

Report No.: 18240SC10003201

Test Report

Client Name : FOSHAN KAICHENG LIGHTING CO., LTD

Address : NO.16,XINGYE WEST ROAD, SHISHAN TOWN,
NANHAI DISTRICT, FOSHAN

Product Name : Portable work lamp

Date : Feb. 26, 2021



Shenzhen Anbotech Compliance Laboratory Limited

Shenzhen Anbotech Compliance Laboratory Limited

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TEST REPORT**IEC 60598-2-4****Luminaires****Part 2: Particular requirements****Section Four - Portable general purpose luminaires****Report**

Report reference No.: 18240SC10003201

Compiled by: Owen Luo

Approved by: Jeff Zhu

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Contents: 41 pages report

Testing laboratory

Name: Shenzhen Anbotech Compliance Laboratory Limited

Address: 1/F, Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128

Applicant

Name: FOSHAN KAICHENG LIGHTING CO., LTD

Address: NO.16,XINGYE WEST ROAD, SHISHAN TOWN, NANHAI DISTRICT, FOSHAN

Test specificationStandard: IEC 60598-2-4:2017 used in conjunction with
IEC 60598-1:2014+A1: 2017

Test procedure: N.A.

Non-standard test method: N.A.

Test item Description

Product name: Portable work lamp

Trademark: N.A.

Model and/or type reference: TG01-A, TG01-B, TG01-C, TG02-A, TG02-B, TG02-C, TG02-D,
TG03-E, TG03-A, TG03-B, TG03-C, TG03-D

Manufacturer: same as applicant

Address: same as applicant

Factory: same as applicant

Address: same as applicant

Rating(s): 3.7VDC, 100W

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Test item particulars

Classification of installation and use.....: Portable luminaire for indoor use

Protection class.....: Class III

Degree of protection.....: IP65

Test case verdicts

- test case does not apply to the test object.....: N (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.....: Jan. 24, 2021

Date(s) of performance of tests.....: Jan. 24, 2021 to Feb. 04, 2021

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.

Throughout this report a point is used as the decimal separator.

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 60598-1: 2015 +A1: 2018

- EN 60598-2-4: 2018

- EN 62031: 2008+A1: 2013+A2: 2015

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

All models have the similar mechanical and electrical construction, main differences among them are size and shape.

The submitted samples were found to comply with the above specification, except for clause 4.24.

List of Attachments

Attachment 1: Test report of EN 62031

Attachment 2: Photo documentation

Copy of marking plate(s)**Portable work lamp****Model No.: TG01-C****Rating: 3.7VDC, 100W****IP65****FOSHAN KAICHENG LIGHTING CO., LTD****NO.16,XINGYE WEST ROAD, SHISHAN TOWN,
NANHAI DISTRICT, FOSHAN****Importer: xxxxxx****Address: xxxxxx**

Remark: this label is only representative.

Unless otherwise specified, the maximum power model TG01-C was selected as representative models to perform all tests.

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict

4.1 (0)	SCOPE		—
4.2 (0.1)	Information for luminaire design considered	Standard Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
4.2 (0.3)	More sections applicable	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—

4.4 (2)	CLASSIFICATION		—
4.4 (2.2)	Type of protection	Class III	—
4.4 (2.3)	Degree of protection	IP65	—
4.4 (2.4)	Portable and handheld luminaire	Yes	—
	Fixed luminaire suitable for normally flammable surfaces.....	No	—
	Fixed luminaire suitable for non-combustible materials only	No	—
4.4 (2.5)	Luminaire for normal use	Yes	—
	Luminaire for rough service	No	—

4.5 (3)	MARKING		—
4.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
4.5 (3.3)	Additional information		P
	Language of instructions	English	P
4.5 (3.3.1)	Combination luminaires		N
4.5 (3.3.2)	Nominal frequency in Hz		N
4.5 (3.3.3)	Operating temperature		N
4.5 (3.3.4)	Symbol or warning notice		P
4.5 (3.3.5)	Wiring diagram		N
4.5 (3.3.6)	Special conditions		N
4.5 (3.3.7)	Metal halid lamp luminaire – warning		N
4.5 (3.3.8)	Limitation for semi-luminaires		N
4.5 (3.3.9)	Power factor and supply current		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.5 (3.3.10)	Suitability for use indoors		P
4.5 (3.3.11)	Luminaires with remote control		N
4.5 (3.3.12)	Clip-mounted luminaire - warning		N
4.5 (3.3.13)	Specifications of protective shields		N
4.5 (3.3.14)	Symbol for nature of supply	---	P
4.5 (3.3.15)	Rated current of socket outlet		N
4.5 (3.3.16)	Rough service luminaire		N
4.5(3.3.17)	The mounting instructions for luminaires with type X, Y or Z attachments	X	P
4.5(3.3.18)	Information of luminaires provided with a PVC non-detachable cable or cord		N
4.5 (3.3.19)	Protective conductor current in instruction if applicable		N
4.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N
4.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	Non replaceable light sources	P
	Cautionary symbol		P
4.5 (3.3.22)	Controllable luminaires, insulation		N
4.5 (3.4)	Test of marking		P
	Test with water	15s with water	P
	Test with hexane	15s with hexane	P
	Legible after test		P
	Label attached		P
4.6 (4)	CONSTRUCTION		—
4.6.1 (-)	Insulation cables and cords		N
4.6.2 (-)	Means of fixing wiring		N
4.6.3 (-)	Stability		P
4.6.4 (-)	Candlestick luminaires with switch		P
4.6.5 (-)	E5 lampholders		N
4.6 (4.2)	Components replaceable without difficulty		P
4.6 (4.3)	Wireways smooth and free from sharp edges		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.6 (4.4)	Lampholders		N
4.6 (4.4.1)	Integral lampholder		N
4.6 (4.4.2)	Wiring connection		P
4.6 (4.4.3)	Lampholder for end-to-end mounting		N
4.6 (4.4.4)*	Positioning		N
4.6 (4.4.5)	Peak pulse voltage		N
4.6 (4.4.6)	Centre contact		N
4.6 (4.4.7)*	Rough service luminaires		N
4.6 (4.4.8)	Lamp connectors		N
4.6 (4.4.9)	Caps and bases correctly used		N
4.6 (4.5)	Starter holders		N
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
4.6 (4.6)	Terminal blocks		N
	Tails		N
	Unsecured blocks		N
4.6 (4.7)	Terminals and supply connections		N
4.6 (4.7.1)	Contact to metal parts		N
4.6 (4.7.2)	Location stranded wires		N
	8 mm test live conductor		N
	8 mm test earth conductor		N
4.6 (4.7.3)	Terminals for supply conductors		N
4.6 (4.7.3.1)	Welded connections:		N
	- stranded or solid conductor		N
	- spot welding		N
	- welding between wires		N
	- Type Z attachment		N
	- mechanical test according to 15.8.2		N
	- electrical test according to 15.9		N
	- heat test according to 15.9.2.3 and 15.9.2.4		N
4.6 (4.7.4)	Terminals other than supply connection		N

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IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.6 (4.7.5)	Heat-resistant wiring/sleeves		N
4.6 (4.7.6)	Multi-pole plug		N
	- test at 30 N		N
4.6 (4.8)	Switches:		N
	- adequate rating		N
	- adequate fixing		N
	- polarized supply		N
4.6 (4.9)	Insulating lining and sleeves		N
4.6 (4.9.1)	Retainment		N
	Method of fixing		—
4.6 (4.9.2)	Insulated linings and sleeves		N
	Resistant to a temperature > 20 °C to the wire temperature or		N
	a) & c) Insulation resistance and electric strength		N
	b) Ageing test. Temperature (°C)		N
4.6 (4.10)	Insulation of Class II luminaires		N
4.6 (4.10.1)	No contact, mounting surface - accessible metal parts - wiring of basic insulation		N
	Safe installation fixed luminaires		N
	Capacitors		N
	Interference suppression capacitors according to IEC 60384-14		N
4.6 (4.10.2)	Assembly joints:		N
	- not coincidental		N
	- no straight access		N
	- degree of protection		N
4.6 (4.10.3)	Retainment of insulation:		N
	- fixed		N
	- unable to be replaced; luminaire inoperative		N
	- sleeves retained in position		N
	- lining in lampholder		N
4.6 (4.11)	Electrical connections		P

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.6 (4.11.1)	Contact pressure		P
4.6 (4.11.2)	Screws:		N
	- spaced threaded screws		N
	- thread-cutting screws		N
	- earth continuity		N
	- at least two screws		N
4.6 (4.11.3)	Screw locking:		N
	- spring washer		N
	- rivets		N
4.6 (4.11.4)	Material of current-carrying parts		P
4.6 (4.11.5)	No contact to wood		P
4.6 (4.11.6)	Electro-mechanical contact systems		N
4.6 (4.12)	Mechanical connections and glands		P
4.6 (4.12.1)	Mechanical stress		P
	Not made of soft metal		P
	Screws of insulating material		N
	Torque test: torque (Nm); part	Fixed enclosure: 0.4Nm	P
	Torque test: torque (Nm); part		N
	Torque test: torque (Nm); part		N
4.6 (4.12.2)	Screw diameter up to 3 mm		N
4.6 (4.12.4)	Locked connections:		N
	- fixed arms; torque (Nm).....		N
	- lampholder; torque (Nm)		N
	- push-button switches; torque (Nm)		N
4.6 (4.12.5)	Screwed glands; force (N)		N
4.6 (4.13)	Mechanical strength		P
4.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm).....	Diffuser: 0.35Nm	P
	- other parts; energy (Nm)	Enclosure: 0.50 Nm	P
	1) live parts		P
	2) linings		N
	3) protection		P

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	4) covers		P
4.6(4.13.2)	Metal parts enclosing live parts		N
4.6 (4.13.3)	Straight test finger		P
4.6 (4.13.4)	Rough service luminaires		N
	a) fixed		N
	b) hand-held		N
	c) delivered with a stand		N
	d) for temporary installations and suitable for mounting on a stand		N
4.6 (4.13.6)	Tumbling barrel		N
4.6 (4.14)	Suspensions and adjusting devices		N
4.6 (4.14.1)	Mechanical load:		N
	A) four times the weight		N
	B) torque 2,5 Nm		N
	C) bracket arm; force (N)		N
	D) load track-mounted luminaires		N
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N
	metal rod. diameter (mm)		N
	Fixed luminaire or independent control gear without fixing devices		N
4.6 (4.14.2)	Load to flexible cables		N
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N
	Mass (kg) of semi-luminaire		—
	Bending moment (Nm) of semi-luminaire:		N
4.6 (4.14.3)	Adjusting devices:		N
	- rotating test; number of cycles		N
	- strands broken		N
	- high voltage test		N
4.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N
4.6 (4.14.5)	Guide pulleys		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.6 (4.14.6)	Strain on socket-outlets		N
4.6 (4.15)	Flammable materials:		P
	- glow-wire test 650°C		P
	- spacing \geq 30 mm		N
	- screen withstanding test of 13.3.1		N
	- screen dimensions		N
	- no fiercely burning material		P
	- thermal protection		N
	- electronic circuits exempted		N
4.6 (4.15.2)	Luminaires made of thermoplastic material		N
	a) construction		N
	b) temperature sensing control		N
	c) surface temperature		N
4.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N
	No lamp control gear (compliance with Section 12)		N
4.6 (4.16.1)	Lamp control gear spacing:		N
	- spacing 35 mm		N
	- spacing 10 mm		N
4.6 (4.16.2)	Thermal protection:		N
	- in lamp control gear		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
4.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N
4.6 (4.17)	Drain holes		N
	Clearance at least 5 mm		N
4.6 (4.18)	Resistance to corrosion:		N
4.6 (4.18.1)	- rust-resistance		N
4.6 (4.18.2)*	- season cracking in copper		N
4.6 (4.18.3)	- corrosion of aluminium		N
4.6 (4.19)	Ignitors compatible with ballast		N
4.6 (4.20)*	Rough service vibration		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.6 (4.21)	Protective shield:		N
4.6 (4.21.1)	Shield fitted		N
4.6 (4.21.2)	Particles from a shattering lamp not impair safety		N
4.6 (4.21.3)	No direct path		N
4.6 (4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment		N
4.6 (4.22)	Attachments to lamps		N
4.6 (4.23)	Semi-luminaires comply Class II		N
4.6 (4.24)*	UV radiation, metal halide lamps		N
4.6 (4.24.2)	Retinal blue light hazard		N
	Luminaires with E_{thr}		N
	a) Fixed luminaires		N
	Distance x m, borderline between RG1 and RG2.....		N
	Marking and instruction		N
	b) Portable and handheld luminaires		N
	RG1 exceeded at 200 mm according to IEC/TR 62778		N
	Marking		N
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12		N
	RG at 200 mm according to IEC/62778		N
4.6 (4.25)	No sharp point or edges		P
4.6 (4.26)	Short-circuit protection:		N
4.6 (4.26.1)	Uninsulated accessible SELV parts		N
4.6 (4.26.2)	Short-circuit test		N
4.6 (4.26.3)	Test chain according to IEC 61032		N
4.6 (4.27)	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	Pull test of terminal fixing (20 N)		N
	After test, resistance < 0,05 Ω		N
	Pull test of mechanical connection (50 N)		N
	After test, resistance < 0,05 Ω		N
	Voltage drop test, resistance < 0,05 Ω		N
4.6 (4.28)	Fixing of thermal sensing control		N
	External to lamp control gear		N
	Plug-in or easily replaceable type		N
	Adhesive fixing		N
	Positioning		N
	Temperature ($^{\circ}\text{C}$)		N
	100 cycles between t min and t max		N
	Temperature sensing control still in position		N
4.6 (4.29)	Luminaires with non-replaceable light source		P
	Replacement not possible		P
	Live part not accessible		P
	Breaking of the luminaire or its parts		N
	Removal of parts		N
	Compliance with test probe		P
	Access to live parts		N
4.6 (4.30)	Luminaires with non-user replaceable light source		N
	Protective cover		N
	Fixing means		N
	Cautionary symbol		N
4.6 (4.31)	Insulation between circuits		N
	Transformer or control gears		N
	Insulation between circuits		N
	Circuits insulated from LV supply		N
	Insulation provided		N
	Controllable luminaires		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	Control terminals		N
	Insulation		N
	Control gear U-OUT		N
4.6 (4.31.1)	SELV circuits		P
	Source		P
	Insulation between circuits		P
	Control gear U-OUT		N
	Plug and socket outlet		N
4.6 (4.31.2)	FELV circuits		N
	Source		N
	Insulation between circuits		N
	Plug and socket outlet		N
4.6 (4.31.3)	Other circuits		N
	CI II		N
	Equipotential bonding		N
	All conductive part connected		N
	Resistance < 0,5 Ω		N
	Insulation fault: accessible part cause electric shock		N
	Master/slave applications		N
4.6 (4.32)	Overvoltage protective devices		N
	External to lamp control gear, connected to earth		N
	Fixed luminaires connected to a protective earth		N
4.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		—
4.7 (11.2)	Creepage distances and clearances	See Table 4.7 (11.2)	P
	Working voltage (V)	3.7V==	—
	Rated pulse voltage (kV)	--	—
	Voltage form	Sinusoidal [$\sqrt{\quad}$] (input of power supply) Non-sinusoidal [] (input of luminaire)	—

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	PTI	< 600 [√] ≥ 600 []	—
	Impulse withstand category (Normal category II) (Category III Annex U)	--	—

4.8 (7)	PROVISION FOR EARTHING		—
4.8 (7.2.1 + 7.2.3)	Accessible metal parts	Class III luminaire	N
	Metal parts in contact with supporting surface		N
	Resistance < 0,5 Ω		N
	Self-tapping screws used		N
	Thread-forming screws		N
	Thread-forming screw used in a groove		N
	Earth makes contact first		N
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N
	Built-in control gear		N
4.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N
4.8 (7.2.4)	Locking of clamping means		N
	Compliance with 4.7.3		N
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N
4.8 (7.2.5)	Earth terminal integral part of connector socket		N
4.8 (7.2.6)	Earth terminal adjacent to mains terminals		N
4.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N
4.8 (7.2.8)	Material of earth terminal		N
	Contact surface bare metal		N
4.8 (7.2.10)	Class II luminaire for looping-in		N
	Double or reinforced insulation to functional earth		N
4.8 (7.2.11)	Earthing core coloured green-yellow		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	Length of earth conductor		N
4.8 (7.2.10)	Class II luminaire for looping-in		N
4.8 (7.2.11)	Earthing core coloured green-yellow		N
	Length of earth conductor		N
4.9 (14)	SCREW TERMINALS		—
	Separately approved; component list		N
	Part of the luminaire		N
4.9 (15)	SCREWLESS TERMINALS		—
	Separately approved; component list		N
	Part of the luminaire		N
4.10 (5)	EXTERNAL AND INTERNAL WIRING		—
4.10 (5.2)	Supply connection and external wiring		P
4.10 (5.2.1)	Means of connection..... :		P
4.10 (5.2.2)	Type of cable..... :		P
	Nominal cross-sectional area (mm ²)..... :		P
	Cables equal to IEC 60227 or IEC 60245		P
4.10 (5.2.3)	Type of attachment, X, Y or Z	Type X	P
4.10 (5.2.5)	Type Z not connected to screws		N
4.10 (5.2.6)	Cable entries:		N
	- suitable for introduction		N
	- adequate degree of protection		N
4.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
4.10 (5.2.8)	Insulating bushings:		N
	- suitably fixed		N
	- material in bushings		N
	- material not likely to deteriorate		N
	- tubes or guards made of insulating material		N
4.10 (5.2.9)	Locking of bushings		N
4.10 (5.2.10)	Cord anchorage:		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	- covering protected from abrasion		N
	- clear how to be effective		N
	- no mechanical or thermal stress		N
	- no tying of cables into knots etc.		N
	- insulating material or lining		N
4.10 (5.2.10.1)	Cord anchorage for type X attachment:		N
	a) at least one part fixed		N
	b) types of cable		N
	c) no damaging of the cable		N
	d) whole cable can be mounted		N
	e) no touching of clamping screws		N
	f) metal screw not directly on cable		N
	g) replacement without special tool		N
	Glands not used as anchorage		N
	Labyrinth type anchorages		N
4.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N
4.10 (5.2.10.3)	Tests:		N
	- impossible to push cable; unsafe		N
	- pull test: 25 times; pull (N)		N
	- torque test: torque (Nm)		N
	- displacement ≤ 2 mm		N
	- no movement of conductors		N
	- no damage of cable or cord		N
4.10 (5.2.11)	External wiring passing into luminaire		N
4.10 (5.2.12)	Looping-in terminals		N
4.10 (5.2.13)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N
4.10 (5.2.14)	Mains plug same protection		N
	Class III luminaire plug		N
	No unsafe compatibility		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.10 (5.2.15)	Colour code low voltage		N
4.10 (5.2.16)	Appliance inlets (IEC 60320)		N
	Installation couplers (IEC 61535)		N
	Other appliance inlet or connector		N
	Relevant IEC standard		N
4.10 (5.2.17)	No standardized interconnecting cables properly assembled		N
4.10 (5.2.18)	Used plug in accordance with		N
	- IEC 60083		N
	- other standard		N
4.10 (5.3)	Internal wiring		P
4.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		P
	- not delivered/ mounting instruction		N
	- factory assembled		P
	- socket outlet loaded (A).....		N
	- temperatures.....		N
	Green-yellow for earth only		N
4.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)		N
	Insulation thickness		N
	Extra insulation added where necessary		N
4.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N
	Adequate cross-sectional area and insulation thickness		N
4.10 (5.3.1.3)	Double or reinforced insulation for class II		P
4.10 (5.3.1.4)	Conductors without insulation		N
4.10 (5.3.1.5)	SELV current-carrying parts		N
4.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N
4.10 (5.3.2)	Sharp edges etc.		N
	No moving parts of switches etc.		N

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Clause	Requirement - Test	Result - Remark	Verdict
	Joints, raising/lowering devices		N
	Telescopic tubes etc.		N
	No twisting over 360°		P
4.10 (5.3.3)	Insulating bushings:		N
	- suitable fixed		N
	- material in bushings		N
	- material not likely to deteriorate		N
	- cables with protective sheath		N
4.10 (5.3.4)	Joints and junctions effectively insulated		N
4.10 (5.3.5)	Strain on internal wiring		N
4.10 (5.3.6)	Wire carriers		N
4.10 (5.3.7)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N

4.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		—
4.11 (8.2.1)	Live parts not accessible		N
	Basic insulated parts not used on the outer surface without appropriate protection		N
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N
	Basic insulation only accessible under lamp or starter replacement		N
	Protection in any position		N
	Double-ended tungsten filament lamp		N
	Insulation lacquer not reliable		N
	Double-ended high pressure discharge lamp		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	Relevant warning according to 3.2.18 fitted to the luminaire		N
4.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N
4.11 (8.2.3.a)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement		P
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		N
4.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N
4.11 (8.2.3.c)	Class III luminaires with exposed SELV parts:		P
	Ordinary luminaire:		P
	- touch current		P
	- no-load voltage		N
	Other than ordinary luminaire:		N
	- nominal voltage		N
4.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		P
4.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
4.11 (8.2.6)	Covers reliably secured		N
4.11 (8.2.7)	Discharging of capacitors $\geq 0,5 \mu\text{F}$		N
	Portable plug connected luminaire with capacitor		N
	Other plug connected luminaire with capacitor		N
	Discharge device on or within capacitor		N
	Discharge device mounted separately		N
4.11.1 (-)	Class I luminaire with bayonet lampholder:		N
	- cap not accessible with test finger©		N
	- metal lampholder is earthed		N
4.12 (12)	ENDURANCE TEST AND THERMAL TEST		—

IEC 60598-2-4			
Clause	Requirement - Test		Verdict
4.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 4.13		P
4.12 (12.3)	Endurance test:		P
	- mounting-position	(see Annex 2)	—
	- test temperature (°C)	35°C	—
	- total duration (h).....	240 h	—
	- supply voltage: Un factor; calculated voltage (V).....	3.7V*1.1	—
	- lamp used	LED	—
4.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N
	- marking legible		P
	- no cracks, deformation etc.		P
4.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
4.12 (12.5)	Thermal test (abnormal operation)		N
4.12 (-)	Overtured position		N
4.12 (12.6)	Thermal test (failed lamp control gear condition):		N
4.12 (12.6.1)	- case of abnormal conditions.....		N
	- electronic lamp control gear		N
	- measured winding temperature (°C): at 1,1 Un.....		N
	- measured mounting surface temperature (°C): at 1,1 Un		N
	- calculated mounting surface temperature (°C).....		N
	- track-mounted luminaires		N
4.12 (12.6.2)	Temperature sensing control		N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N

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Clause	Requirement - Test	Result - Remark	Verdict
	- measured mounting surface temperature (°C):.....		N
	- track-mounted luminaires		N
4.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N
4.12 (12.7.1)	Luminaire without temperature sensing control		N
4.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N
	Test method 12.7.1.1 or Annex W :		—
	Test according to 12.7.1.1:		N
	- case of abnormal conditions:		—
	- Ballast failure at supply voltage (V) :		—
	- Components retained in place after the test		N
	- Test with standard test finger after the test		N
	Test according to Annex W:		N
	- 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 4.15 (13.2.1)	N
4.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N
	- 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 4.15 (13.2.1)	N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N
	- case of abnormal conditions.....		—
	- Components retained in place after the test		N
	- Test with standard test finger after the test		N
4.12 (12.7.2)	Luminaire with temperature sensing control		
	- thermal link	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- manual reset cut-out.....	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- auto reset cut-out.....	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- case of abnormal conditions.....		—
	- highest measured temperature of fixing point/ exposed part (°C):.....		—
	Ball-pressure test:	See Table 4.15 (13.2.1)	N
4.12 (-)	Test overturned position (overturns < 15°)	6° and 15° pass	P
4.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		—
4.13 (-)	If IP > IP 20 the order of tests as specified in clause 4.12		N
4.13 (9.2)*	Tests for ingress of dust, solid objects and moisture:		—
	- classification according to IP	IP65	—
	- mounting position during test.....	According to manual	—
	- fixing screws tightened; torque (Nm)	0.4	—
	- tests according to clauses		—
	- electric strength		P
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on live parts		P
	d) no accumulation of water in waterproof luminaire		N
	e) no water in watertight luminaire		P
	f) no contact with live parts (IP 2X)		N
	f) no entry into enclosure (IP 3X and IP 4X)		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
	f) no contact with live parts (IP3X and IP4X)		N
	g) no trace of water on part of lamp requiring protection from splashing water		N
	h) no damage of protective shield or glass envelope		N
4.13 (9.3)	Humidity test 48 h	Humidity: 93% Temperature: 25°C	P

4.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		—
4.14 (10.2.1)	Insulation resistance test	Class III	P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø :		—
	Insulation resistance (MΩ) :		—
	SELV:		P
	- between current-carrying parts of different polarity..... :	100 MΩ	P
	- between current-carrying parts and mounting surface :	100 MΩ	P
	- between current-carrying parts and metal parts of the luminaire :		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts :		N
	- Insulation bushings as described in Section 5 :		N
	Other than SELV:		N
	- between live parts of different polarity .. :		N
	- between live parts and mounting surface :		N
	- between live parts and metal parts :		N
	- between live parts of different polarity through action of a switch :		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts :		N
	- Insulation bushings as described in Section 5 :		N

IEC 60598-2-4			
Clause	Requirement - Test		Verdict
4.14 (10.2.2)	Electric strength test:		P
	Class of protection	Class III	P
	Dummy lamp		N
	Luminaires with ignitors after 24 h test		N
	Luminaires with manual ignitors		N
	Test voltage (V):		N
	SELV:		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.....		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N
	- Insulation bushings as described in Section 5		N
	Other than SELV:		N
	- between live parts of different polarity ..		N
	- between live parts and mounting surface		N
	- between live parts of different polarity through action of a switch		N
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N
	- Insulation bushings as described in Section 5		N
4.14 (10.3.1)	Touch current or protective conductor current (mA)		N

4.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		—
4.15 (13.2.1)	Ball-pressure test.....	See Test Table 4.15 (13.2.1)	P
4.15 (13.3.1)	Needle-flame test (10 s)	See Test Table 4.15 (13.3.1)	P
4.15 (13.3.2)	Glow-wire test (650°C)	See Test Table 4.15 (13.3.2)	P

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict
4.15 (13.4)*	Proof tracking test (IEC 60112)		N
	- part tested.....		N

IEC 60598-2-4								
Clause	Requirement - Test			Result - Remark			Verdict	
4.7 (11.2)	TABLES: Creepage distances and clearances						P	
Table 11.1	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages						P	
RMS working voltage (V) not exceeding		50	150	250	500	750	1000	
Creepage distances								
Required basic insulation, PTI ≥ 600		0,6	0,8	1,5	3	4	5,5	
Measured between current carrying parts of different polarity		>0.6	--	--	--	--	--	
Required basic insulation, PTI < 600		1,2	1,6	2,5	5	8	10	
Measured		--	--	--	--	--	--	
Required supplementary insulation PTI ≥ 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 between current carrying parts of different polarity		>0.2	--	--	--	--	--	
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		--	--	--	--	--	--	--

IEC 60598-2-4				
Clause	Requirement - Test		Result - Remark	Verdict
3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)				—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Plastic of enclosure	--	75	0.93	
Supplementary information:--				

3.15 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Plastic of enclosure	--	0	Yes	0	Pass
Supplementary information:--					

3.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				P
Glow wire temperature			650°C		—
Object/ Part No./ Material	Manufacturer/ trademark		Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Plastic of enclosure	--		No	0	Pass
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No)					
Supplementary information:--					

3.15 (13.4) *	TABLE: Proof tracking test (IEC 60112)				N
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:--					

ANNEX 1	TABLE: Critical components information	P
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IEC 60598-2-4					
Clause	Requirement - Test		Result - Remark		Verdict
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
LED light source	FOSHAN KAICHENG LIGHTING CO., LTD	2835	0.2-0.5W	EN 60598-1 EN 60598-2-4	Test with appliance
Battery	Various	Various	3.7VDC, 50AH	IEC 62133	CE
Internal wire	Various	1007	22AWG, 80°C	UL 758	UL
Plastic of enclosure	COVESTRO DEUTSCHLAND AG	PC R96 GF + (z)(f1)	V-1, 120°C	UL 94	UL E41613
Switch	Zhejiang Jialong Electronics Co., Ltd.	KAN-9, KAN-9A, KAN-9L	6A, 250VAC	61058-1	VDE
LED PCB	INTERNATIONAL LAMINATE MATERIAL LTD	ILM-R1##	V-0/130°C	UL 796	UL

IEC 60598-2-4

Clause	Requirement - Test	Result - Remark	Verdict
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ANNEX 2-1	temperature measurements, thermal tests of Section 12			P			
	Type reference.....:	TG01-C		—			
	Lamp used	LED		—			
	Ballast used	--		—			
	Mounting position of luminaire.....:	Normal use		—			
	Supply wattage (W)	96.5W		—			
	Supply current (A).....:	--		—			
	Calculated power factor.....:	--		—			
	Table: measured temperatures corrected for Ta=25°C:			P			
	- abnormal operating mode	--		—			
	- test 1: rated voltage.....:	--		—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	3.7Vx1.06=3.9V		—			
	- 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 (°C) of part		clause 12.4 – normal			clause 12.5 – abnormal		
		test 1	test 2	test 3	limits	test 4	Limit
Switch		--	28.9	--	90	--	--
Input wire of LED PCB		--	46.7	--	80	--	--
Battery surface		--	43.2	--	Ref.	--	--
LED PCB		--	57.4	--	130	--	--
LED cover		--	39.5	--	95	--	--
LED		--	62.8	--	Ref.	--	--
Mounting surface		--	26.7	--	90	--	--

IEC 60598-2-4			
Clause	Requirement - Test		Verdict
ANNEX 3	Screw terminals (part of the luminaire)		—
(14)	SCREW TERMINALS		N
(14.2)	Type of terminal		—
	Rated current (A)		—
(14.3.2.1)	One or more conductors		N
(14.3.2.2)	Special preparation		N
(14.3.2.3)	Terminal size		N
	Cross-sectional area (mm ²)		N
(14.3.3)	Conductor space (mm)		N
(14.4)	Mechanical tests		N
(14.4.1)	Minimum distance		N
(14.4.2)	Cannot slip out		N
(14.4.3)	Special preparation		N
(14.4.4)	Nominal diameter of thread (metric ISO thread)		N
	External wiring		N
	No soft metal		N
(14.4.5)	Corrosion		N
(14.4.6)	Nominal diameter of thread (mm)		N
	Torque (Nm)		N
(14.4.7)	Between metal surfaces		N
	Lug terminal		N
	Mantle terminal		N
	Pull test; pull (N)		N
(14.4.8)	Without undue damage		N

IEC 60598-2-4			
Clause	Requirement - Test	Result - Remark	Verdict

ANNEX 4	screwless terminals (part of the luminaire)		—
(15)	SCREWLESS TERMINALS		N
(15.2)	Type of terminal		—
	Rated current (A)		—
(15.3.1)	Material		N
(15.3.2)	Clamping		N
(15.3.3)	Stop		N
(15.3.4)	Unprepared conductors		N
(15.3.5)	Pressure on insulating material		N
(15.3.6)	Clear connection method		N
(15.3.7)	Clamping independently		N
(15.3.8)	Fixed in position		N
(15.3.10)	Conductor size		N
	Type of conductor		N
(15.5.1)	Terminals internal wiring		N
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N
	Insertion force not exceeding 50 N		N
(15.5.2)	Permanent connections: pull-off test (20 N)		N
(15.6)	Electrical tests		N
	Voltage drop (mV) after 1 h (4 samples) ..		N
	Voltage drop of two inseparable joints		N
	Number of cycles		N
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N

IEC 60598-2-4										
Clause	Requirement - Test					Result - Remark				Verdict
(15.7)	Terminals external wiring									N
	Terminal size and rating									N
(15.8.1)	Pull test spring-type terminals (4 samples); pull (N)									N
	Pull test pin or tab terminals (4 samples); pull (N)									N
(15.9)	Contact resistance test									N
	Voltage drop (mV) after 1 h									N
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									N
	Voltage drop after 10th alt. 25th cycle									N
	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
	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
	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
	Max. allowed voltage drop (mV)									--
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										

Attachment 1: Test report of EN 62031

Clause	Requirement - Test	Result	Verdict
4	GENERAL REQUIREMENTS		---
4.4	Integral modules tested assembled in the luminaire		N
4.5	Independent modules complies with requirements in IEC 60598-1		P
5	GENERAL TEST REQUIREMENTS		--
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	N
	General conditions for tests in Annex A	(see Annex A)	N
6	CLASSIFICATION		---
	Built-in module: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		---
	Independent module: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		---
	Integral module: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		---
	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.		---
7	MARKING		N
	Requirements not applicable to the evaluated product.		---
8	TERMINALS		---
	Screw terminals according section 14 of IEC 60598-1:		N
	Separately approved; component list	(see Annex 2)	N
	Part of the luminaire	(see Annex 3)	N
	Screwless terminals according section 15 of IEC 60598-1:		N
	Separately approved; component list	(see Annex 2)	N
	Part of the luminaire	(see Annex 4)	N
	Connectors according IEC 60838-2-2:		N
	Separately approved; component list	(see Annex 2)	N
9 (9)	PROVISION FOR PROTECTIVE EARTHING		N
	Requirements not applicable to the evaluated product.		---
10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		N
	Requirements not applicable to the evaluated product.		--

Attachment 1: Test report of EN 62031

Clause	Requirement - Test	Result	Verdict
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11 (11)	MOISTURE RESISTANCE AND INSULATION	---
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	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MΩ):	P
	For basic insulation $\geq 2 \text{ M}\Omega$	N
	For double or reinforced insulation $\geq 4 \text{ M}\Omega$: 100MΩ	P
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1	N

12 (12)	ELECTRIC STRENGTH	---
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	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V	500V	P
	Working voltage ≤ 50 V, test voltage 500 V		N
	Working voltage > 50 V ≤ 1000 V, test voltage (V):		N
	Basic insulation, 2U + 1000 V		N
	Supplementary insulation, 2U + 1000 V		N
	Double or reinforced insulation, 4U + 2000 V		N
	No flashover or breakdown		N
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N

13 (14)	FAULT CONDITIONS	---
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- (14)	When operated under fault conditions the controlgear:	N
	- does not emit flames or molten material	N
	- does not produce flammable gases	N
	- protection against accidental contact not impaired	N
	Thermally protected controlgear does not exceed the marked temperature value	N
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	N

Attachment 1: Test report of EN 62031

Clause	Requirement - Test	Result	Verdict
- (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
	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3		N
- (14.2)	Short-circuit or interruption of semiconductor devices		N
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile		N
- (14.4)	Short-circuit across electrolytic capacitors		N
- (14.5)	After the tests has been carried out on three samples:		N
	The insulation resistance $\geq 1 \text{ M}\Omega$		N
	No flammable gases		N
	No accessible parts have become live		N
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		N
- (14.6)	Relevant fault condition tests with high-power supply		N
13.2	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
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		N
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		N
	Insulating lining of metallic enclosures		N

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Clause	Requirement - Test	Result	Verdict
	Basic insulation on printed boards tested according to clause 14		N
	Distances subjected to both sinusoidal voltage as non-sinusoidal pulses not less than value in Table 16		N
	Creepage distances not less than minimum clearance		N
16 (-)	Conductive accessible parts in compliance with applicable parts of IEC 60598-1		N
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)		N
18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		---
- (18.1)	Ball-pressure test	See Test Table 18 (18.1)	N
- (18.3)	Glow-wire test (650°C)	See Test Table 18 (18.3)	N
- (18.4)	Needle-flame test (10 s)	See Test Table 18 (18.4)	N
- (18.5)	Proof tracking test	See Test Table 18 (18.5)	N
19 (19)*	RESISTANCE TO CORROSION		---
	- test according 4.18.1 of IEC 60598-1		N
	- adequate varnish on the outer surface		N
20*	INFORMATION FOR LUMINAIRE DESIGN		N
	Information in Annex D (informative)		---
21*	HEAT MANAGEMENT		---
21.1	General		N
	Exchangeability is safeguarded by cap or base		N
21.2	Heat-conducting foil and paste		N
	Heat-conducting foil delivered with the module if necessary		N
22 *	PHOTOBIOLOGICAL SAFETY		---
22.1	UV radiation		N
	Luminous radiation not exceed 2mW/klm		N

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Clause	Requirement - Test	Result	Verdict
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22.2	Blue light hazard		N
	Assessed according to IEC TR 62778		N
22.3	Infrared radiation		N
	Requirements for infrared radiation when required		N

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

	ANNEX 1 - SELV-operated LED modules		---
	SELV-operated LED modules in compliance with Annex I of IEC 61347-2-13		N

Attachment 2: Photo Documentation

Photo 1

TG01-C

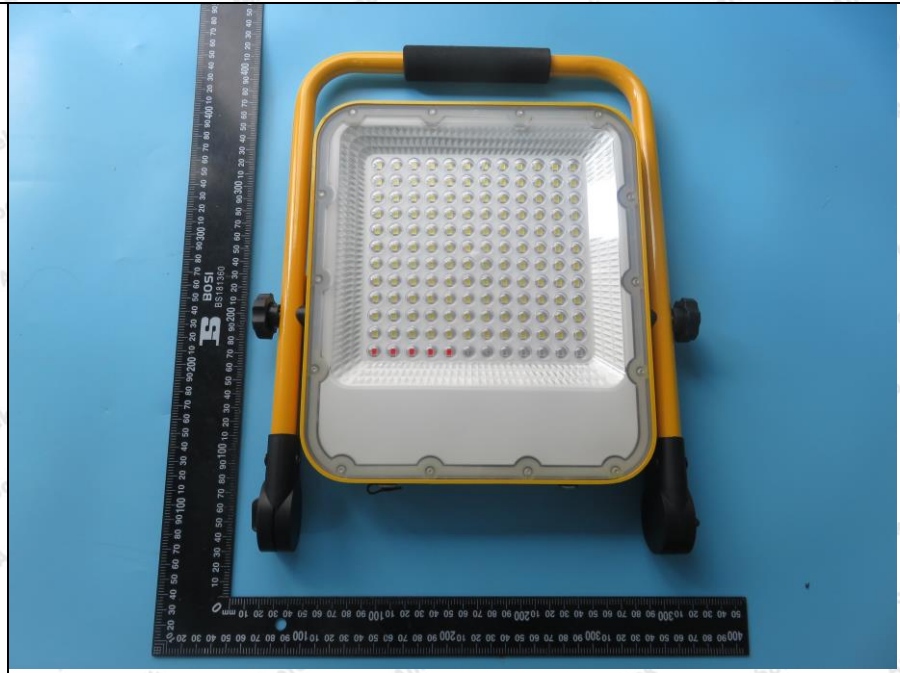
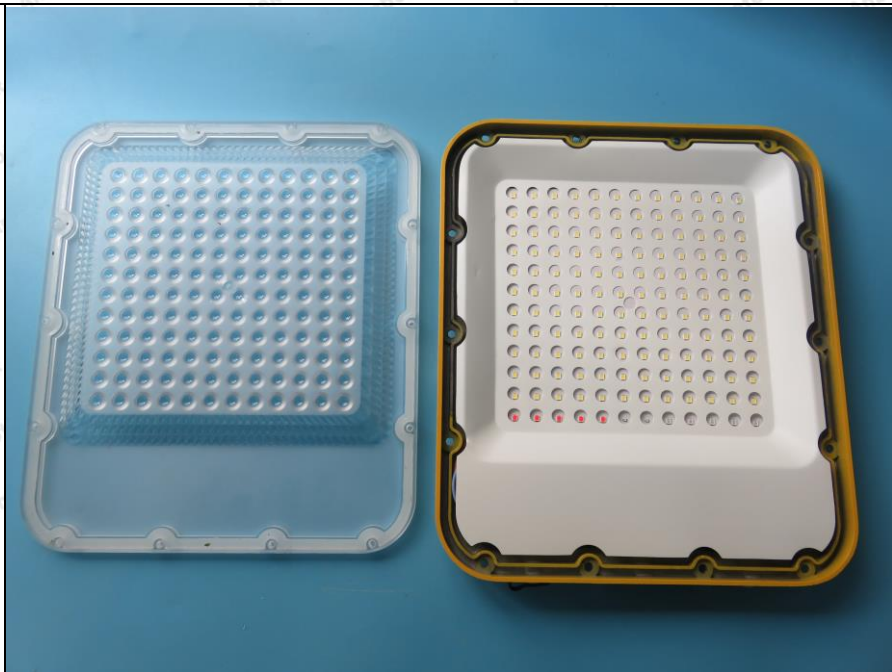


Photo 2

TG01-C



Attachment 2: Photo Documentation**Photo 3****TG01-C****Photo 4****TG01-C**

Attachment 2: Photo Documentation

Photo 5

TG01-C

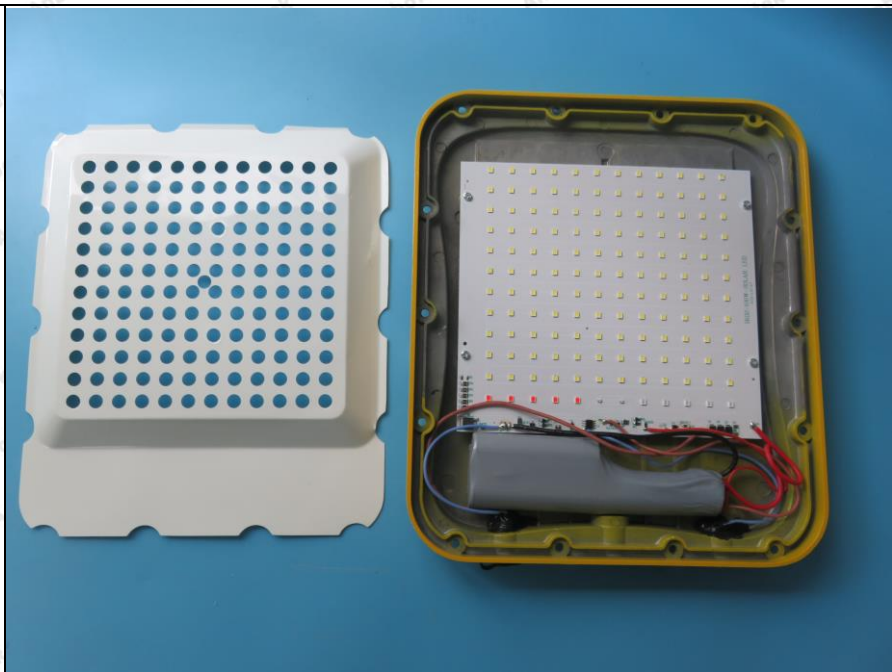
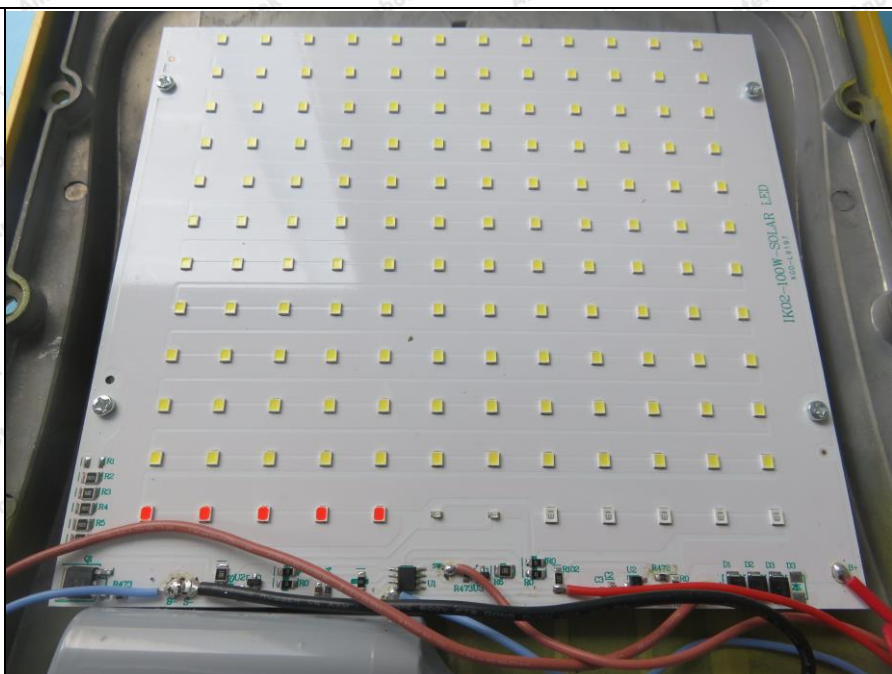


Photo 6

TG01-C



--- End of report ---