TÜVRheinland®
Precisely Right.

Business Stream Products
Certification Department

TÜV Rheinland LGA Products GmbH · 90431 Nürnberg

Cixi Yuanhui Lighting Electric
Co., Ltd.
Industrial Zone, Sanbei Town
315331 CIXI CITY
CHINA

Contact

Tel. +49 911 655-5225
Mail service@de.tuv.com

Date June 07, 2017

Application for	**: CB-Zertifikat**
Certificate No.	: DE 02021912
Device	: Fixed Luminaire LED Waterproof Luminaire
Type	: see Certificate
Test requirement	: IEC 60598-1:2014 IEC 60598-2-1 AMD 1:1987 IEC 60598-2-24:2013 IEC TR 62778:2014

Dear Madame or Sir,

The submitted sample of the product has been tested and in this configuration found to be in accordance with the above mentioned requirements.
Enclosed please find the certificate No. DE 02021912.

Kind regards

Certification body

Yafei Wang

Test sample: no, documentation available

TÜV Rheinland
LGA Products GmbH

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IEC IECEE CB SCHEME

Ref. Certif. No.

DE 2-021912

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product Produit	LED Waterproof Luminaire
Name and address of the applicant Nom et adresse du demandeur	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town Cixi City, 315331 Zhejiang, China
Name and address of the manufacturer Nom et adresse du fabricant	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town Cixi City, 315331 Zhejiang, China
Name and address of the factory Nom et adresse de l'usine Note: When more than one factory, please report on page 2 Note: Lorsque il y plus d'une usine, veuillez utiliser la 2ème page	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town Cixi City, 315331 Zhejiang, China
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	AC 220-240V, 50/60Hz, IP66, Class I, For details, refer to general product information.
Trade mark (if any) Marque de fabrique (si elle existe)	The logo of Cixi Yuanhui Lighting Electric Co., Ltd
Model/type Ref. Ref. de type	YL08-20W-650 , YL08-20W-1220 , YL08-30W-1220 , YL08-36W-1220 , YL08-45W-1220 , YL08-36W-1560 , YL08-54W-1560 , YL08-65W-1560
Additional information (if necessary may also be reported on page 2) Les Information complémentaire (si nécessaire, peuvent être indiqués sur la 2ème page)	The models differ in ratted wattage and driver.
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	**PUBLICATION** **EDITION** IEC 60598-1:2014 IEC 60598-2-1 AMD 1:1987 IEC 60598-2-24:2013 IEC TR 62778:2014
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce Certificat	50085306 001

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

TÜVRheinland®

TÜV Rheinland LGA Products GmbH
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Web: www.tuv.com

Date: 07.06.2017

Signature: Yafei Wang

TÜV Rheinland LGA Products GmbH Zertifizierungsstelle

10/061 12.09

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 60598-2-1
Luminaires
Part 2: Particular requirements
Section 1: Fixed general purpose luminaires

Report Number. ..... :	50085306 001 part 1
Date of issue ..... :	2017.06.05
Total number of pages ..... :	63 pages
Name of Testing Laboratory preparing the Report ..... :	TÜV Rheinland / CCIC (Ningbo) Co., Ltd. 3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.
Applicant's name ..... :	Cixi Yuanhui Lighting Electric Co., Ltd.
Address ..... :	Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China
Test specification:	
Standard ..... :	IEC 60598-2-1 (ed.1), am1 used in conjunction with IEC 60598-1 (ed.8)
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60598_2_1E
Test Report Form(s) Originator .... :	Intertek Semko AB
Master TRF ..... :	2016-04

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	LED Waterproof Luminaire
Trade Mark .....:	YUANHUI LIGHTING
Manufacturer.....:	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China
Model/Type reference .....:	YL08-20W-650, YL08-20W-1220, YL08-30W-1220, YL08-36W-1220, YL08-45W-1220, YL08-36W-1560, YL08-54W-1560, YL08-65W-1560
Ratings .....:	AC 220-240V, 50/60Hz, IP66, Class I, details see 'General product information'

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.	
Testing location/ address .....:		3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:		Brent Zhang	Brent Zhang
Approved by (name, function, signature)..:		Heiko Li	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature)..:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Witnessed by (name, function, signature).:			
Approved by (name, function, signature)..:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			

Tested by (name, function, signature).....:		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature)...:		
Supervised by (name, function, signature) :		

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

Part 2: Luminaires with limited surface temperature according to IEC 60598-2-24:2013.
Part 3: Photobiological safety of lamps and lamp systems testing report according to IEC TR 62778:2014 (Total 12 pages).
Attachment 1: Photo documentation(Total 23 pages).

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Model YL08-20W-650, YL08-36W-1220, YL08-54W-1560 and YL08-65W-1560 were selected to perform the thermal test. Other tests performed on all the models. **Test result: Pass.**	TÜV Rheinland / CCIC (Ningbo) Co., Ltd. 3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R.China.

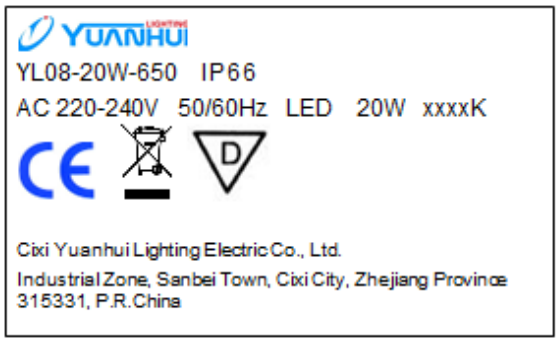
Summary of compliance with National Differences:

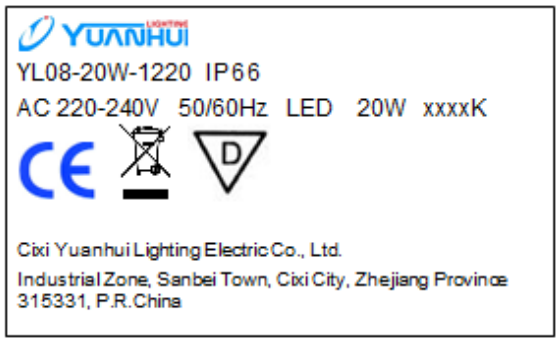
N/A

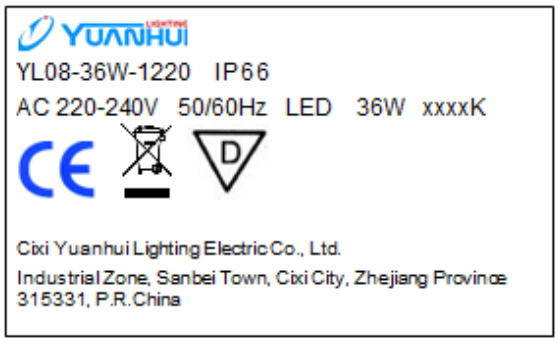
☒ **The product fulfils the requirements of IEC 60598-2-1 (ed.1), am1 used in conjunction with IEC 60598-1 (ed.8)**

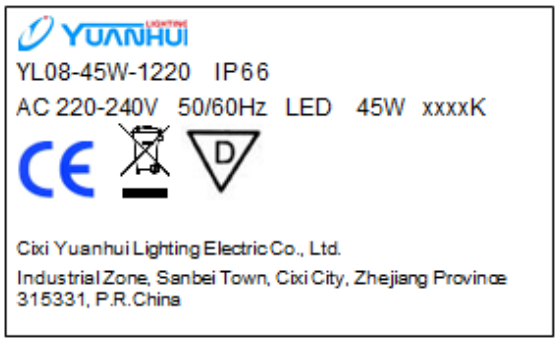
Copy of marking plate:

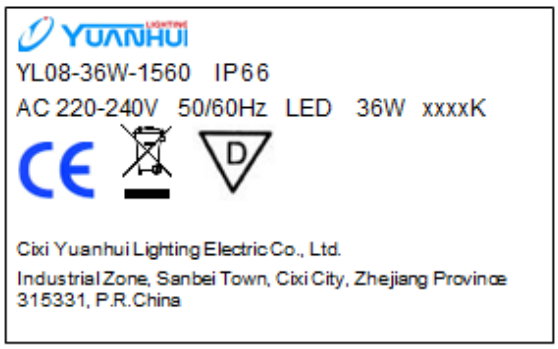
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

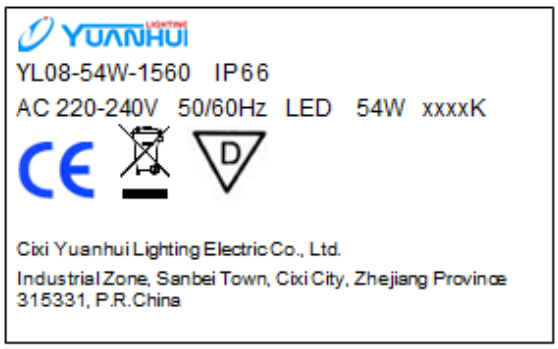


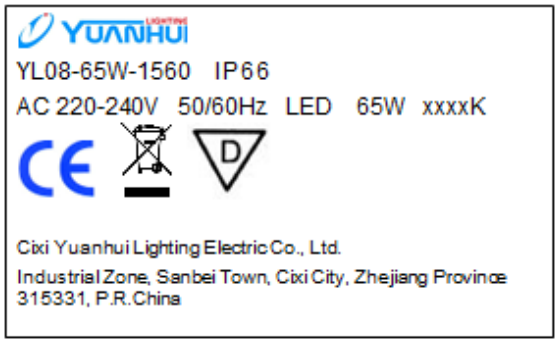


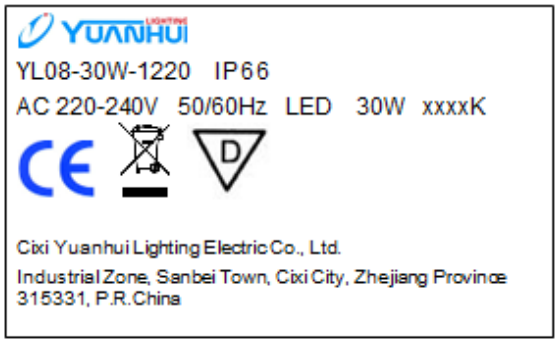












Remark: xxxxK=2700K, 3000K, 3500K, 4000K, 4500K, 5000K, 5700K, 6500K

The height of graphical symbols shall not be less than 5mm.

The height of letters and numbers shall not be less than 2 mm.

The height of symbol of WEEE shall not be less than 7 mm.

Test item particulars.....:	LED Waterproof Luminaire
Classification of installation and use.....:	Class I, IP66
Supply Connection.....:	Connecting leads / connector
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2017.03.21
Date (s) of performance of tests.....:	2017.04.01~2017.05.26

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Clause numbers between brackets refer to clauses in IEC 60598-1

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China

General product information:

1. The testing appliance is fixed LED Waterproof Luminaire with non-replaceable LED lighting source;
2. Rating: AC 220-240V, 50/60Hz, Class I, IP66;

Details see below table:

Lamp Type	Rated wattage	Driver	LED type	CCT
YL08-20W-650	20W	LC 19W 250-350mA flexC Ip ADV / LC 25W 350mA fixC Ip SNC / KEDH025S0350NM08A1	67-21S / LEMWS28U80X XXXXX / EL-283580DBN30	2700K, 3000K, 3500K, 4000K, 4500K, 5000K, 5700K, 6500K
YL08-20W-1220				
YL08-30W-1220	30W	LC 38W 500-700mA flexC Ip ADV / OT FIT 35/220-240/700 CS L AP / OTi DALI 35/220-240/700 LT2 L / CertaDrive 38W 0.7A 54V 230V		
YL08-36W-1220	36W	LC 38W 500-700mA flexC Ip ADV / LC 35W 350mA fixC Lp SNC / OT FIT 35/220-240/700 CS L AP / OTi DALI 35/220-240/700 LT2 L / CertaDrive 38W 0.7A 54V 230V / XZ-ST50B-540070 / KEDH035S0350NM08A1 / LC 38W 250-350mA flexC Ip ADV / CertaDrive 40W 360mA 110V 230V		
YL08-36W-1560				
YL08-45W-1220	45W	LC 57W 800-1050mA flexC Ip ADV / LC 50W 350mA fixC Ip SNC / OT FIT 55/220-240/1A0 CS L AP / OTi DALI 50/220-240/1A4 LT2 L / CertaDrive 57W 1.05A 54V 230V / XZ-ST50B-420105 / KEDH050S0350NM08A1 / LC 53W 250-350mA flexC Ip ADV		
YL08-54W-1560	54W	LC 57W 800-1050mA flexC Ip ADV / LC 50W 350mA fixC Ip SNC / OT FIT 55/220-240/1A0 CS L AP / OTi DALI 50/220-240/1A4 LT2 L / CertaDrive 57W 1.05A 54V 230V / XZ-ST60B-540105 / KEDH050S0350NM08A1 / LC 53W 250-350mA flexC Ip ADV / CertaDrive 60W 360mA 170V 230V		

YL08-65W-1560	65W	LC 81W 1200-1750mA flexC Ip ADV / LC 65W 700mA fixC Ip SNC / OT FIT 75/220-240/1A4 CS L AP / OTi DALI 80/220-240/2A1 LT2 L / CertaDrive 65W 1.4A 46.5V 230V / XZ-ST60B-420140 / KEDH065S0350NM08A1 / LC 71W 250-350mA flexC Ip ADV		

Remark: Two kinds of arrays of LED boards used: single row & double row, the total luminous flux of doulbe row LED board is higher than the single row LED board.

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.2 (0)	**GENERAL TEST REQUIREMENTS**		**P**
1.2 (0.1)	Information for luminaire design considered ..... :	Yes ☒ No ☐ Lamp standard:	—
1.2 (0.3)	More sections applicable..... :	Yes ☒ No ☐ Section/s:-2-24	—

1.4 (2)	**CLASSIFICATION OF LUMINAIRES**		**P**
1.4 (2.2)	Type of protection ..... :	Class I	P
1.4 (2.3)	Degree of protection..... :	IP66	P
1.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☒ No ☐	—
1.4 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—

1.5 (3)	**MARKING**		**P**
1.5 (3.2)	Mandatory markings		P
	Position of the marking	Rating label stuck on the enclosure	P
	Format of symbols/text	Height of letter and symbol is enough	P
1.5 (3.3)	Additional information	Mention in instruction manual	P
	Language of instructions	English version	P
1.5 (3.3.1)	Combination luminaires		N/A
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	Suitable for putting on a normally flammable surface	N/A
1.5 (3.3.5)	Wiring diagram		P
1.5 (3.3.6)	Special conditions		N/A
1.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
1.5 (3.3.8)	Limitation for semi-luminaires		N/A
1.5 (3.3.9)	Power factor and supply current		P
1.5 (3.3.10)	Suitability for use indoors		N/A
1.5 (3.3.11)	Luminaires with remote control		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
1.5 (3.3.13)	Specifications of protective shields		N/A
1.5 (3.3.14)	Symbol for nature of supply	~	P
1.5 (3.3.15)	Rated current of socket outlet		N/A
1.5 (3.3.16)	Rough service luminaire		N/A
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/A
1.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
1.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
1.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
	Cautionary symbol		N/A
1.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
1.5 (3.4)	Test with water	15s	P
	Test with hexane	15s	P
	Legible after test		P
	Label attached	Not be easily removable , show no curling	P
1.6 (4)	**CONSTRUCTION**		**P**
1.6 (4.2)	Components replaceable without difficulty		N/A
1.6 (4.3)	Wireways smooth and free from sharp edges		P
1.6 (4.4)	**Lampholders**		**N/A**
1.6 (4.4.1)	Integral lampholder		N/A
1.6 (4.4.2)	Wiring connection		N/A
1.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
1.6 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
1.6 (4.4.5)	Peak pulse voltage		N/A
1.6 (4.4.6)	Centre contact		N/A
1.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
1.6 (4.4.8)	Lamp connectors		N/A
1.6 (4.4.9)	Caps and bases correctly used		N/A
1.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
1.6 (4.5)	**Starter holders**		**N/A**
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
1.6 (4.6)	**Terminal blocks**		**P**
	Tails		N/A
	Unsecured blocks		N/A
1.6 (4.7)	**Terminals and supply connections**		**P**
1.6 (4.7.1)	Contact to metal parts	Fixed luminaire that can't be adjusted	N/A
1.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
1.6 (4.7.3)	Terminals for supply conductors		P
1.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.7.4)	Terminals other than supply connection		N/A
1.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
1.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
1.6 (4.8)	**Switches**		**N/A**
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
1.6 (4.9)	**Insulating lining and sleeves**		**P**
1.6 (4.9.1)	Retainment		P
	Method of fixing ..... :	Heat-shrinkable tube	P
1.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :		N/A
1.6 (4.10)	**Double or reinforced insulation**		**N/A**
1.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
1.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
1.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
1.6 (4.11)	**Electrical connections and current-carrying parts**		**P**
1.6 (4.11.1)	Contact pressure	Compliance checked	P
1.6 (4.11.2)	Screws:		P
	- self-tapping screws	Not be used for connection of current-carry part	P
	- thread-cutting screws	No such screws used	P
1.6 (4.11.3)	Screw locking:		P
	- spring washer		N/A
	- rivets		N/A
1.6 (4.11.4)	Material of current-carrying parts		P
1.6 (4.11.5)	No contact to wood or mounting surface		P
1.6 (4.11.6)	Electro-mechanical contact systems		N/A
1.6 (4.12)	**Screws and connections (mechanical) and glands**		**P**
1.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	0,6Nm, fixed terminal block	P
	Torque test: torque (Nm); part..... :	1,2Nm, fixed driver	P
	Torque test: torque (Nm); part..... :	0,6Nm, fixed LED board	P
	Torque test: torque (Nm); part..... :	1,2Nm, fixed buckle screw	P
1.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
1.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
1.6 (4.12.5)	Screwed glands; force (Nm)..... :	3,25Nm	P
1.6 (4.13)	**Mechanical strength**		**P**

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) ..... :	No fragile parts	N/A
	- other parts; energy (Nm)..... :	0,35Nm; Plastic enclosure & cover	P
	1) live parts	Not have become accessible	P
	2) linings	Not have been impaired	N/A
	3) protection	Continue to afford the degree of protection	P
	4) covers	No breaking	P
1.6 (4.13.3)	Straight test finger	30N	P
1.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
1.6 (4.13.6)	Tumbling barrel		N/A
1.6 (4.14)	**Suspensions, fixings and means of adjusting**		**P**
1.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) ..... :		N/A
	Metal rod. diameter (mm) ..... :		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
1.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) ..... :		—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken ..... :		N/A
	- electric strength test afterwards		N/A
1.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
1.6 (4.14.5)	Guide pulleys		N/A
1.6 (4.14.6)	Strain on socket-outlets		N/A
1.6 (4.15)	**Flammable materials**		**P**
	- glow-wire test 650°C ..... :	See Test Table 1.15 (13.3.2)	P
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
1.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
1.6 (4.16)	**Luminaires for mounting on normally flammable surfaces**		**P**
	No lamp control gear ..... :	(compliance with Section 12)	N/A
1.6 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm		N/A
	- spacing 10 mm		P
1.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
1.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
1.6 (4.17)	**Drain holes**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
	Clearance at least 5 mm		N/A
1.6 (4.18)	**Resistance to corrosion**		**N/A**
1.6 (4.18.1)	- rust-resistance		N/A
1.6 (4.18.2)	- season cracking in copper		N/A
1.6 (4.18.3)	- corrosion of aluminium		N/A
1.6 (4.19)	Ignitors compatible with ballast		N/A
1.6 (4.20)	Rough service vibration		N/A
1.6 (4.21)	**Protective shield**		**N/A**
1.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
1.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
1.6 (4.21.3)	No direct path		N/A
1.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 1.15 (13.3.2)	N/A
1.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
1.6 (4.23)	Semi-luminaires comply Class II		N/A
1.6 (4.24)	**Photobiological hazards**		**P**
1.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
1.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 ..... :	Exempt group	—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2 .. :	RG0	N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
1.6 (4.26)	**Short-circuit protection**		**N/A**
1.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
1.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
1.6 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		**N/A**
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
1.6 (4.28)	**Fixing of thermal sensing control**		**N/A**
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) ..... :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
1.6 (4.29)	**Luminaires with non-replaceable light source**		**P**
	Not possible to replace light source		P
	Live part not accessible after parts have been opened by hand or tools		N/A
1.6 (4.30)	**Luminaires with non-user replaceable light source**		**N/A**
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Minimum two fixing means		N/A
1.6 (4.31)	**Insulation between circuits**	**Approved driver used**	**P**
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
1.6 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
1.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
1.6 (4.32)	**Overvoltage protective devices**		**N/A**
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
1.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		**P**
1.7 (11.2)	Creepage distances and clearances..... :	See Table 1.7 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	—
1.8 (7)	**PROVISION FOR EARTHING**		**P**
1.8 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :	Max.0,045Ω	P
	Self-tapping screws used		P
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
1.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
1.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
1.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
1.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
1.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
1.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
1.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
1.8 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
1.9 (14)	**SCREW TERMINALS**		**P**
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	N/A
1.9 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTION**		**P**
	Separately approved; component list..... :	(see Annex 1)	P
	Part of the luminaire ..... :	(see Annex 4)	N/A
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 ..... :	Connecting leads / connector	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		P

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (5.2.2)	Type of cable ..... :	H07RN-F	P
	Nominal cross-sectional area (mm²) ..... :	3x1,0mm^2	P
	Cables equal to IEC 60227 or IEC 60245		N/A
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/A
1.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
1.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
1.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
1.10 (5.2.9)	Locking of screwed bushings		N/A
1.10 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
1.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Labyrinth type anchorages		N/A
1.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		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		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
1.10 (5.2.11)	External wiring passing into luminaire		P
1.10 (5.2.12)	Looping-in terminals		N/A
1.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
1.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
1.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
1.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
1.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
1.10 (5.3)	**Internal wiring**		**P**

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		P
	- not delivered/ mounting instruction		P
	- factory assembled		P
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	P
	Green-yellow for earth only		P
1.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :	(see Annex 1)	P
	Insulation thickness		P
	Extra insulation added where necessary		N/A
1.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Adequate cross-sectional area and insulation thickness		N/A
1.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
1.10 (5.3.1.4)	Conductors without insulation		N/A
1.10 (5.3.1.5)	SELV current-carrying parts		N/A
1.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
1.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
1.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.10 (5.3.4)	Joints and junctions effectively insulated		N/A
1.10 (5.3.5)	Strain on internal wiring		N/A
1.10 (5.3.6)	Wire carriers		N/A
1.10 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
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
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		P
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
1.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
1.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
1.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)..... :		N/A
	- no-load voltage (V)..... :		N/A
	- touch current if applicable (mA) ..... :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V) ..... :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
1.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
1.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
1.11 (8.2.6)	Covers reliably secured		P
1.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

1.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		**P**
1.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 1.13		—
1.12 (12.3)	Endurance test:		P
	- mounting-position..... :	As in normal used	—
	- test temperature (°C) ..... :	35±2°C	—
	- total duration (h)..... :	240h	—
	- supply voltage: Un factor; calculated voltage (V)... :	264V	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- lamp used..... :	LED lighting source	—
1.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
1.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
1.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
1.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
1.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		—
	- case of abnormal conditions ..... :		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .... :		—
	- measured mounting surface temperature (°C) at 1,1 Un..... :		N/A
	- calculated mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
1.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions ..... :		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
1.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
1.12 (12.7.1)	Luminaire without temperature sensing control		N/A
1.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Test method 12.7.1.1 or Annex W ..... :		—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions ..... :		—
	- Ballast failure at supply voltage (V) ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test .....:	See Table 1.15 (13.2.1)	N/A
1.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test ..... :	See Table 1.15 (13.2.1)	N/A
1.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
1.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link..... :	Yes ☐ No ☐	—
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- case of abnormal conditions ..... :		—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :		—
	Ball-pressure test: ..... :	See Table 1.15 (13.2.1)	N/A

1.13 (9)	**RESISTANCE TO DUST AND MOISTURE**		**P**
1.13 (-)	If IP > IP 20 the order of tests as specified in clause 1.12		P
1.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP66	—
	- mounting position during test ..... :	In the most unfavourable position of normal use	—
	- fixing screws tightened; torque (Nm) ..... :	/	—
	- tests according to clauses..... :	Cl. 9.2.2 & Cl.9.2.7	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		P
1.13 (9.3)	Humidity test 48 h		P

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Clause	Requirement + Test	Result - Remark	Verdict

1.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		**P**
1.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :		—
	Insulation resistance (MΩ) ..... :	--	—
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :	>500MΩ	P
	- between current-carrying parts and metal parts of the luminaire..... :	>500MΩ	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV		P
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :	>500MΩ	P
	- between live parts and metal parts ..... :	>500MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
1.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V) ..... :	--	P
	SELV		P
	- between current-carrying parts of different polarity :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts and mounting surface..... :	500V	P
	- between current-carrying parts and metal parts of the luminaire..... :	500V	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV		P
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :	2960V	P
	- between live parts and metal parts ..... :	1480V	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
1.14 (10.3)	Touch current or protective conductor current (mA).:	0,056mA	P

1.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		**P**
1.15 (13.2.1)	Ball-pressure test ..... :	See Test Table 1.15 (13.2.1)	P
1.15 (13.3.1)	Needle-flame test (10 s)..... :	See Test Table 1.15 (13.3.1)	P
1.15 (13.3.2)	Glow-wire test (650°C) ..... :	See Test Table 1.15 (13.3.2)	P
1.15 (13.4)	Proof tracking test (IEC 60112)..... :	See Test Table 1.15 (13.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict

1.7 (11.2)	**TABLE: Creepage distances and clearances**							**P**
	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages							**P**
	Applicable part of IEC 60598-1 Table 11.1* and 11.2*							**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:	B	8,0	1,5	11.1	8,0	2,5	11.1	
Working voltage (V) .....:					AC 220-240V			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					2,5Kv			—
Supplementary information: N/A								
Distance 2:	--	--	--	--	--	--	--	
Working voltage (V) .....:					--			—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					--			—
Supplementary information: N/A								
Distance 3:	--	--	--	--	--	--	--	
Working voltage (V) .....:					--			—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					--			—
Supplementary information: N/A								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

1.15 (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**			**P**
Allowed impression diameter (mm) ..... :		<2mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Plastic enclosure	--	80°C	0,7mm	
Plastic cover	--	80°C	0,7mm	
LED board	--	125°C	0,6mm	

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information: N/A

1.15 (13.3.1)	**TABLE: Needle-flame test (IEC 60695-11-5)**				**P**
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
LED board	--	10s	No	--	P
Terminal block	--	10s	No	6	P
Supplementary information: N/A					

1.15 (13.3.2)	**TABLE: Glow-wire test (IEC 60695-2-11)**			**P**
Glow wire temperature ..... :	650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Plastic enclosure	--	No	--	P
Plastic cover	--	No	--	P
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No) ..... :				Yes
Supplementary information: N/A				

1.15 (13.4)	**TABLE: Proof tracking test (IEC 60112)**				**P**
Test voltage PTI ..... :	175 V				—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Connector	--	Yes	Yes	Yes	P
--	--	--	--	--	--
Supplementary information: N/A					

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Supply cord	B	NINGBO XUANHUA ELECTRIC CO., LTD.	H07RN-F	3x1,0 mm^2	DIN EN 50525-2-1	VDE (40037611)
Plastic enclosure	B	GE China	2807,1100,757,750	PC; ABS	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Plastic cover	B	GE China	2807,143R,666D,80N	PC; PS; PMMA	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Terminal block	B	Ningbo Development Zone Hengda Electrical Co., Ltd.	TB-7020	AC 250V, 24A, T85	DIN EN 60998-1 DIN EN 60998-2-1	VDE (40022436)
Alternative	B	Ningbo Economic & Technical Development Zone Hengda Electrical Co., Ltd.	TB-7020B/x(x=1-5)	AC 450V,16, 2,5mm^2	EN 60998-1 EN 60998-2-2	TÜV (R 50160873 0001)
Alternative	B	Cixi Ding Li Plastic Co., Ltd.	DL06	AC 450V, 24A, T110	DIN EN 60998-1 DIN EN 60998-2-1	VDE (40024873)
Alternative	B	Heavy Power Co., Ltd.	PA9	AC 450V, 24A, T110	DIN EN 60998-1 DIN EN 60998-2-1	VDE (40016425)
Alternative	B	A.A.G. Stucchi S R L unico socio	1673,1673/A, 1673/SP	AC 450V, 16A, T85	EN 60998-1 EN 60998-2-2	ENEC (CA02.02722)
Internal wire	B	Cixi Hongxin Wire and Cable Factory	H05V-K H05V-U	1x0,5…1,5mm^2	DIN EN 50525-2-31	VDE (40028426)
Alternative	B	Ningbo Haoguang Electric Appliance Co., Ltd.	H07V-K H07V-U	1x1,5mm^2	DIN EN 50525-2-31	VDE (126062)
Alternative	B	Ningbo Haoguang Electric Appliance Co., Ltd.	H05V-K H05V-U	1x0,5…1,5mm^2	DIN EN 50525-2-31	VDE (126062)

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	B	Cixi Haosheng Wire & Cable Co., Ltd.	H05V-K H05V-U	1x0,5…1,5m m^2	DIN EN 50525-2-41	VDE (40021089)
Alternative	B	Cixi Haosheng Wire & Cable Co., Ltd.	H05S-K	1x0,5…1,5m m^2	DIN EN 50525-2-41	VDE (40020128)
Alternative	B	Ningbo Haoguang Electric Appliance Co., Ltd.	H05S-K	1x0,5…1,5m m^2	DIN EN 50525-2-41	VDE (40038042)
Screwed gland	B	Cixi Ding Li Plastic Co., Ltd.	DL250-3-1-M, DL250-3-1-F	500V, 6A	DIN EN 61984	VDE (40043553)
Alternative	B	Cixi Ding Li Plastic Co., Ltd.	PG13.5	NYLON, PA66	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Alternative	B	Shanghai Shengyang Electronics Technology CO., Ltd.	PG13.5	NYLON, PA66	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Heat-Shrinkable tube	B	DONGGUAN SALIPT CO LTD	SALIPT S-901-600	600V, 125°C	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance UL(E209436)
LED board	B	ZHEJIANG CHANGSHAN DEXUNDA ELECTRONIC TECHNOLOGY CO LTD	DXD-AL1	V-0, 90°C	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance and UL(E474292)
Alternative	B	ZHEJIANG CHANGSHAN DEXUNDA ELECTRONIC TECHNOLOGY CO LTD	DXD-D1	V-0, 130°C	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance and UL(E474292)
LED chip	B	EVERLIGHT	67-21S	Vf=2,8V-3,5V, If=150mA	IEC TR 62778	Tested with appliance
Alternative	B	LG	LEMWS28U80XXXXXX	Vf=3,0V-3,4V, If=150mA	IEC TR 62778	Tested with appliance
Alternative	B	Jiangxi Elite Optoelectronic	EL-283580DBN3	Vf=3,0V-3,4V,	IEC TR 62778	Tested with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

		science and Technology Co., Ltd	0	If=150mA		
Driver for YL08-20W-650, YL08-20W-1220	B	Tridonic GmbH & Co KG	LC 19W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 250-350mA, Po=19W, tc=65°C	EN 61347-1 EN 61347-2-13	ENEC (7590-194)
Driver for YL08-36W-1220, YL08-36W-1560	B		LC 38W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=250Vdc, 250-350mA, Po=38W, tc=70°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B		LC 38W 500-700mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 500-700mA, Po=38W, tc=80°C		
Driver for YL08-45W-1220, YL08-54W-1560	B		LC 53W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=250Vdc, 250-350mA, Po=53W, tc=70°C		
Driver for YL08-45W-1220, YL08-54W-1560	B		LC 57W 800-1050mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 800-1050mA, Po=57W, tc=90°C		
Driver for YL08-65W-1560	B		LC 71W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=250Vdc, 250-350mA, Po=71W, tc=70°C		
Driver for YL08-65W-1560	B		LC 81W 1200-1750mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc,		

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Clause	Requirement + Test	Result - Remark	Verdict

				1200-1750mA, Po=80,5W, tc=95°C		
Driver for YL08-20W-650, YL08-20W-1220	B		LC 25W 350mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=300Vdc, 350mA, Po=25W, tc=65°C	DIN EN 61347-1 DIN EN 61347-2-13	VDE (40044698)
Driver for YL08-36W-1220, YL08-36W-1560	B		LC 35W 350mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=350Vdc, 350mA, Po=35W, tc=70°C	EN 61347-1 EN 61347-2-13	ENEC (7590-186)
Driver for YL08-45W-1220, YL08-54W-1560	B		LC 50W 350mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=350Vdc, 350mA, Po=50W, tc=75°C		
Driver for YL08-65W-1560	B		LC 65W 700mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=300Vdc, 700mA, Po=65W, tc=85°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B	OSRAM GmbH	OT FIT 35/220–240/700 CS L AP	Ui=AC 220-240V, 50/60Hz; Uo=27-54Vdc, 700mA, Po=38W, tc=80°C	EN 61347-1 EN 61347-2-13	ENEC (2198430.01)
Driver for YL08-45W-1220, YL08-54W-1560	B		OT FIT 55/220–240/1A0 CS L AP	Ui=AC 220-240V, 50/60Hz; Uo=27-54Vdc, 1050mA, Po=57W, tc=80°C		

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

Driver for YL08-65W-1560	B		OT FIT 75/220–240/1A4 CS L AP	Ui=AC 220-240V, 50/60Hz; Uo=27-54Vdc, 1400mA, Po=76W, tc=80°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B		OTi DALI 35/220-240/700 LT2 L	Ui=AC 220-240V, 50/60Hz; Uo=20-54Vdc, 200-700mA, Po=35W, tc=75°C	DIN EN 61347-1 DIN EN 61347-2-13	VDE (40038447)
Driver for YL08-45W-1220, YL08-54W-1560	B		OTi DALI 50/220-240/1A4 LT2 L	Ui=AC 220-240V, 50/60Hz; Uo=20-54Vdc, 600-1400mA, Po=54W, tc=75°C		
Driver for YL08-65W-1560	B		OTi DALI 80/220-240/2A1 LT2 L	Ui=AC 220-240V, 50/60Hz; Uo=20-54Vdc, 1000-2100mA, Po=80W, tc=80°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B	Philips Lighting B.V.	CertaDrive 38W 0.7A 54V 230V	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 700mA, Po=38W, tc=75°C	EN 61347-1 EN 61347-2-13	ENEC (2194767.01)
Driver for YL08-45W-1220, YL08-54W-1560	B		CertaDrive 57W 1.05A 54V 230V	Ui=AC 220-240V, 50/60Hz; Uo=32-54Vdc, Max.70Vdc, 1050mA, Po=57W, tc=75°C		ENEC (2198409.01)

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

Driver for YL08-65W-1560	B		CertaDrive 65W 1.4A 46.5V 230V	Ui=AC 220-240V, 50/60Hz; Uo=32-46,5Vdc, Max.70Vdc, 1400mA, Po=65W, tc=75°C		ENEC (2033681.01)
Driver for YL08-36W-1220, YL08-36W-1560	B	Philips Lighting B.V.	CertaDrive 40W 360mA 110V 230V	Ui=AC 220-240V, 50/60Hz; Uo=80-116Vdc, Max.300Vdc, 360mA, Po=42W, tc=75°C	EN 61347-1 EN 61347-2-13	ENEC (2183006.01)
Driver for YL08-54W-1560	B		CertaDrive 60W 360mA 170V 230V	Ui=AC 220-240V, 50/60Hz; Uo=120-170Vdc, Max.340Vdc, 360mA, Po=61,2W, tc=80°C		
Driver for YL08-36W-1220, YL08-36W-1560	B	Shenzhen Xiezhen Electronics Co., LTD	XZ-ST50B-540XXX	Ui=AC 220-240V, 50/60Hz; Uo=30-54Vdc, 1050mA, tc=85°C	EN 61347-1 EN 61347-2-13	TÜV (R 50332607)
Driver for YL08-45W-1220	B		XZ-ST50B-420XXX	Ui=AC 220-240V, 50/60Hz; Uo=27-42Vdc, 1050mA, tc=85°C		
Driver for YL08-54W-1560	B		XZ-ST60B-540XXX	Ui=AC 220-240V, 50/60Hz; Uo=30-54Vdc, 1050mA, tc=85°C		

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Clause	Requirement + Test	Result - Remark	Verdict

Driver for YL08-65W-1560	B		XZ-ST60B-420XXX	Ui=AC 220-240V, 50/60Hz; Uo=27-42Vdc, 1400mA, tc=85°C		
Driver for YL08-20W-650, YL08-20W-1220	B	Kegu Power Electronics Co., Ltd	KEDH025S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=43-72Vdc, 350mA, Po=25W, tc=85°C	EN 61347-1 EN 61347-2-13	TÜV (R 50349491)
Driver for YL08-36W-1220, YL08-36W-1560	B		KEDH035S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=60-100Vdc, 350mA, Po=35W, tc=85°C		
Driver for YL08-45W-1220, YL08-54W-1560	B		KEDH050S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=86-143Vdc, 350mA, Po=50W, tc=85°C		
Driver for YL08-65W-1560	B		KEDH065S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=130-186Vdc, 350mA, Po=65W, tc=85°C		

Supplementary information:

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

The codes above have the following meaning:

A - The component is replaceable with another one, also certified, with equivalent characteristics

B - The component is replaceable if authorised by the test house

C - Integrated component tested together with the appliance

D - Alternative component

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	**TABLE: Temperature measurements, thermal tests of Section 12**		**P**
	Type reference ..... :	YL08-20W-650	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 19W 250-350mA flexC Ip ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	19,5	—
	Supply current (A) ..... :	0,088	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Supply cord	25,0	--	35,9	--	90	--	--
Internal wire	25,0	--	47,8	--	90	--	--
Terminal block	25,0	--	39,4	--	85	--	--
LED board	25,0	--	57,7	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	63,0	--	65	--	--
Horizontal surface of plastic cover(up)	25,0	--	39,7	--	90	26,9	90
Horizontal surface of plastic cover(low)	25,0	--	39,1	--	90	25,3	90
Vertical surface of plastic cover	25,0	--	41,0	--	150	26,6	150
Mounting surface	25,0	--	42,2	--	90	27,3	130
Supplementary information: N/A							

	Type reference ..... :	YL08-20W-650	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	KEDH025S0350NM08A1	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	18,7	—
	Supply current (A) ..... :	0,084	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	56,2	--	85	--	--
Mounting surface	25,0	--	40,1	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-20W-650	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 25W 350mA fixC Ip SNC	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	19,1	—
	Supply current (A) ..... :	0,086	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Tc of driver	25,0	--	57,0	--	65	--	--
Mounting surface	25,0	--	39,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 38W 250-350mA flexC lp ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	34,7	—
	Supply current (A) ..... :	0,142	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1,06x240V=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..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Supply cord	25,0	--	33,7	--	90	--	--
Internal wire	25,0	--	41,9	--	90	--	--
Terminal block	25,0	--	36,7	--	85	--	--
LED board	25,0	--	59,6	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	67,4	--	70	--	--
Horizontal surface of plastic cover(up)	25,0	--	36,7	--	90	26,2	90
Horizontal surface of plastic cover(low)	25,0	--	33,4	--	90	25,6	90
Vertical surface of plastic cover	25,0	--	35,7	--	150	26,0	150
Mounting surface	25,0	--	42,8	--	90	27,2	130
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	KEDH035S0350NM08A1	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	35,6	—
	Supply current (A) ..... :	0,147	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	67,4	--	85	--	--
Mounting surface	25,0	--	44,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	CertaDrive 40W 360mA 110V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	34,6	—
	Supply current (A) ..... :	0,148	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Tc of driver	25,0	--	63,9	--	75	--	--
Mounting surface	25,0	--	40,2	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 35W 350mA fixC Lp SNC	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	34,2	—
	Supply current (A) ..... :	0,143	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	58,9	--	70	--	--
Mounting surface	25,0	--	40,0	--	90	--	--
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OT FIT 35/220-240/700 CS L AP	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,6	—
	Supply current (A) ..... :	0,149	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	70,7	--	80	--	--
Mounting surface	25,0	--	44,2	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OTi DALI 35/220-240/700 LT2 L	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,8	—
	Supply current (A) ..... :	0,153	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	60,4	--	75	--	--
Mounting surface	25,0	--	39,7	--	90	--	--

Supplementary information: N/A

	Type reference ..... :	YL08-36W-1220	—
	Lamp used ..... :	LED lighting source	—
	Lamp control gear used ..... :	CertaDrive 38W 0.7A 54V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,7	—
	Supply current (A) ..... :	0,150	—
	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=254,4V	—

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Clause	Requirement + Test	Result - Remark	Verdict

	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	--	—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	66,2	--	75	--	--
Mounting surface	25,0	--	41,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	XZ-ST50B-540070	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	35,3	—
	Supply current (A) ..... :	0,156	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

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Clause	Requirement + Test	Result - Remark	Verdict

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	57,1	--	85	--	--
Mounting surface	25,0	--	39,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 38W 500-700mA flexC lp ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,7	—
	Supply current (A) ..... :	0,155	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1,06x240V=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..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	70,3	--	80	--	--
Mounting surface	25,0	--	44,3	--	90	--	--
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

	Type reference ..... :	YL08-54W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	CertaDrive 60W 360mA 170V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	52,2	—
	Supply current (A) ..... :	0,219	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Supply cord	25,0	--	39,6	--	90	--	--
Internal wire	25,0	--	62,0	--	90	--	--
Terminal block	25,0	--	69,6	--	85	--	--
LED board	25,0	--	80,0	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	74,5	--	80	--	--
Horizontal surface of plastic cover(up)	25,0	--	46,5	--	90	26,0	90
Horizontal surface of plastic cover(low)	25,0	--	54,9	--	90	25,4	90
Vertical surface of plastic cover	25,0	--	46,3	--	150	25,7	150
Mounting surface	25,0	--	49,6	--	90	26,8	130
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 81W 1200-1750mA flexC Ip ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	63,1	—
	Supply current (A) ..... :	0,257	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	89,3	--	95	--	--
Mounting surface	25,0	--	41,6	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 65W 700mA fixC Ip SNC	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	61,1	—
	Supply current (A) ..... :	0,254	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Tc of driver	25,0	--	74,5	--	85	--	--
Mounting surface	25,0	--	37,6	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OT FIT 75/220-240/1A4 CS L AP	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	67,0	—
	Supply current (A) ..... :	0,269	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	66,9	--	80	--	--
Mounting surface	25,0	--	48,5	--	90	--	--
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OTi DALI 80/220-240/2A1 LT2 L	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	62,5	—
	Supply current (A) ..... :	0,257	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1,06x240V=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..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	75,6	--	80	--	--
Mounting surface	25,0	--	45,9	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	CertaDrive 65W 1.4A 46.5V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	63,0	—
	Supply current (A) ..... :	0,256	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	66,7	--	75	--	--
Mounting surface	25,0	--	41,5	--	90	--	--

Supplementary information: N/A

	Type reference ..... :	YL08-65W-1560	—
	Lamp used ..... :	LED lighting source	—
	Lamp control gear used ..... :	XZ-ST60B-420140	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	62,4	—
	Supply current (A) ..... :	0,253	—
	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=254,4V	—

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Clause	Requirement + Test	Result - Remark	Verdict

	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	--	—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	76,4	--	85	--	--
Mounting surface	25,0	--	42,3	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	KEDH065S0350NM08A1	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	63,3	—
	Supply current (A) ..... :	0,258	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

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Clause	Requirement + Test	Result - Remark	Verdict

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	77,3	--	85	--	--
Mounting surface	25,0	--	39,0	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 71W 250-350mA flexC lp ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	65,5	—
	Supply current (A) ..... :	0,268	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test				Result - Remark		Verdict
Supply cord	25,0	--	38,7	--	90	--	--
Internal wire	25,0	--	52,5	--	90	--	--
Terminal block	25,0	--	41,4	--	85	--	--
LED board	25,0	--	66,8	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	65,2	--	70	--	--
Horizontal surface of plastic cover(up)	25,0	--	38,5	--	90	25,5	90
Horizontal surface of plastic cover(low)	25,0	--	36,4	--	90	25,0	90
Vertical surface of plastic cover	25,0	--	38,1	--	150	25,2	150
Mounting surface	25,0	--	39,2	--	90	25,8	130
Supplementary information: N/A							

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		**P**
(14)	**SCREW TERMINALS**	**Approved terminal block**	**P**
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) .....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) .....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	**Screwless terminals (part of the luminaire)**		**P**
(15)	**SCREWLESS TERMINALS**	**Approved terminal block**	**P**
(15.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	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
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples).....:		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....:		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....:		N/A
(15.6)	Terminals and connections for external wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....:		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									**N/A**
	Voltage drop (mV) after 1 h									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop of two inseparable joints									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--

IEC 60598-2-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information: N/A

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 60598-2-24
Luminaires
Part 2: Particular requirements
Section 24: Luminaires with limited surface temperature

Report Number. ..... :	50085306 001 part 2
Date of issue ..... :	2017.06.05
Total number of pages ..... :	62 pages
Name of Testing Laboratory preparing the Report ..... :	TÜV Rheinland / CCIC (Ningbo) Co., Ltd. 3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.
Applicant's name ..... :	Cixi Yuanhui Lighting Electric Co., Ltd.
Address ..... :	Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China
Test specification:	
Standard ..... :	IEC 60598-2-24:2013 used in conjunction with IEC 60598-1:2014
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60598_2_24F
Test Report Form(s) Originator .... :	Intertek Semko AB
Master TRF ..... :	2016-09

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	LED Waterproof Luminaire
Trade Mark .....:	YUANHUI LIGHTING
Manufacturer.....:	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China
Model/Type reference .....:	YL08-20W-650, YL08-20W-1220, YL08-30W-1220, YL08-36W-1220, YL08-45W-1220, YL08-36W-1560, YL08-54W-1560, YL08-65W-1560
Ratings .....:	AC 220-240V, 50/60Hz, IP66, Class I, details see 'General product information'

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.	
Testing location/ address .....:		3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:		Brent Zhang	
Approved by (name, function, signature)..:		Heiko Li	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature)..:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name + signature) .....:			
Witnessed by (name, function, signature).:			
Approved by (name, function, signature)..:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			

Tested by (name, function, signature).....:		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature)...:		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): N/A	
Summary of testing:	
Tests performed (name of test and test clause): Model YL08-20W-650, YL08-36W-1220, YL08-54W-1560 and YL08-65W-1560 were selected to perform the thermal test. Other tests performed on all the models. **Test result: Pass.**	**Testing location:** TÜV Rheinland / CCIC (Ningbo) Co., Ltd. 3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R.China.
Summary of compliance with National Differences: **N/A** ☒ **The product fulfils the requirements of IEC 60598-2-24:2013 used in conjunction with IEC 60598-1:2014**	
Copy of marking plate: **The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.** Refer to report 50085306 001 part 1.	

Test item particulars.....:	LED Waterproof Luminaire
Classification of installation and use.....:	Class I, IP66
Supply Connection.....:	Connecting leads / connector
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2017.03.21
Date (s) of performance of tests.....:	2017.04.01~2017.05.26

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Clause numbers between brackets refer to clauses in IEC 60598-1

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China

General product information:

Refer to report 50085306 001 part 1.

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict

24.3 (0)	**GENERAL TEST REQUIREMENTS**		**P**
24.3 (0.1)	Information for luminaire design considered ..... :	Yes ☒ No ☐ Lamp standard:	—
24.3 (0.3)	More sections applicable..... :	Yes ☒ No ☐ Section/s:-2-1	—

24.5 (2)	**CLASSIFICATION**		**P**
24.5 (2.2)	Type of protection ..... :	Class I	P
24.5 (2.3)	Degree of protection..... :	IP66	P
24.5 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☒ No ☐	—
24.5 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—
24.5 (-)	a) Luminaire where no unusual accumulation of dust is expected	Yes ☒ No ☐	—
	b) Luminaire where an accumulation of non-conductive dust may be expected	Yes ☒ No ☐	—
	c) Luminaire where an accumulation of conductive dust may be expected	Yes ☒ No ☐	—

24.6 (3)	**MARKING**		**P**
24.6 (3.2)	Mandatory markings		P
	Position of the marking	Rating label stuck on the enclosure	P
	Format of symbols/text	Height of letter and symbol is enough	P
24.6 (3.3)	Additional information	Mention in instruction manual	P
	Language of instructions	English version	P
24.6 (3.3.1)	Combination luminaires		N/A
24.6 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
24.6 (3.3.3)	Operating temperature		P
24.6 (3.3.4)	Symbol or warning notice	Suitable for putting on a normally flammable surface	N/A
24.6 (3.3.5)	Wiring diagram		P
24.6 (3.3.6)	Special conditions		N/A

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.6 (3.3.7)	Metal halide lamp luminaire – warning		N/A
24.6 (3.3.8)	Limitation for semi-luminaires		N/A
24.6 (3.3.9)	Power factor and supply current		P
24.6 (3.3.10)	Suitability for use indoors		N/A
24.6 (3.3.11)	Luminaires with remote control		N/A
24.6 (3.3.12)	Clip-mounted luminaire – warning		N/A
24.6 (3.3.13)	Specifications of protective shields		N/A
24.6 (3.3.14)	Symbol for nature of supply	~	P
24.6 (3.3.15)	Rated current of socket outlet		N/A
24.6 (3.3.16)	Rough service luminaire		N/A
24.6 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments	Type Y	P
24.6 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
24.6 (3.3.19)	Protective conductor current in instruction if applicable		N/A
24.6 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
24.6 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
	Cautionary symbol		N/A
24.6 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
24.6 (3.4)	Test with water	15s	P
	Test with hexane	15s	P
	Legible after test		P
	Label attached	Not be easily removable , show no curling	P
24.6.1 (-)	Symbol for luminaire with limited surface temp.		P
	Marking visible		P

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.6.2 (-)	Classification of the luminaire according 24.5 in manufacturers literature		P
24.7 (4)	**CONSTRUCTION**		**P**
24.7 (4.2)	Components replaceable without difficulty		N/A
24.7 (4.3)	Wireways smooth and free from sharp edges		P
24.7 (4.4)	**Lampholders**		**N/A**
24.7 (4.4.1)	Integral lampholder		N/A
24.7 (4.4.2)	Wiring connection		N/A
24.7 (4.4.3)	Lampholder for end-to-end mounting		N/A
24.7 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) ..... :		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
24.7 (4.4.5)	Peak pulse voltage		N/A
24.7 (4.4.6)	Centre contact		N/A
24.7 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
24.7 (4.4.8)	Lamp connectors		N/A
24.7 (4.4.9)	Caps and bases correctly used		N/A
24.7 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
24.7 (4.5)	**Starter holders**		**N/A**
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
24.7 (4.6)	**Terminal blocks**		**P**
	Tails		N/A
	Unsecured blocks		N/A
24.7 (4.7)	**Terminals and supply connections**		**P**

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.7 (4.7.1)	Contact to metal parts	Fixed luminaire that can't be adjusted	N/A
24.7 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
24.7 (4.7.3)	Terminals for supply conductors		P
24.7 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
24.7 (4.7.4)	Terminals other than supply connection		N/A
24.7 (4.7.5)	Heat-resistant wiring/sleeves		N/A
24.7 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
24.7 (4.8)	**Switches**		**N/A**
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
24.7 (4.9)	**Insulating lining and sleeves**		**P**
24.7 (4.9.1)	Retainment		P
	Method of fixing ..... :	Heat-shrinkable tube	P
24.7 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :		N/A
24.7 (4.10)	**Double or reinforced insulation**		**N/A**

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.7 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
24.7 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
24.7 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
24.7 (4.10.4)	Protective impedance device		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
24.7 (4.11)	**Electrical connections and current-carrying parts**		**P**
24.7 (4.11.1)	Contact pressure	Compliance checked	P
24.7 (4.11.2)	Screws:		P
	- self-tapping screws	Not be used for connection of current-carry part	P
	- thread-cutting screws	No such screws used	P
24.7 (4.11.3)	Screw locking:		P
	- spring washer		N/A
	- rivets		N/A

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.7 (4.11.4)	Material of current-carrying parts		P
24.7 (4.11.5)	No contact to wood or mounting surface		P
24.7 (4.11.6)	Electro-mechanical contact systems		N/A
24.7 (4.12)	**Screws and connections (mechanical) and glands**		**P**
24.7 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	0,6Nm, fixed terminal block	P
	Torque test: torque (Nm); part..... :	1,2Nm, fixed driver	P
	Torque test: torque (Nm); part..... :	0,6Nm, fixed LED board	P
	Torque test: torque (Nm); part..... :	1,2Nm, fixed buckle screw	P
24.7 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
24.7 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
24.7 (4.12.5)	Screwed glands; force (Nm)..... :	3,25Nm	P
24.7 (4.13)	**Mechanical strength**		**P**
24.7 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) ..... :	No fragile parts	N/A
	- other parts; energy (Nm)..... :	0,35Nm; Plastic enclosure & cover	P
	1) live parts	Not have become accessible	P
	2) linings	Not have been impaired	N/A
	3) protection	Continue to afford the degree of protection	P
	4) covers	No breaking	P
24.7 (4.13.3)	Straight test finger	30N	P

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.7 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
24.7 (4.13.6)	Tumbling barrel		N/A
24.7 (4.14)	**Suspensions, fixings and means of adjusting**		**P**
24.7 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		N/A
	C) bracket arm; bending moment (Nm)..... :		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) ..... :		N/A
	Metal rod. diameter (mm) ..... :		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
24.7 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) ..... :		—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A
24.7 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles..... :		N/A
	- strands broken ..... :		N/A
	- electric strength test afterwards		N/A
24.7 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict
24.7 (4.14.5)	Guide pulleys		N/A
24.7 (4.14.6)	Strain on socket-outlets		N/A
24.7 (4.15)	**Flammable materials**		**P**
	- glow-wire test 650°C ..... :	See Test Table 1.15 (13.3.2)	P
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
24.7 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
24.7 (4.16)	**Luminaires for mounting on normally flammable surfaces**		**P**
	No lamp control gear ..... :	(compliance with Section 12)	N/A
24.7 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm		N/A
	- spacing 10 mm		P
24.7 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
24.7 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
24.7 (4.17)	**Drain holes**		**N/A**
	Clearance at least 5 mm		N/A
24.7 (4.18)	**Resistance to corrosion**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
24.7 (4.18.1)	- rust-resistance		N/A
24.7 (4.18.2)	- season cracking in copper		N/A
24.7 (4.18.3)	- corrosion of aluminium		N/A
24.7 (4.19)	Ignitors compatible with ballast		N/A
24.7 (4.20)	Rough service vibration		N/A
24.7 (4.21)	**Protective shield**		**N/A**
24.7 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
24.7 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
24.7 (4.21.3)	No direct path		N/A
24.7 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 1.15 (13.3.2)	N/A
24.7 (4.22)	Attachments to lamps not cause overheating or damage		N/A
24.7 (4.23)	Semi-luminaires comply Class II		N/A
24.7 (4.24)	**Photobiological hazards**		**P**
24.7 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
24.7 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 ..... :	Exempt group	—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		P
	- distance x m, borderline between RG1 and RG2 .. :	RG0	N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
24.7 (4.25)	**Mechanical hazard**		**P**
	No sharp point or edges		P
24.7 (4.26)	**Short-circuit protection**		**N/A**
24.7 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
24.7 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
24.7 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		**N/A**
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
24.7 (4.28)	**Fixing of thermal sensing control**		**N/A**
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) ..... :		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
24.7 (4.29)	**Luminaires with non-replaceable light source**		**P**
	Not possible to replace light source		P
	Live part not accessible after parts have been opened by hand or tools		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

24.7 (4.30)	**Luminaires with non-user replaceable light source**		**N/A**
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
24.7 (4.31)	**Insulation between circuits**	**Approved driver used**	**P**
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
24.7 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
24.7 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage ≤ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter socket-outlets of other voltage systems		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
24.7 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
24.7 (4.32)	**Overvoltage protective devices**		**N/A**
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
24.7.1 (-)	Degree of protection	24.7.1 (-)	P
	IP4X at least		P
	IP5X if presence of dust		P
	IP6X if presence of conductive dust		P
	At least IP 5X or IP6X for certain locations according IEC 60364-4-42		P
24.7.2 (-)	Applicable surfaces comply with requirements of horizontal surfaces	24.7.2 (-)	P
	Vertical surfaces not complying with spacing requirements in 24.13 comply with the limits for horizontal surfaces		P
24.8 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		**P**

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Clause	Requirement + Test	Result - Remark	Verdict
24.8 (11.2)	Creepage distances and clearances..... :	See Table 24.8 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	—

24.9 (7)	**PROVISION FOR EARTHING**		**P**
24.9 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :	Max.0,045Ω	P
	Self-tapping screws used		P
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
24.9 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
24.9 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
24.9 (7.2.5)	Earth terminal integral part of connector socket		N/A
24.9 (7.2.6)	Earth terminal adjacent to mains terminals		P
24.9 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
24.9 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
24.9 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
24.9 (7.2.11)	Earthing core coloured green-yellow		P
	Length of earth conductor		P

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Clause	Requirement + Test	Result - Remark	Verdict

24.10 (14)	**TERMINALS AND ELECTRICAL CONNECTIONS**		**P**
24.10 (14)	Screw terminals		P
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	N/A

1.9 (15)	**TERMINALS AND ELECTRICAL CONNECTIONS**		**P**
24.10 (15)	Screwless terminals and electrical connections		P
	Separately approved; component list..... :	(see Annex 1)	P
	Part of the luminaire ..... :	(see Annex 4)	N/A

24.11 (5)	**EXTERNAL AND INTERNAL WIRING**		**P**
24.11 (5.2)	**Supply connection and external wiring**		**P**
24.11 (5.2.1)	Means of connection ..... :	Connecting leads / connector	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		P
24.11 (5.2.2)	Type of cable ..... :	H07RN-F	P
	Nominal cross-sectional area (mm²) ..... :	3x1,0mm^2	P
	Cables equal to IEC 60227 or IEC 60245		N/A
24.11 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
24.11 (5.2.5)	Type Z not connected to screws		N/A
24.11 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
24.11 (5.2.7)	Cable entries through rigid material have rounded edges		P
24.11 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
24.11 (5.2.9)	Locking of screwed bushings		N/A
24.11 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
24.11 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
24.11 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
24.11 (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		P
	- no movement of conductors		P
	- no damage of cable or cord		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- function independent of electrical connection		P
24.11 (5.2.11)	External wiring passing into luminaire		P
24.11 (5.2.12)	Looping-in terminals		N/A
24.11 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
24.11 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
24.11 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
24.11 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
24.11 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
24.11 (5.3)	**Internal wiring**		**P**
24.11 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		P
	- not delivered/ mounting instruction		P
	- factory assembled		P
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	P
	Green-yellow for earth only		P
24.11 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :	(see Annex 1)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Insulation thickness		P
	Extra insulation added where necessary		N/A
24.11 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Adequate cross-sectional area and insulation thickness		N/A
24.11 (5.3.1.3)	Double or reinforced insulation for class II		N/A
24.11 (5.3.1.4)	Conductors without insulation		N/A
24.11 (5.3.1.5)	SELV current-carrying parts		N/A
24.11 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
24.11 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
24.11 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
24.11 (5.3.4)	Joints and junctions effectively insulated		N/A
24.11 (5.3.5)	Strain on internal wiring		N/A
24.11 (5.3.6)	Wire carriers		N/A
24.11 (5.3.7)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

24.12 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		**P**
24.12 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		P
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
24.12 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
24.12 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
24.12 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
24.12 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- no-load voltage (V) ..... :		N/A
	- touch current if applicable (mA) ..... :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V) ..... :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
24.12 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
24.12 (8.2.5)	Compliance with the standard test finger or relevant probe		P
24.12 (8.2.6)	Covers reliably secured		P
24.12 (8.2.7)	Luminaire other than below with capacitor > 0,5 μF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

24.13 (12)	**ENDURANCE TEST AND THERMAL TEST**		**P**
24.13 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 24.14		—
24.13 (12.3)	Endurance test:		P
	- mounting-position ..... :	As in normal used	—
	- test temperature (°C) ..... :	35±2°C	—
	- total duration (h) ..... :	240h	—
	- supply voltage: Un factor; calculated voltage (V) ... :	264V	—
	- lamp used ..... :	LED lighting source	—
24.13 (12.3.2)	After endurance test:		P
	- no part unserviceable		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
24.13 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
24.13 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
24.13 (12.6)	Thermal test (failed lamp control gear condition):		N/A
24.13 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :		—
	- case of abnormal conditions ..... :		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .... :		—
	- measured mounting surface temperature (°C) at 1,1 Un ..... :		N/A
	- calculated mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
24.13 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions ..... :		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
24.13 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
24.13 (12.7.1)	Luminaire without temperature sensing control		N/A
24.13 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W ..... :		—
	Test according to 12.7.1.1:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- case of abnormal conditions ..... :		—
	- Ballast failure at supply voltage (V) ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test .....:	See Table 24.16 (13.2.1)	N/A
24.13 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- measured winding temperature (°C): at 1,1 Un ..... :		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :		—
	- calculated temperature of fixing point/exposed part (°C) ..... :		—
	Ball-pressure test ..... :	See Table 24.16 (13.2.1)	N/A
24.13 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions ..... :		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
24.13 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link..... :	Yes ☐ No ☐	—
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—
	- case of abnormal conditions ..... :		—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ball-pressure test: ..... :	See Table 24.16 (13.2.1)	N/A
24.13 (-)	Temperature limit for vertical surfaces with gap < 30 mm	(see Annex 2)	P
24.13.1 (-)	Special temperature limits – normal operation	(see Annex 2)	P
24.13.2 (-)	Special temperature limits – abnormal operation	(see Annex 2)	P
24.13.3 (-)	Special temperature limits – fault conditions	(see Annex 2)	N/A

24.14 (9)	**RESISTANCE TO DUST AND MOISTURE**		**P**
24.14 (-)	The order of tests as specified in clause 24.13		P
24.14 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... :	IP66	—
	- mounting position during test ..... :	In the most unfavourable position of normal use	—
	- fixing screws tightened; torque (Nm) ..... :	/	—
	- tests according to clauses..... :	Cl. 9.2.2 & Cl.9.2.7	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		P
24.14 (9.3)	Humidity test 48 h		P

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Clause	Requirement + Test	Result - Remark	Verdict

24.15 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		**P**
24.15 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :		—
	Insulation resistance (MΩ) ..... :	--	—
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :	>500MΩ	P
	- between current-carrying parts and metal parts of the luminaire..... :	>500MΩ	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV		P
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :	>500MΩ	P
	- between live parts and metal parts ..... :	>500MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 .....:		N/A
24.15 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V) ..... :	--	P
	SELV		P
	- between current-carrying parts of different polarity :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts and mounting surface..... :	500V	P
	- between current-carrying parts and metal parts of the luminaire..... :	500V	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
	Other than SELV		P
	- between live parts of different polarity ..... :		N/A
	- between live parts and mounting surface ..... :	2960V	P
	- between live parts and metal parts ..... :	1480V	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 ..... :		N/A
24.15 (10.3)	Touch current or protective conductor current (mA).:	0,056mA	P

24.16 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		**P**
24.16 (13.2.1)	Ball-pressure test ..... :	See Test Table 24.16 (13.2.1)	P
24.16 (13.3.1)	Needle-flame test (10 s)..... :	See Test Table 24.16 (13.3.1)	P
24.16 (13.3.2)	Glow-wire test (650°C) ..... :	See Test Table 24.16 (13.3.2)	P
24.16 (13.4)	Proof tracking test (IEC 60112)..... :	See Test Table 24.16 (13.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict

24.8 (11.2)	**TABLE: Creepage distances and clearances**							**P**
	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages							**P**
	Applicable part of IEC 60598-1 Table 11.1* and 11.2*							**P**
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**		
			clearance	***Table**		**creepage**	***Table**	
Distance 1:	B	8,0	1,5	11.1	8,0	2,5	11.1	
Working voltage (V) .....:					AC 220-240V			—
PTI .....:					< 600 ☒ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					2,5Kv			—
Supplementary information: N/A								
Distance 2:	--	--	--	--	--	--	--	
Working voltage (V) .....:					--			—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					--			—
Supplementary information: N/A								
Distance 3:	--	--	--	--	--	--	--	
Working voltage (V) .....:					--			—
PTI .....:					< 600 ☐ ≥ 600 ☐			—
Pulse voltage if applicable (kV) .....:					--			—
Supplementary information: N/A								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

24.16 (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**			**P**
Allowed impression diameter (mm) ..... :		<2mm		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Plastic enclosure	--	80°C	0,7mm	
Plastic cover	--	80°C	0,7mm	
LED board	--	125°C	0,6mm	

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information: N/A

24.16 (13.3.1)	**TABLE: Needle-flame test (IEC 60695-11-5)**				**P**
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
LED board	--	10s	No	--	P
Terminal block	--	10s	No	6	P
Supplementary information: N/A					

24.16 (13.3.2)	**TABLE: Glow-wire test (IEC 60695-2-11)**			**P**
Glow wire temperature ..... :	650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Plastic enclosure	--	No	--	P
Plastic cover	--	No	--	P
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No) ..... :				Yes
Supplementary information: N/A				

24.16 (13.4)	**TABLE: Proof tracking test (IEC 60112)**				**P**
Test voltage PTI ..... :	175 V				—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Connector	--	Yes	Yes	Yes	P
--	--	--	--	--	--
Supplementary information: N/A					

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	**Code**	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Supply cord	B	NINGBO XUANHUA ELECTRIC CO., LTD.	H07RN-F	3x1,0 mm^2	DIN EN 50525-2-1	VDE (40037611)
Plastic enclosure	B	GE China	2807,1100,757,750	PC; ABS	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Plastic cover	B	GE China	2807,143R,666D,80N	PC; PS; PMMA	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Terminal block	B	Ningbo Development Zone Hengda Electrical Co., Ltd.	TB-7020	AC 250V, 24A, T85	DIN EN 60998-1 DIN EN 60998-2-1	VDE (40022436)
Alternative	B	Ningbo Economic & Technical Development Zone Hengda Electrical Co., Ltd.	TB-7020B/x(x=1-5)	AC 450V,16, 2,5mm^2	EN 60998-1 EN 60998-2-2	TÜV (R 50160873 0001)
Alternative	B	Cixi Ding Li Plastic Co., Ltd.	DL06	AC 450V, 24A, T110	DIN EN 60998-1 DIN EN 60998-2-1	VDE (40024873)
Alternative	B	Heavy Power Co., Ltd.	PA9	AC 450V, 24A, T110	DIN EN 60998-1 DIN EN 60998-2-1	VDE (40016425)
Alternative	B	A.A.G. Stucchi S R L unico socio	1673,1673/A, 1673/SP	AC 450V, 16A, T85	EN 60998-1 EN 60998-2-2	ENEC (CA02.02722)
Internal wire	B	Cixi Hongxin Wire and Cable Factory	H05V-K H05V-U	1x0,5…1,5mm^2	DIN EN 50525-2-31	VDE (40028426)
Alternative	B	Ningbo Haoguang Electric Appliance Co., Ltd.	H07V-K H07V-U	1x1,5mm^2	DIN EN 50525-2-31	VDE (126062)
Alternative	B	Ningbo Haoguang Electric Appliance Co., Ltd.	H05V-K H05V-U	1x0,5…1,5mm^2	DIN EN 50525-2-31	VDE (126062)

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	B	Cixi Haosheng Wire & Cable Co., Ltd.	H05V-K H05V-U	1x0,5…1,5m m^2	DIN EN 50525-2-41	VDE (40021089)
Alternative	B	Cixi Haosheng Wire & Cable Co., Ltd.	H05S-K	1x0,5…1,5m m^2	DIN EN 50525-2-41	VDE (40020128)
Alternative	B	Ningbo Haoguang Electric Appliance Co., Ltd.	H05S-K	1x0,5…1,5m m^2	DIN EN 50525-2-41	VDE (40038042)
Screwed gland	B	Cixi Ding Li Plastic Co., Ltd.	DL250-3-1-M, DL250-3-1-F	500V, 6A	DIN EN 61984	VDE (40043553)
Alternative	B	Cixi Ding Li Plastic Co., Ltd.	PG13.5	NYLON, PA66	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Alternative	B	Shanghai Shengyang Electronics Technology CO., Ltd.	PG13.5	NYLON, PA66	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance
Heat-Shrinkable tube	B	DONGGUAN SALIPT CO LTD	SALIPT S-901-600	600V, 125°C	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance UL(E209436)
LED board	B	ZHEJIANG CHANGSHAN DEXUNDA ELECTRONIC TECHNOLOGY CO LTD	DXD-AL1	V-0, 90°C	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance and UL(E474292)
Alternative	B	ZHEJIANG CHANGSHAN DEXUNDA ELECTRONIC TECHNOLOGY CO LTD	DXD-D1	V-0, 130°C	IEC 60598-1 IEC 60598-2-1 IEC 60598-2-24	Tested with appliance and UL(E474292)
LED chip	B	EVERLIGHT	67-21S	Vf=2,8V-3,5V, If=150mA	IEC TR 62778	Tested with appliance
Alternative	B	LG	LEMWS28U80XXXXXX	Vf=3,0V-3,4V, If=150mA	IEC TR 62778	Tested with appliance
Alternative	B	Jiangxi Elite Optoelectronic	EL-283580DBN3	Vf=3,0V-3,4V,	IEC TR 62778	Tested with appliance

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Clause	Requirement + Test	Result - Remark	Verdict

		science and Technology Co., Ltd	0	If=150mA		
Driver for YL08-20W-650, YL08-20W-1220	B	Tridonic GmbH & Co KG	LC 19W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 250-350mA, Po=19W, tc=65°C	EN 61347-1 EN 61347-2-13	ENEC (7590-194)
Driver for YL08-36W-1220, YL08-36W-1560	B		LC 38W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=250Vdc, 250-350mA, Po=38W, tc=70°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B		LC 38W 500-700mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 500-700mA, Po=38W, tc=80°C		
Driver for YL08-45W-1220, YL08-54W-1560	B		LC 53W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=250Vdc, 250-350mA, Po=53W, tc=70°C		
Driver for YL08-45W-1220, YL08-54W-1560	B		LC 57W 800-1050mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 800-1050mA, Po=57W, tc=90°C		
Driver for YL08-65W-1560	B		LC 71W 250-350mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=250Vdc, 250-350mA, Po=71W, tc=70°C		
Driver for YL08-65W-1560	B		LC 81W 1200-1750mA flexC lp ADV	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc,		

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Clause	Requirement + Test	Result - Remark	Verdict

				1200-1750mA, Po=80,5W, tc=95°C		
Driver for YL08-20W-650, YL08-20W-1220	B		LC 25W 350mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=300Vdc, 350mA, Po=25W, tc=65°C	DIN EN 61347-1 DIN EN 61347-2-13	VDE (40044698)
Driver for YL08-36W-1220, YL08-36W-1560	B		LC 35W 350mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=350Vdc, 350mA, Po=35W, tc=70°C	EN 61347-1 EN 61347-2-13	ENEC (7590-186)
Driver for YL08-45W-1220, YL08-54W-1560	B		LC 50W 350mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=350Vdc, 350mA, Po=50W, tc=75°C		
Driver for YL08-65W-1560	B		LC 65W 700mA fixC lp SNC	Ui=AC 220-240V, 50/60Hz; Uo=300Vdc, 700mA, Po=65W, tc=85°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B	OSRAM GmbH	OT FIT 35/220–240/700 CS L AP	Ui=AC 220-240V, 50/60Hz; Uo=27-54Vdc, 700mA, Po=38W, tc=80°C	EN 61347-1 EN 61347-2-13	ENEC (2198430.01)
Driver for YL08-45W-1220, YL08-54W-1560	B		OT FIT 55/220–240/1A0 CS L AP	Ui=AC 220-240V, 50/60Hz; Uo=27-54Vdc, 1050mA, Po=57W, tc=80°C		

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Clause	Requirement + Test	Result - Remark	Verdict

Driver for YL08-65W-1560	B		OT FIT 75/220–240/1A4 CS L AP	Ui=AC 220-240V, 50/60Hz; Uo=27-54Vdc, 1400mA, Po=76W, tc=80°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B		OTi DALI 35/220-240/700 LT2 L	Ui=AC 220-240V, 50/60Hz; Uo=20-54Vdc, 200-700mA, Po=35W, tc=75°C	DIN EN 61347-1 DIN EN 61347-2-13	VDE (40038447)
Driver for YL08-45W-1220, YL08-54W-1560	B		OTi DALI 50/220-240/1A4 LT2 L	Ui=AC 220-240V, 50/60Hz; Uo=20-54Vdc, 600-1400mA, Po=54W, tc=75°C		
Driver for YL08-65W-1560	B		OTi DALI 80/220-240/2A1 LT2 L	Ui=AC 220-240V, 50/60Hz; Uo=20-54Vdc, 1000-2100mA, Po=80W, tc=80°C		
Driver for YL08-30W-1220, YL08-36W-1220, YL08-36W-1560	B	Philips Lighting B.V.	CertaDrive 38W 0.7A 54V 230V	Ui=AC 220-240V, 50/60Hz; Uo=60Vdc, 700mA, Po=38W, tc=75°C	EN 61347-1 EN 61347-2-13	ENEC (2194767.01)
Driver for YL08-45W-1220, YL08-54W-1560	B		CertaDrive 57W 1.05A 54V 230V	Ui=AC 220-240V, 50/60Hz; Uo=32-54Vdc, Max.70Vdc, 1050mA, Po=57W, tc=75°C		ENEC (2198409.01)

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Clause	Requirement + Test	Result - Remark	Verdict

Driver for YL08-65W-1560	B		CertaDrive 65W 1.4A 46.5V 230V	Ui=AC 220-240V, 50/60Hz; Uo=32-46,5Vdc, Max.70Vdc, 1400mA, Po=65W, tc=75°C		ENEC (2033681.01)
Driver for YL08-36W-1220, YL08-36W-1560	B	Philips Lighting B.V.	CertaDrive 40W 360mA 110V 230V	Ui=AC 220-240V, 50/60Hz; Uo=80-116Vdc, Max.300Vdc, 360mA, Po=42W, tc=75°C	EN 61347-1 EN 61347-2-13	ENEC (2183006.01)
Driver for YL08-54W-1560	B		CertaDrive 60W 360mA 170V 230V	Ui=AC 220-240V, 50/60Hz; Uo=120-170Vdc, Max.340Vdc, 360mA, Po=61,2W, tc=80°C		
Driver for YL08-36W-1220, YL08-36W-1560	B	Shenzhen Xiezhen Electronics Co., LTD	XZ-ST50B-540XXX	Ui=AC 220-240V, 50/60Hz; Uo=30-54Vdc, 1050mA, tc=85°C	EN 61347-1 EN 61347-2-13	TÜV (R 50332607)
Driver for YL08-45W-1220	B		XZ-ST50B-420XXX	Ui=AC 220-240V, 50/60Hz; Uo=27-42Vdc, 1050mA, tc=85°C		
Driver for YL08-54W-1560	B		XZ-ST60B-540XXX	Ui=AC 220-240V, 50/60Hz; Uo=30-54Vdc, 1050mA, tc=85°C		

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Clause	Requirement + Test	Result - Remark	Verdict

Driver for YL08-65W-1560	B		XZ-ST60B-420XXX	Ui=AC 220-240V, 50/60Hz; Uo=27-42Vdc, 1400mA, tc=85°C		
Driver for YL08-20W-650, YL08-20W-1220	B	Kegu Power Electronics Co., Ltd	KEDH025S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=43-72Vdc, 350mA, Po=25W, tc=85°C	EN 61347-1 EN 61347-2-13	TÜV (R 50349491)
Driver for YL08-36W-1220, YL08-36W-1560	B		KEDH035S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=60-100Vdc, 350mA, Po=35W, tc=85°C		
Driver for YL08-45W-1220, YL08-54W-1560	B		KEDH050S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=86-143Vdc, 350mA, Po=50W, tc=85°C		
Driver for YL08-65W-1560	B		KEDH065S0350NM08A1	Ui=AC 220-240V, 50/60Hz; Uo=130-186Vdc, 350mA, Po=65W, tc=85°C		

Supplementary information:

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

The codes above have the following meaning:

A - The component is replaceable with another one, also certified, with equivalent characteristics

B - The component is replaceable if authorised by the test house

C - Integrated component tested together with the appliance

D - Alternative component

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference ..... :	YL08-20W-650	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 19W 250-350mA flexC Ip ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	19,5	—
	Supply current (A) ..... :	0,088	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Supply cord	25,0	--	35,9	--	90	--	--
Internal wire	25,0	--	47,8	--	90	--	--
Terminal block	25,0	--	39,4	--	85	--	--
LED board	25,0	--	57,7	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	63,0	--	65	--	--
Horizontal surface of plastic cover(up)	25,0	--	39,7	--	90	26,9	90
Horizontal surface of plastic cover(low)	25,0	--	39,1	--	90	25,3	90
Vertical surface of plastic cover	25,0	--	41,0	--	150	26,6	150
Mounting surface	25,0	--	42,2	--	90	27,3	130
Supplementary information: N/A							

	Type reference ..... :	YL08-20W-650	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	KEDH025S0350NM08A1	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	18,7	—
	Supply current (A) ..... :	0,084	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	56,2	--	85	--	--
Mounting surface	25,0	--	40,1	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-20W-650	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 25W 350mA fixC Ip SNC	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	19,1	—
	Supply current (A) ..... :	0,086	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Tc of driver	25,0	--	57,0	--	65	--	--
Mounting surface	25,0	--	39,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 38W 250-350mA flexC lp ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	34,7	—
	Supply current (A) ..... :	0,142	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1,06x240V=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..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Supply cord	25,0	--	33,7	--	90	--	--
Internal wire	25,0	--	41,9	--	90	--	--
Terminal block	25,0	--	36,7	--	85	--	--
LED board	25,0	--	59,6	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	67,4	--	70	--	--
Horizontal surface of plastic cover(up)	25,0	--	36,7	--	90	26,2	90
Horizontal surface of plastic cover(low)	25,0	--	33,4	--	90	25,6	90
Vertical surface of plastic cover	25,0	--	35,7	--	150	26,0	150
Mounting surface	25,0	--	42,8	--	90	27,2	130
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	KEDH035S0350NM08A1	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	35,6	—
	Supply current (A) ..... :	0,147	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	67,4	--	85	--	--
Mounting surface	25,0	--	44,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	CertaDrive 40W 360mA 110V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	34,6	—
	Supply current (A) ..... :	0,148	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Tc of driver	25,0	--	63,9	--	75	--	--
Mounting surface	25,0	--	40,2	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 35W 350mA fixC Lp SNC	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	34,2	—
	Supply current (A) ..... :	0,143	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	58,9	--	70	--	--
Mounting surface	25,0	--	40,0	--	90	--	--
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OT FIT 35/220-240/700 CS L AP	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,6	—
	Supply current (A) ..... :	0,149	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	70,7	--	80	--	--
Mounting surface	25,0	--	44,2	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OTi DALI 35/220-240/700 LT2 L	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,8	—
	Supply current (A) ..... :	0,153	—

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Clause	Requirement + Test	Result - Remark	Verdict

	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	60,4	--	75	--	--
Mounting surface	25,0	--	39,7	--	90	--	--

Supplementary information: N/A

	Type reference ..... :	YL08-36W-1220	—
	Lamp used ..... :	LED lighting source	—
	Lamp control gear used ..... :	CertaDrive 38W 0.7A 54V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,7	—
	Supply current (A) ..... :	0,150	—
	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=254,4V	—

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Clause	Requirement + Test	Result - Remark	Verdict

	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	--	—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	66,2	--	75	--	--
Mounting surface	25,0	--	41,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	XZ-ST50B-540070	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	35,3	—
	Supply current (A) ..... :	0,156	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

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Clause	Requirement + Test	Result - Remark	Verdict

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	57,1	--	85	--	--
Mounting surface	25,0	--	39,7	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-36W-1220	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 38W 500-700mA flexC lp ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	36,7	—
	Supply current (A) ..... :	0,155	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1,06x240V=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..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	70,3	--	80	--	--
Mounting surface	25,0	--	44,3	--	90	--	--
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

	Type reference ..... :	YL08-54W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	CertaDrive 60W 360mA 170V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	52,2	—
	Supply current (A) ..... :	0,219	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Supply cord	25,0	--	39,6	--	90	--	--
Internal wire	25,0	--	62,0	--	90	--	--
Terminal block	25,0	--	69,6	--	85	--	--
LED board	25,0	--	80,0	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	74,5	--	80	--	--
Horizontal surface of plastic cover(up)	25,0	--	46,5	--	90	26,0	90
Horizontal surface of plastic cover(low)	25,0	--	54,9	--	90	25,4	90
Vertical surface of plastic cover	25,0	--	46,3	--	150	25,7	150
Mounting surface	25,0	--	49,6	--	90	26,8	130
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 81W 1200-1750mA flexC Ip ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	63,1	—
	Supply current (A) ..... :	0,257	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—

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	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	89,3	--	95	--	--
Mounting surface	25,0	--	41,6	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 65W 700mA fixC Ip SNC	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	61,1	—
	Supply current (A) ..... :	0,254	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test	Result - Remark	Verdict

Tc of driver	25,0	--	74,5	--	85	--	--
Mounting surface	25,0	--	37,6	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OT FIT 75/220-240/1A4 CS L AP	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	67,0	—
	Supply current (A) ..... :	0,269	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	66,9	--	80	--	--
Mounting surface	25,0	--	48,5	--	90	--	--
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	OTi DALI 80/220-240/2A1 LT2 L	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	62,5	—
	Supply current (A) ..... :	0,257	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	75,6	--	80	--	--
Mounting surface	25,0	--	45,9	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	CertaDrive 65W 1.4A 46.5V 230V	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	63,0	—
	Supply current (A) ..... :	0,256	—

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	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	66,7	--	75	--	--
Mounting surface	25,0	--	41,5	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used ..... :	LED lighting source	—
	Lamp control gear used ..... :	XZ-ST60B-420140	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	62,4	—
	Supply current (A) ..... :	0,253	—
	Calculated power factor ..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage ..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=254,4V	—

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	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	--	—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	76,4	--	85	--	--
Mounting surface	25,0	--	42,3	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	KEDH065S0350NM08A1	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	63,3	—
	Supply current (A) ..... :	0,258	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	--	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage ..... :	1,06x240V=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 ..... :	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—
	Temperature measurements, (°C)		

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Clause	Requirement + Test	Result - Remark	Verdict

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Tc of driver	25,0	--	77,3	--	85	--	--
Mounting surface	25,0	--	39,0	--	90	--	--
Supplementary information: N/A							

	Type reference ..... :	YL08-65W-1560	—
	Lamp used..... :	LED lighting source	—
	Lamp control gear used..... :	LC 71W 250-350mA flexC lp ADV	—
	Mounting position of luminaire ..... :	As normal installation	—
	Supply wattage (W) ..... :	65,5	—
	Supply current (A) ..... :	0,268	—
	Calculated power factor..... :	--	—
	Table: measured temperatures corrected for ta = 25 °C:		P
	- abnormal operating mode ..... :	Short-circuit adaptor	—
	- test 1: rated voltage..... :	AC 220-240V	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage..... :	1,06x240V=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..... :	1,1x240V=264,0V	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	--	—

	Temperature measurements, (°C)						
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit

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Clause	Requirement + Test				Result - Remark		Verdict
Supply cord	25,0	--	38,7	--	90	--	--
Internal wire	25,0	--	52,5	--	90	--	--
Terminal block	25,0	--	41,4	--	85	--	--
LED board	25,0	--	66,8	--	Cl.13.2.1	--	--
Tc of driver	25,0	--	65,2	--	70	--	--
Horizontal surface of plastic cover(up)	25,0	--	38,5	--	90	25,5	90
Horizontal surface of plastic cover(low)	25,0	--	36,4	--	90	25,0	90
Vertical surface of plastic cover	25,0	--	38,1	--	150	25,2	150
Mounting surface	25,0	--	39,2	--	90	25,8	130
Supplementary information: N/A							

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		**P**
(14)	**SCREW TERMINALS**	**Approved terminal block**	**P**
(14.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²).....:		—
(14.3.3)	Conductor space (mm).....:		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) .....:	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) .....:		N/A
	Torque (Nm).....:		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N).....:		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	**Screwless terminals (part of the luminaire)**		**P**
(15)	**SCREWLESS TERMINALS**	**Approved terminal block**	**P**
(15.2)	Type of terminal.....:		—
	Rated current (A).....:		—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	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
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples).....:		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....:		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....:		N/A
(15.6)	Terminals and connections for external wiring		N/A

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict

(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....:		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....:		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									**N/A**
	Voltage drop (mV) after 1 h									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop of two inseparable joints									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV) ..... :									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--

IEC 60598-2-24			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information: N/A

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC TR 62778
Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires

Report Number. ..... :	50085306 001 part 3
Date of issue ..... :	2017.06.05
Total number of pages ..... :	12 pages
Name of Testing Laboratory preparing the Report ..... :	TÜV Rheinland / CCIC (Ningbo) Co., Ltd. 3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.
Applicant's name ..... :	Ningbo Thrive Lighting Electric Appliance Co., Ltd.
Address ..... :	Tianyang Crossing, the 329 National Highway, Cixi City, Ningbo City, Zhejiang Province 315331, P.R. China
Test specification:	
Standard ..... :	IEC TR 62778:2014 (Second Edition)
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC62778A
Test Report Form(s) Originator .... :	TÜV SÜD Product Service GmbH
Master TRF ..... :	Dated 2016-02

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description .....:	LED Waterproof Luminaire
Trade Mark .....:	YUANHUI LIGHTING
Manufacturer.....:	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China
Model/Type reference .....:	YL08-20W-650, YL08-20W-1220, YL08-30W-1220, YL08-36W-1220, YL08-45W-1220, YL08-36W-1560, YL08-54W-1560, YL08-65W-1560
Ratings .....:	AC 220-240V, 50/60Hz, IP66, Class I, details see 'General product information'

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.	
Testing location/ address ..... :		3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :		Brent Zhang	Brent Zhang
Approved by (name, function, signature).. :		Heiko Li	Heiko Li
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature).. :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature). :			
Approved by (name, function, signature).. :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			

Tested by (name, function, signature).....:		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature)...:		
Supervised by (name, function, signature) :		

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

N/A

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Model YL08-1560-65W with CCT of 6500K of three kinds of LED types (double row LED board) was selected to perform the test. **Testing result: Pass.**	**TÜV Rheinland / CCIC (Ningbo) Co., Ltd.** 3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China.

Summary of compliance with National Differences (List of countries addressed):

N/A.

☒ **The product fulfils the requirements of IEC TR 62778:2014.**

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Refer to TR 50085306 001 part 1.

Test item particulars.....:	LED Waterproof Luminaire
Product evaluated.....:	☐ **LED package** ☐ **LED module** ☐ **Lamp** ☒ **Luminaire**
Rated voltage (V) .....:	AC 220-240V, 50/60Hz
Rated current (mA) .....:	N/A
Rated CCT (K).....:	6500K
Rated Luminance (Mcd/m^2) .....:	N/A
Component report data used .....:	☒ **Not applicable** ☐ **LED package** ☐ **LED module** ☐ **Lamp** Report number: N/A
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2017.03.21
Date (s) of performance of tests.....:	2017.04.01~2017.05.26
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☒ comma / ☐ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies) ..... :	Cixi Yuanhui Lighting Electric Co., Ltd. Industrial Zone, Sanbei Town, Cixi City, Zhejiang Province 315331, P.R. China
General product information: Refer to TR 50085306 001 part 1.	

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

7	**MEASUREMENT INFORMATION FLOW**		**P**
7.1	**Basic flow**		**P**
	'Law of conservation of luminance' applied		P
	Use of only true luminance/radiance values		P
	In case of luminaire: The light source is operated in the luminaire under similar conditions as when tested as a component		P
	In case E_{thr} value for RG2 was established the peak value was derived from angular light distribution		P
7.2	**Conditions for the radiance measurement**		**P**
	Standard condition applied (200mm distance, 0,011rad field of view)	Tested at 200mm	P
	Non-standard condition applied		N/A
7.3	**Special cases (I): Replacement by a lamp or LED module of another type**		**N/A**
	Light source is a white light source		N/A
	Evaluation done based on highest luminance		N/A
	Evaluation done based on CCT value		N/A
7.4	**Special cases (II): Arrays and clusters of primary light sources**		**P**
	LED package is evaluated as ..... :	☒ RG0 unlimited ☐ RG1 unlimited	P
	E_{thr} of LED package applies to array		P
8	**RISK GROUP CLASSIFICATION**		**P**
	Risk group achieved:		P
	- .. Risk Group 0 unlimited		P
	- .. Risk Group 1 unlimited		N/A
	- E_{thr} ..... (lx) : Distance to reach RG1 ..... (m) :	RG0	N/A

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Spectroradiometric measurement		**P**
	Measurement performed on:	☐ **LED package** ☐ **LED module** ☐ **Lamp** ☒ **Luminaire**	**P**
	Model number.....:	YL08-1560-65W (LEMWS28U80XXXXXX)	
	Test voltage (V) .....:	AC 240V	—
	Test current (mA) .....:	274mA	—
	Test frequency (Hz).....:	50Hz	—
	Ambient, t (°C) .....:	23,2°C	—
	Measurement distance.....:	☒ 20 cm ☐ ... cm	—
	Source size .....:	☒ Non-small ☐ Small : .... mm	—
	Field of view .....:	☒ 100 mrad ☐ 11 mrad ☐ 1,7 mrad (for small sources)	—

Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	N/A	--
x/y colour coordinates	--	--	--	--
Blue light hazard radiance	L_B	$W/(m^2 \cdot sr^1)$	34,93	--
Blue light hazard irradiance	E_B	W/m^2	N/A	--
Luminance	L	cd/m^2	$5{,}551 \times 10^4$	$K_{B,V} = L_B/L = 6{,}293 \times 10^{-4}$
Illuminance	E	lx	N/A	
Supplementary information: N/A				

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Spectroradiometric measurement		**P**
	Measurement performed on:	☐ **LED package** ☐ **LED module** ☐ **Lamp** ☒ **Luminaire**	**P**
	Model number.....:	YL08-1560-65W(67-21S)	
	Test voltage (V) .....:	AC 240V	—
	Test current (mA) .....:	266mA	—
	Test frequency (Hz).....:	50Hz	—
	Ambient, t (°C) .....:	23,2°C	—
	Measurement distance.....:	☒ 20 cm ☐ ... cm	—
	Source size .....:	☒ Non-small ☐ Small : .... mm	—
	Field of view .....:	☒ 100 mrad ☐ 11 mrad ☐ 1,7 mrad (for small sources)	—

Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	N/A	--
x/y colour coordinates	--	--	--	--
Blue light hazard radiance	L_B	$W/(m^2 \cdot sr^1)$	36,06	--
Blue light hazard irradiance	E_B	W/m^2	N/A	--
Luminance	L	cd/m^2	$5,271x10^4$	$K_{B,V}= L_B/L= 6,841x10^{-4}$
Illuminance	E	lx	N/A	
Supplementary information: N/A				

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

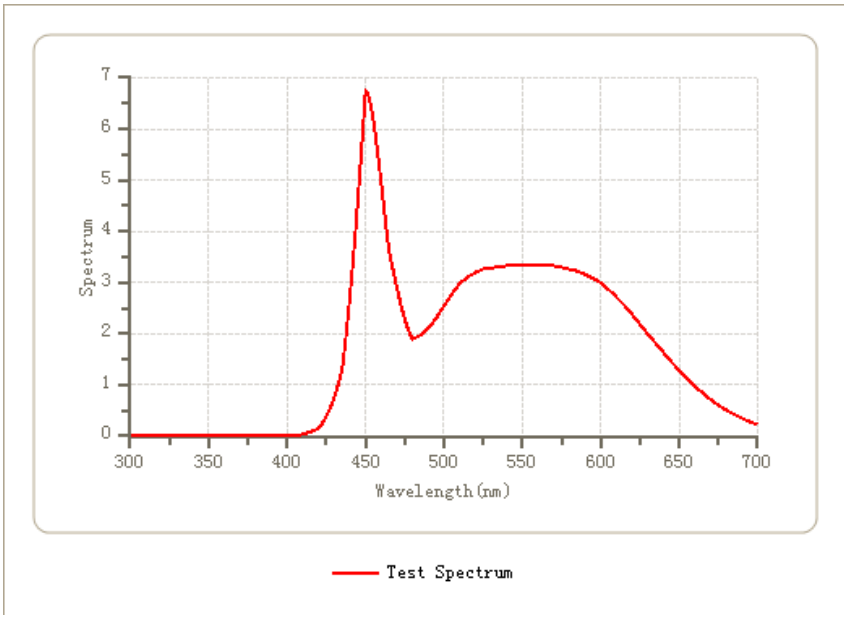
	TABLE: Spectroradiometric measurement		**P**
	Measurement performed on:	☐ **LED package** ☐ **LED module** ☐ **Lamp** ☒ **Luminaire**	**P**
	Model number.....:	YL08-1560-65W (EL-283580DBN30)	
	Test voltage (V) .....:	AC 240V	—
	Test current (mA) .....:	266mA	—
	Test frequency (Hz).....:	50Hz	—
	Ambient, t (°C) .....:	23,2°C	—
	Measurement distance.....:	☒ 20 cm ☐ ... cm	—
	Source size .....:	☒ Non-small ☐ Small : .... mm	—
	Field of view .....:	☒ 100 mrad ☐ 11 mrad ☐ 1,7 mrad (for small sources)	—

Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	N/A	--
x/y colour coordinates	--	--	--	--
Blue light hazard radiance	L_B	$W/(m^2 \cdot sr^1)$	36,64	--
Blue light hazard irradiance	E_B	W/m^2	N/A	--
Luminance	L	cd/m^2	$5,507x10^4$	$K_{B,V}= L_B/L= 6,653x10^{-4}$
Illuminance	E	lx	N/A	
Supplementary information: N/A				

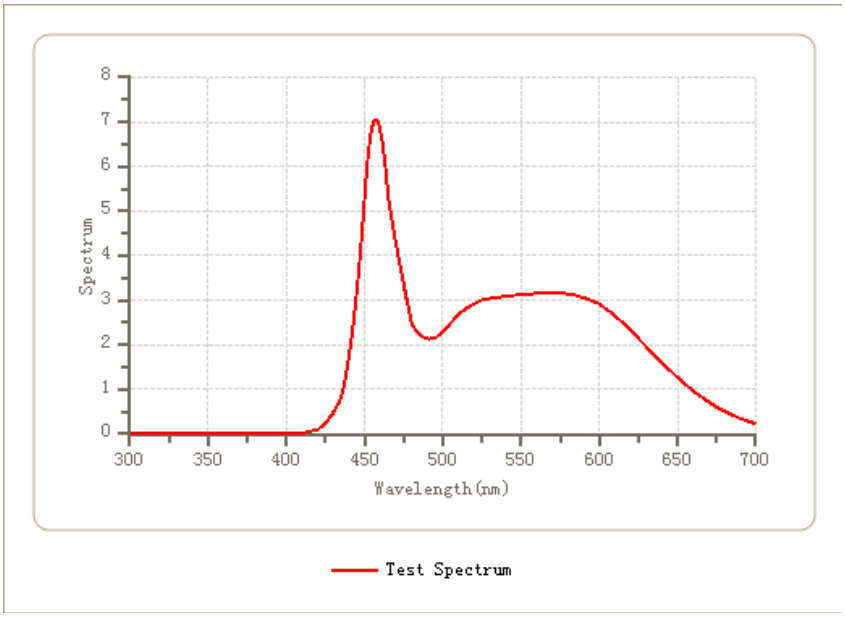
IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Angular light distribution	P

YL08-1560-65W (LEMWS28U80XXXXXX):

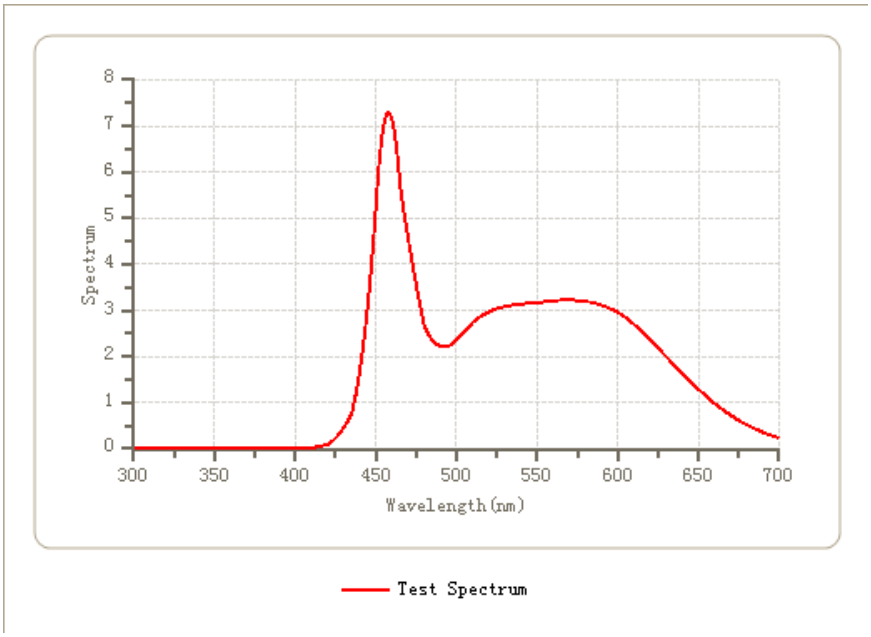


YL08-1560-65W(67-21S):



IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

YL08-1560-65W(EL-283580DBN30):



TÜVRheinland®

PHOTO DOCUMENTATION

Attachment 1 of 50085306 001

for

LED Waterproof Luminaire

YL08-20W-650, YL08-20W-1220,
YL08-30W-1220, YL08-36W-1220,
YL08-45W-1220, YL08-36W-1560,
YL08-54W-1560, YL08-65W-1560

Cixi Yuanhui Lighting Electric Co., Ltd.

This documentation consists of 22 pages (excluding this cover page)

Report Number: Attachment 1 of 50085306 001

Model: See cover page

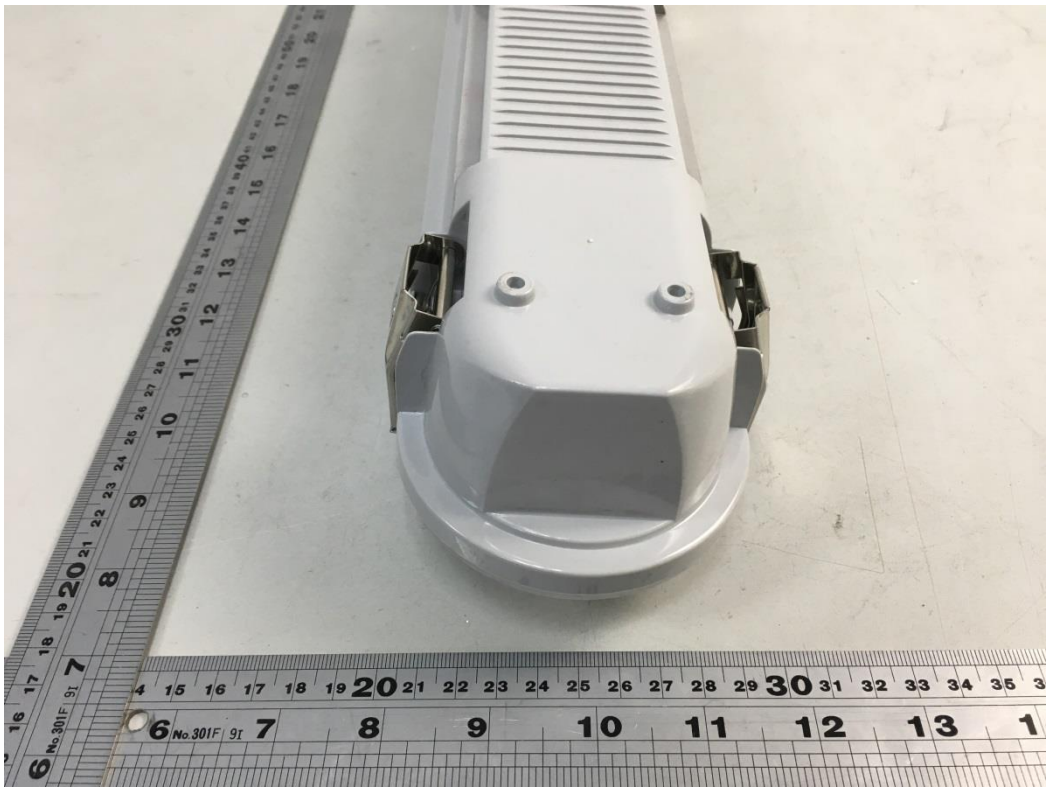
Type designation:
YL08-20W-650

Front view

Side view

Back view

Lamp side part for all models



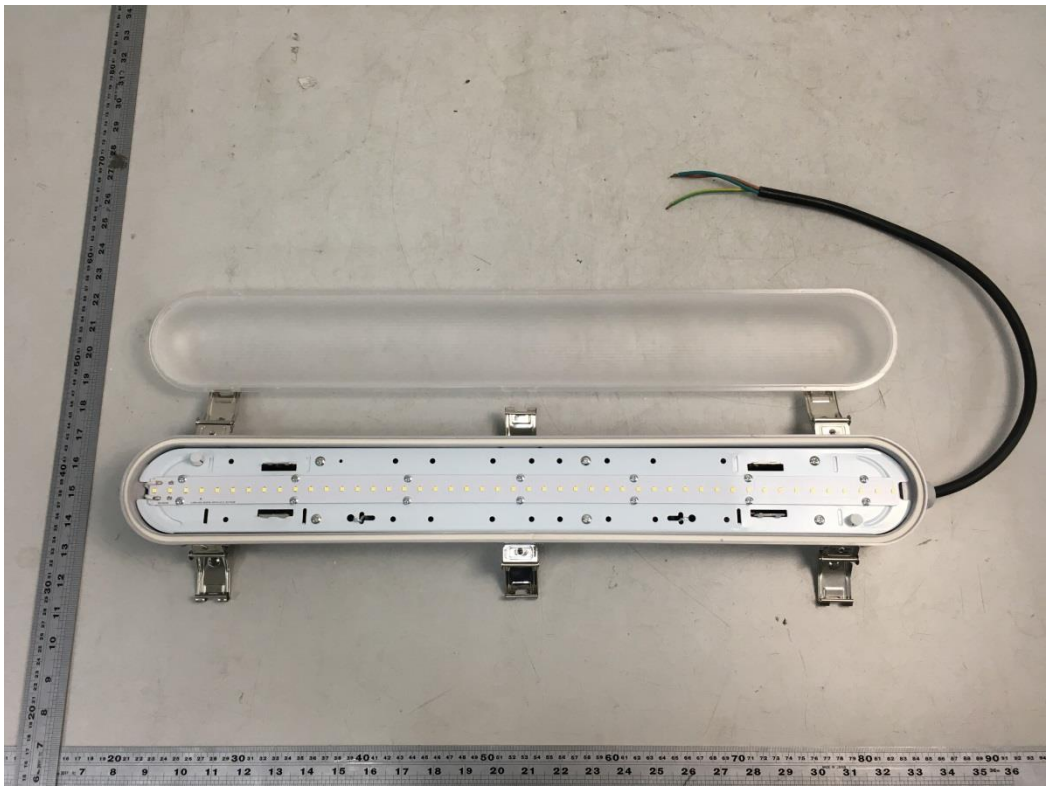
Lamp side part for all models

Lamp side part for all models

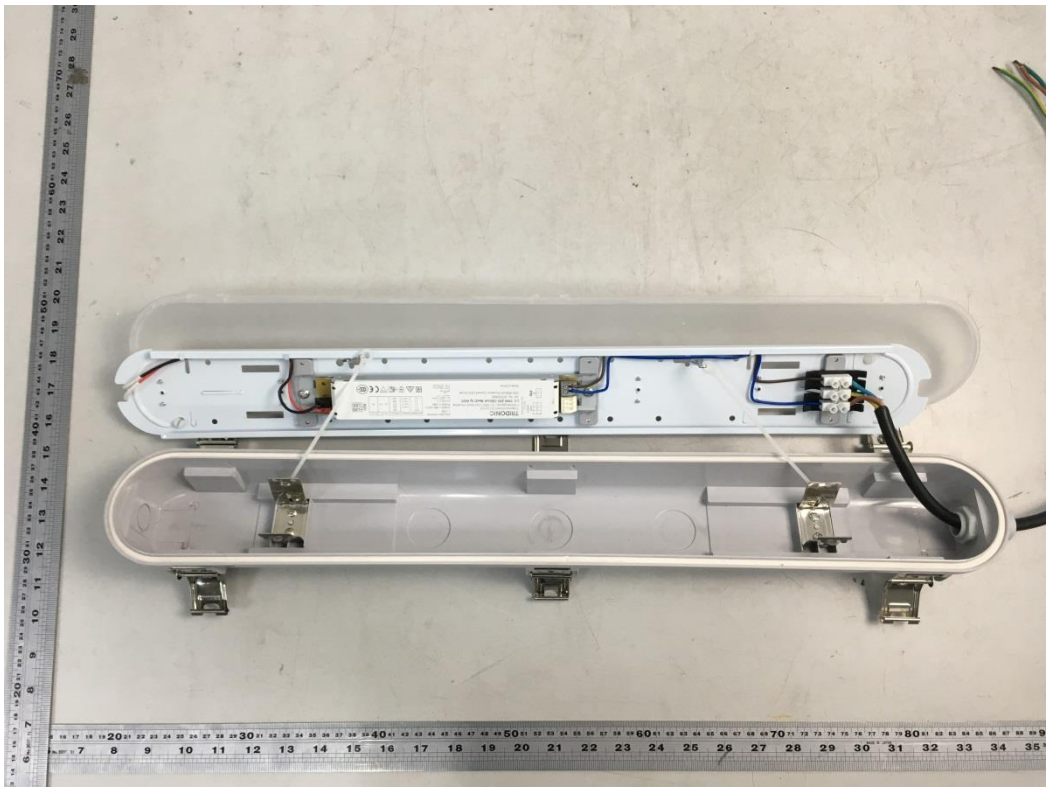
Lamp side part for all models

Fixed screw used on every buckle

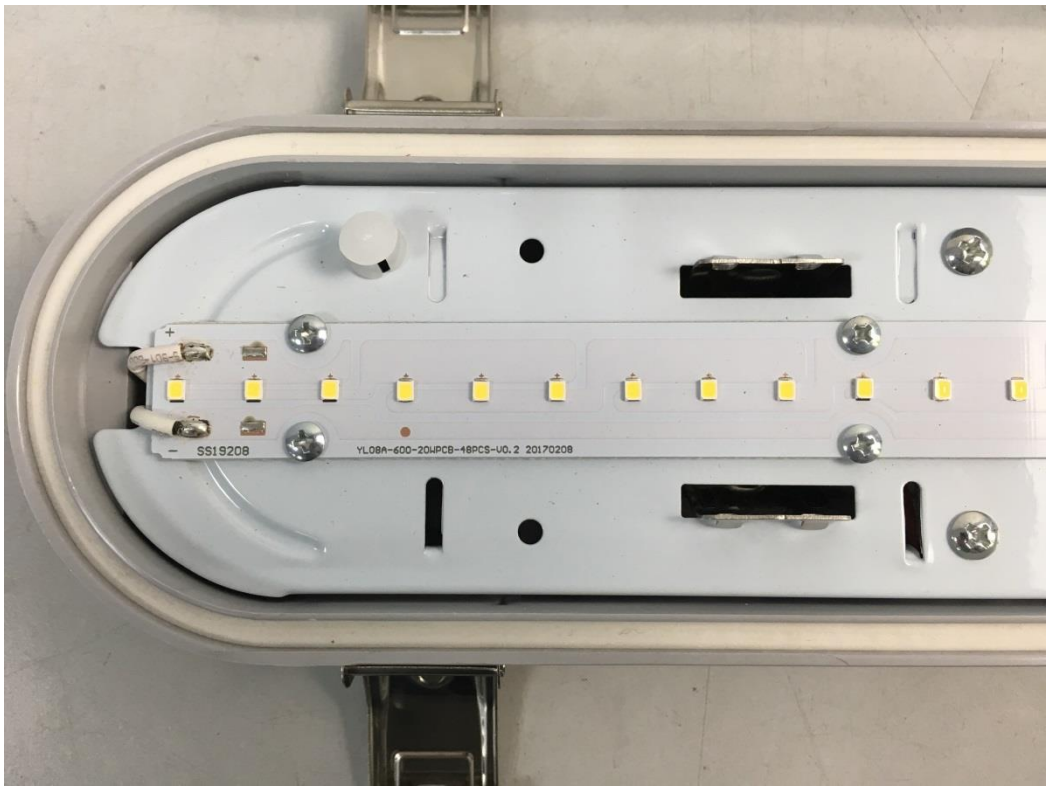
Fixed screw used on every buckle



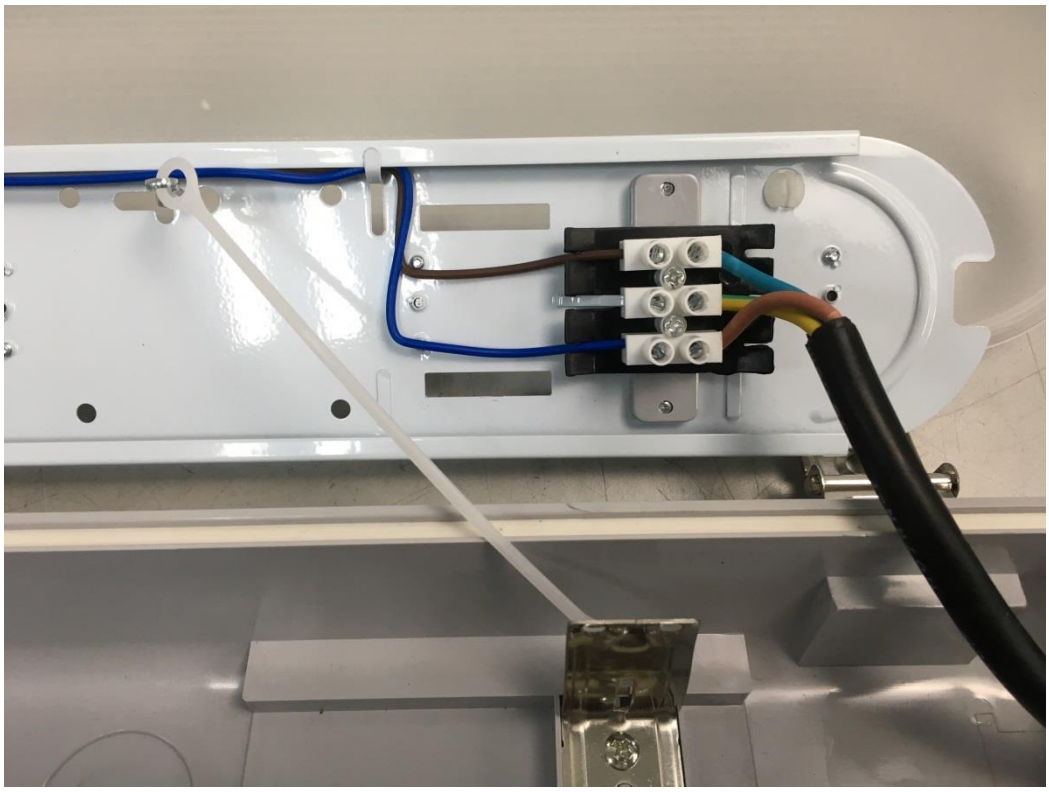
Internal view for YL08-20W-650



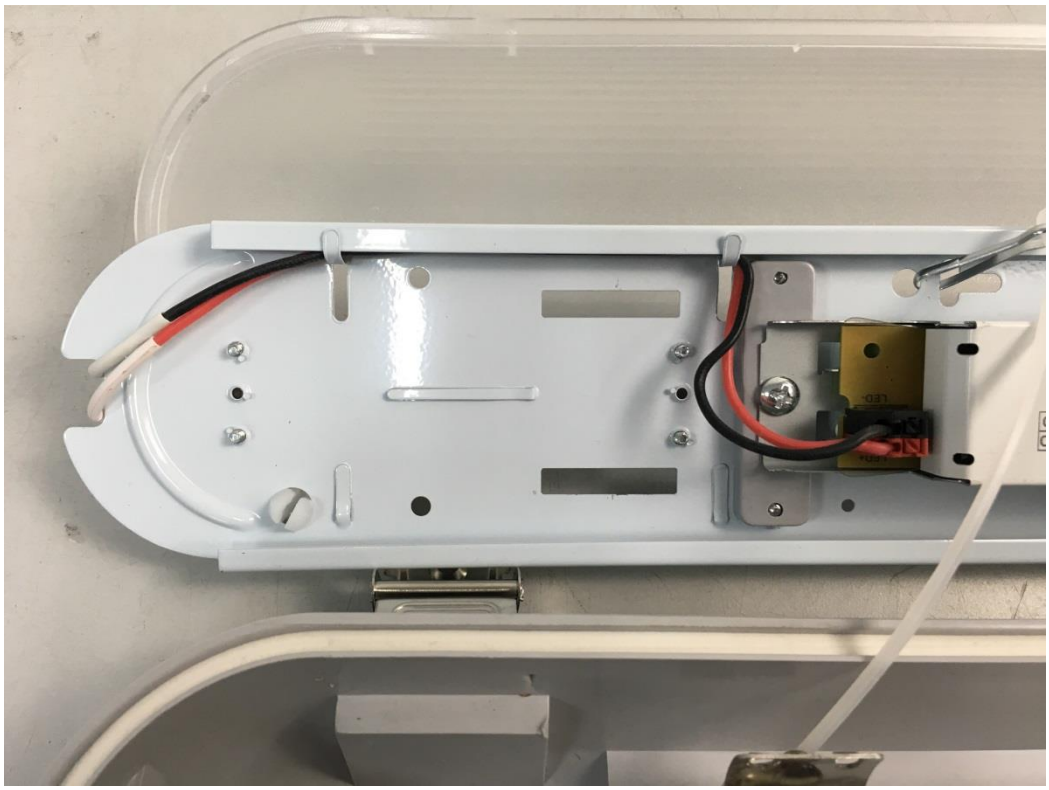
Internal view for YL08-20W-650



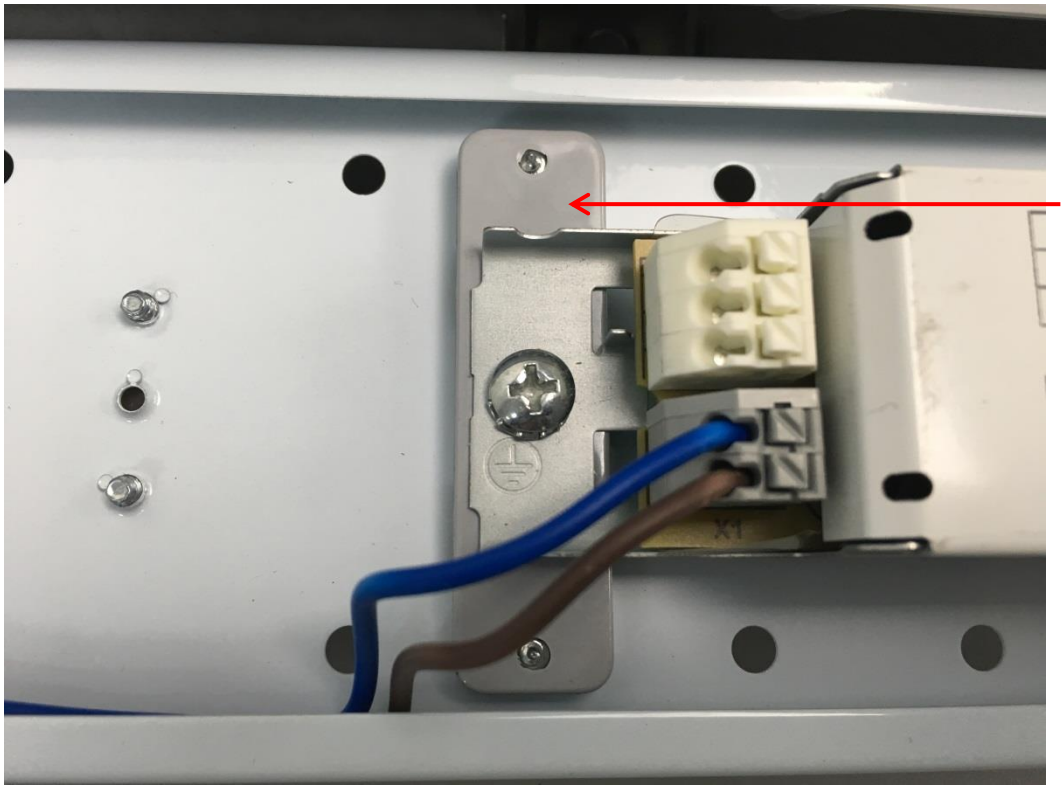
Internal view for YL08-20W-650



Internal view for YL08-20W-650



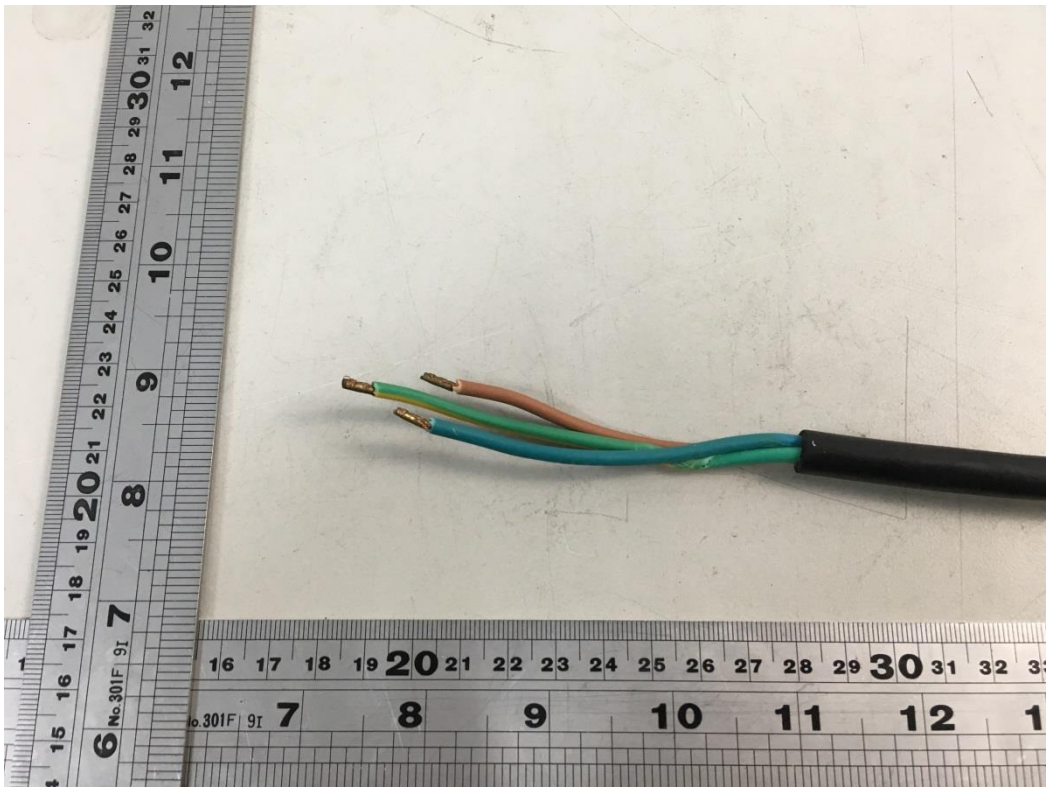
Internal view for YL08-20W-650



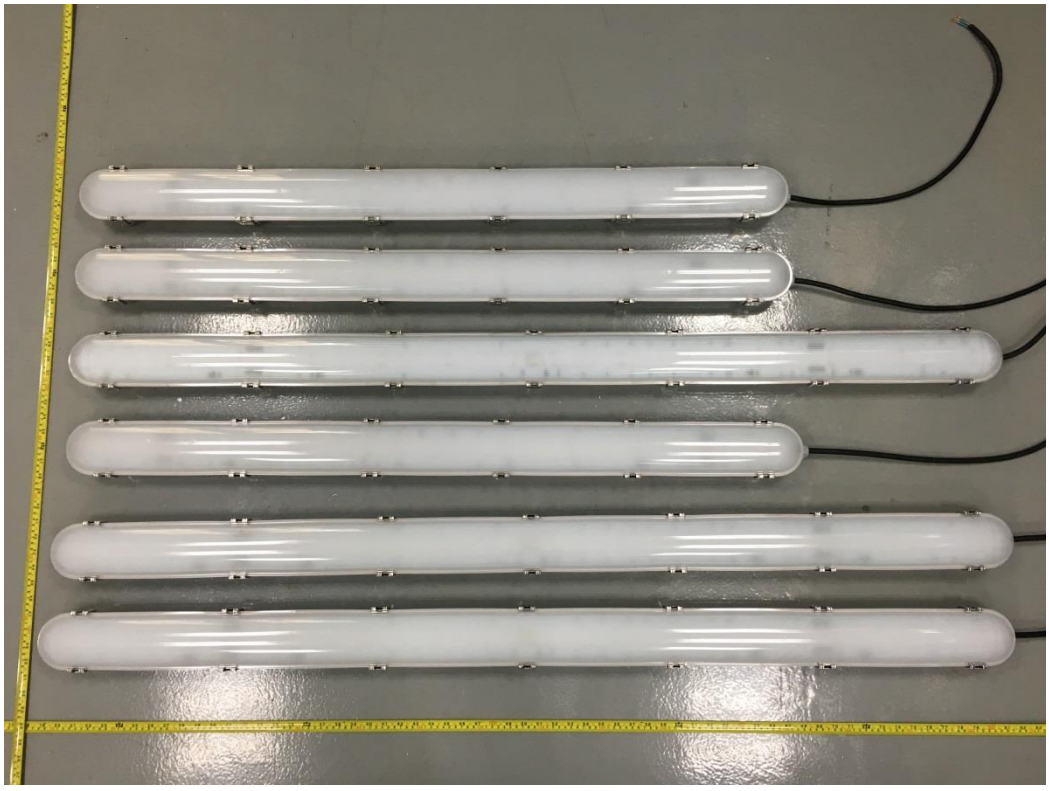
Internal view for YL08-20W-650

Earthing terminal on metal parts

Approved driver for YL08-20W-650

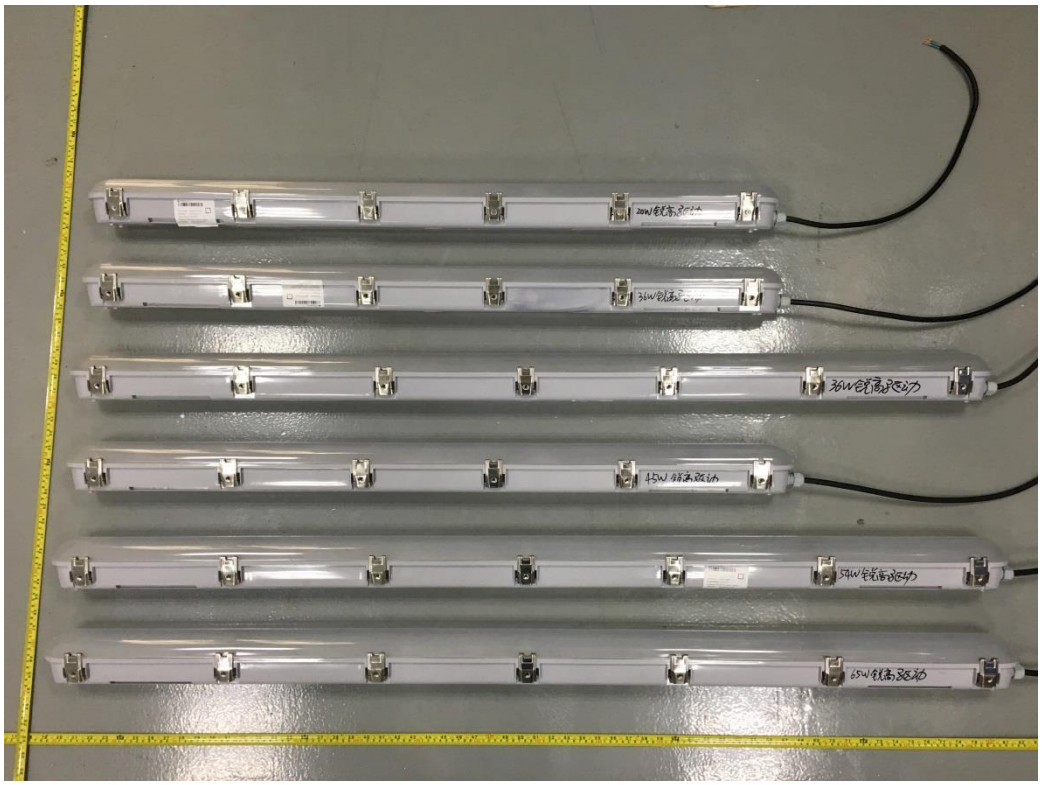


Connecting leads for all models

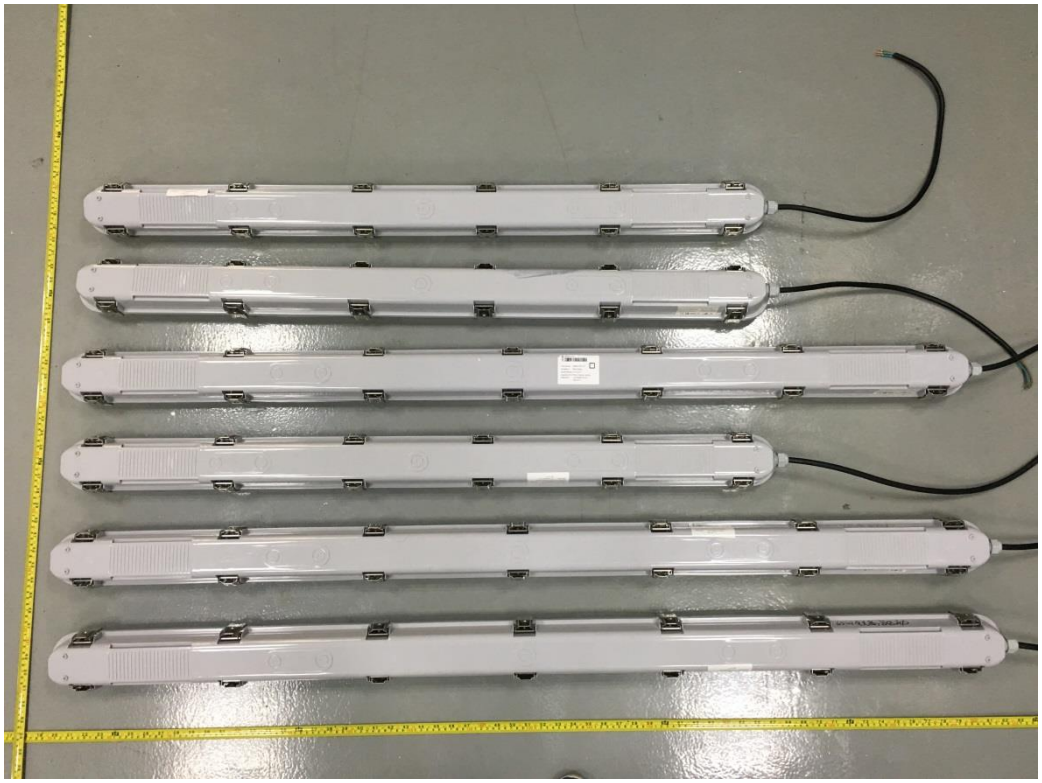


Type designation from top to bottom:
YL08-20W-1220,
YL08-36W-1220,
YL08-36W-1560,
YL08-45W-1220,
YL08-54W-1560,
YL08-65W-1560

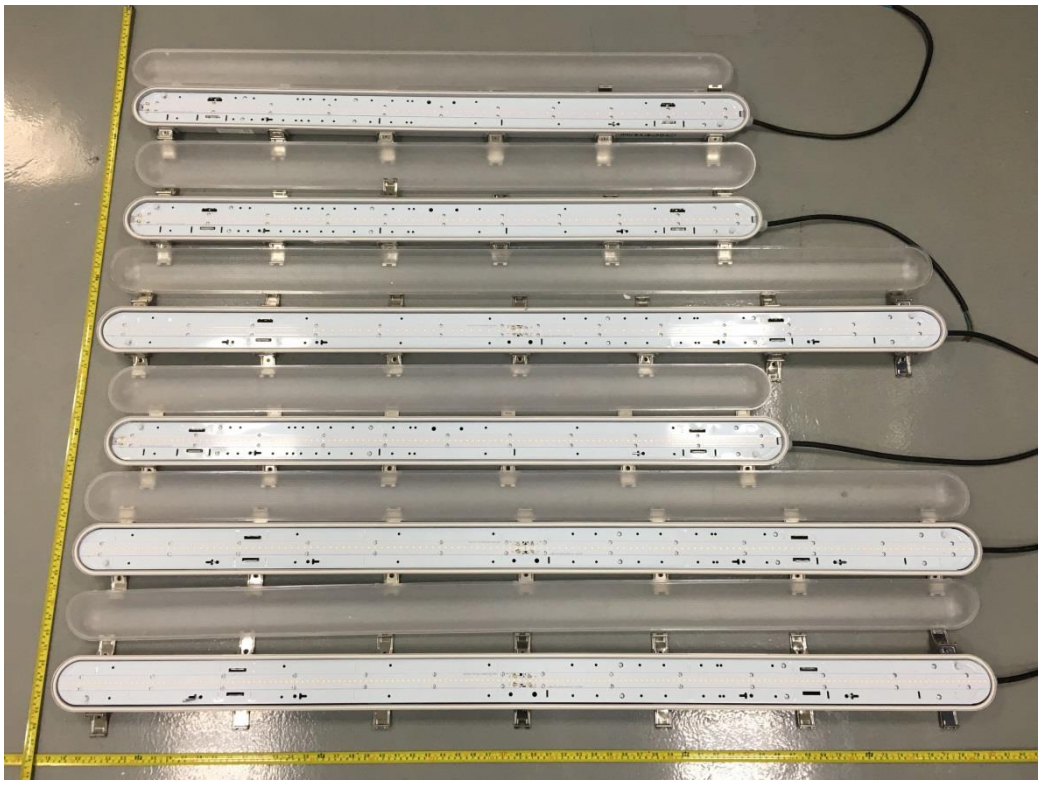
Front view



Side view

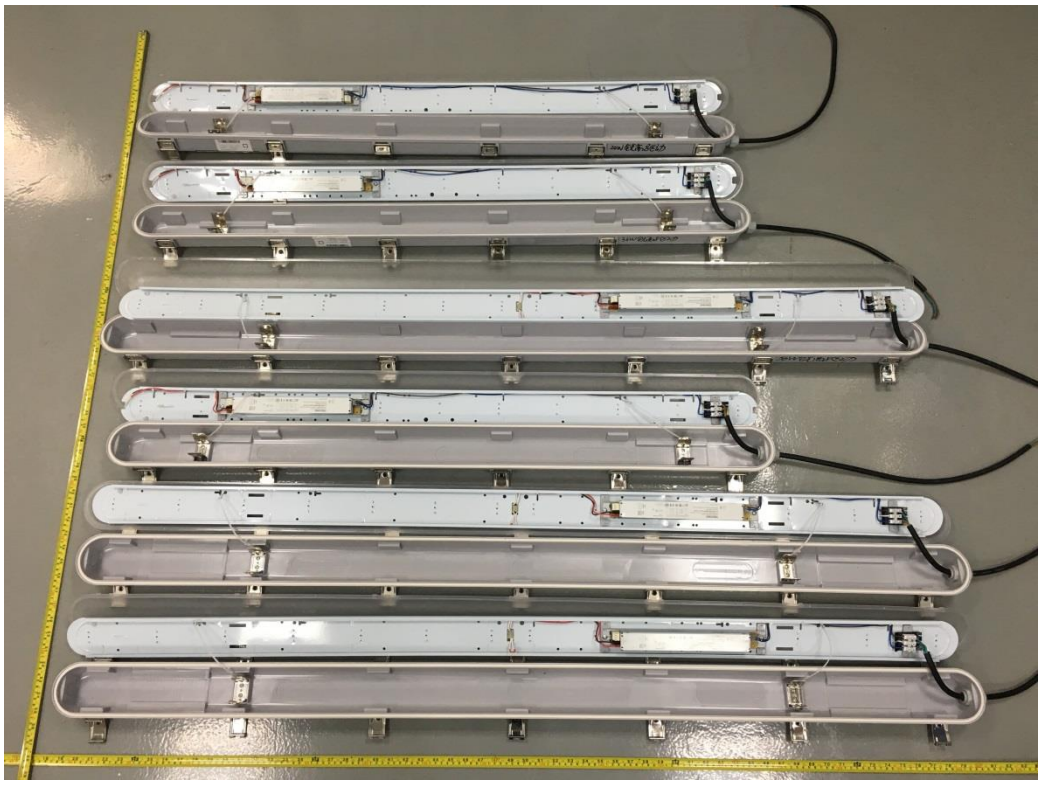


Back view

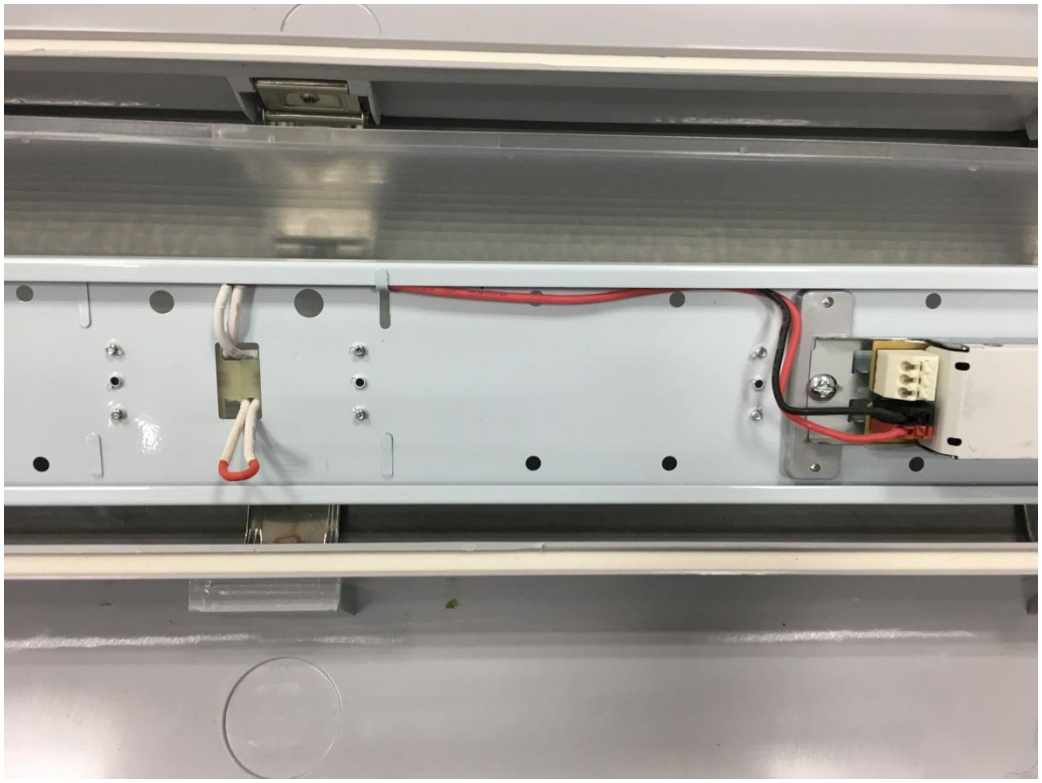


Internal view

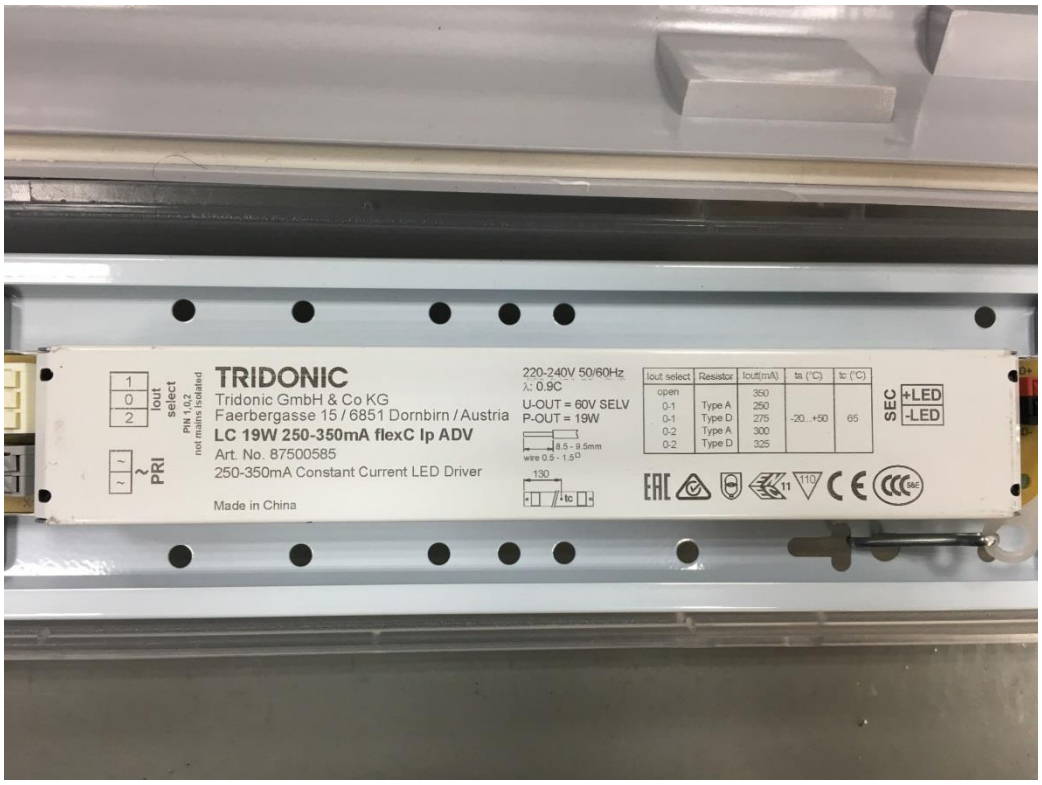
Internal view for '-1560' models



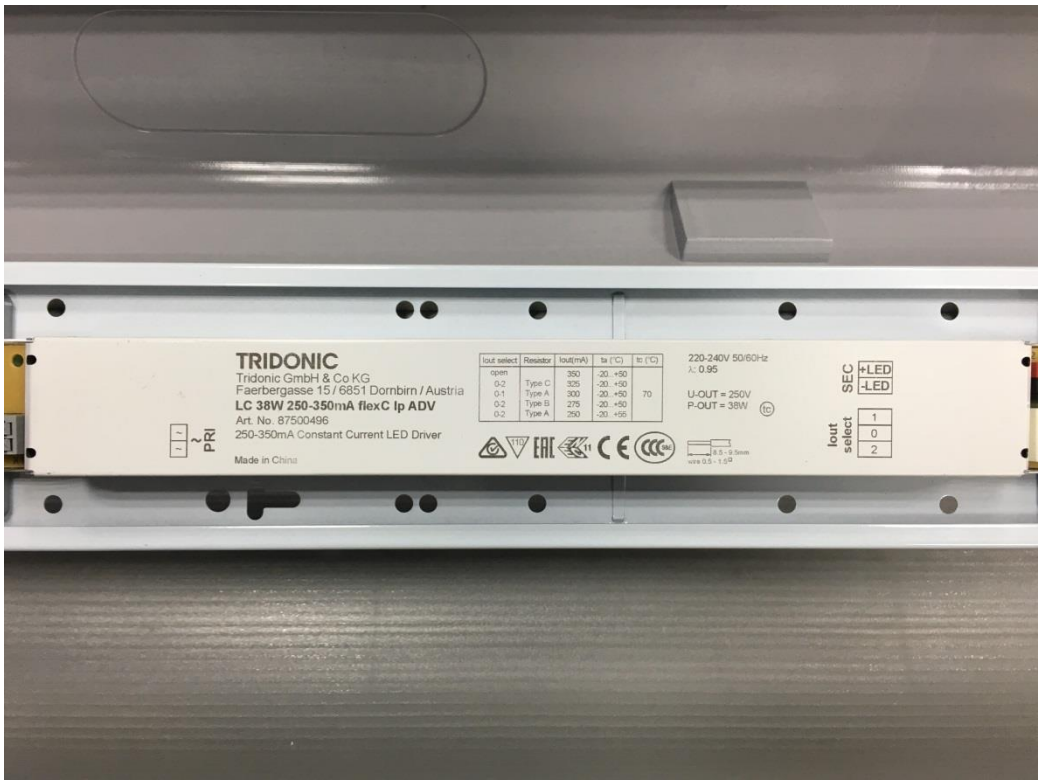
Internal view



Internal view for '-1560' models



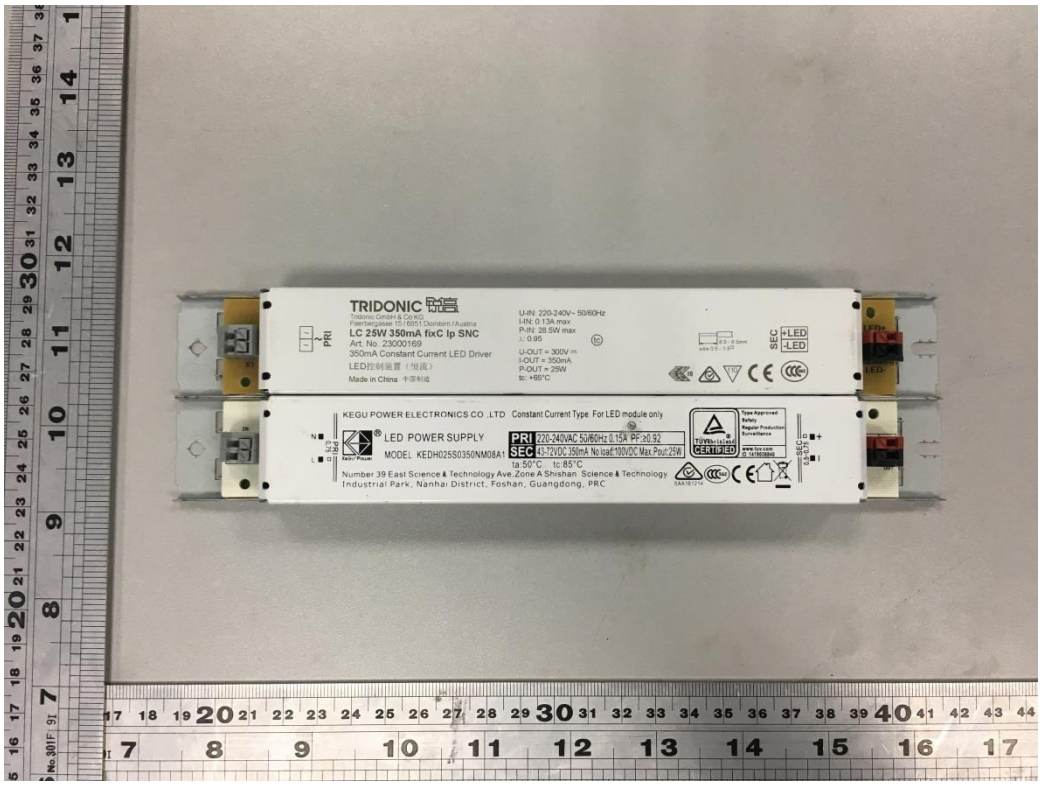
Approved driver for YL08-20W-1220



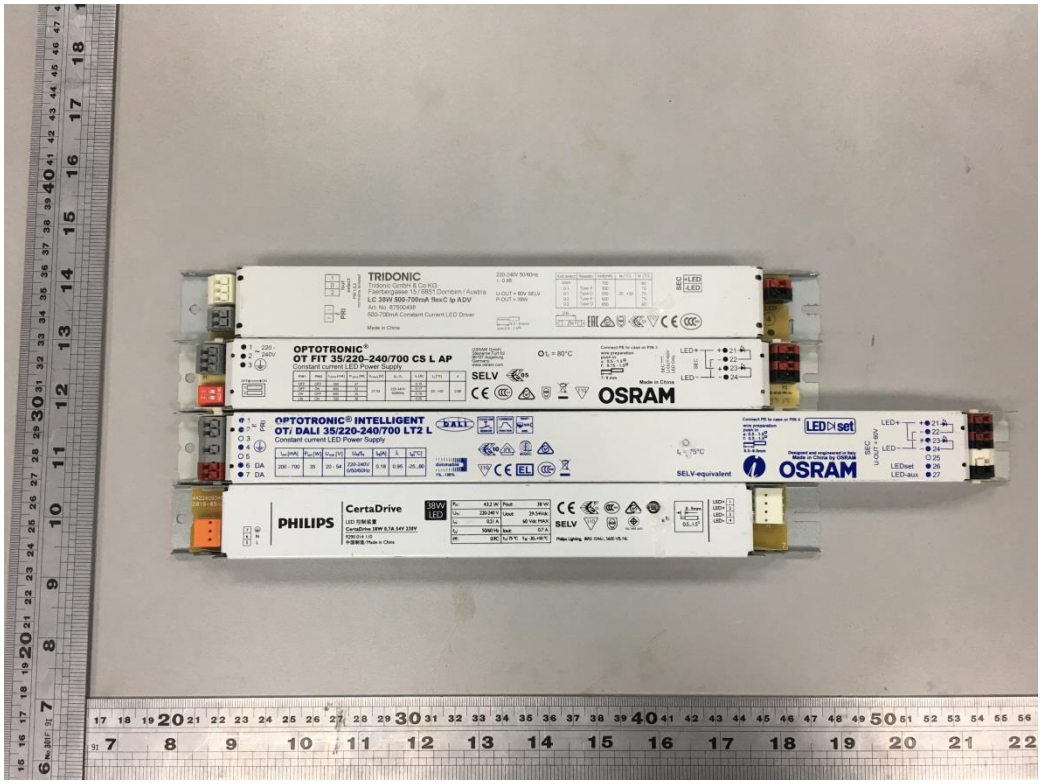
Approved driver for YL08-36W-1220, YL08-36W-1560

Approved driver for YL08-45W-1220, YL08-54W-1560

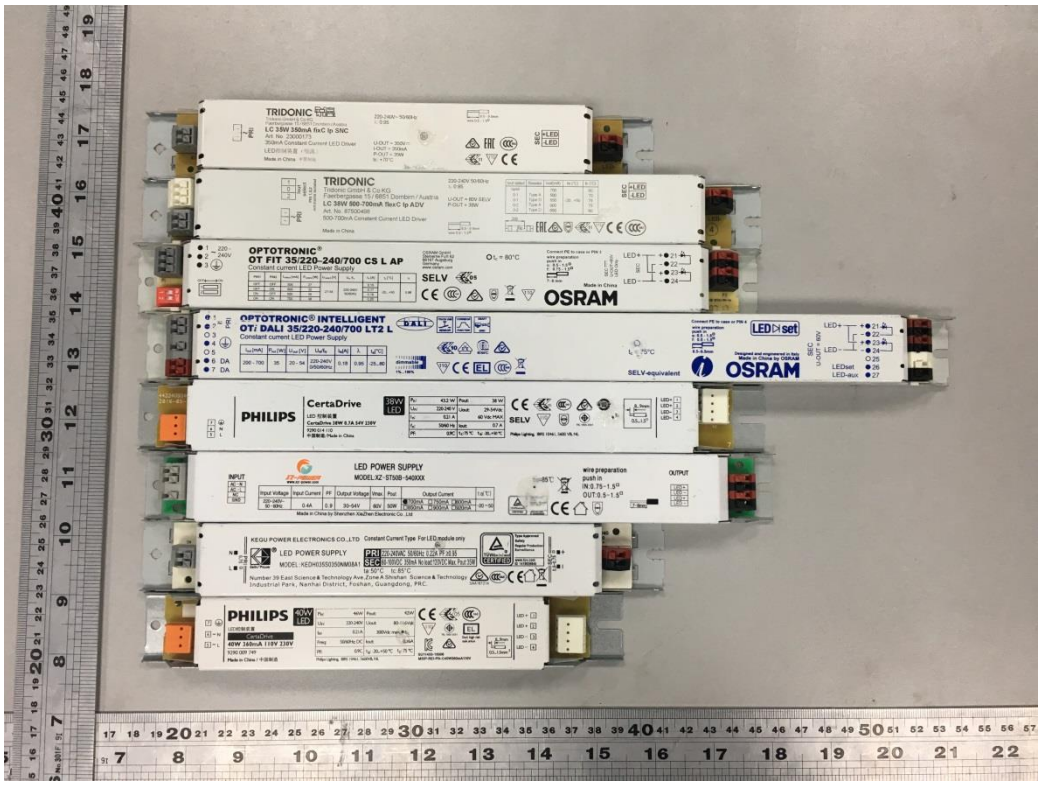
Approved driver for YL08-65W-1560



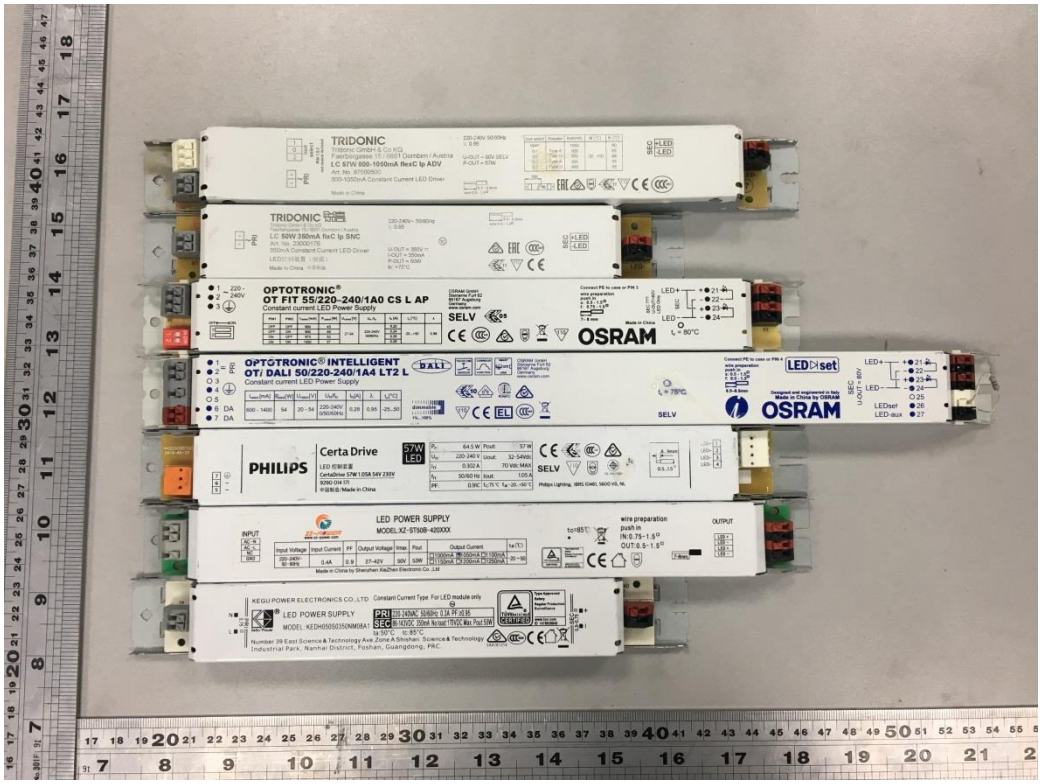
Alternative driver for YL08-20W-650, YL08-20W-1220



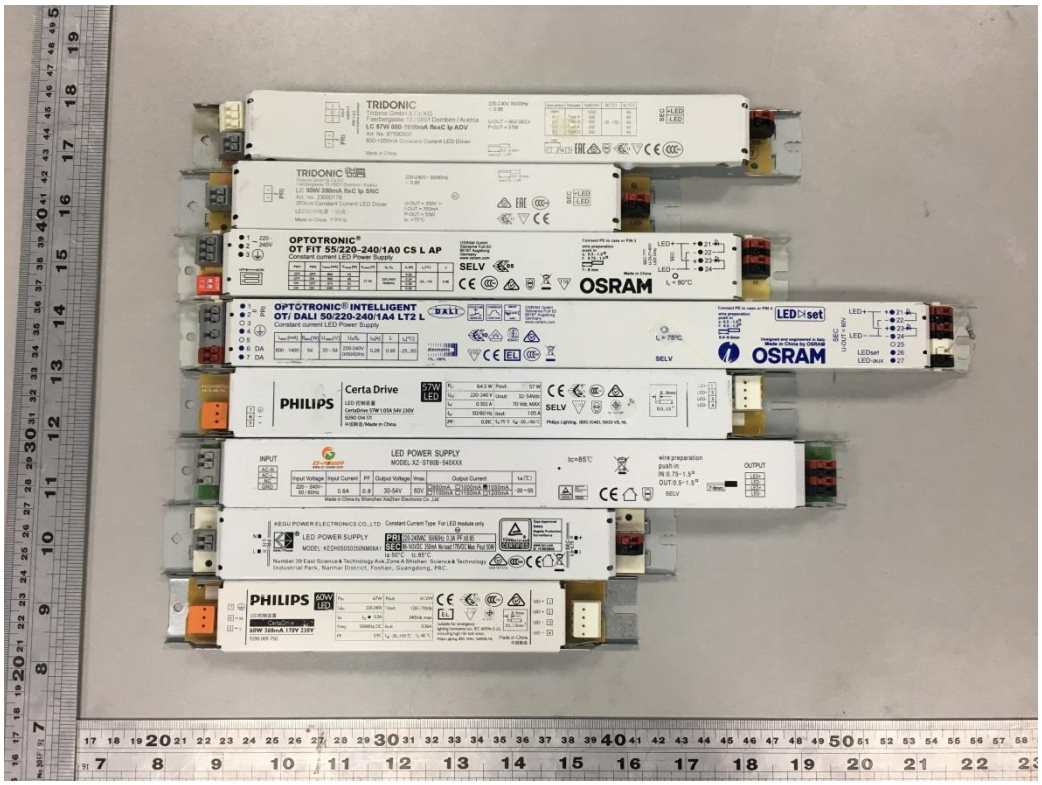
Alternative driver for YL08-30W-1220



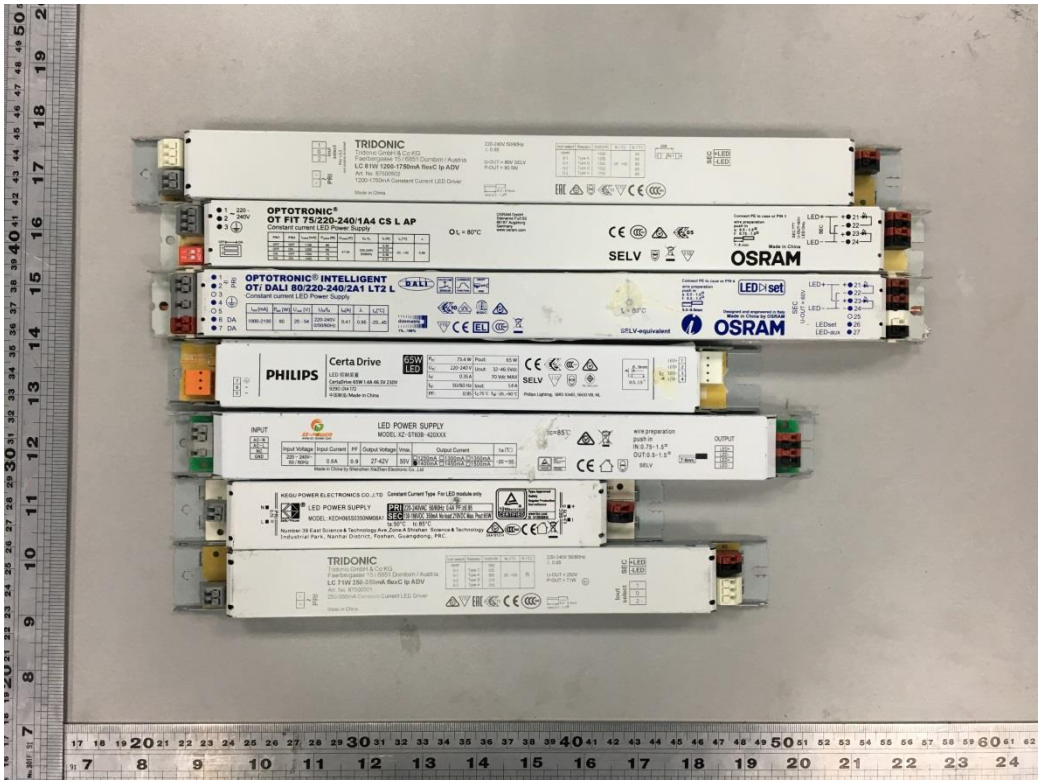
Alternative driver for YL08-36W-1220, YL08-36W-1560



Alternative driver for YL08-45W-1220

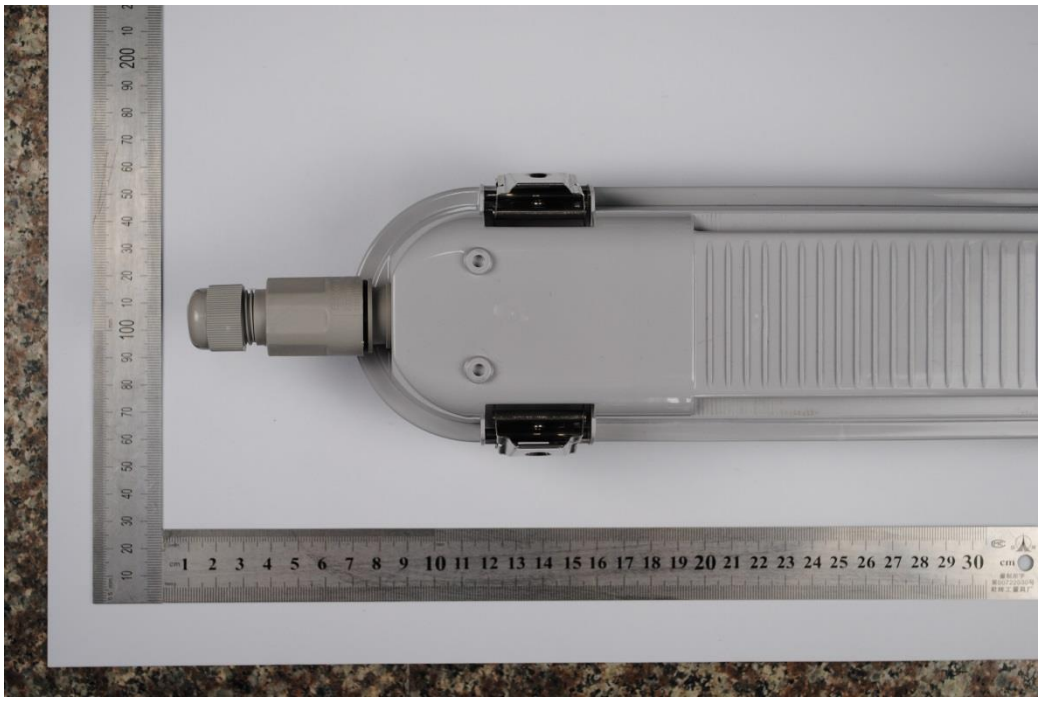


Alternative driver for YL08-54W-1560

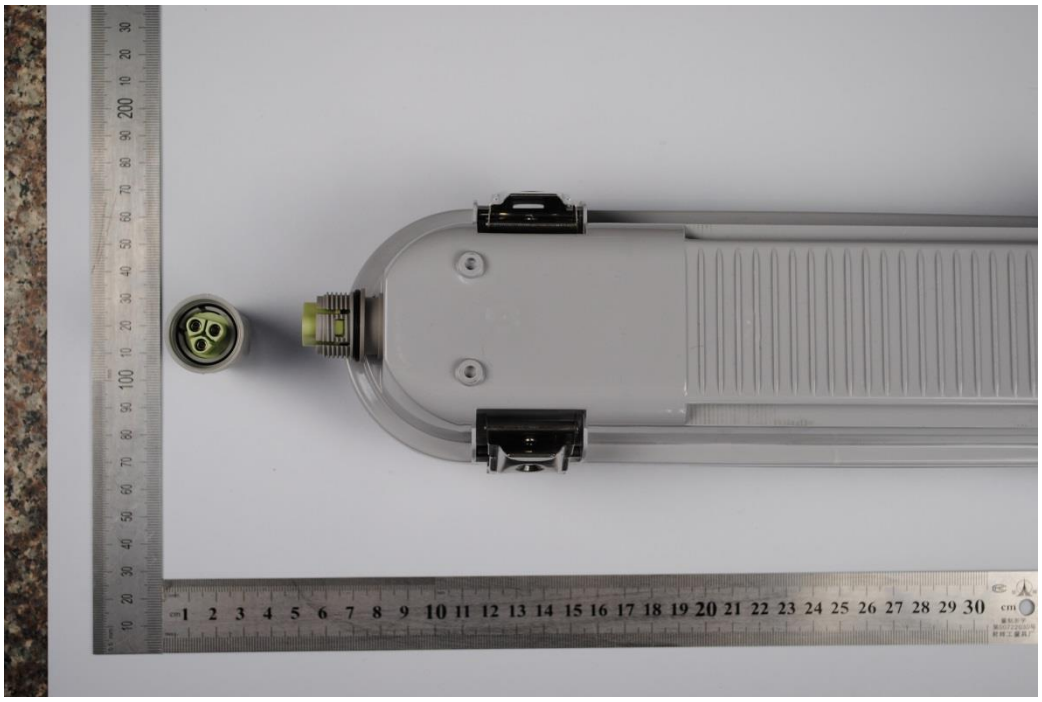


Alternative driver for YL08-65W-1560

Alternative driver for YL08-65W-1560

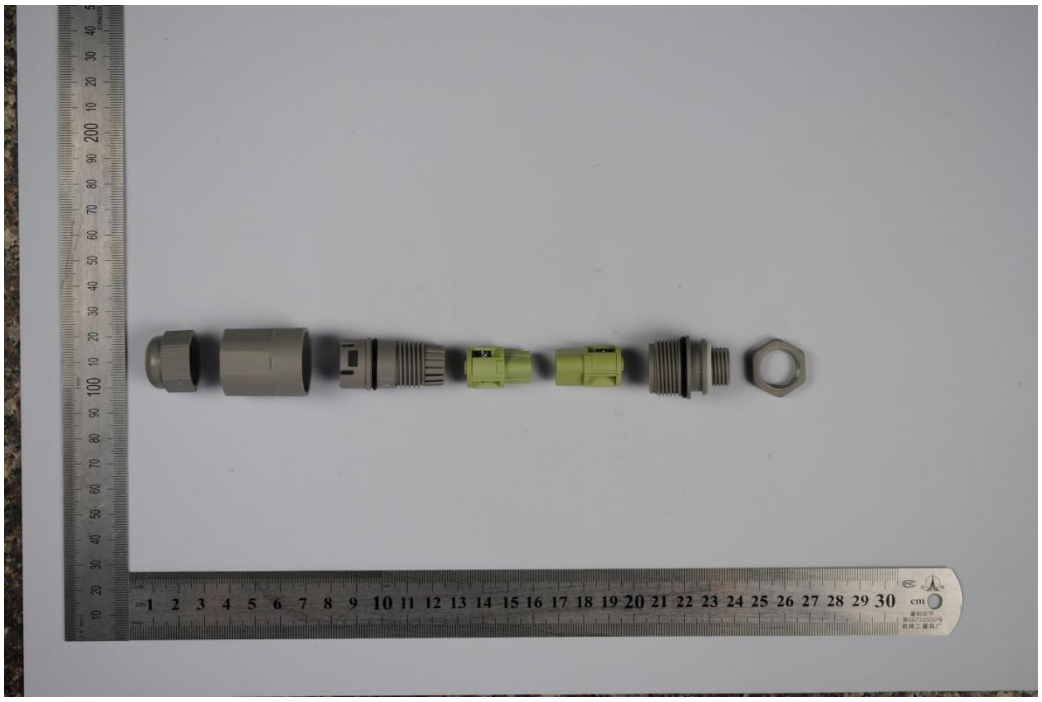


Alternative connector integrated in screw gland for all models

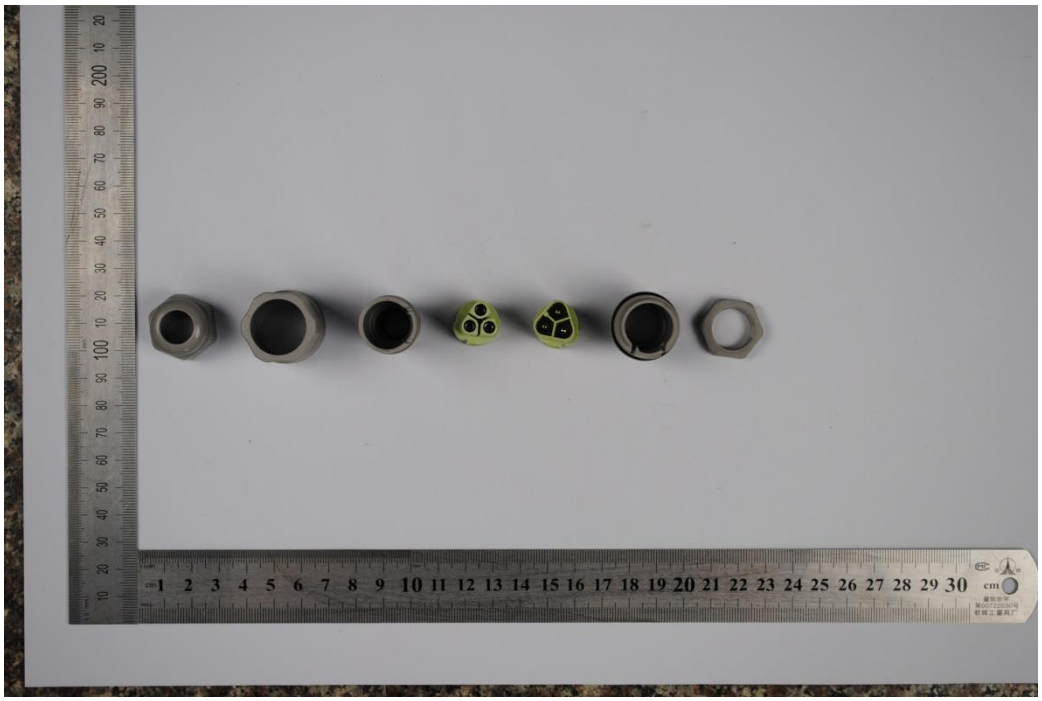


Alternative connector integrated in screw gland for all models

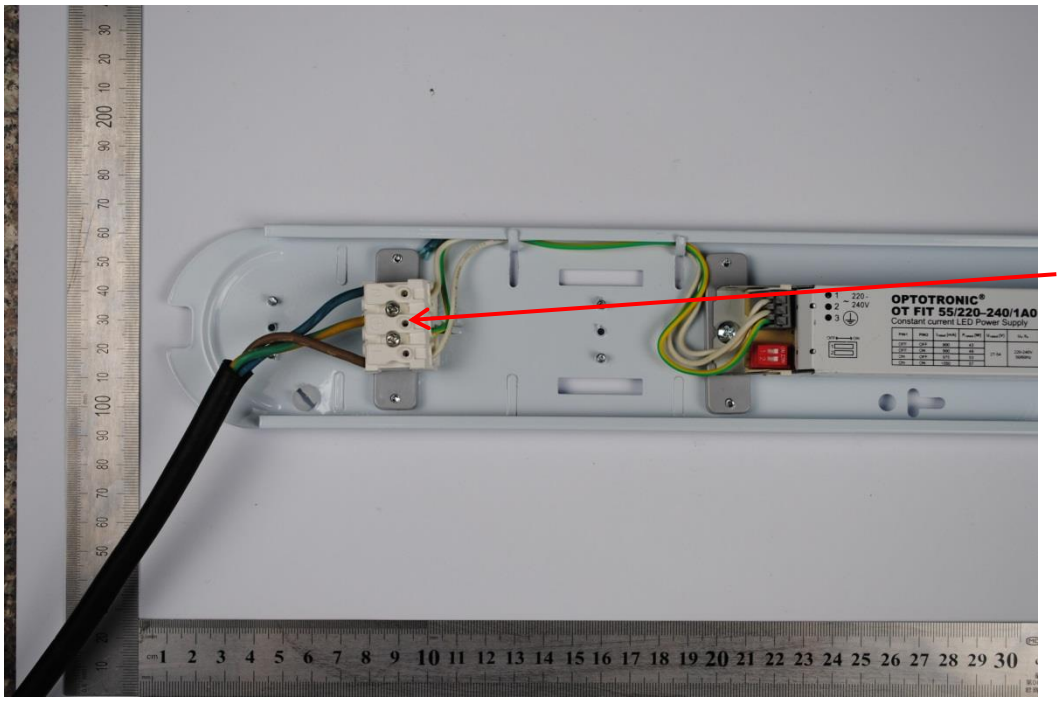
Approved connector integrated in screw gland



Approved connector integrated in screw gland

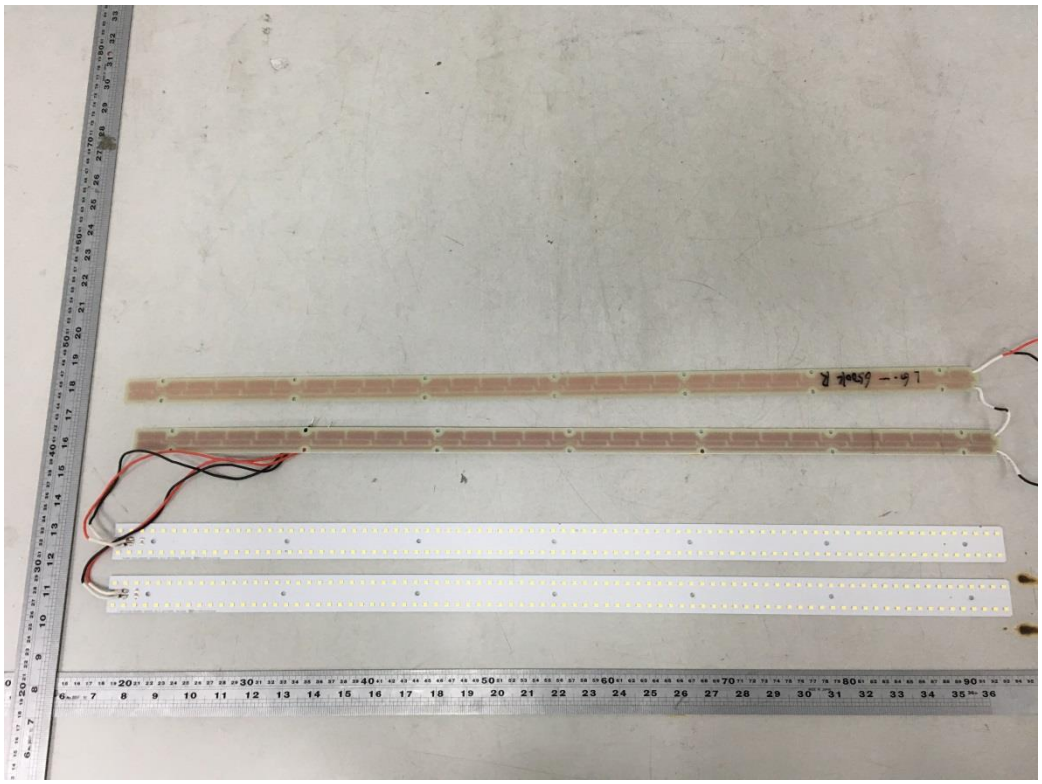


Approved connector integrated in screw gland



Alternative internal structure with earthing wire for all models

Approved screwless terminal



Two kinds of arrays of LED boards used (single row & double row)

Mounting accessories for all models

Alternative plastic buckle for all models