

TEST REPORT

Product Name:	Led panel light
Brand Name:	LIGHT the world
Model Number:	MPL-0606-36 MPL-0303-24, MPL-0306-36, MPL-0312-36, MPL-0612-60, MPL-R105-4, MPL-R120-6, MPL-R145-9, MPL-R160-10, MPL-R170-12, MPL-R180-12, MPL-R195-15, MPL-R225-18, MPL-R240-18, MPL-R250-20, MPL-R300-24, MPL-S105-4, MPL-S120-6, MPL-S145-9, MPL-S175-12, MPL-S195-15, MPL-R225-18, MPL-R250-20
Prepared For:	MIC Optoelectronic Co., Ltd
Address:	2nd floor, Third Building, 97# AiNan Road, Long Dong, BaoLong Street, Long Gang District, Shenzhen, China
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Date of Receipt:	Jul. 27, 2022
Test Date:	Jul. 27, 2022 – Aug. 04, 2022
Date of Report:	Aug. 04, 2022
Report No.:	DL-20220804008S

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TEST REPORT

EN 60598-2-2

Part 2: Particular requirements Section 2: Recessed luminaires

Report Number DL-20220804008S

Tested by (name) Hardy Chen

Reviewed by (name) Ray Liang

Approved by (name) Jade Yang

Date of issue Aug. 04, 2022

Total number of pages 56 pages

Applicant's name MIC Optoelectronic Co., Ltd

2nd floor, Third Building, 97# AiNan Road, Long Dong, BaoLong Street,

LongGang District, Shenzhen, China

Testing Laboratory.....: Shenzhen DL Testing Technology Co., Ltd.

101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong

Cheming Technology

Report No.: DL-20220804008S

Address Industrial Zone, Baolong Street, Longgang District, Shenzhen,

Guangdong, China

Test specification:

EN 60598-1:2015+A1:2018

EN 60598-2-2:2012

Test procedure: CE-LVD

Non-standard test method.....: N/A

Test Report Form No.: IEC60598_2_2F

Test Report Form(s) originator...: Intertek Semko AB

Master TRF: Dated 2017-12-21

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Test item description: Led panel light

Brand Name.....

Manufacturer: Same as applicant

Ratings: 200-240V 50/60Hz 36W

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

Attachment No. 1: 2 pages of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES for

EN 60598-2-2:2012 and EN 60598-1:2015+A1:2018;

Attachment No. 2: 5 pages of test report of IEC 62031:2018;

Attachment No. 3: 2 pages of test report of IEC TR 62778:2014 (for blue light hazard);

Attachment No. 4: 2 pages of test report of EN62493:2015;

Attachment No. 5: 5 pages of photos.

Summary of testing:

Tests performed (name of test and test clause):

The submitted samples were tested and found to comply with the requirements of:

EN 60598-1:2015+A1:2018

EN 60598-2-2:2012

The LED modules in products were found to comply with the requirement of EN IEC 62031:2020
The submitted samples were classified as RG0 according to IEC TR 62778:2014

The submitted samples were LED-light-source technology, they were found to comply with the requirements EN 62493:2015 without test

Testing location:

101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

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Summary of compliance with National Differences:

List of countries addressed: See the attachment of National and Group Differences for details.

☐ The product fulfils the requirements of EN 60598-2-2:2012 and EN 60598-1:2015+A1:2018 and EN 62493:2015

General disclaimer:

The test results presented in this report relate only to the object tested.

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Copy of marking plate:

Led panel light

Model: MPL-0606-36

Rating: 200-240V > 50/60Hz 36W



MIC Optoelectronic Co.,Ltd

Importer: XXXXXX
Address: XXXXXX

Made in China

Report No.: DL-20220804008S

- The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

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Test item particulars:	O' CO' X		
Classification of installation and use::	Class II		
Supply Connection::	AC power supply		
<u> </u>			
Possible test case verdicts:			
- test case does not apply to the test object:	N/A		
- test object does meet the requirement:	P (Pass)		
- test object does not meet the requirement:	F (Fail)		
Testing:			
te of receipt of test item: Ite (s) of performance of tests: Jul. 27, 2022 Jul. 27, 2022 – Aug. 04, 2022			
General remarks:			
"(See Enclosure #)" refers to additional information app	pended to the report.		
"(See appended table)" refers to a table appended to the	report.		
Throughout this report a ☐ comma / ☒ point is u	used as the decimal senarator		
A Community of the community of point is a			
Clause numbers between brackets refer to clauses in IE	C 60598-1		
When differences exist; they shall be identified in the	e General product information section.		
Name and address of factory (ies):	MIC Optoelectronic Co., Ltd		
	2nd floor,Third Building, 97# AiNan Road,LongDong,		
	BaoLong Street, LongGang District, Shenzhen, China		
General product information and other remarks:			
Led panel light, class II equipment, power by LED drive	er, indoor used only.		
All of the models are same light source and construction	n' ce d'annue de la company		

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	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
0	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		
2.3 (0)	GENERAL TEST REQUIREMENTS		Cett
2.3 (0.3)	More sections applicable:	Yes ☐ No ☒ Section/s:	_
2.3 (0.5)	Components	(see Annex 1)	_
2.3 (0.7)	Information for luminaire design in light sources s	tandards	_
2.3 (0.7.2)	Light source safety standard:	IEC 62031	_
	Luminaire design in the light source safety standard	ON CONTRACTOR	P
2.5 (2)	CLASSIFICATION OF LUMINAIRES		
2.5 (2.2)	Type of protection:	Class II	Р
2.5 (2.3)	Degree of protection:	IP20	Р
2.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces:	Yes No No	_
2.5 (2.5)	Luminaire for normal use:	Yes ⊠ No □	_
, (Luminaire for rough service:	Yes No 🛛	_
2.6 (3)	MARKING		_
2.6 (3.2)	Mandatory markings		P
Cer	Position of the marking	OLI COL	CP
O,	Format of symbols/text	x O' cot	P G
2.6 (3.3)	Additional information	y di cet	P
ce ^x	Language of instructions	English	Р
2.6 (3.3.1)	Combination luminaires	A See St.	Ň/A
2.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	Per
2.6 (3.3.3)	Operating temperature	\$ 50°.	N/A
2.6 (3.3.5)	Wiring diagram	28 X	N/A
2.6 (3.3.6)	Special conditions		N/A
2.6 (3.3.7)	Metal halide lamp luminaire – warning	OF COL	N/A
2.6 (3.3.8)	Limitation for semi-luminaires	Or Cer	N/A
2.6 (3.3.9)	Power factor and supply current	x Or Cor	N/A

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IEC 60598-2-2				
Clause	Requirement + Test	Result - Remark	Verdict	
2.6 (3.3.10)	Suitability for use indoors		P	
2.6 (3.3.11)	Luminaires with remote control	Q, 7''Co, 'F Q	N/A	
2.6 (3.3.12)	Clip-mounted luminaire – warning	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	N/A	
2.6 (3.3.13)	Specifications of protective shields	Col. A. Co.	N/A	
2.6 (3.3.14)	Symbol for nature of supply	\sim 500	Р	
2.6 (3.3.15)	Rated current of socket outlet	Dr. Call	N/A	
2.6 (3.3.16)	Rough service luminaire	OF COST	N/A	
2.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type X	P	
2.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A	
2.6 (3.3.19)	Protective conductor current in instructions, if applicable	Orice Cet. Orice	N/A	
2.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach	A Copy	N/A	
2.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided	Non-user replaceable light source	P	
, C [®]	Cautionary symbol	Dr. Col.	P	
2.6 (3.3.22)	Controllable luminaires, classification of insulation provided	OV CON CONT	N/A	
2.6 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A	
2.6 (3.3.24)	If not supplied with terminal block, information on the packaging	N. Cop. O. Co.	N/A	
2.6 (3.4)	Test with water		P	
O'V	Test with hexane	, 0 ¹ , 0 ¹	Р	
ķ. O	Legible after test		Р	
- et	Label attached	, 5° × 0° -	Č P	
2.7 (4)	CONSTRUCTION		- X	
2.7 (4.2)	Components replaceable without difficulty		Р	
2.7 (4.3)	Wireways smooth and free from sharp edges	× V , 50° ,	P	

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Clause	Requirement + Test	Result - Remark	Verdict
Ciagos	rioquii o rioci	Treat Treman	70.0.00
2.7 (4.4)	Lampholders		N/A
2.7 (4.4.1)	Integral lampholder	A. Co. T. Q	N/A
2.7 (4.4.2)	Wiring connection		N/A
2.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
2.7 (4.4.4)	Positioning	Contraction of the Contraction o	N/A
V at	- pressure test (N):	Or Car	_
QY,C0	After test the lampholder comply with relevant standard sheets and show no damage	X OV. Cert	N/A
50 ⁵ , ×	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation	Ticer Oricer	N/A
Cert	- bending test (N):		_
Dr. Ce	After test the lampholder have not moved from its position and show no permanent deformation	OV. Cert	N/A
2.7 (4.4.5)	Peak pulse voltage	Cart V AV Car	N/A
2.7 (4.4.6)	Centre contact	Con Nico	N/A
2.7 (4.4.7)	Parts in rough service luminaires resistant to tracking	Or Car	N/A
2.7 (4.4.8)	Lamp connectors	Q, Q ₀ , , ,	N/A
2.7 (4.4.9)	Caps and bases correctly used	is of cer	N/A
2.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way	Cer X Or Cer	N/A
2.7 (4.5)	Starter holders	Y CON X OV	N/A
01/0	Starter holder in luminaires other than class II	\$ 500 X	N/A
OV.	Starter holder class II construction	\$, \$\frac{\chi}{\chi}\$, \tag{\chi}\$	N/A
2.7 (4.6)	Terminal blocks	Cart Car	N/A
χ.	Tails	Contraction of the contraction o	N/A
So x	Unsecured blocks	Or Care De la	N/A
2.7 (4.7)	Terminals and supply connections	ON CONT.	P
2.7 (4.7.1)	Contact to metal parts		N/A

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	IEC 60598-2-2		\Diamond
Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.7.2)	Test 8 mm live conductor		N/A
OV CS	Test 8 mm earth conductor	Q, ~ C ₀ , ~ Q	N/A
2.7 (4.7.3)	Terminals for supply conductors	\$ 2,0°°	P
2.7 (4.7.3.1)	Welded method and material		N/A
<i>></i>	- stranded or solid conductor	CSL A. CO.	N/A
, CO	- spot welding	Or Col.	N/A
	- welding between wires	OSE OSE	N/A
	- Type Z attachment	is of con	N/A
	- mechanical test according to 15.6.2	The Or Care	N/A
Cor	- electrical test according to 15.6.3	To the On Car	N/A
Cert	- heat test according to 15.6.3.2.3 and 15.6.3.2.4	N.O. at OV	N/A
2.7 (4.7.4)	Terminals other than supply connection		P
2.7 (4.7.5)	Heat-resistant wiring/sleeves	, 0° -a'	N/A
2.7 (4.7.6)	Multi-pole plug		N/A
- 01/2	- test at 30 N		N/A
2.7 (4.8)	Switches	DY COL	N/A
37.0	- adequate rating	Q	N/A
01.	- adequate fixing	is of Cont	N/A
	- polarized supply	Col.	N/A
Con x	- compliance with IEC 61058-1 for electronic switches	No toke Of the	N/A
2.7 (4.9)	Insulating lining and sleeves	OV, COK.	N/A
2.7 (4.9.1)	Retainment		N/A
0	Method of fixing:	x or cer	N/A
2.7 (4.9.2)	Insulated linings and sleeves:	Con x Or cor	N/A
Cork X	Resistant to a temperature > 20 °C to the wire temperature or	Or Car Or Co	N/A
,	a) & c) Insulation resistance and electric strength	OF COK	N/A
→ × ×	b) Ageing test. Temperature (°C):	x 0 00 00 00 00 00 00 00 00 00 00 00 00	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Co ^S			
2.7 (4.10)	Double or reinforced insulation		N/A
2.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
, (Safe installation fixed luminaires	COL ON CONT	N/A
	Capacitors and switches	Carry Or Carry	N/A
y cet	Interference suppression capacitors according to IEC 60384-14	Original Origina Original Origina Origina Origina Origina Original	N/A
2.7 (4.10.2)	Assembly gaps:		N/A
OV.	- not coincidental	37.	N/A
~	- no straight access with test probe		N/A
2.7 (4.10.3)	Retainment of insulation:	Dr. Col.	N/A
OV.	- fixed	Or Call	N/A
7), C	- unable to be replaced; luminaire inoperative	ON COL	N/A
	- sleeves retained in position	er Or Cer	N/A
	- lining in lampholder	of the state of th	N/A
2.7 (4.10.4)	Protective impedance device	OV. ON O	N/A
Or. Cell	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor	it Or Cett	N/A
→	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
-je ^k	Resistors comply with test (a) in 14.1 of IEC 60065	To the On Car	N/A
2.7 (4.11)	Electrical connections and current-carrying parts	OL'O GE OV	O P
2.7 (4.11.1)	Contact pressure		N/A
2.7 (4.11.2)	Screws:		Р
× 0	- self-tapping screws		P
-05	- thread-cutting screws	Cox x Ox	N/A
2.7 (4.11.3)	Screw locking:	DY CON TO THE	P
0).0	- spring washer	O CON	Р
¥ (- rivets	x O' CO'	N/A

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, O ^V	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.11.4)	Material of current-carrying parts		ΘP
2.7 (4.11.5)	No contact to wood or mounting surface	V 00	O Po
2.7 (4.11.6)	Electro-mechanical contact systems	\$ V. C.	N/A
4.7 (4.12)	Screws and connections (mechanical) and glands		PO
2.7 (4.12.1)	Screws not made of soft metal	N Cott	P P
	Screws of insulating material	Or Coy	N/A
	Torque test: torque (Nm); part:	Screw for enclosure	P
	Torque test: torque (Nm); part:	The Or Care	N/A
	Torque test: torque (Nm); part:	C St. Ox Car.	N/A
2.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal	1,0° 1,0° 1,0° 1,0° 1,0° 1,0° 1,0° 1,0°	N/A
2.7 (4.12.4)	Locked connections:		N/A
Q C	- fixed arms; torque (Nm):		N/A
O.	- lampholder; torque (Nm):		N/A
it o	- push-button switches; torque 0,8 Nm:		N/A
2.7 (4.12.5)	Screwed glands; force (Nm):		N/A
2.7 (4.13)	Mechanical strength	Q, C ₀ , ' ' '	P
2.7 (4.13.1)	Impact tests:	O COL	Р
0	- fragile parts; energy (Nm):		N/A
*	- other parts; energy (Nm):	0.35Nm	Р
Contraction of the contraction o	1) live parts	or or	P
Cer	2) linings	OV. Cet. O	N/A
Or Co	3) protection	× Oli cet	P
0	4) covers	x OV con	Р
2.7 (4.13.3)	Straight test finger	30N	P
2.7 (4.13.4)	Rough service luminaires	× 0	N/A
V cet	- IP54 or higher	S. S. X. Q.	N/A
0),	a) fixed	D. X	N/A
	b) hand-held	- % O. O.	N/A

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	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
CO ^X	c) delivered with a stand		N/A
D), C	d) for temporary installations and suitable for mounting on a stand		N/A
2.7 (4.13.6)	Tumbling barrel	TO THE STATE OF TH	N/A
2.7 (4.14)	Suspensions, fixings and means of adjusting	Solve Or Con	N/A
2.7 (4.14.1)	Mechanical load:	OV - ot OV C	N/A
) Col	A) four times the weight	Or Care Or	N/A
0,	B) torque 2,5 Nm	× 0 / - 0 /	N/A
	C) bracket arm; bending moment (Nm):	× O' cor	N/A
- o [*]	D) load track-mounted luminaires	98 x 07 68	N/A
Cox	E) clip-mounted luminaires, glass-shelve. Thickness (mm):	Or Cert Or	_
O. C.	Metal rod. diameter (mm):		N/A
, C	Fixed luminaire or independent control gear without fixing devices	Cet X Direct	N/A
2.7 (4.14.2)	Load to flexible cables		N/A
T' cett	Mass (kg):	O CONTRACTOR	_
OV.	Stress in conductors (N/mm²):	Q SO X	N/A
01/	Mass (kg) of semi-luminaire:	X V S	N/A
X	Bending moment (Nm) of semi-luminaire:	Contraction of the second	N/A
2.7 (4.14.3)	Adjusting devices:	Y CON TO SO	N/A
Co	- flexing test; number of cycles:	ON COL	N/A
Q, Co	- strands broken:	ON CONT.	N/A
▽ ′	- electric strength test afterwards	x or cor	N/A
2.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors	Set of Set	N/A
2.7 (4.14.5)	Guide pulleys	D. Col. J. M.	N/A
2.7 (4.14.6)	Strain on socket-outlets		N/A
2.7 (4.15)	Flammable materials	x or con	R

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	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
Co Cox	- glow-wire test 650°C:	See Test Table 2.15 (13.3.2)	P
O) (3	- spacing ≥30 mm	0, 10,	N/A
OV.	- screen withstanding test of 13.3.1	× 0, 7, 0, ×	N/A
х <	- screen dimensions		N/A
·	- no fiercely burning material		χР
, co,	- thermal protection	Or Cay Or Co	N/A
), Ce,	- electronic circuits exempted	QV. 09t.	N/A
2.7 (4.15.2)	Luminaires made of thermoplastic material with lamp of	control gear	N/A
	a) construction		N/A
Ser	b) temperature sensing control		N/A
Contraction	c) surface temperature		N/A
2.7 (4.16)	Luminaires for mounting on normally flammable so	urfaces	P.
OV	No lamp control gear:	(compliance with Section 12)	N/A
2.7 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		∴ N/A
V at	- spacing 10 mm	Or Care A Chic	N/A
2.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear	ir of con	N/A
	- external		N/A
58¢	- fixed position		N/A
Cort	- temperature marked lamp control gear	Orio Carr	N/A
2.7 (4.16.3)	Design to satisfy the test of 12.6:	(see clause 12.6)	N/A
2.7 (4.17)	Drain holes		N/A
<u>, </u>	Clearance at least 5 mm	per x ov cer	N/A
2.7 (4.18)	Resistance to corrosion		N/A
2.7 (4.18.1)	- rust-resistance	DY CONT X DY	N/A
2.7 (4.18.2)	- season cracking in copper	\$\tag{\tag{\tag{\tag{\tag{\tag{\tag{	N/A
2.7 (4.18.3)	- corrosion of aluminium	St. OX CO.	N/A

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IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
2.7 (4.19)	Ignitors compatible with ballast	Y Zoo X V	N/A
2.7 (4.20)	Rough service vibration	\$ 50° X \$	N/A
2.7 (4.21)	Protective shield		N/A
2.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
Cox x	Shield of glass if tungsten halogen lamps	Ohi car	N/A
2.7 (4.21.2)	Particles from a shattering lamp not impair safety	Orio cier Or	N/A
2.7 (4.21.3)	No direct path	x or cor	N/A
2.7 (4.21.4)	Impact test on shield	x or cer	N/A
- e ^t	Glow-wire test on lamp compartment:	See Test Table 2.15 (13.3.2)	N/A
2.7 (4.22)	Attachments to lamps not cause overheating or damage	Or Colt	N/A
2.7 (4.23)	Semi-luminaires comply Class II	ON COL	N/A
2.7 (4.24)	Photobiological hazards	at or con	Р
2.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)	Cey X Or Cey	N/A
2.7 (4.24.2)	Retinal blue light hazard	DY SON X DY	Р
O).	Class of risk group assessed according to IEC/TR 62778	RG0	_
~ ·	Luminaires with E _{thr}	The Or Care	N/A
je ^j	a) Fixed luminaires		N/A
Cert	- distance x m, borderline between RG1 and RG2:	No at Or	N/A
Q C.	- marking and instruction according 3.2.23	, O. S. S.	N/A
Or	b) Portable and handheld luminaires		N/A
<u> </u>	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778	Cart Oringe	N/A
Cot	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	Or Cer Or	N/A
2.7 (4.25)	Mechanical hazard	K O OF	· P

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, O ^v	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
C COX	No sharp point or edges	Y CONTRACTOR AND	P̈́Ρ
2.7 (4.26)	Short-circuit protection	Q, 10, 5 Q	N/A
2.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
2.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
×.	Test chain not melt through	Cor. A. Co.	N/A
	Test sample not exceed values of Table 12.1 and 12.2	Dr. Col.	N/A
2.7 (4.27)	Terminal blocks with integrated screwless earthing	contacts	N/A
	Test according Annex V	a or cor	N/A
♦.	Pull test of terminal fixing (20 N)	The Or Care	N/A
OSK.	After test, resistance < 0,05 Ω	Contraction of Contraction	N/A
Ceir	Pull test of mechanical connection (50 N)	, Or Or	N/A
QV 08	After test, resistance < 0,05 Ω		N/A
QV.	Voltage drop test, resistance $< 0.05 \Omega$		N/A
2.7 (4.28)	Fixing of thermal sensing control	Contraction of the contraction o	N/A
a.K.	Not plug-in or easily replaceable type		N/A
V - at	Reliably kept in position	D. Co.	N/A
OV:	No adhesive fixing if UV radiations from a lamp can degrade the fixing	x O' Cor	N/A
\Diamond	Not outside the luminaire enclosure	× O' Get	N/A
-,eit	Test of adhesive fixing:	LOO IN ON CON	N/A
ceit	Max. temperature on adhesive material (°C):		_
Q C8	100 cycles between t min and t max		N/A
OV.	Temperature sensing control still in position		N/A
2.7 (4.29)	Luminaires with non-replaceable light source	Cert Vice at	N/A
	Not possible to replace light source		N/A
, cett	Live part not accessible after parts have been opened by hand or tools	Or care or	N/A
2.7 (4.30)	Luminaires with non-user replaceable light source		P

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Clause	Requirement + Test	Result - Remark	Verdict
Co ^X	If protective cover provide protection against electric sheeteric shock risk" symbol:	hock and marked with "caution,	C [®] P
37.0	Minimum two fixing means		P
2.7 (4.31)	Insulation between circuits	Colt	Р
e e t	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3	Posit of con	P
Dr. Or.	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	er dr. Cer	N/A
2.7 (4.31.1)	SELV circuits		P
	Used SELV source		P
, C8,	Voltage ≤ ELV	Q, Co.	N/A
	Insulating of SELV circuits from LV supply	Col.	N/A
,	Insulating of SELV circuits from other non SELV circuits	Car A Car	N/A
cet	Insulating of SELV circuits from FELV		N/A
i cet	Insulating of SELV circuits from other SELV circuits		N/A
O).	SELV circuits insulated from accessible parts according Table X.1	it Orio	OV P
e ^t	Plugs not able to enter socket-outlets of other voltage systems	Cox X Or Cox	N/A
Ceir	Socket outlets does not admit plugs of other voltage systems	O'COOK O'	N/A
OV.	Plugs and socket-outlets does not have protective conductor contact		N/A
2.7 (4.31.2)	FELV circuits		N/A
COX	Used FELV source		N/A
, coit	Voltage ≤ ELV	D. 700 8 07,	N/A
0	Insulating of FELV circuits from LV supply	V	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Co ^t	FELV circuits insulated from accessible parts according Table X.1		N/A
Ø,	Plugs not able to enter socket-outlets of other voltage systems	× Ø, °°,	N/A
	Socket outlets does not admit plugs of other voltage systems	Cot Or Cot	N/A
Y Cork	Socket-outlets does not have protective conductor contact	Or Car	N/A
2.7 (4.31.3)	Other circuits	x or cor	P
. O	Other circuits insulated from accessible parts according Table X.1		Р
Cox	Class II construction with equipotential bonding for prot with live parts:	tection against indirect contacts	N/A
Q. S.	- conductive parts are connected together	Or Cot	N/A
0	- test according 7.2.3	x or get	N/A
	- conductive part not cause an electric shock in case of an insulation fault	Cor Or Cor	N/A
N. Co	- equipotential bonding in master/slave applications	D. Col.	N/A
QY.03	- master luminaire provided with terminal for accessible conductive parts of slave luminaires	x Or cor	N/A
	- slave luminaire constructed as class I	× V GE	N/A
2.7 (4.32)	Overvoltage protective devices		N/A
Cox	Comply with IEC 61643-11		N/A
OY G	External to controlgear and connected to earth:	7 7° 5 0	N/A
Q ^V	- only in fixed luminaires		N/A
x 0	- only connected to protective earth	-9 ^k	N/A
2.8 (11)	CREEPAGE DISTANCES AND CLEARANCES		<u>.</u> ~ —
), Cet	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1):	Category II Category III	_
2.8 (11.2.1)	Category III according Annex U		N/A

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IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
0			
Or cer	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1	Or Cert A	N/A
2.8 (11.2.2)	Creepage distances for frequency up to 30 kHz:	Approved SELV LED driver used	N/A
	Creepage distances for frequency over 30 kHz:	COL COL	N/A
e e e e e e e e e e e e e e e e e e e	- Controlgear marked with \hat{U}_{OUT} and f_{UOUT} according IEC 61347-1, clause 7.1, item w):	See Test Table 2.7 (11.2) II	N/A
N. Cet	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347:	See Test Table 2.7 (11.2) II	N/A
2.8 (11.2.3)	Clearances for frequency up to 30 kHz:	See Test Table 2.7 (11.2) I	N/A
	Clearances distances for frequency over 30 kHz:	- or Or Cor	N/A
Cost !	- Controlgear marked with U _P	See Test Table 2.7 (11.2) II	N/A
Or Col	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347:	See Test Table 2.7 (11.2) II	O N/A
2.9 (7)	PROVISION FOR EARTHING		O'Y
2.9 (7.2.1 + 7.2.3)	Accessible metal parts	Cott	N/A
Copy (Metal parts in contact with supporting surface	Original Original	N/A
Cel	Resistance < 0,5 Ω:	0), - ° ₁ , 0,	N/A
0,	Self-tapping screws used	x Oli ceit	N/A
0,	Thread-forming screws	x O' cet	N/A
-ex	Thread-forming screw used in a grove		N/A
- ex	Earth makes contact first	X OX	N/A
OV. Ce	Terminal blocks with integrated screwless earthing contacts tested according Annex V	D. Cor	N/A
je d	Protective earthing of the luminaire not via built-in control gear		N/A
2.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.	Dr. Cost Dr.	N/A
2.9 (7.2.4)	Locking of clamping means	ON COL	N/A
Q,	Compliance with 4.7.3	E OF GOT	N/A

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, O ^v	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdic
Cert	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
2.9 (7.2.5)	Earth terminal integral part of connector socket	Con Contraction	N/A
2.9 (7.2.6)	Earth terminal adjacent to mains terminals	St. Or Cal.	N/A
2.9 (7.2.7)	Electrolytic corrosion of the earth terminal	Contraction of Contraction	N/A
2.9 (7.2.8)	Material of earth terminal	Or Coll.	N/A
Cel	Contact surface bare metal	OV, COL. OV	N/A
2.9 (7.2.10)	Class II luminaire for looping-in	x or cor	N/A
0,	Double or reinforced insulation to functional earth	A OV CON	N/A
2.9 (7.2.11)	Earthing core coloured green-yellow		N/A
- et	Length of earth conductor	O CONTRACTOR OF THE PROPERTY O	N/A
2.10 (14)	SCREW TERMINALS		
O ^V	Separately approved; component list:	(see Annex 1)	ÓΡ
x Ó	Part of the luminaire:	(see Annex 3)	N/A
2.10 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONN	NECTIONS	~ —
See X	Separately approved; component list:	(see Annex 1)	N/A
, Co	Part of the luminaire:	(see Annex 4)	N/A
2.11 (5)	EXTERNAL AND INTERNAL WIRING		
2.11 (5.2)	Supply connection and external wiring		Р
2.11 (5.2.1)	Means of connection:	AC power supply	Р
Or Cer	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	Or Cer Or	N/A
2.11 (5.2.2)	Type of cable::	x or con	Р
X O	Nominal cross-sectional area (mm²):	Contraction of Contraction	Р
COX	Cables equal to IEC 60227 or IEC 60245	IEC 60227	P P
2.11 (5.2.3)	Type of attachment, X, Y or Z:	Type X	P
2.11 (5.2.5)	Type Z not connected to screws	7 7 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	N/A
2.11 (5.2.6)	Cable entries:		P

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Olavia	Description and Task	Death Devel	1/ " -
Clause	Requirement + Test	Result - Remark	Verdict
Cex	- suitable for introduction		ΘP
OY 09	- adequate degree of protection	, , , , , , , , , , , , , , , , , , ,	Po
2.11 (5.2.7)	Cable entries through rigid material have rounded edges	i or or or	N/A
2.11 (5.2.8)	Insulating bushings:	Con Con	N/A
Col.	- suitably fixed		N/A
S. Col	- material in bushings	Orio Carro	N/A
\(\frac{1}{2}\)	- material not likely to deteriorate	× OV cor	N/A
0,	- tubes or guards made of insulating material		N/A
2.11 (5.2.9)	Locking of screwed bushings	Con x Or con	N/A
2.11 (5.2.10)	Cord anchorage:	A Con X OX	P
0), 48	- covering protected from abrasion	\$ 50° X \$	P
OV.	- clear how to be effective	X V CO X	P
x Ó	- no mechanical or thermal stress		P
X	- no tying of cables into knots etc.	A CONTRACTOR	P
Con x	- insulating material or lining	ON CONT.	N/A
2.11 (5.2.10.1)	Cord anchorage for type X attachment:	DV Cat	N/A
0	a) at least one part fixed		N/A
-01	b) types of cable		N/A
- 01	c) no damaging of the cable	Or Coll * Or	N/A
01/	d) whole cable can be mounted	Q, 'Co, 'X O,	N/A
01:0	e) no touching of clamping screws	K OY CON	N/A
× 0	f) metal screw not directly on cable	- 8th O	N/A
×	g) replacement without special tool	A CONTRACTOR	N/A
Co, x	Glands not used as anchorage	Or Car Or Co	N/A
Con	Labyrinth type anchorages	OV. COK	N/A
2.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Туре Х	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.11 (5.2.10.3)	Tests:		P
20,0	- impossible to push cable; unsafe		N/A
	- pull test: 25 times; pull (N):	60	P
36	- torque test: torque (Nm):	0.25	Р
Con "	- displacement ≤ 2 mm	1.0	P
Col	- no movement of conductors	OV, COK.	CP
0,	- no damage of cable or cord	x OV cox	P
0,	- function independent of electrical connection		P
2.11 (5.2.11)	External wiring passing into luminaire	y y or ce	Р
2.11 (5.2.12)	Looping-in terminals		N/A
2.11 (5.2.13)	Wire ends not tinned	\$ 50° x \$	N/A
O ^V	Wire ends tinned: no cold flow	C ON X	P
2.11 (5.2.14)	Mains plug same protection	COX OX	P
У Х.	Class III luminaire plug		N/A
S. X	No unsafe compatibility	Or Care	PX
2.11 (5.2.16)	Appliance inlets (IEC 60320)	ON COL	N/A
	Installation couplers (IEC 61535)	x or cor	N/A
,č	Other appliance inlet or connector according relevant IEC standard		N/A
2.11 (5.2.17)	No standardized interconnecting cables properly assembled	Dr. Carr	N/A
2.11 (5.2.18)	Used plug in accordance with	Cor Cor	P
<u>.</u> 0	- IEC 60083		Р
	- other standard		N/A
2.11 (5.3)	Internal wiring	D. Cay	B
2.11 (5.3.1)	Internal wiring of suitable size and type	O CONT.	P
~	Through wiring	The Open Cap	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
C.O.K.	- not delivered/ mounting instruction		N/A
OV 68	- factory assembled	Q, ⁷ / ₂₀ , ⁷ Q,	N/A
OV.	- socket outlet loaded (A):	\$ \tag{\tau} \tau \tag{\tau} \tau	N/A
× 0	- temperatures:	(see Annex 2)	N/A
,	Green-yellow for earth only	Col. A St. Co.	Р
2.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring	Dr. Corr	N/A
0,	Cross-sectional area (mm²):	x OV COX	N/A
O	Insulation thickness	x Or cet	N/A
- e ^t	Extra insulation added where necessary		N/A
2.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal cur	rrent-limiting device	Ç P
Q, Co	Cross-sectional area (mm²):	OF COL	P
2.11 (5.3.1.3)	Double or reinforced insulation for class II	Car X Dr. Car	N/A
2.11 (5.3.1.4)	Conductors without insulation	Orices Orice	N/A
2.11 (5.3.1.5)	SELV current-carrying parts	* Of car	P
2.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
2.11 (5.3.2)	Sharp edges etc.	Y Col.	Р
O'	No moving parts of switches etc.	ON COL	N/A
QV.	Joints, raising/lowering devices	OST.	N/A
	Telescopic tubes etc.	Tr Or Car	N/A
	No twisting over 360°	of con	Р
2.11 (5.3.3)	Insulating bushings:		N/A
J Cell	- suitable fixed	NO SE OF	N/A
0	- material in bushings	V 2500 X <	N/A

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IEC 60598-2-2			
Clause	Requirement + Test	Result - Remark	Verdict
Ce ^k	- material not likely to deteriorate		N/A
O 69	- cables with protective sheath	Q, 7\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	N/A
2.11 (5.3.4)	Joints and junctions effectively insulated	7. O.	N/A
2.11 (5.3.5)	Strain on internal wiring	Cott	N/A
2.11 (5.3.6)	Wire carriers		N/A
2.11 (5.3.7)	Wire ends not tinned	Or Call	N/A
N. Co	Wire ends tinned: no cold flow	O. Coly	P
2.11 (5.4)	Test to determine suitability of conductors having	a reduced cross-sectional area	P
- o ^t	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	Р
- ei th	No damage to luminaire wiring after test		P
2.12 (8)	PROTECTION AGAINST ELECTRIC SHOCK	, , , , , , , , , , , , , , , , , , , ,	_0
2.12 (8.2.1)	Live parts not accessible	, S. S. X.	P
je d	Basic insulated parts not used on the outer surface without appropriate protection	Car O' Car	P
Cort of	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires	Original Andrews	N/A
Q\	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires	K O' CO' C	P
-9 ⁸ * ×	Lamp and starter holders in portable and adjustable luminaires comply with double or reinforced insulation requirements	Ticet Of Cet	N/A
Or Co	Basic insulation only accessible under lamp or starter replacement	Dr. Cerr	N/A
O.	Protection in any position	x 0 -0 1	Р
	Double-ended tungsten filament lamp		N/A
co ^X	Insulation lacquer not reliable	X OV	N/A
/ reit	Double-ended high pressure discharge lamp	D. Son Y	N/A
Q1,0	Relevant warning according to 3.2.18 fitted to the luminaire	F Or Car	N/A

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. O _Y	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
2.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
2.12 (8.2.3.a)	Class II luminaire:		N/A
i e	- basic insulated metal parts not accessible during starter or lamp replacement	Cer Dr. Cer	N/A
Cert	- basic insulation not accessible other than during starter or lamp replacement	Or Care Original	N/A
0,0,	- glass protective shields not used as supplementary insulation	st of cot	N/A
2.12 (8.2.3.b)	BC lampholder of metal in class I luminaires is earthed		N/A
2.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:	Or Car	N/A
O).	Ordinary luminaire:		N/A
<u>,</u>	- voltage under load (V)::		N/A
	- no-load voltage (V):	Col.	N/A
N. O. O. O.	- touch current if applicable (mA):	Dr. Col.	N/A
	One conductive part insulated if required	Q, C ₈ ,	N/A
	Other than ordinary luminaire:	ir Or Corr	N/A
	- nominal voltage (V):	St. O. Co.	N/A
5.0°C	Class III luminaire only for connection to SELV		N/A
Dr. Cer	Class III luminaire not provided with means for protective earthing	Orio Carr Or	N/A
2.12 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
2.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
2.12 (8.2.6)	Covers reliably secured	V. Co. * O.	Р
2.12 (8.2.7)	Luminaire other than below with capacitor $> 0.5~\mu F$ not exceed 50 V 1 min after disconnection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		Ç Ö P
3. ¹ ²	Other luminaires with capacitor $>$ 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection	Cet Dr. Cet	N/A
2.12 (-)	Parts within the celling space provide same degree of protection against electric shock as parts below the celling space	Chicograph Ohio	N/A

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2.13 (12)	ENDURANCE TEST AND THERMAL TEST		O,
2.13.1 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (specified in 2.14	(12.7) after (9.2) before (9.3)	_
2.13 (12.2)	Selection of lamps and ballasts	Or Car	_
D. C.	Lamp used according Annex B:	See Annex 2 for lamp used	_
, <u>r</u>	Controlgear if separate and not supplied:	See Annex 2 for controlgear used	_
2.13 (12.3)	Endurance test:		P
V. G.	a) mounting-position:	As in normal use	_
2	b) test temperature (°C):	35	_
	c) total duration (h):	240	_
	d) if not equipped with controlgear, constant voltage/current (V) or (A):	264V	_
- Six	e) luminaire ceases to operate	Y- 70° × 0'	_
2.13 (12.3.2)	After endurance test:	r price	Per
	- no part unserviceable		P
	- luminaire not unsafe	Ser Or Con	Р
Col	- no damage to track system		N/A
, cer	- marking legible	OV. COR. OV	CP
O.	- no cracks, deformation etc.	. OV - ot	P

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01	Indiana Autor	D. A. D	Marilat
Clause	Requirement + Test	Result - Remark	Verdict
2.13 (12.4)	Thermal test (normal operation):	(see Annex 2)	O P
2.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
2.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
2.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A):	Cett Orice	_
Colonial Colonia Colo	- case of abnormal conditions:	OV. COX. OV. S	_
Cer	- electronic lamp control gear	O' COR O'	N/A
O,	- measured winding temperature (°C): at 1,1 Un:	x OV cet	_
's.	- measured mounting surface temperature (°C) at 1,1 Un:	Cott. Or Cott.	N/A
500	- calculated mounting surface temperature (°C):		N/A
O.	- track-mounted luminaires	Or Col.	N/A
2.13 (12.6.2)	Temperature sensing control		N/A
, C	- case of abnormal conditions:	CON X OV CON	
- ex	- thermal link	, CO X OY	N/A
Y cet	- manual reset cut-out	A Son X	N/A
OV.	- auto reset cut-out	Q, You	N/A
OV.	- measured mounting surface temperature (°C):	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	N/A
χ.	- track-mounted luminaires	Car. D. Co.	N/A
2.13 (12.7)	Thermal test (failed lamp control gear in plastic lun	ninaires):	N/A
2.13 (12.7.1)	Luminaire without temperature sensing control	Or Car	N/A
2.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
X	Test method 12.7.1.1 or Annex W:	Contraction of the contraction o	_
Cox	Test according to 12.7.1.1:	Or Care De Co	N/A
Con	- case of abnormal conditions:	ON CONTRACTOR	
O,	- Ballast failure at supply voltage (V):		

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Clause	Requirement + Test	Result - Remark	Verdict
C.S.			
CEX	- Components retained in place after the test		N/A
OV.	- Test with standard test finger after the test	V, Co or O	N/A
OV.	Test according to Annex W:		N/A
<u>.</u>	- case of abnormal conditions:		_
	- measured winding temperature (°C): at 1,1 Un:		_
OV. Cer	- measured temperature of fixing point/exposed part (°C): at 1,1 Un:	Or Car	_
	- calculated temperature of fixing point/exposed part (°C)	er Oriona	_
, č.	Ball-pressure test:	See Table 2.15 (13.2.1)	N/A
2.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70V	V, transformer > 10 VA	N/A
Q, Q	- case of abnormal conditions:		_
O,	- measured winding temperature (°C): at 1,1 Un:	x OV ce ^x	_
3 ² ×	- measured temperature of fixing point/exposed part (°C): at 1,1 Un:	Cer Ori Cer	_
or cert	- calculated temperature of fixing point/exposed part (°C)	Or Cert	_
0	Ball-pressure test:	See Table 2.15 (13.2.1)	N/A
2.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA	Cet Oricet	N/A
Co at	- case of abnormal conditions:	or ceit	_
Co	- Components retained in place after the test	Or Col.	N/A
	- Test with standard test finger after the test	ON COL	N/A
2.13 (12.7.2)	Luminaire with temperature sensing control	Sex V Or Sex	N/A
- oth	- thermal link:	Yes No No	_
St. Jet	- manual reset cut-out:	Yes No	
OV.	- auto reset cut-out:	Yes No	
0	- case of abnormal conditions:	SK O S	_

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	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
S ^V , Co ^X	- highest measured temperature of fixing point/ exposed part (°C)::	St. Cat. St.	_
7	Ball-pressure test::	See Table 2.15 (13.2.1)	N/A
2.13.1 (-)	Wiring, for connection to the supply, not reach unsafe t	emperature	N/A
×	- measured temperature of the cable (°C):	Carr Or Carr	N/A
2.14 (9)	RESISTANCE TO DUST AND MOISTURE		o`
2.14 (-)	If IP > IP 20 the order of tests as specified in clause 2.1	13	Č.
2.14 (9.2)	Tests for ingress of dust, solid objects and moisture:	x OV cor	P
O,	- classification according to IP:	IP20	_
- oth	- mounting position during test:	As in normal use	_
- OK	- fixing screws tightened; torque (Nm):		_
01/0	- tests according to clauses:	Clause 9.2.0	_
OV.	- electric strength test afterwards	Z. Z. X	N/A
χ. <	a) no deposit in dust-proof luminaire	CONT. OF SON X	N/A
χ.	b) no talcum in dust-tight luminaire	Contraction of the contraction o	N/A
, Cet	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	Or Cat Oric	N/A
O	c.1) For luminaires without drain holes – no water entry		N/A
× 0,	c.2) For luminaires with drain holes – no hazardous water entry		N/A
.go.	d) no water in watertight or pressure watertight luminaire	N. Cok. A. Orice	N/A
OV C	e) no contact with live parts (IP 2X)	IP20	P
OV	e) no entry into enclosure (IP 3X and IP 4X)		N/A
<u>,</u>	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)	Set Or Cert	N/A
, cer	f) no trace of water on part of lamp requiring protection from splashing water	Original St. Original St.	N/A
OV.	g) no damage of protective shield or glass envelope	V 250 38 K	N/A

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	IEC 60598-2-2		· ·
Clause	Requirement + Test	Result - Remark	Verdict
2.14 (9.3)	Humidity test 48 h		P
2.15 (10)	INSULATION RESISTANCE AND ELECTRIC STRENG	STH	- ø
2.15 (10.2.1)	Insulation resistance test	- V 25° 4	ΟP
,	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø:	Cat. Orice	_
Č.	Insulation resistance (M Ω):	Or Care Or C	_
Col	SELV		CP CP
0,	- between current-carrying parts of different polarity:	× 0 - 6 - 6	N/A
	- between current-carrying parts and mounting surface	100 ΜΩ	Р
Ce ^{jt}	- between current-carrying parts and metal parts of the luminaire:	N. Col. O. Co.	N/A
DY. C6	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	ot of cet	N/A
	- Insulation bushings as described in Section 5:		N/A
Cert !	Other than SELV	OV. ON CO	P
N Cel	- between live parts of different polarity:	100 ΜΩ	CP CP
0	- between live parts and mounting surface:	100 ΜΩ	P 0
Q.	- between live parts and metal parts:	× OV CON	N/A
Ce ^X	- between live parts of different polarity through action of a switch:	Y CONTROL ON CONTROL	N/A
Dr. Ce	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	Or Cay	N/A
<u>,</u>	- Insulation bushings as described in Section 5:	Cox V	N/A
2.15 (10.2.2)	Electric strength test	Cox V	P P
, co, x	Dummy lamp	De Care de Care	N/A
Co	Luminaires with ignitors after 24 h test	Or Cert	N/A
→ · · · ·	Luminaires with manual ignitors	x ov cor	N/A

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IEC 60598-2-2						
Clause	Requirement + Test	Result - Remark	Verdict			
S x	X X X		χ.			
Section	Test voltage (V):		N/A			
Q 69	SELV		Po			
	- between current-carrying parts of different polarity:		N/A			
	- between current-carrying parts and mounting surface	500V	PÔ			
Cert	- between current-carrying parts and metal parts of the luminaire:	Olin Cart Olin	N/A			
9,	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:		N/A			
- e ^t	- Insulation bushings as described in Section 5:		N/A			
CO.	Other than SELV	X S	ØP			
OV CS	- between live parts of different polarity:	1480V	P			
O ^V	- between live parts and mounting surface::	2960V	ÓP			
x Ó	- between live parts and metal parts:	cet V	N/A			
Cert	- between live parts of different polarity through action of a switch:	Original Original	N/A			
Or. Co.	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts:	St. Or. Cat.	N/A			
	- Insulation bushings as described in Section 5:	er Or Cor	N/A			
2.15 (10.3)	Touch current or protective conductor current (mA).:	Max. 0.02mA (limit: 0.7mA)	P			
2.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		-00			
2.16 (13.2.1)	Ball-pressure test:	See Test Table 2.15 (13.2.1)	P			
2.16 (13.3.1)	Needle-flame test (10 s):	See Test Table 2.15 (13.3.1)	P			
2.16 (13.3.2)	Glow-wire test (650°C):	See Test Table 2.15 (13.3.2)	χР			
2.16 (13.4)	Proof tracking test (IEC 60112)	See Test Table 2.15 (13.4)	N/A			

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Distance 1:

Shenzhen DL Testing Technology Co., Ltd.

IEC 60598-2-2

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Clause	Requirement	t + Test	O' TO'	ON.	Result - Rema	rk	Verdict
2.8 (11.2)	TABLE I: Cr	eepage distai	nces and clea	rances	Q C	× 0	N/A
QV G	Minimum dis	stances (mm)	for a.c. up to	30 kHz sinu	soidal voltages	<i>2</i>	N/A
OV.	Applicable p	part of IEC 60	598-1 Table 1	1.1A*, 11.1B*	and 11.2*	,	N/A
× <	Insulation	Measured	Req	uired	Measured	Requ	iired
	type **	clearance	clearance	*Table	creepage	creepage	*Table
Distance 1:	OV.	Cer		- A	Or Car		V et
Working vol	tage (V)	<u> </u>		, , , , , , , , , , , , , , , , , , ,	O _V	Cer	_
PTI	<u> </u>		-gel		< 600	<u>></u> 600 □	_
Pulse voltag	ge if applicable	(kV)	- OF			Or Col	_
Supplement	ary information	1:	Or Col		N. C. C.	0,	-je ^r
Distance 2:		, o at	O.	Ser	V 0	K 0	Cert
Working vol	tage (V)	, jo	<u>× </u>	<u> </u>	0,0		
PTI	Ç Î	V 0		<u> </u>	< 600 □	≥ 600 □	
Pulse voltag	ge if applicable	(kV)	,oʻ	O :	Contraction of the contraction o		× —
Supplement	ary information	P.	01.0	, C 0			- ot
Distance 3:	0,	Cest	0	-01	O, Cou		- ot
Working vol	tage (V)	OV GET		,	0,	Con .	
PTI		<u> </u>	<u>,ø</u>		< 600 □	≥ 600 □	_
Pulse voltag	ge if applicable	(kV)	Ç.			D. Col	_
Supplement 60598-1 An	•	n: ** Insulation	type: B – Basi	c; S – Supple	mentary; R – Re	einforced. See a	lso IEC
OV 69	35.	(°)	x 🔗	C OF	→ V)` X	OV 6
2.8 (11.2)	TABLE II: 0	Creepage dis	tances and cl	earances	, O'	Joe, x	N/A
x (Minimur	m distances (mm) for a.c. h	nigher than 3	0 kHz sinusoid	al voltages	x 0
×	Applicab	le part of IEC	61347-1 Tabl	e 7 and 8* or	IEC 60664-4 Ta	able 1 and 2	`
Distances	Insulation	Measured	Requ	uired	Measured	Requ	ired
	type **	clearance	clearance	*Table	creepage	creepage	*Table

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. 🔷	Y GOT	IEC (60598-2-2	, of		O _X
Clause	Requirement +	Test	. 0	Result - Rer	mark	Verdict
Working vo	oltage (V)	ž V Š	:	PY COK	·	_
Frequency	if applicable (kHz)		<u></u> :	\(\frac{1}{2}\)	Co X	<u> </u>
PTI		7 00		< 600 □	≥ 600 □	_
Peak value	e of the working vo	ltage Û _{out} if applicable (k\	V):	cert	Δ' C° '	_
Supplemer	ntary information:		(Q 3,	Coll	2V,C0	. X
Distance 2		Cox.	Ž.	O'S	30	, Sir
Working vo	oltage (V)		, , , , , , , , , , , , , , , , , , ,	OV:	Cor.	_
Frequency	if applicable (kHz)	Q gr	<u> </u>	8	N Cer	_
PTI		QY		< 600 🗌	≥ 600 □	_
Peak value	e of the working vo	ltage Û _{out} if applicable (k\	V):	Co	OV C	ž
Supplemer	ntary information:	, S. O.	Cer	7,08	at OV	Cerc
Distance 3	:]		CON			or cert
Working vo	oltage (V)	, , , , , , , , , , , , , , , , , , ,	Q		OV ON	_
Frequency	if applicable (kHz)		<u> </u>	cer		_
PTI	<u> </u>		<u>,,</u>	< 600 🗌	≥ 600 □	_
Peak value	e of the working vo	Itage Û _{out} if applicable (k	v):	OV C		
Supplemer 60598-1 A	~ 60'	Insulation type: B – Basi	ic; S – Supplei	mentary; R –	Reinforced. See als	so IEC
	, Co	OV ON	V Ç	, ,	0) or	
2.16 (13.2.1) TABLE: Ball F	Pressure Test of Therm	oplastics	Y CON		P
Allowed in	mpression diamet	er (mm):	. of	Dr. Cer		_
Object/ Pa	rt No./ Material	Manufacturer/ trademark	Test tempera	ature (°C)	Impression diame	eter (mm)
LED modu	le PCB	See annex 1	125	X	0.6	V
Connector	O, Co, X	See annex 1	125	Ç [®]	0.6	, \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
LED cover	Q, Co,	See annex 1	75	Ce	0.5	CONT.
Suppleme	ntary information:		-01	Ò,	, ×	- of

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		IEC 60598	3-2-2			
Clause	Requirement + Test		O).	Result - Remark	J.Co	Verdict
00,					Q, \(\bigcirc_{\infty} \)	

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2.16 (13.3.1) TABLE	E: Needle-flame test (IEC	60695-11-5)			O 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)	Verdict
LED module PCB	See annex 1	10	No	0 0	Pass
Connector	See annex 1	10	No	0	Pass

2.16 (13.3.2)	TABLE	: Glow-wire test (IEC 60695-2-11)						N/A
Glow wire ter	mperatur	е		:	650°C	COK O	, Con ,	_
Object/ Part N Material	lo./			ufacturer demark	/	Ignition of specified layer Yes/No	Duration of burning (tb)	Verdict
01	-01		Cer	x	or, est	Ω	<u></u>	0)
Supplementar	ry informa	ation:						

2.16 (13.4)	TABLE: Proof	TABLE: Proof tracking test (IEC 60112)					
Test voltage	PTI	:	e ^k	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	at OV	_	
Object/ Part N	Object/ Part No./ Material Manufacturer/ trademark		Withstand 50 o	•	failure on three ns	Verdict	
×	or, eigh		01:	6	Q 00°	<	
Supplementa	ry information:	K Or Car	x 0	y' gen	0, 00,	х.	

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č O		IEC 60598-2-2		OV
Clause	Requirement + Test	V.C. 34 OV	Result - Remark	Verdict

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ANNEX 1	TABLI	E: Cri	tical components	information			P
Object / part	No. C	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Input cord	B	0). 32°	Zhongshan Henglan Boyi Electrical Appliance factory	H03VVH2-F	300/300 V 2 x 0.75 mm ²	DIN EN 50525-2-11 IEC 60227-1 IEC 60227-2 IEC 60227-5	VDE 40036714
LED Power Supply	A A		Shenzhen Dome Microelectronic Co., Ltd	ZF-NEH040S0 900FFF	Inpout: 220-240VAC, 50/60Hz, 0.19A Output: 24-40VDC, 0.9A, 55VDC Max.	EN 61347-1 EN 61347-2-13	CE
LED module F	PCB C		Jiangmen Zhonghao Precision Electronics Co. Ltd	MLT-AL	V-0,130 °C	IEC 60598-2-2 IEC 62031	UL E366055 tested with appliance
LED module	Ø B	9	Jiangmen Zhongyang Optoelectronics Co., Ltd	S12W	DC 24-42 V, 300 mA, 12 W	IEC 60598-2-2 IEC 62031	Tested with appliance

Supplementary information:

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
- Alternative component

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



	Ser A	IEC 60598-2-2		O.
Clause	Requirement + Test	Co X	Result - Remark	Verdict

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ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12				
OV.	Type reference:	MPL-0606-36	_		
z Ó	Lamp used	LED	_		
×.	Lamp control gear used:	ZF-NEH040S0900FFF	_		
V	Mounting position of luminaire	Recessed in test box	_		
	Supply wattage (W):	34.1W	_		
	Supply current (A)	0.154	_		
. V	Temperatures in test 1 - 4 below are corrected for ta (°C)	25	_		
- eich	- abnormal operating mode	VII. (50°)	_		
2.12 (12.4)	- test 1: rated voltage	O SO X	_		
Q ¹	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	1.06*240V=254.4V	_		
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage		_		
) Cert	Through wiring or looping-in wiring loaded by a current of A during the test		_		
2.12 (12.5)	Through wiring or looping-in wiring loaded by a current of A during the test	i or cer	_		

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
rait		test 1	test 2	test 3	limit	test 4	limit
Input wire	25.0		48.0		90		<u></u>
External enclosure(tc point, above transformer)	25.0		54.2		80		
LED module PCB	25.0	Q; Gg	49.7	Ce ^t	cl.13.2		ON CO

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			IEC 605	598-2-2				
Clause	e Requirement + Test Result - Remark						Verdict	
Ò.,					V - 2 ^k	\(\frac{1}{2}\)	9,	
LED module PCB	25.0	Cor.	39.4	sr `	cl.13.2	💸	V. Och	
LED cover	ED cover 25.0		26.2	· · · · · · · · · · · · · · · · · · ·	cl.13.2	Ç [©] ,		
Mounting sur	face 25.0		37.5	0,0	90	G.	0	
Object light(0.1m)	25.0	² ♥	31.1	0	90	0, Co	ce ^t	
Supplementa	ary information		Q\'.	COX.	0, 0,	. OV	COX	
ANNEX 3	Screw termi	nals (part of th	e luminaire)				N/A	
(14)	SCREW TER	RMINALS	-e ^X	O' C	× <	St. cett	N/A	
(14.2)	Type of term	inal)	O,			,Š —	
C.O.K.	Rated currer	nt (A)		, <u>``</u> :	Co	, O ^L	_	
(14.3.2.1)	One or more conductors							
(14.3.2.2)	Special preparation							
(14.3.2.3)	Terminal size	e 🔷		Q ¹	-,ex	Z, S	N/A	
δ` <u>X</u>	Cross-sectio	nal area (mm²)	<u></u>		ce ^x	O. Co.	_	
(14.3.3)	Conductor space (mm):							
(14.4)	Mechanical t	ests		J	O ^V G		N/A	
(14.4.1)	Minimum dis	tance	25		× 0	Ce ^X	N/A	
(14.4.2)	Cannot slip out							
(14.4.3)	Special preparation							
(14.4.4)	Nominal diameter of thread (metric ISO thread): M						N/A	
Q 00	External wiring						N/A	
OV.	No soft metal							
(14.4.5)	Corrosion							
(14.4.6)	Nominal diameter of thread (mm):						N/A	
V at	Torque (Nm):							
(14.4.7)	Between me	tal surfaces	. ` `		ON SE	\$C	N/A	
	Lug terminal						N/A	

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	IEC 60598-2-2		
Clause	Requirement + Test	Result - Remark	Verdict
CONT.	Mantle terminal	Property of	N/A
OV.	Pull test; pull (N):	7, Co. 1, O	N/A
(14.4.8)	Without undue damage	3,00	N/A

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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
07.	Type of conductor	N/A
(15.5)	Terminals and connections for internal wiring	N/A
(15.5.1)	Mechanical tests	N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples):	N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples):	N/A
\Diamond^{\vee}	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
r cet	Voltage drop (mV) after 1 h (4 samples):	N/A
Oh:	Voltage drop of two inseparable joints	N/A
	Number of cycles:	×

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					IEC 605	98-2-2					
Clause	Requ	uirement + To	est	~ C°		O,	Resu	lt - Remar	k		Verdict
CONT.		ige drop (m\ mples)			. ()		0	, Cer	, v	4,	N/A
01.0	(7)	ige drop (m\ imples)					o ^č	Q, Q	, Cer	e ^t	N/A
		ageing, volt cycle (4 san	• .	' (),	. je ^{jč}	0,	Cert	N/A
y cet		ageing, volt n cycle (4 sa						Or, Col	-,e ^X	OV.	N/A
(15.6)	Term	ninals and co	nnection	s for exte	ernal wiri	ng		O ¹	ce		N/A
(15.6.1)	Cond	ductors	OV.		×	0,	C ₀	×.	Q\'	cein	N/A
- ex	Term	ninal size and	d rating	OV.	ce ^k	O.	Ç	χ.	O)	, co	N/A
15.6.2	Mech	nanical tests	X	0	,	, C		Co	X	O ^V	N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N):						N/A				
(15.6.2.2)		est pin or ta				4	cet		OV.C	erceit	N/A
(15.6.3)	Elect	rical tests	X	OV.	Ceix				<)\' (N/A
N' cer	Tests	s according	15.6.3.1 +	+ 15.6.3.	2 in IEC	60598-1	0	Z.Co.	X	O ¹	N/A
(15.6.3.1) (15.6.3.2)	ТАВ	LE: Contact	resistar	nce test	/ Heating	j tests	- e ^X	Or.	Cex	S.	N/A
· · · · · · · · · · · · · · · · · · ·	Volta	ige drop (m\	/) after 1	h Ç			-0	· ·	O.	,Cott	_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	o (mV)	OV	- eit	\Diamond	ǰ	×		, , e	X.	Ο.	Co. x
0	2	Voltage dro	p of two	insepara	able joints	, Ç	X.	OV.	C.O.X		N/A
O,	Co	Voltage dro	p after 1	0th alt. 2	.5th cycle	, ,0°	×		/	e ^X	N/A
, i)	Max. allow	ed voltag	e drop (r	nV)		Cocc	X	OV.	ce ^X	
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	o (mV)	,	0° X.		× ,	e ^K	V	Ç	X		C.O.X.
0	- 0 ¹	Voltage dro	p after 5	0th alt. 1	00th cycl	e o		DY C	,) ×		N/A
		Max. allow	<u> </u>	-0			-01		Cec		

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					ZIEC 60	598-2-2					
Clause	Requ	irement +	- Test	S. S.	,	\Diamond	Resu	lt - Rema	rk	Ç X	Verdict
0				O.	00)		~~	1	0	Co.	
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)		N.Co	×	0)	Cex		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	, č.	0	, ce
Q ^V	Cex	Continue	ed agein	g: voltage o	drop after	10th alt.	25th cycle	е	.C°	Ž.	N/A
ž Ó	Y.	Max. allo	owed vol	tage drop ((mV)	Ó.	Cex			, at	_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)	0	cert		/\/\'\'\'	, X	0	Con		V ()	, it
	X	Continue	ed agein	g: voltage o	drop after	50th alt.	100th cyc	ele	Cert		N/A
	5	Max. all	owed vol	tage drop ((mV)			O ₁	Ces		_
terminal		1	2	3	4	5	6	7	8	9	10
voltage drop	(mV)	-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	3	0	Cer		7	O.X.	O)	Ces	
Ceit			Š		, c	e ·			Č.	O,	Cerc
Supplementa	ry info	rmation:	2,00	×	O	Cer				0,	, co

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	Colt.	ATTACHMENT No.1		\Diamond_{λ}
Clause	Requirement + Test	7,0° 3.	Result - Remark	Verdict

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ATTACHMENT No.1 TO TEST REPORT IEC 60598-2-2 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Luminaires

Part 2: Particular requirements Section 2: Recessed luminaires

Differences according to: EN 60598-2-2:2012 used in conjunction with

EN 60598-1:2015 + A1:2018

Attachment Form No.....: EU_GD_IEC60598_2_2F

Attachment Originator: OVE

Master Attachment.....: 2019-01-24

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	CENELEC COMMON MODIFICATIONS (EN)		<u>-</u> 60
O _V			O.
2.6 (3)	MARKING		_0
2.6 (3.3.101)	For luminaires not supplied with terminal block: Adequate warning on the package	Original Original	N/A

2.7 (4)	CONSTRUCTION	ر م	,č	ON.	Cox	
2.7 (4.11.6)	Electro-mechanical contact systems					Р

2.11 (5)	EXTERNAL AND INTERNAL WIRING		Con-
2.11 (5.2.1)	Connecting leads		Pos
ON (- without a means for connection to the supply		Р
, r O	- terminal block specified	con , or or	N/A
-01	- relevant information provided	Con the Contract of the Contra	N/A
N. Cott	- compliance with 4.6, 4.7.1, 4.7.2, 4.10.1, 11.2, 12 and 13.2 of Part 1	Or Care Ori	N/A
2.11 (5.2.2)	Cables equal to EN 50525	is of cert	N/A

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	ATTACHMENT No.1	
Clause	Requirement + Test Result - Remark	Verdict
-0		OX C
COX.	Replace table 5.1 – Supply cord	N/A
Or Cert		at or o
2.13 (12)	ENDURANCE TESTS AND THERMAL TESTS	
2.13 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring	N/A
V col		ر من روا
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)	× 0/-
(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
or con		x O d
zc 🗸	ANNEX ZC, NATIONAL DEVIATIONS (EN)	× 0×
(4 & 5)	FR: Shuttered socket-outlets 10/16A	N/A
	FR: Safety requirements for high buildings (Arrêté du 30 décembre 2011 portant règlement de sécurité pour la co immeubles de grande hauteur et leur protection contre les risques d'ine panique; Section VIII; Article GH 48, Eclairage) Glow-wire test for outer parts of luminaires:	
Set V	- 850°C for luminaires in stairways and horizontal travel paths	N/A
Or Con	- 650°C for indoor luminaires	N/A
QV.	GB: Requirements according to United Kingdom Building Regulation	N/A

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	ATTACHMENT No.2 TO TEST REPO	ORT IEC 62031		
Clause	Requirement + Test	Result - Remark	Verdict	
0	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
4	GENERAL REQUIREMENTS		Cot	
4.4	Integral modules tested assembled in the luminaire		P	
4.5	Independent modules complies with requirements in IEC 60598-1	Cet. Of Cet.	N/A	
5	GENERAL TEST REQUIREMENTS			
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	N/A	
OV.	General conditions for tests in Annex A	(see Annex A)	O P	
6	CLASSIFICATION			
χ.	Built-in module	Yes □ No ⊠	× —	
Co, Y	Independent module:	Yes □ No ⊠		
Cox	Integral module:	Yes ⊠ No □	_	
O. O.	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.	× Or cert	_	
7	MARKING		N/A	
-01	Requirements not applicable to the evaluated product.		2 [*] —	
8	TERMINALS		×	
OV.	Screw terminals according section 14 of IEC 60598-1:	\$ 5°°° ×	N/A	
0	Separately approved; component list	(see Annex 2)	N/A	
×	Part of the luminaire	(see Annex 3)	N/A	
CO X	Screwless terminals according section 15 of IEC 6059	8-1:	N/A	
Con	Separately approved; component list	(see Annex 2)	N/A	
V	Part of the luminaire	(see Annex 4)	N/A	
0	Connectors according IEC 60838-2-2:	at or con	N/A	
, T	Separately approved; component list	(see Annex 2)	N/A	
9 (9)	PROVISION FOR PROTECTIVE EARTHING		N/A	
N co	Requirements not applicable to the evaluated product.	7 10° 14 0°	ei ^k	
10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT V	VITH LIVE PARTS	N/A	
0)	Requirements not applicable to the evaluated product.	et V 50° X	Ø,	

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ATTACHMENT No.2 TO TEST REPORT IEC 62031					
Clause	Requirement + Test	Result - Remark	Verdict		
-0	X. 0	CO X OY	-0		

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<u></u>		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
11 (11)	MOISTURE RESISTANCE AND INSULATION	N 1 V 1	C _C
Or.	After storage 48 h at 91-95% relative humidity and 20-3 resistance with d.c. 500 V (M Ω):	30 °C measuring of insulation	Po
×	For basic insulation \geq 2 M Ω	100 ΜΩ	Р
×	For double or reinforced insulation \geq 4 M Ω	Car Or Car	N/A
S. Ce	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1	Dr. Corr	N/A
12 (12)	ELECTRIC STRENGTH		У́ — с
, Ø	Immediately after clause 11 electric strength test for 1 min		Р
Col .	Basic insulation for SELV, test voltage 500 V	No are do so	Р
Cert	Working voltage ≤ 50 V, test voltage 500 V	O' CO'	N/A
Q ₁	Working voltage > 50 V ≤ 1000 V, test voltage (V):		N/A
O _V	Basic insulation, 2U + 1000 V	x Or cor	N/A
	Supplementary insulation, 2U + 1000 V		N/A
COX	Double or reinforced insulation, 4U + 2000 V	See x Or C	N/A
	No flashover or breakdown		В
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A
13 (14)	FAULT CONDITIONS		_
- (14)	When operated under fault conditions the controlgear:	X OX	N/A
01/0	- does not emit flames or molten material	δ, [×] δ ₀ , [×] φ,	N/A
Ohio	- does not produce flammable gases	Q	N/A
χ.	- protection against accidental contact not impaired	- %x	N/A
- O'T	Thermally protected controlgear does not exceed the marked temperature value	. 20° x 0' c	N/A

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Clause	Requirement + Test	Result - Remark	Verdict			
-,02		X X X				
Oh. Cey	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	N/A			
- (14.1)	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)	(see appended table)	N/A			
Q), Co ₂	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3	* Or Car	N/A			
- (14.2)	Short-circuit or interruption of semiconductor devices	(see appended table)	N/A			
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile (see appended table)					
- (14.4)	Short-circuit across electrolytic capacitors	(see appended table)	N/A			
- (14.5)	After the tests has been carried out on three samples:					
× <	The insulation resistance \geq 1 M Ω	4.8× 0× 100 ×	N/A			
X	No flammable gases		N/A			
Cer	No accessible parts have become live	ON COL	N/A			
Or. Co.	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite	Or Cert	N/A			
- (14.6)	Relevant fault condition tests with high-power supply		N/A			
13.2	Overpower condition		Р			
o ex	Module withstands overpower condition >15 min.		P			
0,0	Module with automatic protective device or power limiter, test performed 15 min. at limit.	Dr. Carr	N/A			
O,	No fire, smoke or flammable gas is produced	x or get	Р			
K K	Molten material does not ignite tissue paper, spread below the module	Cert Or Cert	P			
15	CONSTRUCTION		-0,			
O),	Wood, cotton, silk, paper and similar fibrous material not used as insulation	D) Cert	Р			

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21.2

Heat-conducting foil and paste

Shenzhen DL Testing Technology Co., Ltd.

Ó	ATTACHMENT No.2 TO TEST REPO	RT IEC 62031	O,			
Clause	Requirement + Test	Result - Remark	Verdic			
0		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~				
16 (16)	CREEPAGE DISTANCES AND CLEARANCES					
- (16)	Creepage and distances and clearances in compliance with IEC 60598-1	(see appended table)	Po			
	Insulating lining of metallic enclosures	- 0/4 O, Co,	N/A			
Se ^t	Basic insulation on printed boards tested according to clause 14	Ticest of Con	N/A			
V Ces	Distances subjected to both sinusoidal voltage as non-sinusoidal pulses not less than value in Table 16	Or Copy Or	N/A			
	Creepage distances not less than minimum clearance	*	N/A			
16 (-)	Conductive accessible parts in compliance with applicable parts of IEC 60598-1		N/A			
17 (17)	SCREWS, CURRENT-CARRYING PARTS AND CON	NECTIONS	COX.			
Q1.	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)					
18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING					
- (18.1)	Ball-pressure test:	See Test Table 18 (18.1)	N/A			
(18.2)	Test of printed boards:	See Test Table 18 (18.2)	N/A			
· (18.3)	Glow-wire test (650°C):	See Test Table 18 (18.3)	N/A			
- (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			
19 (19)	RESISTANCE TO CORROSION					
- eit	- test according 4.18.1 of IEC 60598-1	, , , , , , , , , , , , , , , , , , ,	N/A			
0)/	- adequate varnish on the outer surface	V . 50 x . 0	N/A			
20	INFORMATION FOR LUMINAIRE DESIGN					
× ×	Information in Annex D (informative)	TO TO THE REAL PROPERTY.	_			
21	HEAT MANAGEMENT					
21.1	General	dr. Cett A Co	N/A			
Y CO	Exchangeability is safeguarded by cap or base		N/A			

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N/A



, Ó	ATTACHMENT No.2 TO TEST REPORT IEC 62031	\Diamond_{\wedge}
Clause	Requirement + Test Result - Remark	Verdict
0		G [®])
	Heat-conducting foil delivered with the module if necessary	N/A
22	PHOTOBIOLOGICAL SAFETY	0 /
22.1	UV radiation	N/A
	Luminous radiation not exceed 2mW/klm	N/A
22.2	Blue light hazard	Ç P
) Ce	Assessed according to IEC TR 62778	(P
22.3	Infrared radiation	N/A
	Requirements for infrared radiation when required	N/A
1		
A	ANNEX A - TESTS	- A
Or.	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable	O P

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, Ø	ATTACHMENT No.2 TO TEST REPORT IEC 62031	\Diamond_{λ}
Clause	Requirement + Test Result - Remark	Verdict
0		O .
Or Corr	ATTACHMENT TO TEST REPORT IEC 62031 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES LED modules for general lighting – Safety specifications	Or Cay
Difference	es according to: EN 62031:2008+A1:2013+A2:2015	* 0
35		<u> </u>
- ex	CENELEC COMMON MODIFICATIONS (EN)	(o x -
	No common modifications	N/A
01/		O ^N
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS(EN)	
X	No special National conditions	N/A
Cox X		5°
zc 🏈	ANNEX ZC, NATIONAL DEVIATIONS(EN)	, Co
Q,	No National deviations	N/A

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. <	ATTACHMENT No.3 TO TEST REPO	RT IEC TR 62778	
Clause	Requirement + Test	Result - Remark	Verdict
CO			× ×
7	Measurement information flow		P
7.1	Basic flow	T 20° X	P
	'Law of conservation of luminance' applied	Δ, Δ _ο , ^σ	P
	Use of only true luminance/radiance values	at or cer	Р
sř.	In case of luminaire: The light source is operated in the luminaire under similar conditions as when tested as a component	Scorr Of Cer	P
9,0	In case E _{thr} value for RG2 was established the peak value was derived from angular light distribution	Or Car	N/A
7.2	Conditions for the radiance measurement		P
Cox.	Standard condition applied (200mm distance, 0,011rad field of view)	Dices Of Co	P
, Co	Non-standard condition applied	OF CONT.	N/A
7.3	Special cases (I): Replacement by a lamp or LED m	odule of another type	N/A
	Light source is a white light source	The opinion of the opinion	N/A
2 ^X	Evaluation done based on highest luminance	Contraction of Contraction	N/A
Ceix	Evaluation done based on CCT value		N/A
7.4	Special cases (II): Arrays and clusters of primary lig	ght sources	N/A
O ^N	LED package is evaluated as:	☐ RG0 unlimited ☐ RG1 unlimited	N/A
	E _{thr} of LED package applies to array		N/A
8	RISK GROUP CLASSIFICATION		Р
Cex	Risk group achieved:		© P
O),	Risk Group 0 unlimited		N/A
ON.	Risk Group 1 unlimited		P
z ^X	- E _{thr} (lx) : Distance to reach RG1 (m) :	Cor Or Cor	N/A

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	ATTA	CHMENT	Γ No.3 TO TE	ST REPOR	T IEC TR 6	2778			
Clause	Requirement + Test				Result - Remark			Verdict	
. cet	TABLE: Spectroradiometric measurement					× 000 × 000			
9t	Measurement performed on:					□ LED package□ LED module□ Lamp□ Luminaire			
Col	Model number		<u> </u>	·····:	MPL-0606-36				
	Test voltage (V): 240					- e ^j	\Diamond_{λ}		
0	Test current (A) 0.15					0 - ot		_	
Test frequency (Hz) 50					50	50 25			
	Ambient, t (°C) 25								
Ceir			ice:			 ≥ 20 cm cm		_	
0,0	Source size	Source size:					Non-small □ Small : mm		
	Field of view	<u>~~</u>			☐ 100 m ☐ 11 mra ☐ 1,7 mr		sources)	_	
	Item	Symbo	Units	Resu	lt	Re	emark		
Correlated of	colour temperature	ССТ	K	Q, P			-01		
x/y colour co	pordinates		O O	V, 68 , 200		- 25			
Blue light hazard radiance		L _B	W/(m ² •sr ¹)	5.99e		- N	-01		
Blue light ha	azard irradiance	E _B	W/m ²	× 1 0 0			, it		
Luminance	Luminance		cd/m ²	307599	911	Cex	-	27,00	
Illuminance	N.C. O. A.) E C	lx	1	- eX	0, 0	2		
Supplement	ary information:	OV	Cox		C A	O.	Cox		

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	ATTACHMENT No.4 TO TEST REPORT EN62493	Y O
Clause	Requirement + Test Result - Remark	Verdict
0		C.
4.2	APPLICATION OF LIMITS (Test summary)	_
0)	Specific absorption rate (SAR)	
a) 💉	CISPR 15 clause 4.3.1 *) Disturbance voltage mains terminals 20 kHz – 30 MHz	
b)	CISPR 15 clause 4.4 *) Radiated electromagnetic disturbances 100 kHz – 30 MHz	OF P
c)	CISPR 15 clause 4.4.2 *) Radiated electromagnetic disturbances 30 MHz – 300 MHz	BY
*)	See separate Test Report for measurements of a) b) and c) above	N -01

p)	CISPR 1	5 clause 4.4			JOS P	
		d electromagnetic disturbance	es		Co	
O ^V	100 kHz	– 30 MHz	Or cert	V 0° x	0)	
c)	CISPR 1	5 clause 4.4.2	0),	*)	Р	
	Radiated	d electromagnetic disturbance	es	ex Ox Cerr		
	30 MHz	– 300 MHz		CONTRACTOR OF		
*)	⊠ See	separate Test Report for mea	surements of a), b)	and c) above	Cert	
	☐ Only	measurement of d) below. S	See measurement r	esults below.	O' cel	
	In t	his case this test report does	not show complian	nce with IEC 62493.	OV.	
	Induced	current density		St. O. Co.	P	
d)	Induced	current density		See measurement results	Р	
	20 kHz -	- 10 MHz		below	Cert	
4.2.d	INDUCE	D CURRENT DENSITY			_	
ON.	Power s	upply system utilised:	Or Cay		Ф [*] — О	
	Voltage		<u> </u>	AC 200-240V	O ^V	
, X	Frequen	cy	<u> </u>	50/60Hz	<u> </u>	
or ex	Environr	mental conditions:			- 05	
AV.	Tempera	ature	<u> </u>	25°C		
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Humidity	/	<u> </u>	52% R.H.		
	EuT ope	eration mode:		St Or Coll		
30	⊠ Norr	nal operation				
Cert	☐ Othe	er operation:	Col.	OV. ON OV	Csc -	
4.2.d	MEASUREMENT RESULTS					
ON	Measuri	Measuring with "Van der Hoofden" test head				
Location of	of EuT	Measuring distance	Result (F)	Limit (F)	Verdict	

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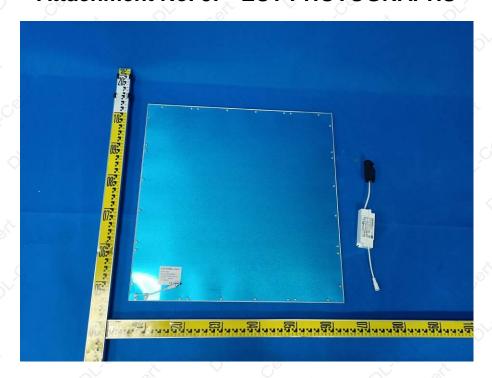
ATTACHMENT No.4 TO TEST REPORT EN62493								
Clause	Requirem	ent + Test	0	E OV	Result - R	emark	Verdict	
Front of Eu	г	50 cm	0	0,12	Q) (C)	0,85	P	
Rear of Eul	e X	50 cm	<	0,11		0,85	O Po	
Side of EuT	COX.	50 cm	X	0,12		0,85	ΟP	

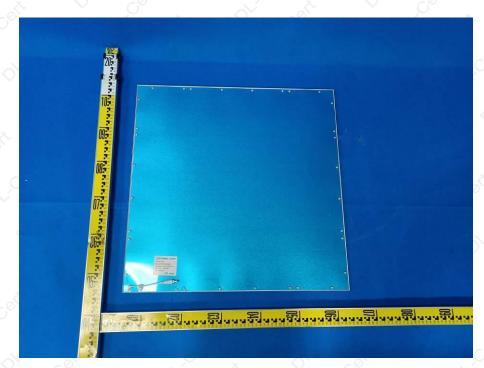
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Attachment No. 5: EUT PHOTOGRAPHS

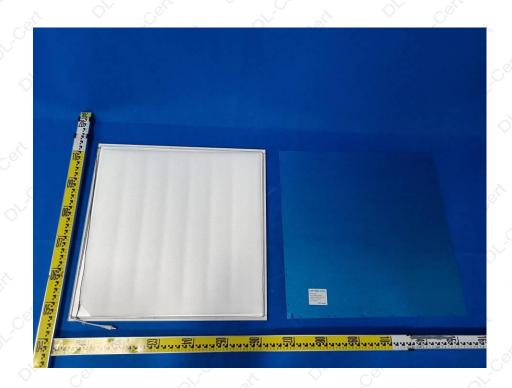




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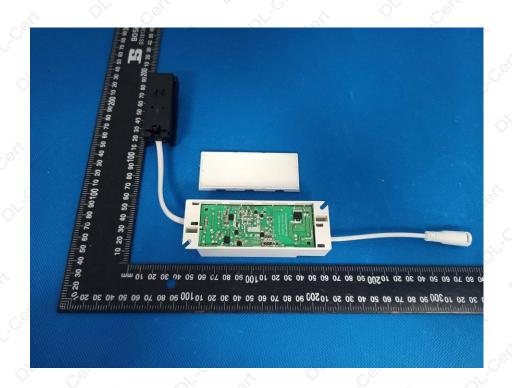


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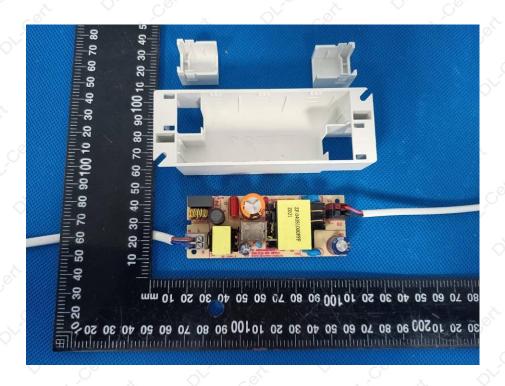


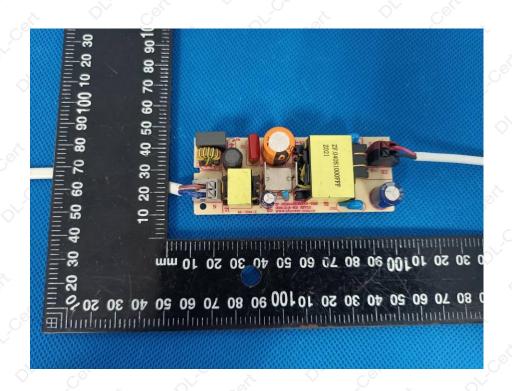




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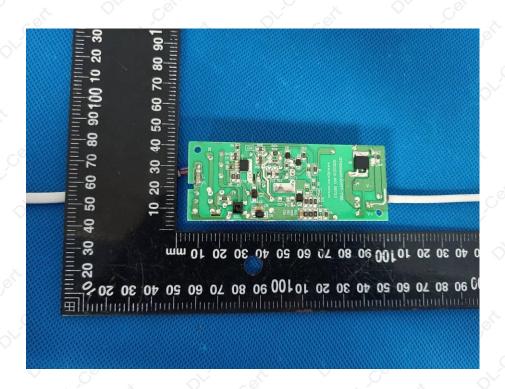






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