SHENZHEN OHMAX OPTOELECTRONIC LIGHTING CO.,LTD.

CE LVD REPORT

Prepared For:	SHENZHEN OHMAX OPTOELECTRONIC LIGHTING CO.,LTD. No.132,Fuxing Street,Hehua Community,Pinghu Subdistrict,Longgang District,Shenzhen,China.
Product Name:	LED GROW LIGHT
Trade Name:	OHMAX
Model :	OH-GL, OH-GL-001, OH-GL-011, OH-GL-021, OH-GL-031, OH-GL-041, OH-GL-002, OH-GL-012, OH-GL-022, OH-GL-032, OH-GL-042, OH-GL-003, OH-GL-013, OH-GL-023, OH-GL-033, OH-GL-043, OH-GL-004, OH-GL-014, OH-GL-024, OH-GL-034,, OH-GL-044, OH-GL-005, OH-GL-015, OH-GL-025, OH-GL-035, OH-GL-045, OH-GL-006, OH-GL-016, OH-GL-026, OH-GL-036, OH-GL-046, OH-GL-007, OH-GL-017, OH-GL-027, OH-GL-037, OH-GL-047, OH-GL-008, OH-GL-018, OH-GL-028, OH-GL-038, OH-GL-048, OH-GL-009, OH-GL-019, OH-GL-029, OH-GL-039, OH-GL-049, OH-GL-010, OH-GL-020, OH-GL-030, OH-GL-040, OH-GL-050
Prepared By :	Shenzhen BST Technology Co., Ltd.
	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China
Test Date:	Mar 23, 2017 – Apr 12, 2017
Date of Report :	Apr 13, 2017
Report No.:	BST1704767760001Y-1SR-2

TEST REPORT

EN 60598-2-1

Luminaires

Part 2: Particular requirements
Section One – Fixed general purpose luminaires

Testing Laboratory Name .....:	Shenzhen BST Technology Co., Ltd.
Address .....:	Building No.23-24, Zhiheng Industrial Park, Guankouer Road, Nantou, Nanshan District, Shenzhen, Guangdong, China
Testing location .....:	Shenzhen BST Technology Co., Ltd.
Applicant's Name .....:	SHENZHEN OHMAX OPTOELECTRONIC LIGHTING CO.,LTD.
Address .....:	No.132,Fuxing Street,Hehua Community,Pinghu Subdistrict,Longgang District,Shenzhen,China.
Manufacturer ....:	SHENZHEN OHMAX OPTOELECTRONIC LIGHTING CO.,LTD.
Address ....:	No.132,Fuxing Street,Hehua Community,Pinghu Subdistrict,Longgang District,Shenzhen,China.
Test specification	N/A
Standard .....:	EN 60598-1:2015+AC:2016 EN 60598-2-1:1989
Procedure deviation .....:	N/A
Non-standard test method .....:	N/A
Test item description .....:	See page 1
Trade Name	OHMAX
Model and/or type reference .....:	See page 1
Rating(s) .....:	100-240V~, 50/60Hz, 700W

Test case verdicts:	N(/A)
Test case does not apply to the test object ...:	N(/A)
Test item does meet the requirement .....:	P(ass)
Test item does not meet the requirement .....:	F(ail)

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(s) tested.

”(see remark #)" refers to a remark appended to the report.

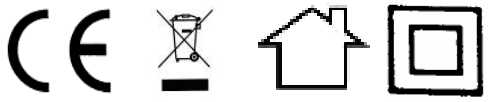
"(see Annex #)" refers to an annex appended to the report.

General product information:

The series products have the same circuit diagram, PCB layout and functionality. The differences are the model name and power, so, we select OH-GL to test.

Copy of marking plate:

Product: LED GROW LIGHT
Model: OH-GL
Rating: 100-240V~, 50/60Hz, 700W



SHENZHEN OHMAX OPTOELECTRONIC LIGHTING CO..LTD

Prepared by : Watt Sun
Engineer

Reviewer : Jacky Zhang
Supervisor

Approved & Authorized Signer : Andy Wang
Manager

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.1 (0)	SCOPE		P
1.1 (0.1)	More sections applicable.....:	Yes [√] No [ ]	—
1.4 (2)	CLASSIFICATION		P
1.4 (2.2)	Type of protection.....:	Class II	—
1.4 (2.3)	Degree of protection.....:	IPX0	—
1.4 (2.4)	Luminaire only suitable for non-combustible materials .....:	No	—
	Luminaire suitable for normally flammable surfaces.....:	Yes	—
	Luminaire suitable to be covered by insulating material.....:	No	—
1.4 (2.5)	Luminaire for normal use .....:	Yes	—
	Luminaire for rough service .....:	No	—
1.5 (3)	MARKING		P
1.5 (3.2)	Marking on luminaires		P
	Position of the marking	On the Enclosure	P
	Format of symbols/text		P
1.5 (3.3)	Additional information		P
	Language of instructions	English	P
1.5 (3.3.1)	Combination luminaires		N
1.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
1.5 (3.3.3)	Operating temperature		P
1.5 (3.3.4)	Symbol or warning notice		P
1.5 (3.3.5)	Wiring diagram		N
1.5 (3.3.6)	Special conditions		N
1.5 (3.3.7)	Metal halid lamp luminaire – warning		N
1.5 (3.3.8)	Limitation for semi-luminaires		N
1.5 (3.3.9)	Power factor and supply current		P
1.5 (3.3.10)	Suitability for use indoors		P
1.5 (3.3.11)	Luminaires with remote control		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.5 (3.3.12)	Clip-mounted luminaire – warning		N
1.5 (3.3.13)	Specifications of protective shields		N
1.5 (3.3.14)	Symbol for nature of supply	~	P
1.5 (3.3.15)	Rated current of socket outlet		N
1.5 (3.3.16)	Rough service luminaire		N
1.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	P
1.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N
1.5(3.3.19)	Protective conductor current in instruction if applicable		N
1.5(3.3.20)	Provided with information if not intended to be mounted within arms reach		P
1.5 (3.3.101)	Terminal block is not supplied with luminaire		P
1.5 (3.4)	Test with water	15s with water	P
	Test with hexane	15s with hexane	P
	Legible after test	The marking is legible	P
	Label attached	The marking not be easily removable and shows no curling	P

1.6 (4)	CONSTRUCTION		P
1.6 (4.2)	Components replaceable without difficulty		N
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	Lampholders		N
1.6 (4.4.1)	Integral lampholder		N
1.6 (4.4.2)	Wiring connection		N
1.6 (4.4.3)	Lampholder for end-to-end mounting		N
1.6 (4.4.4)	Positioning		N
1.6 (4.4.5)	Peak pulse voltage		N
1.6 (4.4.6)	Centre contact		N
1.6 (4.4.7)	Rough service luminaires		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.6 (4.4.8)	Lamp connectors		N
1.6 (4.4.9)	Caps and bases correctly used		N
1.6 (4.5)	Starter holders		N
	Starter holder in luminaires other than class II		N
	Starter holder class II construction		N
1.6 (4.6)	Terminal blocks		N
	Tails		N
	Unsecured blocks		N
1.6 (4.7)	Terminals and supply connections		N
1.6 (4.7.1)	Contact to metal parts		N
1.6 (4.7.2)	Test 8 mm live conductor		N
	Test 8 mm earth conductor		N
1.6 (4.7.3)	Terminals for supply conductors		N
1.6 (4.7.4)	Terminals other than supply connection		N
1.6 (4.7.5)	Heat-resistant wiring/sleeves		P
1.6 (4.7.6)	Multi-pole plug		N
1.6 (4.8)	Switches:		N
	- adequate rating		N
	- adequate fixing		N
	- polarized supply		N
1.6 (4.9)	Insulating lining and sleeves		P
1.6 (4.9.1)	Retainment		P
	Method of fixing .....:		P
1.6 (4.9.2)	Insulated linings and sleeves		P
	a) & c) Insulation resistance and electric strength		P
	b) Ageing test. Temperature (°C) .....:		P
1.6 (4.10)	Insulation of Class II luminaires		N
1.6 (4.10.1)	No contact, mounting surface - accessible metal parts - wiring of basic insulation		P
	Safe installation fixed luminaires		P
	Capacitors		N
	Interference suppression capacitors according to IEC 60384-14		N
1.6 (4.10.2)	Assembly gaps:		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
	- not coincidental		N
	- no straight access with test probe		N
1.6 (4.10.3)	Retainment of insulation:		P
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P
	- lining in lampholder		N
1.6 (4.11)	Electrical connections		N
1.6 (4.11.1)	Contact pressure		N
1.6 (4.11.2)	Screws:		N
	- self-tapping screws		N
	- thread-cutting screws		N
	- at least two self-tapping screws		N
1.6 (4.11.3)	Screw locking:		N
	- spring washer		N
	- rivets		N
1.6 (4.11.4)	Material of current-carrying parts		N
1.6 (4.11.5)	No contact to wood		N
1.6 (4.11.6)	Electro-mechanical contact systems		N
1.6 (4.12)	Mechanical connections and glands		N
1.6 (4.12.1)	Screws not made of soft metal		N
	Screws of insulating material		N
	Torque test: torque (Nm); part.....:		N
	Torque test: torque (Nm); part.....:		N
	Torque test: torque (Nm); part.....:		N
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N
1.6 (4.12.4)	Locked connections:		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
	- fixed arms; torque (Nm) .....:		N
	- lampholder; torque (Nm) .....:		N
	- push-button switches; torque 0,8 Nm .....:		N
1.6 (4.12.5)	Screwed glands; force (N).....:		N
1.6 (4.13)	Mechanical strength		P
1.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) .....:	0.2 Nm	P
	- other parts; energy (Nm).....:	0.35 Nm	P
	1) live parts	Not access	P
	2) linings		P
	3) protection	Continue to afford the degree of protection against ingress of dust, solid objects and moisture	P
	4) covers	No break	P
1.6 (4.13.3)	Straight test finger	Can't touch with live part with 30N	P
1.6 (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
1.6 (4.13.6)	Tumbling barrel		N
1.6 (4.14)	Suspensions and adjusting devices		N
1.6 (4.14.1)	Mechanical load:		N
	A) four times the weight		N
	B) torque 2,5 Nm		N
	C) bracket arm; bending moment (Nm).....:		N
	D) load track-mounted luminaires		N
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) .....:		N
	metal rod. Diameter (mm) .....:		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.6 (4.14.2)	Load to flexible cables		N
	Mass (kg).....:		N
	Stress in conductors (N/mm²) .....:		N
	Semi-luminaires – mass (kg) .....:		N
	Semi-luminaires – bending moment (Nm).....:		N
1.6 (4.14.3)	Adjusting devices:		N
	- flexing test; number of cycles.....:		N
	- strands broken		N
	- electric strength test afterwards		N
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N
1.6 (4.14.5)	Guide pulleys		N
1.6 (4.14.6)	Strain on socket-outlets		N
1.6 (4.15)	Flammable materials:		P
	- glow-wire test 650 °C		P
	- spacing ≥ 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
1.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N
	a) construction		N
	b) temperature sensing control		N
	c) surface temperature		N
1.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N
	No lamp control gear		N
1.6 (4.16.1)	Electronic lamp control gear		N
	Lamp control gear spacing:		N
	- spacing 35 mm		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
	- spacing 10 mm		N
1.6 (4.16.2)	Thermal protection:		N
	- in lamp control gear		N
	- external		N
	- fixed position		N
	- temperature marked lamp control gear		N
1.6 (4.16.3)	The test of 12.6.		N
1.6 (4.17)	Drain holes		N
	Clearance at least 5 mm		N
1.6 (4.18)	Resistance to corrosion:		N
1.6 (4.18.1)	- rust-resistance		N
1.6 (4.18.2)	- season cracking in copper		N
1.6 (4.18.3)	- corrosion of aluminium		N
1.6 (4.19)	Ignitors compatible with ballast		N
1.6 (4.20)	Rough service vibration.....:		N
1.6 (4.21)	Protective shield:		N
1.6 (4.21.1)	Shield fitted		N
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N
1.6 (4.21.3)	No direct path		N
1.6 (4.21.4)	Impact test on shield		N
	Glow-wire test on lamp compartment		N
1.6 (4.22)	Attachments to lamps		N
1.6 (4.23)	Semi-luminaires comply class II		N
1.6 (4.25)	No sharp point or edges	No sharp points or edges	P
1.6 (4.26)	Short-circuit protection:		N
1.6 (4.26.1)	Uninsulated accessible SELV parts		N
1.6 (4.26.2)	Short-circuit test		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.6 (4.26.3)	Test chain according to Figure 29		N

1.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
	Working voltage (V) ..... :	240V	—
	Voltage form	Sinusoidal	—
	PTI	<600	—
	Rated pulse voltage (kV) ..... :		—
	(1) Current-carrying parts of different polarity: cr (mm); cl (mm) ..... :	Cr >2.5mm, Cl>1.5mm	P
	(2) Current-carrying parts and accessible parts: cr (mm); cl (mm) ..... :	Cr >5.0mm, Cl>3.0mm	P
	(3) Parts becoming live due to breakdown of basic insulation and metal parts: cr (mm); cl (mm) ..... :		N
	(4) Outer surface of cable where it is clamped and metal parts: cr (mm); cl (mm) ..... :		N
	(5) Current-carrying parts of switches and metal parts, after removal of insulation: cr (mm); cl (mm) ..... :		N
	(6) Current-carrying parts and supporting surface: cr (mm); cl (mm) ..... :	Cr >5.0mm, Cl>3.0mm	P

1.8 (7)	PROVISION FOR EARTHING		N
1.8 (7.2.1 + 7.2.3)	Accessible metal parts		N
	Metal parts in contact with supporting surface		N
	Resistance < 0,5 Ω		N
	Self-tapping screws used		N
	Thread-forming screws		N
	Connector earthing first		N
1.8 (7.2.2 + 7.2.3)	Earth continuity in joints etc.		N
1.8 (7.2.4)	Locking of clamping means		N
	Compliance with 4.7.3		N
1.8 (7.2.5)	Earth terminal integral part of connector socket		N
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N
1.8 (7.2.8)	Material of earth terminal		N
	Contact surface bare metal		N
1.8 (7.2.10)	Class II luminaire for looping-in		N
1.8 (7.2.11)	Earthing core coloured green-yellow		N
	Length of earth conductor		N
1.9 (14)	SCREW TERMINALS		N
	Separately approved; component list		N
	Part of the luminaire		N
1.9 (15)	SCREWLESS TERMINALS		N
	Separately approved; component list		N
	Part of the luminaire		N
1.10 (5)	EXTERNAL AND INTERNAL WIRING		P
1.10 (5.2)	Supply connection and external wiring		P
1.10 (5.2.1)	Means of connection .....:		P
1.10 (5.2.2)	Type of cable .....:		P
	Nominal cross-sectional area (mm²) .....:		P
1.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
1.10 (5.2.5)	Type Z not connected to screws		N
1.10 (5.2.6)	Cable entries:		N
	- suitable for introduction		N
	- adequate degree of protection		N
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		N
1.10 (5.2.8)	Insulating bushings:		N
	- suitably fixed		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
	- material in bushings		N
	- tubes or guards made of insulating material		N
1.10 (5.2.9)	Locking of screwed bushings		N
1.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
1.10 (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
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	type Y	P
1.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N).....:	60N	P
	- torque test: torque (Nm).....:	0.25Nm	P
	- displacement ≤ 2 mm	0.26mm	P
	- no movement of conductors		P
	- no damage of cable or cord		P
1.10 (5.2.11)	External wiring passing into luminaire		N
1.10 (5.2.12)	Looping-in terminals		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.10 (5.2.13)	Wire ends not tinned		N
	Wire ends tinned: no cold flow		N
1.10 (5.2.14)	Mains plug same protection		N
	Class III luminaire plug		N
1.10 (5.2.16)	Appliance inlets (IEC 60320)		P
	Appliance couplers of class II type		P
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		N
1.10 (5.2.18)	Used plug in accordance with		N
	-IEC 60083		N
	-Other standard		N
1.10 (5.3)	Internal wiring		P
1.10 (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 .....:		P
	Green-yellow for earth only		N
1.10 (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		P
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Adequate cross-sectional area and insulation thickness		P
1.10 (5.3.1.3)	Double or reinforced insulation for class II		P
1.10 (5.3.1.4)	Conductors without insulation		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.10 (5.3.1.5)	SELV current-carrying parts		N
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N
1.10 (5.3.2)	Sharp edges etc.	Inner wire can't touch the sharp edges , rivets and similar components	P
	No moving parts of switches etc.		N
	Joints, raising/lowering devices		N
	Telescopic tubes etc.		N
	No twisting over 360°		P
1.10 (5.3.3)	Openings		N
	Bushings not removable		N
	Bushings in sharp openings		N
	Cables with protective sheath		N
1.10 (5.3.4)	Joints and junctions effectively insulated		N
1.10 (5.3.5)	Strain on internal wiring		N
1.10 (5.3.6)	Wire carriers		N
1.10 (5.3.7)	Wire ends may be tinned		N
	Wire ends tinned: no cold flow		N

1.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
1.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Protection in any position		P
	Double-ended tungsten filament lamp		N
	Insulation lacquer not reliable		N
	Double-ended high pressure discharge lamp		N
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.11 (8.2.3)	Class II luminaire:		P
	- basic insulated metal parts not accessible during starter or lamp replacement		N
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		P
	Class I luminaire with BC lampholder		N
1.11 (8.2.4)	Portable luminaire:		N
	- protection independent of supporting surface		N
	- terminal block completely covered		N
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.11 (8.2.6)	Covers reliably secured		N
1.11 (8.2.7)	Discharging of capacitors ≥ 0,5 μF		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

1.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
1.12 (12.3)	Endurance test:		P
	- mounting-position.....:	Normal position	—
	- test temperature (°C).....:	35°C	—
	- total duration (h).....:	240h	—
	- supply voltage: Un factor; calculated voltage (V) .....:	240x1.1=264V	—
	- lamp used.....:	LED	—
1.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
	- marking legible	Marking still legible and shows no curling	P
	- no cracks, deformation etc.		P
1.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
1.12 (12.5)	Thermal test (abnormal operation)		N
1.12 (12.6)	Thermal test (failed lamp control gear condition):		N
1.12 (12.6.1)	- case of abnormal conditions .....:		—
	- electronic lamp control gear		N
	- measured winding temperature (°C) at 1,1 Un .:		—
	- measured mounting surface temperature (°C) at 1,1 Un .....:		P
	- calculated mounting surface temperature (°C) .:		P
	- track-mounted luminaires		N
1.12 (12.6.2)	Temperature sensing control		N
	- case of abnormal conditions .....:		—
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured mounting surface temperature (°C) :		N
	- track-mounted luminaires		N
1.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N
	- case of abnormal conditions .....:		—
1.12 (12.7.1)	- measured winding temperature (°C) at 1,1 Un .:		—
	- measured temperature of fixing point/ exposed part (°C) at 1,1 Un .....:		N
	- calculated temperature of fixing point/ exposed part (°C).....:		N
1.12 (12.7.2)	Temperature sensing control		N
	- thermal link		N
	- manual reset cut-out		N
	- auto reset cut-out		N
	- measured temperature of fixing point/ exposed part (°C) ..... :		N

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.13 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		N
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		N
	- classification according to IP.....:		—
	- mounting position during test .....:		—
	- fixing screws tightened; torque (Nm) .....:		—
	- tests according to clauses.....:		—
	- electric strength test afterwards		N
	a) no deposit in dust-proof luminaire		N
	b) no talcum in dust-tight luminaire		N
	c) no trace of water on current-carrying parts or where it could become a hazard		N
	d) i) For luminaires without drain holes – no water entry		N
	d) ii) For luminaires with drain holes – no hazardous water entry		N
	e) no water in watertight luminaire		N
	f) no contact with live parts (IP 2X)		N
	f) no entry into enclosure (IP 3X and IP 4X)		N
	f) no contact with live parts (IP 3X and IP 4X)		N
1.13 (9.3)	Humidity test 48 h	R.H.:95% T:25℃	P
1.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
1.14 (10.2.1)	Insulation resistance test		P
	Insulation resistance (MΩ):		--
	SELV:		N
	- between current-carrying parts of different polarity.....:		N
	- between current-carrying parts and mounting surface.....:		N
	- between current-carrying parts and metal parts of the luminaire.....:		N
	Other than SELV:		P
	- between live parts of different polarity .....:	＞2MΩ	P

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
	- between live parts and mounting surface .....:	＞4MΩ	P
	- between live parts and enclosure .....:	＞4MΩ	P
	- between live parts of different polarity through action of a switch.....:		N
1.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N
	Luminaires with ignitors after 24 h test		N
	Luminaires with manual ignitors		N
	Test voltage (V):		P
	SELV:		N
	- between current-carrying parts of different polarity.....:		N
	- between current-carrying parts and mounting surface.....:		N
	- between current-carrying parts and metal parts of the luminaire.....:		N
	Other than SELV:		P
	- between live parts of different polarity .....:	1480V	P
	- between live parts and mounting surface .....:	2960V	P
	- between live parts and enclosure .....:	2960V	P
	- between live parts of different polarity through action of a switch.....:		N
1.14 (10.3.1)	Leakage current (mA).....:	0.041mA<0.5mA	P
1.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
1.15 (13.2.1)	Ball-pressure test:		P
	- part tested; temperature (°C) .....:	Enclosure: 75℃ Limits: 2mm	P
	- part tested; temperature (°C) .....:	Shade: 75℃ Limits: 2mm	P
	- part tested; temperature (°C) .....:		N
1.15 (13.3.1)	Needle flame test (10 s):		P
	- part tested .....:	Enclosure	P
	- part tested .....:	Shade	P

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
1.15 (13.3.2)	Glow wire test (650°C):		P
	- part tested .....:	Enclosure	P
	- part tested .....:	Shade	P
1.15 (13.4.1)	Tracking test: part tested.....:		N

	COMMON MODIFICATIONS		N
(3.3.101 + 5.2.1)	For luminaires connected by tails, information about terminal block		N
(5.2.2)	Cables equal to HD 21 S2 or HD 22 S2		N
(5.2.15)	Colour code low voltage		N

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS		N
(2.2)	Class 0 not accepted		N
(3.3)	DK: power supply cord with label		N
	IT: warning label on Class 0 luminaire		N
(4.5.1)	DK: socket-outlets		N
(4.5.1)	FR: socket-outlets		N
(5.2.1)	DK, FI, SE, GB: type of plug		N

ZC	ANNEX ZC, NATIONAL DEVIATIONS		N
(13.3)	DK: Needle flame test or glow-wire test 750°C for luminaires in access routes		N
(13.3)	GB: Requirements according to United Kingdom Building Regulation		N
(13.3.2)	FR: Glow-wire test 850°C alt. 750°C for luminaires in premises open to public and workers		N

	ANNEX 1: components					N
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s of conformity	

	ANNEX 2: temperature measurements, thermal tests of Section 12		P
	Type reference .....:	See page 2	—
	Lamp used.....:	LED	—

EN 60598-2-1							
Cl.	Requirement – Test				Result		Verdict
	Lamp control gear used.....:						—
	Mounting position of luminaire .....:						—
	Supply wattage (W).....:				700W		—
	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.....:				240V x1.06=254.4V		—
	- 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.....:				--		—
temperature (°C) of part	clause 12.4 - normal				clause 12.5 - abnormal		
	test 1	test 2	test 3	limits	test 4	limit	
Enclosure	--	38.6	--	90			
Power wire	--	44.1	--	90			
Shade	--	38.2	--	90			
Light surface	--	42.3	--	120			
Ambient	--	25.2	--	--			
	ANNEX 3: screw terminals (part of the luminaire)						N
(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 (mm²).....:						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

EN 60598-2-1			
Cl.	Requirement – Test	Result	Verdict
(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
	ANNEX 4: SCREWLESS TERMINALS (PART OF THE LUMINAIRE)		N
(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

EN 60598-2-1										
Cl.	Requirement – Test					Result			Verdict	
	Number of cycles.....:								—	
	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	
(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									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) .....:								—	
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) .....:								—	
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage drop (mV) .....:								—	
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV) .....:								—	
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										

ANNEX A:

Photo-documentation

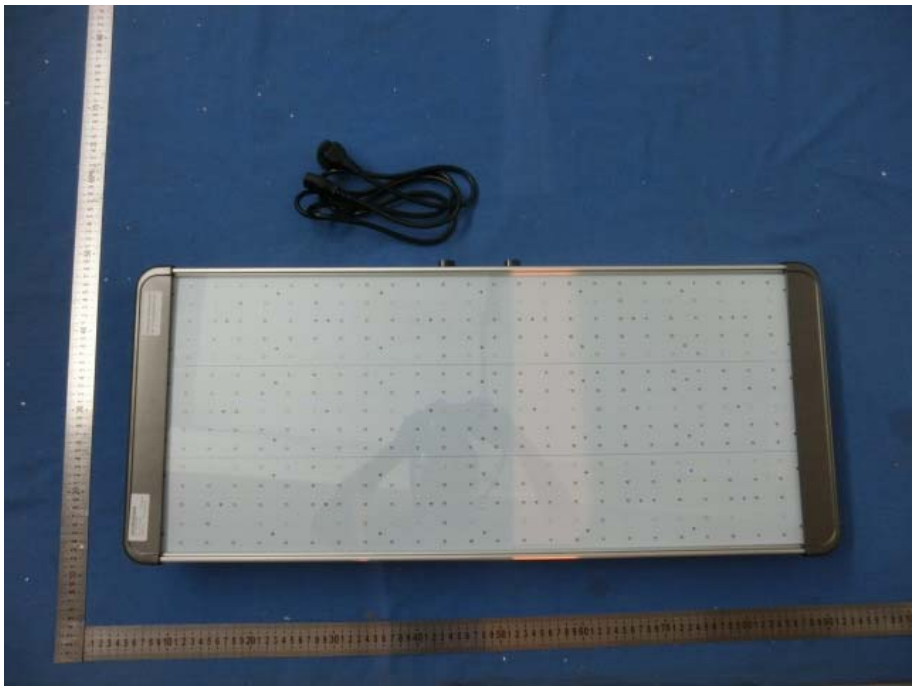


Photo 1 General Appearance of the EUT

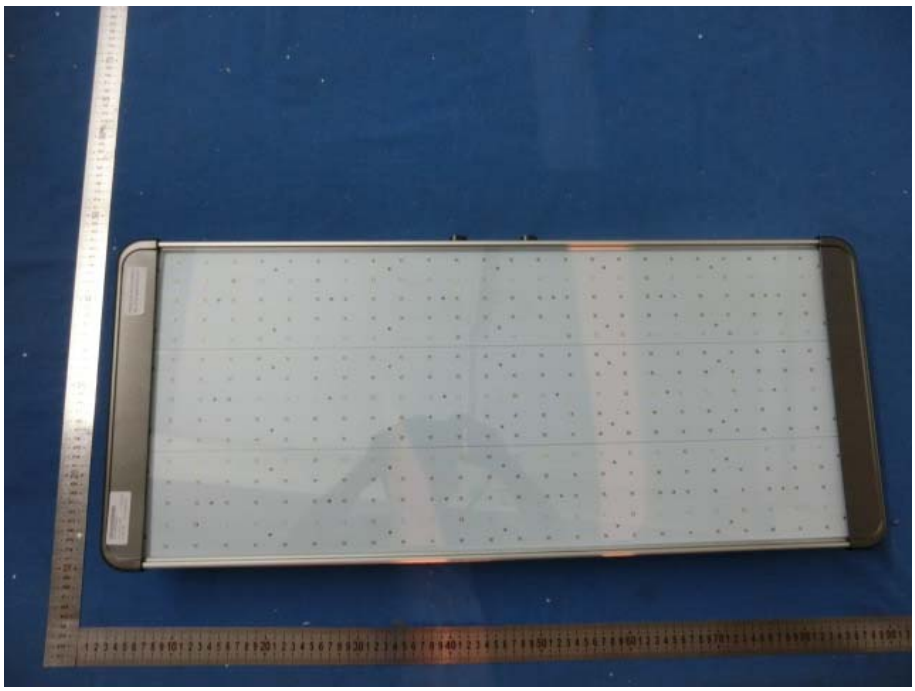


Photo 2 General Appearance of the EUT

Photo 3 General Appearance of the EUT

Photo 4 General Appearance of the EUT

Photo 5 General Appearance of the EUT

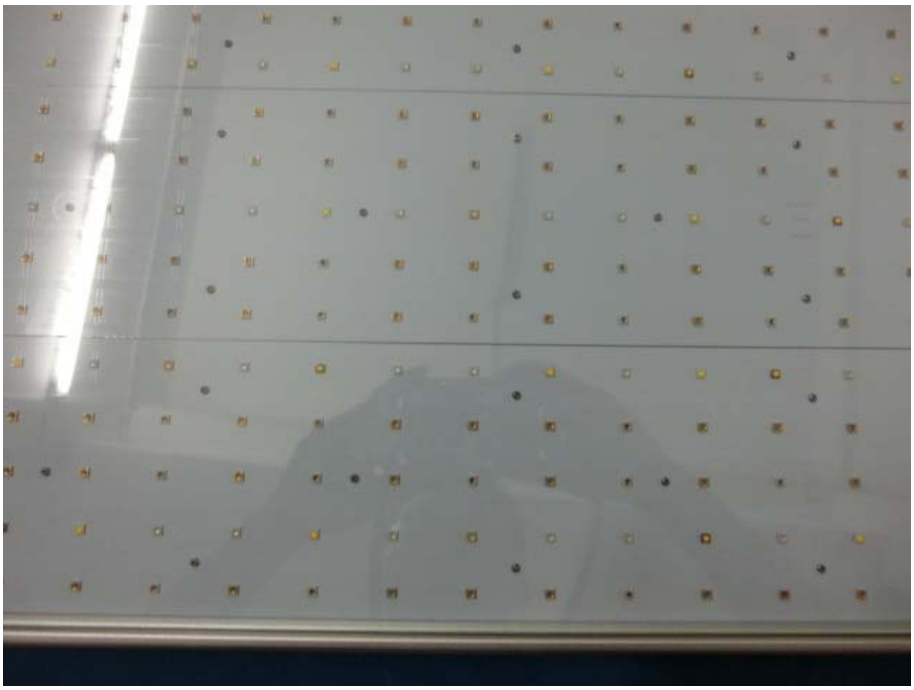


Photo 6 General Appearance of the EUT