E_{thr}…… (lx): Distance to reach RG1……..…… (m):		N/A

Risk Group Number	Risk Group Name	Corresponding t_{max} range (s)	Blue light hazard L_B (W/m².sr)
RG0	Exempt	>10000	<100
RG1	Low Risk	100-10000	100-10000
RG2	Moderate Risk	0.25-100	10000-4000000
RG3	High Risk	<0.25	>4000000

IEC TR 62778:2014			
Clause	Requirement + Test	Result – Remark	Verdict
TABLE	**SPECTRORADIOMETRIC MEASUREMENT**		**P**
Tested model number……..……:	TK-N 300W		
Tested voltage……..…..:	By battery		
Tested current……:	6.16A		
Tested frequency……...:	--		
Ambient temperature……:	24.8 C		
Measurement distance……..:	100mm		
Source size……..:	☒ Non-small source ☐ Small source		
Field of view .	☐ 100 mrad☒ 11 mrad☐ 1.7 mrad		
Blue light hazard radiance (L_B)……:	3.52e+01W/(m²•sr)		
Blue light hazard irradiance (E_B)……..:	--W/m²		
Luminance (L)……:	--cd/m²		
Illuminance (E_{thr})……:	--lx		
Calculate distance (d_{min})……..:	--m		

Measurement Uncertainty Statement:

EB, Urel=2.52% (k=2)
LB, Urel=2.84% (k=2)
LR, Urel=2.84% (k=2)

Attchment 3: Photo documentation

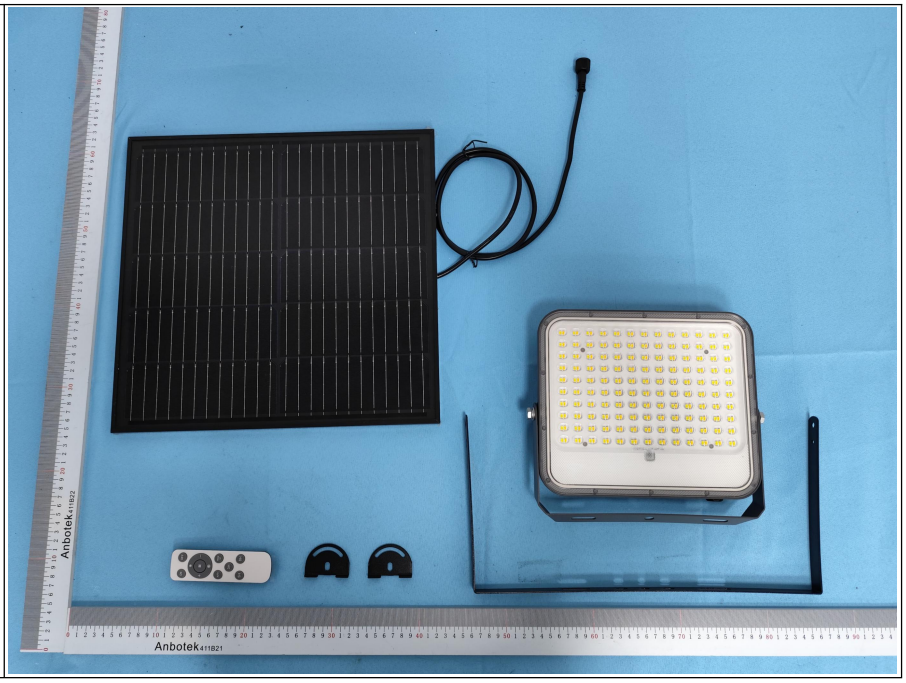
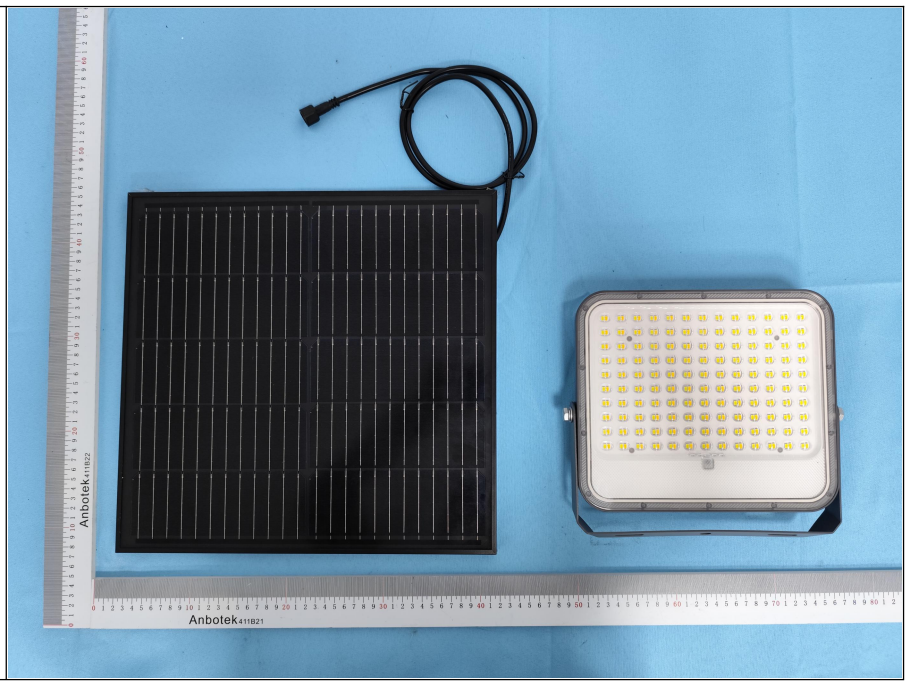
Photo 1 For model: TK-N 300W	

Photo 2 For model: TK-N 300W	

Attchment 3: Photo documentation

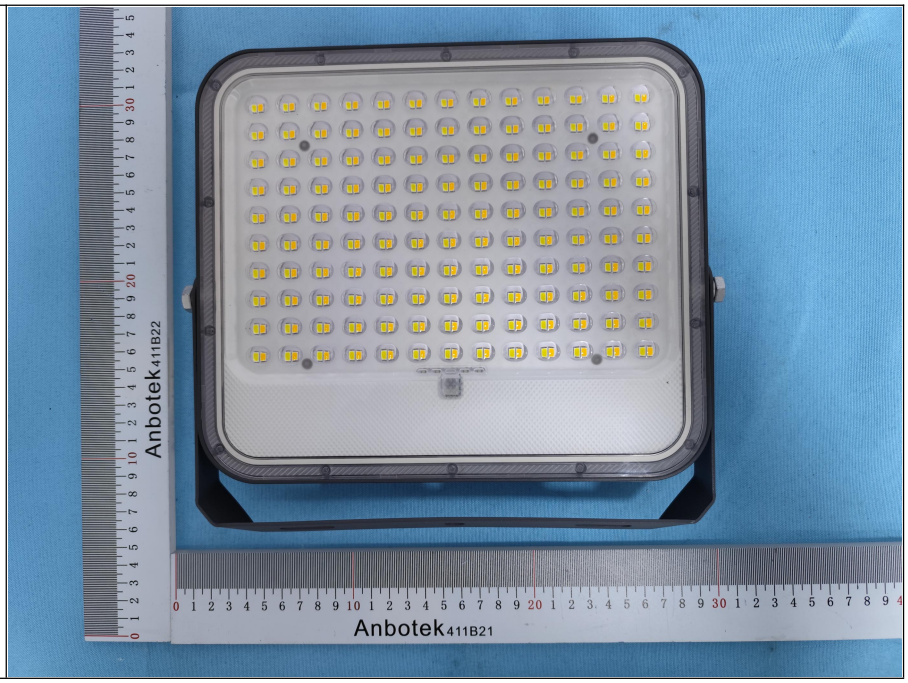
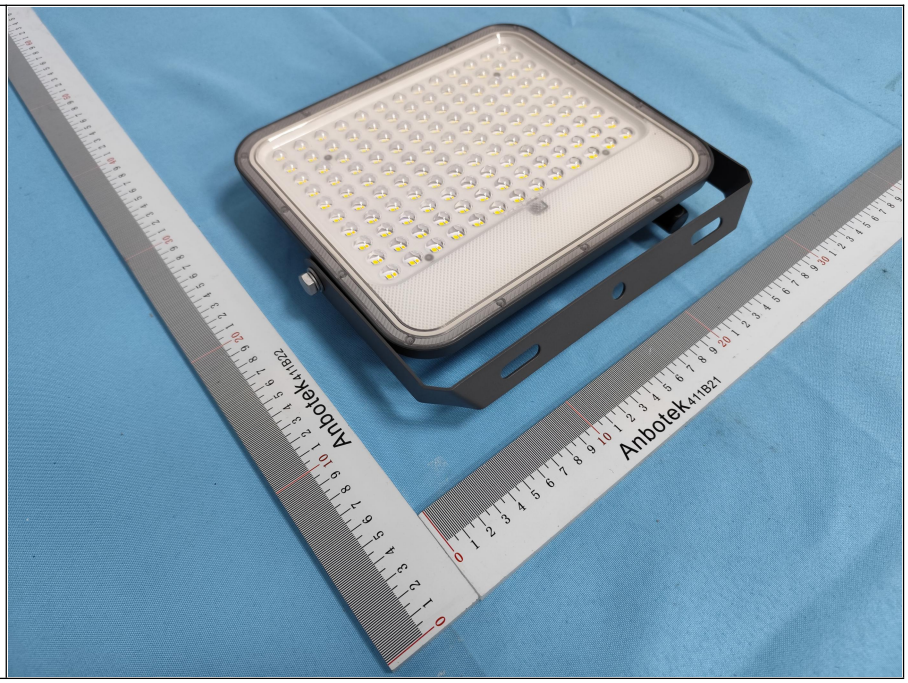
Photo 3 For model: TK-N 300W	

Photo 4 For model: TK-N 300W	

Attchment 3: Photo documentation

Photo 5 For model: TK-N 300W	

Photo 6 For model: TK-N 300W	

Attchment 3: Photo documentation

Photo 7 For model: TK-N 300W	

Photo 8 For model: TK-N 300W	

Attchment 3: Photo documentation

Photo 9 For model: TK-N 300W	

Photo 10 For model: TK-N 300W	

Attchment 3: Photo documentation

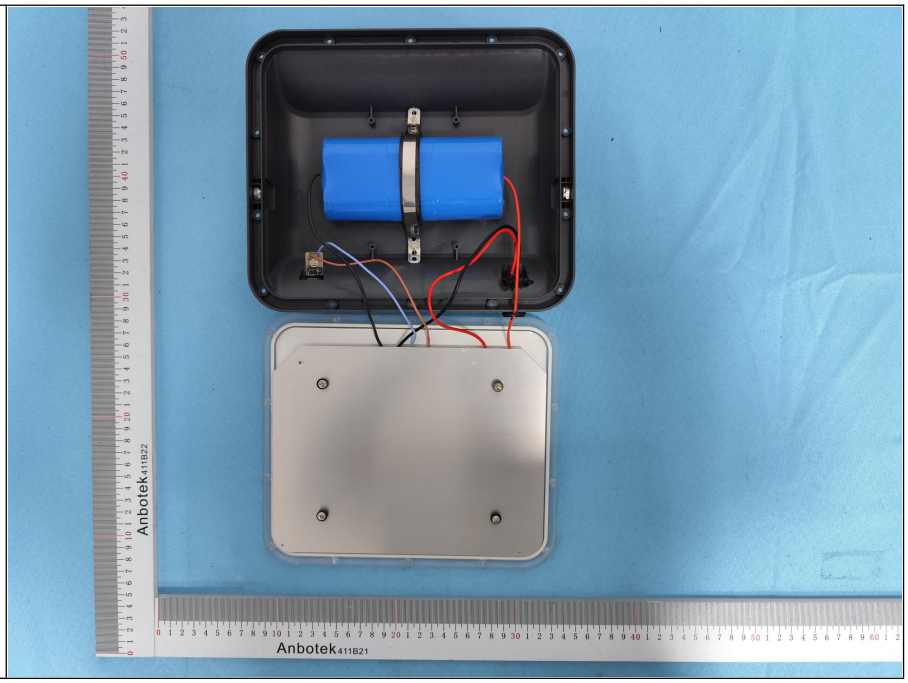
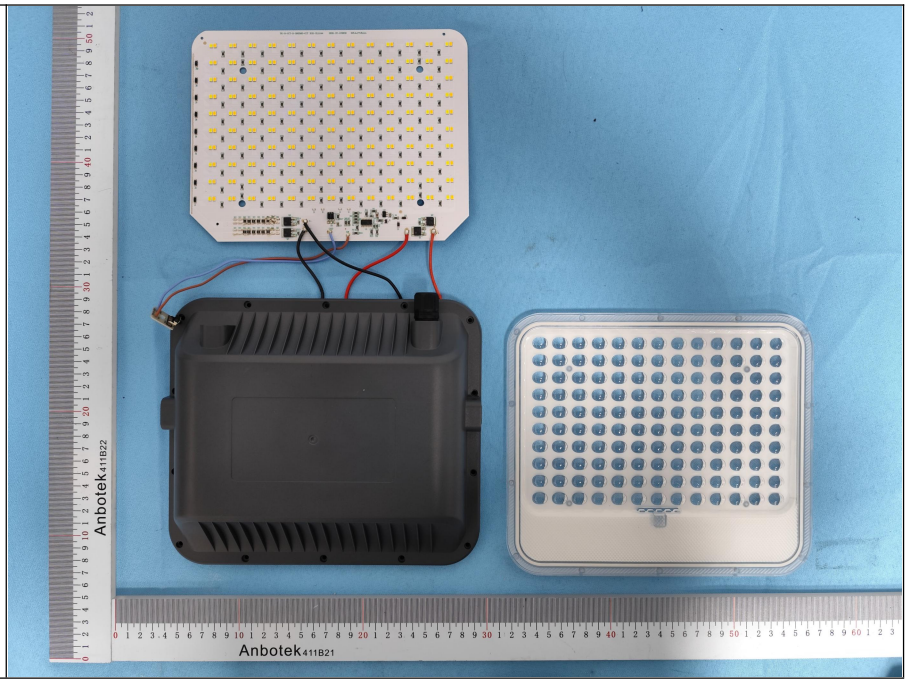
Photo 11 For model: TK-N 300W	

Photo 12 For model: TK-N 300W	

Attchment 3: Photo documentation

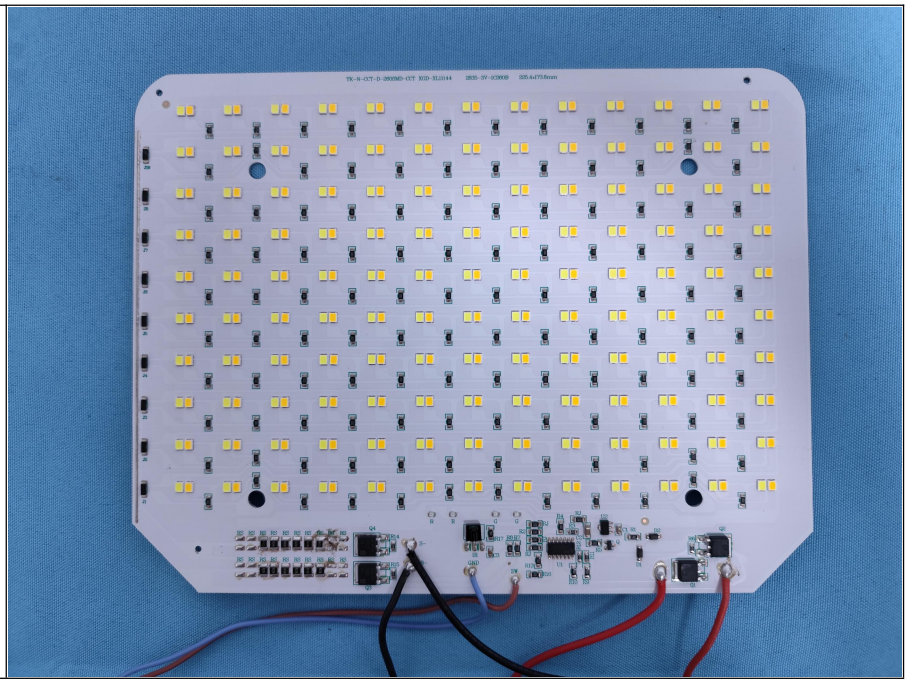
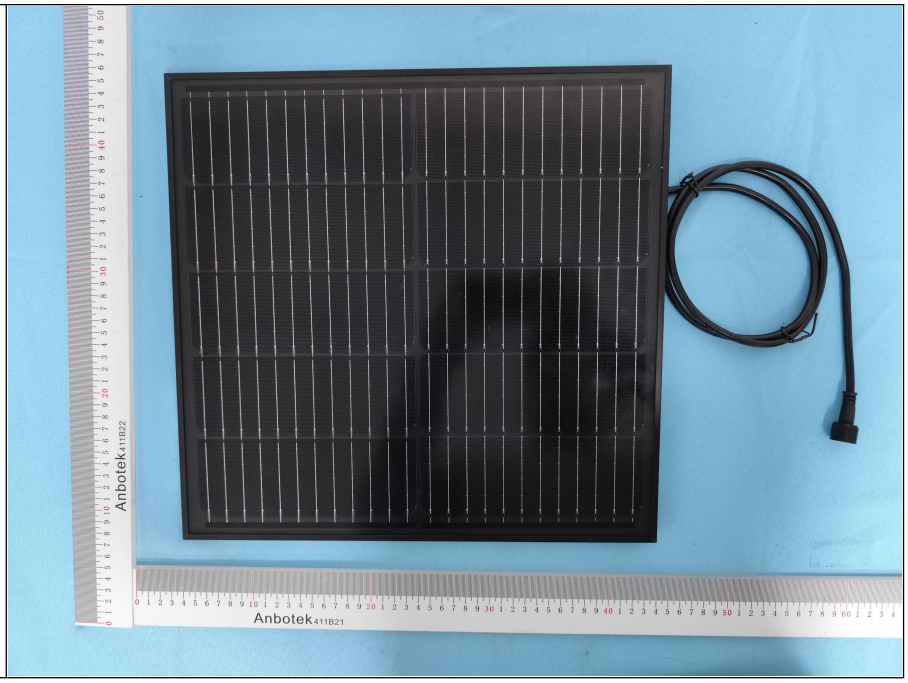
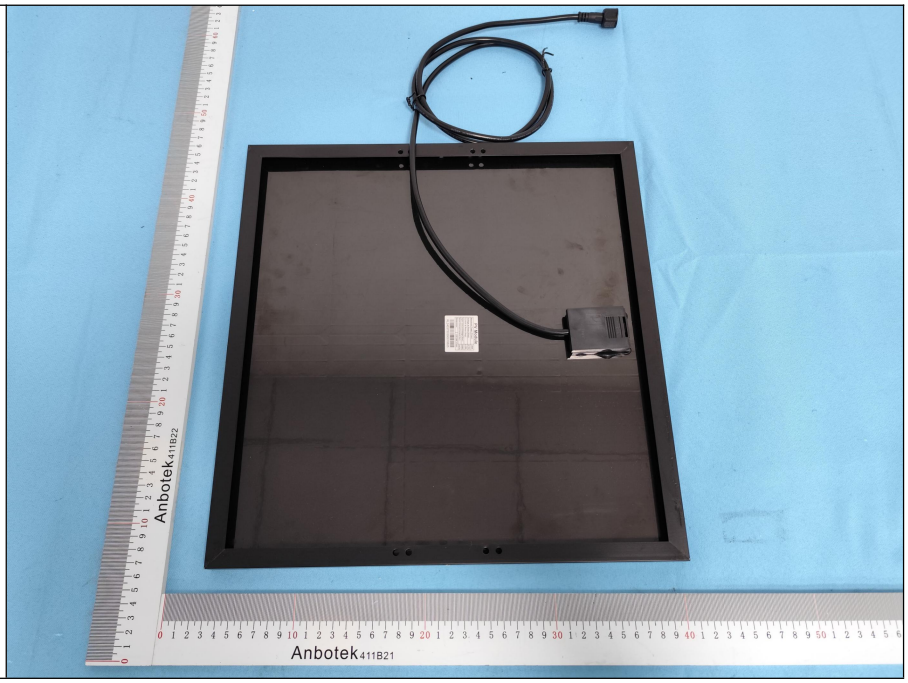
Photo 13 For model: TK-N 300W	

Photo 14 For model: TK-N 300W	

Attchment 3: Photo documentation

Photo 15 For model: TK-N 300W	

--- End of report ---