Test Report issued under the responsibility of:
PL-3 - ITE PREDOM Division

TEST REPORT
IEC 60598-2-3
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number. ..... :	**BS-3/134/B/19/M1**
Date of issue ..... :	Original Report Reference No. BS-3/134/B/19 + Attachment No. 1 (EU Group Differences and National Differences Report Reference No. 1 BS-3/134/B/1/19): 09.01.2020 Amendment No. 1 Report Reference BS-3/131/B/19/M1 + Attachment No. 1 (EU Group Differences and National Differences Report Reference No. BS-3/131/B/1/19/M1): 14.12.2020
Total number of pages ..... :	Original Report Reference No. BS-3/134/B/19: 71 pages + Attachment No. 1 (EU Group Differences and National Differences Report Reference No. 1 BS-3/134/B/1/19 - 1 pages) Amendment No. 1 Report Reference BS-3/134/B/19/M1: 110 pages + Attachment No. 1 (EU Group Differences and National Differences Report Reference No. BS-3/134/B/1/19/M1 - 1 page)
Name of Testing Laboratory preparing the Report..... :	Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland
Applicant's name ..... :	**LUG Light Factory Sp. z.o.o.**
Address ..... :	**65-127 Zielona Góra, ul. Gorzowska 11, Poland**
Test specification:	
Standard ..... :	IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60598_2_3L
Test Report Form(s) Originator .... :	Intertek Semko AB
Master TRF..... :	Dated 2018-03-09

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 ..... :	Luminaires for road and street lighting
Trade Mark ..... :	LUG
Manufacturer ..... :	**LUG Light Factory Sp. z.o.o.** ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Model/Type reference ..... :	**URBINO LED family cl. II – series –** see also "General product information"
Ratings ..... :	220-240V 50/60 Hz, IP66, – details see pages 6 - 52

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**CB Testing Laboratory:**	Łukasiewicz - IMiF PREDOM Division
Testing location/ address.....:		02-255 Warszawa, ul. Krakowiaków 53, Poland
Tested by (name, function, signature).....:		**J. Śmigrodzki**
Approved by (name, function, signature)...:		**T. Małyska**
Supervised by (+ signature) .....:		**A. Piotrowski**

☐	**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):

- Attachment No. 1 (Report Reference No. BS-3/134/B/1/19/M1 - 1 page)

Summary of testing: Positive

Tests performed (name of test and test clause):	**Testing location:**
IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017– all clauses.	Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland

Summary of compliance with National Differences: P

List of countries addressed

See Attachment No. 1 to this Test Report (Report Reference No. BS-3/134/B/1/19/M1 - 1 page)

☒ **The product fulfils the requirements of** EN 60598-2-3:2003, AMD1:2011 used in conjunction with EN 60598-1:2015, AMD1:2018

Copy of marking plate (example):

Test item particulars ..... :	Luminaire for road and street lighting
Classification of installation and use ..... :	Normal use
Supply Connection ..... :	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 ..... :	25.11.2020
Date (s) of performance of tests ..... :	25.11.2020 - 14.12.2020

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) ..... :	LUG Light Factory Sp z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland

General product information:

In the original Test Report No. BS-3/134/B/19 dated 09.01.2020, luminaires for road and street lighting URBINO LED family cl. II – series have been evaluated.

Amendment No.1 to Test Report No. BS-3/134/B/19/M1 dated 14.12.2020:
The original Test Report No. BS-3/134/B/19 dated 09.01.2020 was modified on 14.12.2020.

Scope of modifications of this Test Report:

1. Choice sheet have been modified.

old:

3. 5L - Type of power sypply:
2L - DIMM 1-10V
3L – DALI
5L – on-off
6L – on-off / DALI
7L/PL – programmable

new:

3. 3L - Type of power sypply:
2L - DIMM 1-10V
3L – DALI
5L – on-off
6L – on-off / DALI
7L/PL – programmable

old:

4. R8 - CRI:
R7 = 70-79
R8 = 80-89
R9 = 90-99

new:

4. R7 - CRI:
R7 = 70-79
R8 = 80-89
R9 = 90-99

old:

5. B40 - Color temperature:
B22 = 2200K
B27 = 2700K
B30 = 3000K
B40 = 4000K
B57 = 5700K
B65 = 6500K

new:

5. B40 - Color temperature:
B22 = 2200K
B27 = 2700K
B30 = 3000K
B40 = 4000K

old:

6. S305	-	Max. luminous flux (e.g. S305 = 3050lm)

new:

6. S3600	-	Max. luminous flux (e.g. S3600 = 36000lm)

old:

8. 10	**-**	Optic: 01 O2 - to expressways 02 O3 - to municipal roads 03 O4 - to city roads 04 O5 - to housing estate roads 05 O6P - for pedestrian crossings, right-hand traffic 09 O6L - for pedestrian crossings, left-hand traffic 06 O7 - for area lighting 08 O8 - to municipal and municipal roads 10 O26 - for wet surfaces 12 O33 - to expressways 13 O34 - to municipal roads 14 O35 - to city roads 15 O36 - to residential roads 16 O37P - for pedestrian crossings, right-hand traffic 17 O37L - for pedestrian crossings, left-hand traffic 18 O38 - for area lighting 19 O39 - to city and commune roads 20 O40 - for wet surfaces 30 O13 - to expressways 31 O14 - to municipal roads 32 O15 - to city roads 33 O16 - to housing estate roads XX OXX – for investment optics

new:

8. 38	**-**	Optic: 1 O1 - to highways 2 O2 - to expressways 3 O3 - to municipal roads 4 O4 - to city roads 5 O5 - to housing estate roads 7 O7 - for area lighting 8 O8 - to city and commune roads 10 O50 - to expressways 11 O51 - to municipal roads 12 O52 - to city roads 13 O53 - to housing estate roads 14 O54 - for area lighting 15 O55 - to city and commune roads 18 O58 – to express roads 19 O59 – to local roads 20 O60 - to town roads 21 O61 - to residential area roads 22 O62 - to area lighting 23 O63 - to town and local roads 24 O64 - to municipal and residential area roads

25 O65 - to express roads
26 O66 - to local roads
27 O67 - to town roads
28 O68 - to residential area roads
29 O69 - to area lighting
30 O70 - to town and local roads
31 O71 - to municipal and residential area roads
32 O72 - to street lighting
33 O73 - to street lighting
34 O74 - to street lighting
35 O75 - to street lighting
36 O76 - to street lighting
37 O77 - to street lighting
38 O78 - to street lighting
39 O79 - to street lighting
40 O80 - to street lighting
41 O81 - to street lighting
42 O82 - to street lighting
43 O83 - to street lighting
44 O84 - to street lighting
45 O85 - to street lighting
46 O86 - to street lighting
47 O87 - to street lighting
48 O88 - to street lighting
49 O89 - to street lighting
50 O90 - to street lighting
51 O91 - to street lighting
52 O92 - to street lighting
53 O93 - to street lighting
54 O94 - to street lighting
55 O95 - to street lighting
56 O96 - to street lighting
57 O97 - to street lighting
58 O98 - to street lighting
59 O99 - to street lighting
XX OXX – for investment optics

old:

9. W.P - Additional equipment:
A - additional corrosion protection
B - Tool-free access to the LED Driver
U - ø76mm pole
N - NEMA Socket
Z - ZHAGA Socket
T - NTC Sensor
W - Twilight Sensor
V - Surge Device Protector 10kV
P- Anti pressure vent
I - iBloc (“URBAN” smart city system)
K - Knife switch connector

new:

9. N.P - Additional equipment:
A - additional corrosion protection
B - Tool-free access to the LED Driver
U - ø76mm pole
N - NEMA Socket
Z - ZHAGA Socket
T - NTC Sensor
W - Twilight Sensor
V - Surge Device Protector 10kV
P- Anti pressure vent
I - iBloc (“URBAN” smart city system)
K - Knife switch connector

2. New components have been added:

LED module

old

ML1401010.W740.03A
ML1500300.W740.02A
ML1500301.W740.05A
ML1500301.W765.04A
ML1500301.W740.04A
ML1500302.W740.03A
ML1701400.W730.01A
ML1701400.W740.01A
ML1701401.W730.02A
ML1701401.W740.02A
ML1701401.W730.01A
ML1701402.W730.01A
ML1701403.W730.01A
ML1924107.W740.01A
ML1924106.W740.01A
ML1924105.W740.01A
ML1924108.W740.01A

new:

ML1401700.W740.03A
ML1401700.W740.03B
ML1401700.W740.03C
ML1401701.W740.03A
ML1401701.W740.03B
ML1401701.W740.03C
ML1302080.W740.03A
ML1302080.W740.03B
ML1302080.W740.03C
ML1302090.W740.03A
ML1302090.W740.03B
ML1302090.W740.03C
ML1924900.W730.01A
ML1924900.W730.01B
ML1924900.W730.01C
ML1924900.W740.01A
ML1924900.W740.01B
ML1924900.W740.01C

ML1924901.W730.01A
ML1924901.W730.01B
ML1924901.W730.01C
ML1924901.W740.01A
ML1924901.W740.01B
ML1924901.W740.01C
ML1924902.W730.01A
ML1924902.W730.01B
ML1924902.W730.01C
ML1924902.W740.01A
ML1924902.W740.01B
ML1924902.W740.01C
ML1701405.W730.01A
ML1701405.W730.01B
ML1701405.W730.01C
ML1701405.W740.01A
ML1701405.W740.01B
ML1701405.W740.01C
ML2027100.W722.01A
ML2027100.W722.01B
ML2027100.W722.01C
ML2027100.W727.01A
ML2027100.W727.01B
ML2027100.W727.01C
ML2027100.W730.01A
ML2027100.W730.01B
ML2027100.W730.01C
ML2027100.W740.01A
ML2027100.W740.01B
ML2027100.W740.01C
ML2027101.W722.01A
ML2027101.W722.01B
ML2027101.W722.01C
ML2027101.W727.01A
ML2027101.W727.01B
ML2027101.W727.01C
ML2027101.W730.01A
ML2027101.W730.01B
ML2027101.W730.01C
ML2027101.W740.01A
ML2027101.W740.01B
ML2027101.W740.01C
ML2027102.W722.01A
ML2027102.W722.01B
ML2027102.W722.01C
ML2027102.W727.01A
ML2027102.W727.01B
ML2027102.W727.01C
ML2027102.W730.01A
ML2027102.W730.01B
ML2027102.W730.01C
ML2027102.W740.01A
ML2027102.W740.01B
ML2027102.W740.01C
ML2027103.W722.01A
ML2027103.W722.01B
ML2027103.W722.01C
ML2027103.W727.01A

ML2027103.W727.01B
ML2027103.W727.01C
ML2027103.W730.01A
ML2027103.W730.01B
ML2027103.W730.01C
ML2027103.W740.01A
ML2027103.W740.01B
ML2027103.W740.01C
ML1500300.W740.02A
ML1500300.W740.02B
ML1500300.W740.02C
ML1500301.W740.05A
ML1500301.W740.05B
ML1500301.W740.05C
ML1500301.W765.04A
ML1500301.W765.04B
ML1500301.W765.04C
ML1500301.W740.04A
ML1500301.W740.04B
ML1500301.W740.04C
ML1401010.W740.03A
ML1401010.W740.03B
ML1401010.W740.03C
ML1500302.W740.03A
ML1500302.W740.03B
ML1500302.W740.03C
ML1701400.W730.01A
ML1701400.W730.01B
ML1701400.W730.01C
ML1701400.W740.01A
ML1701400.W740.01B
ML1701400.W740.01C
ML1701401.W730.02A
ML1701401.W730.02B
ML1701401.W730.02C
ML1701401.W740.02A
ML1701401.W740.02B
ML1701401.W740.02C
ML1701401.W730.01A
ML1701401.W730.01B
ML1701401.W730.01C
ML1701402.W730.01A
ML1701402.W730.01B
ML1701402.W730.01C
ML1701403.W730.01A
ML1701403.W730.01B
ML1701403.W730.01C
ML1924107.W740.01A
ML1924107.W740.01B
ML1924107.W740.01C
ML1924106.W740.01A
ML1924106.W740.01B
ML1924106.W740.01C
ML1924105.W740.01A
ML1924105.W740.01B
ML1924105.W740.01C
ML1924108.W740.01A
ML1924108.W740.01B

	ML1924108.W740.01C
	ML2027200.W722.01A
	ML2027200.W722.01B
	ML2027200.W722.01C
	ML2027200.W727.01A
	ML2027200.W727.01B
	ML2027200.W727.01C
	ML2027200.W730.01A
	ML2027200.W730.01B
	ML2027200.W730.01C
	ML2027200.W740.01A
	ML2027200.W740.01B
	ML2027200.W740.01C
	ML2027201.W722.01A
	ML2027201.W722.01B
	ML2027201.W722.01C
	ML2027201.W727.01A
	ML2027201.W727.01B
	ML2027201.W727.01C
	ML2027201.W730.01A
	ML2027201.W730.01B
	ML2027201.W730.01C
	ML2027201.W740.01A
	ML2027201.W740.01B
	ML2027201.W740.01C
	ML2027202.W722.01A
	ML2027202.W722.01B
	ML2027202.W722.01C
	ML2027202.W727.01A
	ML2027202.W727.01B
	ML2027202.W727.01C
	ML2027202.W730.01A
	ML2027202.W730.01B
	ML2027202.W730.01C
	ML2027202.W740.01A
	ML2027202.W740.01B
	ML2027202.W740.01C
	ML2027203.W722.01A
	ML2027203.W722.01B
	ML2027203.W722.01C
	ML2027203.W727.01A
	ML2027203.W727.01B
	ML2027203.W727.01C
	ML2027203.W730.01A
	ML2027203.W730.01B
	ML2027203.W730.01C
	ML2027203.W740.01A
	ML2027203.W740.01B
	ML2027203.W740.01C
Control gear	
	OT 165/220...240/1A0 1DIM G2 CE
	OT 165/170...240/1A0 4DIMLT2 G2 CE
	LCO 200W 200–1050mA 355V pD+ NFC C PRE3
	LCO 135W 200–1050mA 220V pD+ NFC C PRE3
	LCO 90W 200–1050mA 165V pD+ NFC C PRE3
	OT 75/UNV/1A0 2DIM P7
	OT 100/UNV/1A0 2DIM P7

OT 150/UNV/1A0 2DIM P7
OT 200/UNV/1A0 2DIM P7
OT 240/UNV/1A0 2DIM P7
OT 320/UNV/1A1 2DIM P7
OT 100/ 220-240/1A4 2DIM P7
OT 150/ 220-240/1A4 2DIM P7
OT 200/ 220-240/1A4 2DIM P7
OT 240/ 220-240/1A0 2DIM P7
EUM – 100S
EUM – 150S
EUM – 200S
EUM – 240S

Wires LED
H05V-K

Knife switch (connector)
M29 / M29 mini

3. Completed list of LED's and electronic led driver's system – details see pages 17 - 52
ML1401700.XXX
ML1401701.XXX
ML1302080.XXX
ML1302090.XXX
ML1924902.XXX
ML1924900.XXX
ML1924901.XXX
ML1701405.XXX
ML2027100.XXX
ML2027101.XXX
ML2027102.XXX
ML2027103.XXX
ML2027202.XXX
ML2027203.XXX
ML2027200.XXX
ML2027201.XXX

OT 165/220...240/1A0 1DIM G2 CE
OT 165/170...240/1A0 4DIMLT2 G2 CE
LCO 200W 200–1050mA 355V pD+ NFC C PRE3
LCO 135W 200–1050mA 220V pD+ NFC C PRE3
LCO 90W 200–1050mA 165V pD+ NFC C PRE3
OT 75/UNV/1A0 2DIM P7
OT 100/UNV/1A0 2DIM P7
OT 150/UNV/1A0 2DIM P7
OT 200/UNV/1A0 2DIM P7
OT 240/UNV/1A0 2DIM P7
OT 320/UNV/1A1 2DIM P7
OT 100/ 220-240/1A4 2DIM P7
OT 150/ 220-240/1A4 2DIM P7
OT 200/ 220-240/1A4 2DIM P7
OT 240/ 220-240/1A0 2DIM P7
EUM – 100S
EUM – 150S
EUM – 200S
EUM – 240S

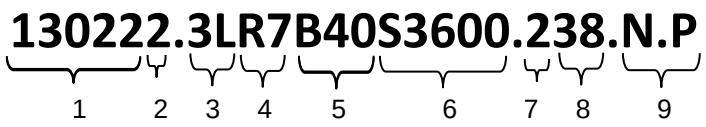
The choice sheet has been modified. List of system configuration have been revised.

After review of the construction, the additional tests for all clauses according to IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017 were considered necessary.
Also the tests related to differences derive from EN 60598-2-3:2003, A1:2011 used in conjunction with EN 60598-1:2015, A1:2018 were considered necessary (see Attachment No.1 to this test Report No. (BS-3/134/B/1/19/M1).

Name and address of the license holder:	LUG Light Factory Sp. z o.o. ul. Gorzowska 11, 65-127 Zielona Góra - Poland
Address of the factory:	LUG Light Factory Sp. z o.o. ul. Gorzowska 11, 65-127 Zielona Góra - Poland
Name of product:	**Luminaires for road and street lighting**
Type (model):	**URBINO LED family cl. II - series**
Trade mark :	**LUG**
Technical data:	
rated voltage	220 - 240V
rated frequency	50 / 60Hz
protection against electric shock	class II
degree of protection	IP 66; IK09
ta	(-40˚C / -30˚C)* to 50˚C * - depending on the control gear used

Choice sheet of the luminaires URBINO LED cl II - series:

Example of symbol:



Designations used on the marking of luminaries (some designation may not appear in the name) :

1. 13022 - Code of the series (URBINO)

2. 2 - Color:
2: grey
5: graphite
0: another

3. 3L - Type of power sypply:
2L - DIMM 1-10V
3L – DALI
5L – on-off
6L – on-off / DALI
7L/PL – programmable

4. R7 - CRI:
R7 = 70-79
R8 = 80-89

5. B40 - Color temperature:
B22 = 2200K
B27 = 2700K
B30 = 3000K
B40 = 4000K

6. S3600	- Max. luminous flux (e.g. S3600 = 36000lm)
7. 2	- Safety Class II
8. 38	- Optic: 01 O2 - for expressways 02 O3 - for municipal roads 03 O4 - for city roads 04 O5 - for residential roads 05 O6P - for pedestrian crossings, right-hand traffic 09 O6L - for pedestrian crossings, left-hand traffic 06 O7 - for area lighting 08 O8 - for city and commune roads 10 O26 - for wet surfaces 12 O33 - for expressways 13 O34 - to municipal roads 14 O35 - for city roads 15 O36 - for residential roads 16 O37P - for pedestrian crossings, right-hand traffic 17 O37L - for pedestrian crossings, left-hand traffic 18 O38 - for area lighting 19 O39 - for city and commune roads 20 O40 - for wet surfaces 30 O13 - for expressways 31 O14 - to municipal roads 32 O15 - for city roads 33 O16 - to residential roads 35 O59 - for municipal roads 36 O60 - for city roads 37 O61 - for residential roads 38 O62 - for expressways 39 O63 - for local roads 40 O64 - for city roads 41 O65 - for residential roads 42 O66 - for pedestrian crossings, left-hand traffic 43 O67 - for pedestrian crossings, right-hand traffic 44 O68 - for area lighting 45 O69 - for city and commune roads 46 O70 - for wet surfaces 47 O71 - for road lighting 48 O72 - for road lighting 49 O73 - for road lighting 50 O74 - for road lighting 51 O75 - for road lighting 52 O76 - for road lighting 53 O77 - for road lighting 54 O78 - for road lighting 55 O79 - for road lighting 56 O80 - for road lighting 57 O81 - for road lighting 58 O82 - for road lighting 59 O83 - for road lighting 60 O84 - for road lighting 61 O85 - for road lighting 62 O86 - for road lighting 63 O87 - for road lighting 64 O89- for road lighting 65 O90 - for road lighting 66 O91 - for road lighting 67 O92 - for road lighting 68 O93 - for road lighting

	69 O94 - for road lighting 70 O95 - for road lighting 71 O96 - for road lighting 72 O97 - for road lighting 73 O98 - for road lighting 74 O99 - for road lighting XX OXX – for investment optics
9. N.P	- Additional equipment A - additional corrosion protection B - Tool-free access to the LED Driver U – ø76mm pole N - NEMA Socket Z - ZHAGA Socket T - NTC Sensor W - Twilight Sensor V - Surge Device Protector 10kV P- Anti pressure vent I - iBloc (“URBAN” smart city system) K - Knife switch connector

List of LED's and electronic led driver's system:

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
Osram OT 165/170-240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Osram OT 60/170-240/1A0 4DIMLT2 E	60	30	115	1050	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT180W/UNV/800C/2DIMLT2/P6	180	82	280	800	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	compatible
OT100W/UNV/800C/2DIMLT2/P6	100	50	185	800	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	-
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
OT 20/170-240/1A0 1DIM LT2 G1 CE	22	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170-240/1A0 1DIM LT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 75/170...240/1A0 1DIMLT2 G1 CE	75	35	115	1050	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Philips Xi Dim 250W 0.7A 1-10V 230V	250	178	357	700	-40...+55^{0}C	-	-	-	-	-	-	compatible
Philips Xi LP 150W 0.3-1.0A S1 230V S240 sXt	150	70	214	1050	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Tridonic LCA 120W 300-1050mA 1-10V ADV	120	40	114	1050	-30...+55^{0}C	compatible	compatible	-	-	-	-	-
Tridonic LCA 75W 250–750mA one4all C	75	45	130	750	-40...+70^{0}C	compatible	compatible	compatible	compatible	-	-	-
Tridonic LCA 120W 350–1050mA o	120	105	320	1050	-40...+70^{0}C	-	-	-	-	compatible	compatible	compatible
Tridonic LCA 160W 350–1050mA o	160	105	320	1050	-40...+70^{0}C	-	-	-	-	compatible	compatible	compatible
OT DX 40/220…240/1A0 DIMA LT2 E	40	15	56	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT DX 75/220…240/1A0 DIMA LT2 E	75	35	115	1050	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT DX 110/220…240/1A0 DIMA LT2 E	110	75	220	1050	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
OT DX 165/220…240/1A0 DIMA LT2 E	165	130	260	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
OT 20/170…240/1A0 4DIMLT2 G2 CE	20	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 4DIMLT2 G2 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
OT 75/170…240/1A0 4DIMLT2 G2 CE	75	35	115	1050	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT 110/170…240/1A0 4DIMLT2 G2 CE	110	80	220	1050	-40...+60^{0}C	-	-	compatible	compatible	compatible	compatible	-
OT 20/170…240/1A0 1DIMLT2 G1 CE	20	10	38	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 1DIMLT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
OT 40/120…277/1A0 4DIMLT2 E	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 60/170…240/1A0 4DIMLT2 E	60	30	115	1050	-40...+60^{0}C	compatible	compatible	-	-	-	-	-
OT 90/170…240/1A0 4DIMLT2 E	90	57	186	1050	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	-
OT 165/170…240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
OT 50/120…277/800 2DIMLT2 P	50	30	115	800	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT 50/120…277/1A2 2DIMLT2 P	50	20	55	1250	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/120…277/800 2DIMLT2 P	100	50	186	800	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	-
OT 110/120…277/1A4 2DIMLT2 P	110	35	85	1400	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT 60/220…240/1A4 1DIMA P7	60	43	86	1400	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT 100/220…240/1A4 1DIMA P7	100	72	144	1400	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
OT 150/220…240/1A4 1DIMA P7	150	91	350	1400	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
OT 200/220…240/1A4 1DIMA P7	200	121	286	1400	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 40W 0.7A Prog+ GL-J sXt	40	29	57	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.35-0.70A GL Prog+ sXt	75	80	152	700	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
Xitanium 75W 0.1-1.05A Prog GL F sXt	75	36	75	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 100W 0.7A Prog+ GL-Z sXt	100	71	143	700	-40...+55^{0}C	-	-	compatible	compatible	-	-	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
Xitanium 150W 0.1-1.05A Prog+ GL F sXt	150	70	148	1050	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
Xitanium 150W 0.35-0.70A GL Prog sXt	150	125	280	700	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xitanium 300W 1.5A Prog+ GL-R sXt	300	80	280	1050	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	compatible
Xi BP 12W 0.1-0.5A S 230V C100	12	13	39	500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 22W 0.2-0.7A S 230V C123	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 40W 0.2-0.7A S 230V C123	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 40W 0.3-1.0A S 230V C123	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.2-0.7A S1 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.3-1.0A S1 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A S1 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A S1 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A S1 230V C133 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 75W 0.3-1.0A S1 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xi LP 75W 0.5-1.5A S1 230V C133 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 110W 0.2-0.7A S1 230V C133 sXt	110	70	220	700	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi LP 110W 0.3-1.0A S1 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 165W 0.2-0.7A S1 230V C170 sXt	165	100	300	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi LP 165W 0.3-1.0A S1 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi LP 165W 0.5-1.5A S1 230V C170 sXt	165	54	157	1500	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 22W 0.2-0.7A S1 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.3-1.0A S1 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	40	23	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A SL 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A S1 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A SL 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A SN 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A S1 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 75W 0.2-0.7A SL 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 75W 0.3-1.0A S1 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xi LP 75W 0.3-1.0A SL 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xi LP 75W 0.2-0.7A SN 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 75W 0.5-1.5A S1 230V S240 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.2-0.7A S1 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi LP 150W 0.2-0.7A SL 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi LP 150W 0.3-1.0A SL 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi LP 150W 0.5-1.5A S1 230V S240 sXt	150	50	142	1500	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 150W 0.2-0.7A SN 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 70W 0.3-1.0A NLD C150 230V sXt	70	30	100	1000	-30...+60^{0}C	compatible	compatible	-	-	-	-	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	75	25	71	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	100	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	110	70	220	700	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi FP 110W 0.3-1.0A NLD C150 230V sXt	110	60	200	1000	-30...+60^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi FP 165W 0.3-1.0A SNLDAE 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi FP 165W 0.2-0.7A SNLDAE 230V C170 sXt	165	100	300	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi FP 330W 0.2-0.75A SNDAE 230V C240 sXt	330	100	300	750	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	12	8	32	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	110	70	220	700	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xitanium 100W 2.1-4.2A AOC 230V I220	100	12	48	4200	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 2.5-4.9A AOC 230V I220	150	15	61	4900	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 200W 2.8-5.6A AOC 230V I250	200	18	71	5600	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 100W 0.3-1.05A S1 230V I175	100	46	143	1000	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xi LP 150W 0.3-1.05A S1 230V I175	150	72	214	1000	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xi LP 220W 0.3-1.05A S1 230V I230	220	104	314	1000	-40...+55^{0}C	-	-	-	-	compatible	compatible	compatible
Xi LP 220W 0.5-1.5A S1 230V I230	220	73	210	1500	-40...+55^{0}C	-	-	compatible	compatible	compatible	compatible	-
Xitanium Dim 35W 0.7A 1-10V TWE I175	35	18	50	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 100W 0.7A 1-10V TWE I220	100	71	143	700	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
Xitanium Dim 150W 0.7A 1-10V TWE I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
Xitanium 75W 0.7A TWE I175	75	40	117	700	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xitanium 150W 0.7A TWE I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
Xitanium 75W 1.05A 1-10V 230V C165 sXt	75	36	75	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.70A 1-10V 230V C165 sXt	75	52	107	700	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xitanium 150W 0.70A 1-10V 230V S240 sXt	150	100	214	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1000	-40...+55^{0}C	-	-	compatible	compatible	-	-	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
Xitanium Dim 250W 0 70A 1-10V 230V Q	250	178	357	700	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xitanium Dim 75W 0.70A 1-10V 230V I220	75	52	107	700	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xitanium Dim 150W 0.70A 1-10V 230V I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
Xitanium Dim 250W 0.70A 1-10V 230V I220	250	178	357	700	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xitanium 75W 1-10V 230V C165	75	52	107	700	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1050	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
Xitanium 250W 1-10V 230V I220	250	118	238	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
Xitanium 250W 1-10V 230V Q	250	118	238	700	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
LCO 14/100-500/38 NF C ADV3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 NF C ADV3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 NF C ADV3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 60/200-1050/100 NF C ADV3	60	28	100	1050	-40...+70^{0}C	compatible	compatible	-	-	-	-	-
LCO 90/200-1050/165 NF C ADV3	90	46	165	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 135/200-1050/220 NF C ADV3	135	62	220	1050	-40...+70^{0}C	-	-	compatible	compatible	compatible	compatible	-
LCO 200/200-1050/355 NF C ADV3	200	100	355	1050	-40...+70^{0}C	-	-	-	-	compatible	compatible	compatible
LCO 14/100-500/38 o4a NF C EXC3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 o4a NF C EXC3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 o4a NF C EXC3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 60/200-1050/100 o4a NF C EXC3	60	28	100	1050	-40...+70^{0}C	compatible	compatible	-	-	-	-	-
LCO 90/200-1050/165 o4a NF C EXC3	90	46	165	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 135/200-1050/220 o4a NF C EXC3	135	62	220	1050	-40...+70^{0}C	-	-	compatible	compatible	compatible	compatible	-

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
LCO 200/200-1050/355 o4a NF C EXC3	200	100	355	1050	-40...+70^{0}C	-	-	-	-	compatible	compatible	compatible
LCO 100/1050/95 fixC L SNC2	100	29	95	1050	-40...+65^{0}C	compatible	compatible	-	-	-	-	-
LCO 100/1400/71 fixC L SNC2	100	21	71	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 100/500/200 fixC L SNC2	100	60	200	500	-40...+65^{0}C	-	-	compatible	compatible	compatible	compatible	-
LCO 100/700/143 fixC L SNC2	100	43	143	700	-40...+65^{0}C	compatible	compatible	compatible	compatible	-	-	-
LCO 150/1050/142 fixC L SNC2	150	43	142	1050	-40...+65^{0}C	compatible	compatible	compatible	compatible	-	-	-
LCO 150/1400/107 fixC L SNC2	150	32	107	1400	-40...+65^{0}C	compatible	compatible	-	-	-	-	-
LCO 150/500/300 fixC L SNC2	150	90	300	500	-40...+65^{0}C	-	-	-	-	compatible	compatible	compatible
LCO 150/700/214 fixC L SNC2	150	64	214	700	-40...+65^{0}C	-	-	compatible	compatible	compatible	compatible	-
LCO 200/1050/190 fixC L SNC2	200	63	190	1050	-40...+65^{0}C	-	-	compatible	compatible	compatible	compatible	-
LCO 200/1400/142 fixC L SNC2	200	47	142	1400	-40...+65^{0}C	compatible	compatible	compatible	compatible	-	-	-
LCO 200/500/400 fixC L SNC2	200	133	400	500	-40...+65^{0}C	-	-	-	-	-	-	compatible
LCO 200/700/285 fixC L SNC2	200	95	285	700	-40...+65^{0}C	-	-	-	-	compatible	compatible	compatible
LCO 75/1050/72 fixC L SNC2	75	22	72	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/1400/53 fixC L SNC2	75	16	53	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/500/150 fixC L SNC2	75	45	150	500	-40...+65^{0}C	compatible	compatible	compatible	compatible	-	-	-
LCO 75/700/108 fixC L SNC2	75	32	108	700	-40...+65^{0}C	compatible	compatible	-	-	-	-	-
OT 165/220...240/1A0 1DIM G2 CE	165	130	260	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
OT 165/170...240/1A0 4DIMLT2 G2 CE	165	130	260	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
LCO 200W 200–1050mA 355V pD+ NFC C PRE3	200	169	355	1050	-40...+60^{0}C	-	-	-	-	-	-	compatible

Driver's						Module's						
						ML1401700.XXX	ML1401701.XXX	ML1302080.XXX	ML1302090.XXX	ML1924902.XXX	ML1924900.XXX	ML1924901.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	118	118	161	166	242
LCO 135W 200–1050mA 220V pD+ NFC C PRE3	135	104	220	1050	-40...+65^{0}C	-	-	-	-	compatible	compatible	-
LCO 90W 200–1050mA 165V pD+ NFC C PRE3	90	78	165	1050	-40...+70^{0}C	-	-	compatible	compatible	compatible	-	-
OT 75/UNV/1A0 2DIM P7 - brak karty	75	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/UNV/1A0 2DIM P7	100	75	150	1050	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
OT 150/UNV/1A0 2DIM P7	150	107	214	1050	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
OT 200/UNV/1A0 2DIM P7	200	143	286	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
OT 240/UNV/1A0 2DIM P7 - brak karty	240	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 320/UNV/1A1 2DIM P7	320	235	457	1100	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/ 220-240/1A4 2DIM P7	100	61	144	1400	-40...+55^{0}C	-	-	compatible	compatible	-	-	-
OT 150/ 220-240/1A4 2DIM P7	150	91	214	1400	-40...+55^{0}C	-	-	-	-	compatible	compatible	-
OT 200/ 220-240/1A4 2DIM P7	200	121	286	1400	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT 240/ 220-240/1A0 2DIM P7	240	180	343	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
Inventronics EUM – 100S	100	17	143	2100	-40...+75^{0}C	compatible	compatible	compatible	compatible	-	-	-
Inventronics EUM – 150S	150	18	214	3150	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	-
Inventronics EUM – 200S	200	18	286	4200	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
Inventronics EUM – 240S	240	18	343	4900	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible

List of LED's and electronic led driver's system:

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
Osram OT 165/170-240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Osram OT 60/170-240/1A0 4DIMLT2 E	60	30	115	1050	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT180W/UNV/800C/2DIMLT2/P6	180	82	280	800	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT100W/UNV/800C/2DIMLT2/P6	100	50	185	800	-40...+55^{0}C	-	-	-	-	-	-	-
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 20/170-240/1A0 1DIM LT2 G1 CE	22	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170-240/1A0 1DIM LT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	compatible	compatible
OT 75/170...240/1A0 1DIMLT2 G1 CE	75	35	115	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
Philips Xi Dim 250W 0.7A 1-10V 230V	250	178	357	700	-40...+55^{0}C	compatible	compatible	-	-	compatible	-	-
Philips Xi LP 150W 0.3-1.0A S1 230V S240 sXt	150	70	214	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Tridonic LCA 120W 300-1050mA 1-10V ADV	120	40	114	1050	-30...+55^{0}C	-	-	-	-	-	-	compatible
Tridonic LCA 75W 250–750mA one4all C	75	45	130	750	-40...+70^{0}C	-	-	-	-	-	-	-
Tridonic LCA 120W 350–1050mA o	120	105	320	1050	-40...+70^{0}C	compatible	compatible	-	compatible	-	-	-
Tridonic LCA 160W 350–1050mA o	160	105	320	1050	-40...+70^{0}C	compatible	compatible	-	compatible	-	-	-
OT DX 40/220…240/1A0 DIMA LT2 E	40	15	56	1050	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT DX 75/220…240/1A0 DIMA LT2 E	75	35	115	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
OT DX 110/220…240/1A0 DIMA LT2 E	110	75	220	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT DX 165/220…240/1A0 DIMA LT2 E	165	130	260	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT 20/170…240/1A0 4DIMLT2 G2 CE	20	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 4DIMLT2 G2 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	compatible	compatible

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
OT 75/170…240/1A0 4DIMLT2 G2 CE	75	35	115	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
OT 110/170…240/1A0 4DIMLT2 G2 CE	110	80	220	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 20/170…240/1A0 1DIMLT2 G1 CE	20	10	38	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 1DIMLT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	compatible	compatible
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 40/120…277/1A0 4DIMLT2 E	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	compatible	compatible
OT 60/170…240/1A0 4DIMLT2 E	60	30	115	1050	-40...+60^{0}C	-	-	-	-	-	compatible	compatible
OT 90/170…240/1A0 4DIMLT2 E	90	57	186	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 165/170…240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT 50/120…277/800 2DIMLT2 P	50	30	115	800	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT 50/120…277/1A2 2DIMLT2 P	50	20	55	1250	-40...+55^{0}C	-	-	-	-	-	compatible	-
OT 100/120…277/800 2DIMLT2 P	100	50	186	800	-40...+55^{0}C	-	-	-	-	-	-	-
OT 110/120…277/1A4 2DIMLT2 P	110	35	85	1400	-40...+55^{0}C	-	-	-	-	-	-	compatible
OT 60/220…240/1A4 1DIMA P7	60	43	86	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/220…240/1A4 1DIMA P7	100	72	144	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 150/220…240/1A4 1DIMA P7	150	91	350	1400	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT 200/220…240/1A4 1DIMA P7	200	121	286	1400	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xitanium 40W 0.7A Prog+ GL-J sXt	40	29	57	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 75W 0.35-0.70A GL Prog+ sXt	75	80	152	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.1-1.05A Prog GL F sXt	75	36	75	1050	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xitanium 100W 0.7A Prog+ GL-Z sXt	100	71	143	700	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
Xitanium 150W 0.1-1.05A Prog+ GL F sXt	150	70	148	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 0.35-0.70A GL Prog sXt	150	125	280	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xitanium 300W 1.5A Prog+ GL-R sXt	300	80	280	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi BP 12W 0.1-0.5A S 230V C100	12	13	39	500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 22W 0.2-0.7A S 230V C123	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi BP 40W 0.2-0.7A S 230V C123	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi BP 40W 0.3-1.0A S 230V C123	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi LP 22W 0.2-0.7A S1 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi LP 22W 0.3-1.0A S1 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A S1 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 40W 0.3-1.0A S1 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi LP 75W 0.2-0.7A S1 230V C133 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.3-1.0A S1 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xi LP 75W 0.5-1.5A S1 230V C133 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 110W 0.2-0.7A S1 230V C133 sXt	110	70	220	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 110W 0.3-1.0A S1 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 165W 0.2-0.7A S1 230V C170 sXt	165	100	300	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi LP 165W 0.3-1.0A S1 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 165W 0.5-1.5A S1 230V C170 sXt	165	54	157	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.2-0.7A S1 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi LP 22W 0.3-1.0A S1 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	40	23	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 40W 0.2-0.7A SL 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 40W 0.3-1.0A S1 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi LP 40W 0.3-1.0A SL 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi LP 40W 0.2-0.7A SN 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 75W 0.2-0.7A S1 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A SL 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.3-1.0A S1 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xi LP 75W 0.3-1.0A SL 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xi LP 75W 0.2-0.7A SN 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.5-1.5A S1 230V S240 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 150W 0.2-0.7A S1 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi LP 150W 0.2-0.7A SL 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi LP 150W 0.3-1.0A SL 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.5-1.5A S1 230V S240 sXt	150	50	142	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.2-0.7A SN 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi FP 70W 0.3-1.0A NLD C150 230V sXt	70	30	100	1000	-30...+60^{0}C	-	-	-	-	-	compatible	compatible

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	75	25	71	1500	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	100	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	110	70	220	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 110W 0.3-1.0A NLD C150 230V sXt	110	60	200	1000	-30...+60^{0}C	-	-	-	-	-	-	-
Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 165W 0.3-1.0A SNLDAE 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 165W 0.2-0.7A SNLDAE 230V C170 sXt	165	100	300	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi FP 330W 0.2-0.75A SNDAE 230V C240 sXt	330	100	300	750	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	12	8	32	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	compatible	-

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	110	70	220	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xitanium 100W 2.1-4.2A AOC 230V I220	100	12	48	4200	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xitanium 150W 2.5-4.9A AOC 230V I220	150	15	61	4900	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 200W 2.8-5.6A AOC 230V I250	200	18	71	5600	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 100W 0.3-1.05A S1 230V I175	100	46	143	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.3-1.05A S1 230V I175	150	72	214	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 220W 0.3-1.05A S1 230V I230	220	104	314	1000	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
Xi LP 220W 0.5-1.5A S1 230V I230	220	73	210	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 35W 0.7A 1-10V TWE I175	35	18	50	700	-40...+55^{0}C	-	-	-	-	-	compatible	-
Xitanium Dim 100W 0.7A 1-10V TWE I220	100	71	143	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 150W 0.7A 1-10V TWE I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.7A TWE I175	75	40	117	700	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xitanium 150W 0.7A TWE I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 1.05A 1-10V 230V C165 sXt	75	36	75	1000	-40...+55^{0}C	-	-	-	-	-	-	compatible
Xitanium 75W 0.70A 1-10V 230V C165 sXt	75	52	107	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 0.70A 1-10V 230V S240 sXt	150	100	214	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1000	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
Xitanium Dim 250W 0 70A 1-10V 230V Q	250	178	357	700	-40...+55^{0}C	compatible	compatible	-	-	compatible	-	-
Xitanium Dim 75W 0.70A 1-10V 230V I220	75	52	107	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 150W 0.70A 1-10V 230V I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 250W 0.70A 1-10V 230V I220	250	178	357	700	-40...+55^{0}C	compatible	compatible	-	-	compatible	-	-
Xitanium 75W 1-10V 230V C165	75	52	107	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 250W 1-10V 230V I220	250	118	238	700	-40...+55^{0}C	-	-	-	compatible	-	-	-
Xitanium 250W 1-10V 230V Q	250	118	238	700	-40...+55^{0}C	-	-	-	compatible	-	-	-
LCO 14/100-500/38 NF C ADV3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 NF C ADV3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 NF C ADV3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
LCO 60/200-1050/100 NF C ADV3	60	28	100	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
LCO 90/200-1050/165 NF C ADV3	90	46	165	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 135/200-1050/220 NF C ADV3	135	62	220	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 200/200-1050/355 NF C ADV3	200	100	355	1050	-40...+70^{0}C	compatible	compatible	-	compatible	compatible	-	-
LCO 14/100-500/38 o4a NF C EXC3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 o4a NF C EXC3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 o4a NF C EXC3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
LCO 60/200-1050/100 o4a NF C EXC3	60	28	100	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
LCO 90/200-1050/165 o4a NF C EXC3	90	46	165	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 135/200-1050/220 o4a NF C EXC3	135	62	220	1050	-40...+70^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
LCO 200/200-1050/355 o4a NF C EXC3	200	100	355	1050	-40...+70^{0}C	compatible	compatible	-	compatible	compatible	-	-
LCO 100/1050/95 fixC L SNC2	100	29	95	1050	-40...+65^{0}C	-	-	-	-	-	compatible	compatible
LCO 100/1400/71 fixC L SNC2	100	21	71	1400	-40...+65^{0}C	-	-	-	-	-	compatible	compatible
LCO 100/500/200 fixC L SNC2	100	60	200	500	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 100/700/143 fixC L SNC2	100	43	143	700	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 150/1050/142 fixC L SNC2	150	43	142	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 150/1400/107 fixC L SNC2	150	32	107	1400	-40...+65^{0}C	-	-	-	-	-	-	compatible
LCO 150/500/300 fixC L SNC2	150	90	300	500	-40...+65^{0}C	compatible	compatible	-	compatible	-	-	-
LCO 150/700/214 fixC L SNC2	150	64	214	700	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 200/1050/190 fixC L SNC2	200	63	190	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 200/1400/142 fixC L SNC2	200	47	142	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 200/500/400 fixC L SNC2	200	133	400	500	-40...+65^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 200/700/285 fixC L SNC2	200	95	285	700	-40...+65^{0}C	compatible	compatible	-	compatible	-	-	-
LCO 75/1050/72 fixC L SNC2	75	22	72	1050	-40...+65^{0}C	-	-	-	-	-	compatible	compatible
LCO 75/1400/53 fixC L SNC2	75	16	53	1400	-40...+65^{0}C	-	-	-	-	-	compatible	-
LCO 75/500/150 fixC L SNC2	75	45	150	500	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/700/108 fixC L SNC2	75	32	108	700	-40...+65^{0}C	-	-	-	-	-	-	compatible
OT 165/220...240/1A0 1DIM G2 CE	165	130	260	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT 165/170...240/1A0 4DIMLT2 G2 CE	165	130	260	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
LCO 200W 200–1050mA 355V pD+ NFC C PRE3	200	169	355	1050	-40...+60^{0}C	compatible	compatible	-	compatible	compatible	-	-

Driver's						Module's						
						ML1701405.XXX	ML2027100.XXX	ML2027101.XXX	ML2027102.XXX	ML2027103.XXX	ML1500300.XXX	ML1924107.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	240	242	363	236	354	40	56
LCO 135W 200–1050mA 220V pD+ NFC C PRE3	135	104	220	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 90W 200–1050mA 165V pD+ NFC C PRE3	90	78	165	1050	-40...+70^{0}C	-	-	-	-	-	-	-
OT 75/UNV/1A0 2DIM P7 - brak karty	75	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/UNV/1A0 2DIM P7	100	75	150	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 150/UNV/1A0 2DIM P7	150	107	214	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 200/UNV/1A0 2DIM P7	200	143	286	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT 240/UNV/1A0 2DIM P7 - brak karty	240	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 320/UNV/1A1 2DIM P7	320	235	457	1100	-40...+55^{0}C	-	-	compatible	-	compatible	-	-
OT 100/ 220-240/1A4 2DIM P7	100	61	144	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 150/ 220-240/1A4 2DIM P7	150	91	214	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 200/ 220-240/1A4 2DIM P7	200	121	286	1400	-40...+55^{0}C	compatible	compatible	-	compatible	-	-	-
OT 240/ 220-240/1A0 2DIM P7	240	180	343	1050	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Inventronics EUM – 100S	100	17	143	2100	-40...+75^{0}C	-	-	-	-	-	compatible	compatible
Inventronics EUM – 150S	150	18	214	3150	-40...+75^{0}C	-	-	-	-	-	compatible	compatible
Inventronics EUM – 200S	200	18	286	4200	-40...+75^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Inventronics EUM – 240S	240	18	343	4900	-40...+75^{0}C	compatible	compatible	-	compatible	-	compatible	compatible

List of LED's and electronic led driver's system:

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
Osram OT 165/170-240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Osram OT 60/170-240/1A0 4DIMLT2 E	60	30	115	1050	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
OT180W/UNV/800C/2DIMLT2/P6	180	82	280	800	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
OT100W/UNV/800C/2DIMLT2/P6	100	50	185	800	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
OT 20/170-240/1A0 1DIM LT2 G1 CE	22	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170-240/1A0 1DIM LT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 75/170...240/1A0 1DIMLT2 G1 CE	75	35	115	1050	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Philips Xi Dim 250W 0.7A 1-10V 230V	250	178	357	700	-40...+55^{0}C	-	-	-	-	-	-	-
Philips Xi LP 150W 0.3-1.0A S1 230V S240 sXt	150	70	214	1050	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Tridonic LCA 120W 300-1050mA 1-10V ADV	120	40	114	1050	-30...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Tridonic LCA 75W 250–750mA one4all C	75	45	130	750	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Tridonic LCA 120W 350–1050mA o	120	105	320	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
Tridonic LCA 160W 350–1050mA o	160	105	320	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
OT DX 40/220…240/1A0 DIMA LT2 E	40	15	56	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT DX 75/220…240/1A0 DIMA LT2 E	75	35	115	1050	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
OT DX 110/220…240/1A0 DIMA LT2 E	110	75	220	1050	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
OT DX 165/220…240/1A0 DIMA LT2 E	165	130	260	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 20/170…240/1A0 4DIMLT2 G2 CE	20	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 4DIMLT2 G2 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
OT 75/170…240/1A0 4DIMLT2 G2 CE	75	35	115	1050	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
OT 110/170…240/1A0 4DIMLT2 G2 CE	110	80	220	1050	-40...+60^{0}C	-	-	-	compatible	compatible	compatible	compatible
OT 20/170…240/1A0 1DIMLT2 G1 CE	20	10	38	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 1DIMLT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
OT 40/120…277/1A0 4DIMLT2 E	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 60/170…240/1A0 4DIMLT2 E	60	30	115	1050	-40...+60^{0}C	compatible	compatible	compatible	compatible	-	-	-
OT 90/170…240/1A0 4DIMLT2 E	90	57	186	1050	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
OT 165/170…240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT 50/120…277/800 2DIMLT2 P	50	30	115	800	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
OT 50/120…277/1A2 2DIMLT2 P	50	20	55	1250	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/120…277/800 2DIMLT2 P	100	50	186	800	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
OT 110/120…277/1A4 2DIMLT2 P	110	35	85	1400	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
OT 60/220…240/1A4 1DIMA P7	60	43	86	1400	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
OT 100/220…240/1A4 1DIMA P7	100	72	144	1400	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
OT 150/220…240/1A4 1DIMA P7	150	91	350	1400	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT 200/220…240/1A4 1DIMA P7	200	121	286	1400	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 40W 0.7A Prog+ GL-J sXt	40	29	57	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.35-0.70A GL Prog+ sXt	75	80	152	700	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
Xitanium 75W 0.1-1.05A Prog GL F sXt	75	36	75	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 100W 0.7A Prog+ GL-Z sXt	100	71	143	700	-40...+55^{0}C	-	-	-	compatible	compatible	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
Xitanium 150W 0.1-1.05A Prog+ GL F sXt	150	70	148	1050	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
Xitanium 150W 0.35-0.70A GL Prog sXt	150	125	280	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 300W 1.5A Prog+ GL-R sXt	300	80	280	1050	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi BP 12W 0.1-0.5A S 230V C100	12	13	39	500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 22W 0.2-0.7A S 230V C123	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 40W 0.2-0.7A S 230V C123	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 40W 0.3-1.0A S 230V C123	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.2-0.7A S1 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.3-1.0A S1 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A S1 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A S1 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A S1 230V C133 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 75W 0.3-1.0A S1 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xi LP 75W 0.5-1.5A S1 230V C133 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 110W 0.2-0.7A S1 230V C133 sXt	110	70	220	700	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi LP 110W 0.3-1.0A S1 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
Xi LP 165W 0.2-0.7A S1 230V C170 sXt	165	100	300	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 165W 0.3-1.0A S1 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi LP 165W 0.5-1.5A S1 230V C170 sXt	165	54	157	1500	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 22W 0.2-0.7A S1 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.3-1.0A S1 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	40	23	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A SL 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A S1 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A SL 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A SN 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A S1 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 75W 0.2-0.7A SL 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 75W 0.3-1.0A S1 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xi LP 75W 0.3-1.0A SL 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xi LP 75W 0.2-0.7A SN 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 75W 0.5-1.5A S1 230V S240 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.2-0.7A S1 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 150W 0.2-0.7A SL 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 150W 0.3-1.0A SL 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi LP 150W 0.5-1.5A S1 230V S240 sXt	150	50	142	1500	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 150W 0.2-0.7A SN 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 70W 0.3-1.0A NLD C150 230V sXt	70	30	100	1000	-30...+60^{0}C	compatible	compatible	compatible	-	-	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	75	25	71	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	100	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	110	70	220	700	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi FP 110W 0.3-1.0A NLD C150 230V sXt	110	60	200	1000	-30...+60^{0}C	-	-	compatible	compatible	compatible	compatible	compatible
Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
Xi FP 165W 0.3-1.0A SNLDAE 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi FP 165W 0.2-0.7A SNLDAE 230V C170 sXt	165	100	300	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 330W 0.2-0.75A SNDAE 230V C240 sXt	330	100	300	750	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	12	8	32	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	75	50	150	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	110	70	220	700	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	150	90	283	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 100W 2.1-4.2A AOC 230V I220	100	12	48	4200	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 2.5-4.9A AOC 230V I220	150	15	61	4900	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 200W 2.8-5.6A AOC 230V I250	200	18	71	5600	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 100W 0.3-1.05A S1 230V I175	100	46	143	1000	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Xi LP 150W 0.3-1.05A S1 230V I175	150	72	214	1000	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xi LP 220W 0.3-1.05A S1 230V I230	220	104	314	1000	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xi LP 220W 0.5-1.5A S1 230V I230	220	73	210	1500	-40...+55^{0}C	-	-	-	compatible	compatible	compatible	compatible
Xitanium Dim 35W 0.7A 1-10V TWE I175	35	18	50	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 100W 0.7A 1-10V TWE I220	100	71	143	700	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
Xitanium Dim 150W 0.7A 1-10V TWE I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 75W 0.7A TWE I175	75	40	117	700	-40...+55^{0}C	compatible	compatible	compatible	compatible	-	-	-
Xitanium 150W 0.7A TWE I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 75W 1.05A 1-10V 230V C165 sXt	75	36	75	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.70A 1-10V 230V C165 sXt	75	52	107	700	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xitanium 150W 0.70A 1-10V 230V S240 sXt	150	100	214	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1000	-40...+55^{0}C	-	-	-	compatible	compatible	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
Xitanium Dim 250W 0 70A 1-10V 230V Q	250	178	357	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 75W 0.70A 1-10V 230V I220	75	52	107	700	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xitanium Dim 150W 0.70A 1-10V 230V I220	150	90	214	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium Dim 250W 0.70A 1-10V 230V I220	250	178	357	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 1-10V 230V C165	75	52	107	700	-40...+55^{0}C	compatible	compatible	compatible	-	-	-	-
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1050	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
Xitanium 250W 1-10V 230V I220	250	118	238	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
Xitanium 250W 1-10V 230V Q	250	118	238	700	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
LCO 14/100-500/38 NF C ADV3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 NF C ADV3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 NF C ADV3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 60/200-1050/100 NF C ADV3	60	28	100	1050	-40...+70^{0}C	compatible	compatible	compatible	-	-	-	-
LCO 90/200-1050/165 NF C ADV3	90	46	165	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
LCO 135/200-1050/220 NF C ADV3	135	62	220	1050	-40...+70^{0}C	-	-	-	compatible	compatible	compatible	compatible
LCO 200/200-1050/355 NF C ADV3	200	100	355	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
LCO 14/100-500/38 o4a NF C EXC3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 o4a NF C EXC3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 o4a NF C EXC3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 60/200-1050/100 o4a NF C EXC3	60	28	100	1050	-40...+70^{0}C	compatible	compatible	compatible	-	-	-	-
LCO 90/200-1050/165 o4a NF C EXC3	90	46	165	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
LCO 135/200-1050/220 o4a NF C EXC3	135	62	220	1050	-40...+70^{0}C	-	-	-	compatible	compatible	compatible	compatible

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
LCO 200/200-1050/355 o4a NF C EXC3	200	100	355	1050	-40...+70^{0}C	-	-	-	-	-	compatible	compatible
LCO 100/1050/95 fixC L SNC2	100	29	95	1050	-40...+65^{0}C	compatible	compatible	compatible	-	-	-	-
LCO 100/1400/71 fixC L SNC2	100	21	71	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 100/500/200 fixC L SNC2	100	60	200	500	-40...+65^{0}C	-	-	compatible	compatible	compatible	compatible	compatible
LCO 100/700/143 fixC L SNC2	100	43	143	700	-40...+65^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 150/1050/142 fixC L SNC2	150	43	142	1050	-40...+65^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 150/1400/107 fixC L SNC2	150	32	107	1400	-40...+65^{0}C	compatible	compatible	compatible	-	-	-	-
LCO 150/500/300 fixC L SNC2	150	90	300	500	-40...+65^{0}C	-	-	-	-	-	compatible	compatible
LCO 150/700/214 fixC L SNC2	150	64	214	700	-40...+65^{0}C	-	-	-	compatible	compatible	compatible	compatible
LCO 200/1050/190 fixC L SNC2	200	63	190	1050	-40...+65^{0}C	-	-	-	compatible	compatible	compatible	compatible
LCO 200/1400/142 fixC L SNC2	200	47	142	1400	-40...+65^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 200/500/400 fixC L SNC2	200	133	400	500	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 200/700/285 fixC L SNC2	200	95	285	700	-40...+65^{0}C	-	-	-	-	-	compatible	compatible
LCO 75/1050/72 fixC L SNC2	75	22	72	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/1400/53 fixC L SNC2	75	16	53	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/500/150 fixC L SNC2	75	45	150	500	-40...+65^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
LCO 75/700/108 fixC L SNC2	75	32	108	700	-40...+65^{0}C	compatible	compatible	compatible	-	-	-	-
OT 165/220...240/1A0 1DIM G2 CE	165	130	260	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 165/170...240/1A0 4DIMLT2 G2 CE	165	130	260	1050	-40...+55^{0}C	-	-	-	-	-	-	-
LCO 200W 200–1050mA 355V pD+ NFC C PRE3	200	169	355	1050	-40...+60^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1500301.XXX	ML1701400.XXX	ML1924106.XXX	ML1924105.XXX	ML1401010.XXX	ML1500302.XXX	ML1701401.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	79	79	81	111	118	158	158
LCO 135W 200–1050mA 220V pD+ NFC C PRE3	135	104	220	1050	-40...+65^{0}C	-	-	-	-	-	compatible	compatible
LCO 90W 200–1050mA 165V pD+ NFC C PRE3	90	78	165	1050	-40...+70^{0}C	-	-	-	compatible	compatible	compatible	compatible
OT 75/UNV/1A0 2DIM P7 - brak karty	75	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/UNV/1A0 2DIM P7	100	75	150	1050	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
OT 150/UNV/1A0 2DIM P7	150	107	214	1050	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT 200/UNV/1A0 2DIM P7	200	143	286	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 240/UNV/1A0 2DIM P7 - brak karty	240	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 320/UNV/1A1 2DIM P7	320	235	457	1100	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/ 220-240/1A4 2DIM P7	100	61	144	1400	-40...+55^{0}C	-	-	-	compatible	compatible	-	-
OT 150/ 220-240/1A4 2DIM P7	150	91	214	1400	-40...+55^{0}C	-	-	-	-	-	compatible	compatible
OT 200/ 220-240/1A4 2DIM P7	200	121	286	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 240/ 220-240/1A0 2DIM P7	240	180	343	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Inventronics EUM – 100S	100	17	143	2100	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	-	-
Inventronics EUM – 150S	150	18	214	3150	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
Inventronics EUM – 200S	200	18	286	4200	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
Inventronics EUM – 240S	240	18	343	4900	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible

List of LED's and electronic led driver's system:

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
Osram OT 165/170-240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Osram OT 60/170-240/1A0 4DIMLT2 E	60	30	115	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT180W/UNV/800C/2DIMLT2/P6	180	82	280	800	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
OT100W/UNV/800C/2DIMLT2/P6	100	50	185	800	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 20/170-240/1A0 1DIM LT2 G1 CE	22	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170-240/1A0 1DIM LT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 75/170...240/1A0 1DIMLT2 G1 CE	75	35	115	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Philips Xi Dim 250W 0.7A 1-10V 230V	250	178	357	700	-40...+55^{0}C	-	-	compatible	-	compatible	-	-
Philips Xi LP 150W 0.3-1.0A S1 230V S240 sXt	150	70	214	1050	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Tridonic LCA 120W 300-1050mA 1-10V ADV	120	40	114	1050	-30...+55^{0}C	-	-	-	-	-	-	-
Tridonic LCA 75W 250–750mA one4all C	75	45	130	750	-40...+70^{0}C	-	-	-	-	-	-	-
Tridonic LCA 120W 350–1050mA o	120	105	320	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
Tridonic LCA 160W 350–1050mA o	160	105	320	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
OT DX 40/220…240/1A0 DIMA LT2 E	40	15	56	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT DX 75/220…240/1A0 DIMA LT2 E	75	35	115	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT DX 110/220…240/1A0 DIMA LT2 E	110	75	220	1050	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT DX 165/220…240/1A0 DIMA LT2 E	165	130	260	1050	-40...+55^{0}C	-	compatible	-	-	-	-	-
OT 20/170…240/1A0 4DIMLT2 G2 CE	20	10	38	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 4DIMLT2 G2 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
OT 75/170…240/1A0 4DIMLT2 G2 CE	75	35	115	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 110/170…240/1A0 4DIMLT2 G2 CE	110	80	220	1050	-40...+60^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 20/170…240/1A0 1DIMLT2 G1 CE	20	10	38	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 40/170…240/1A0 1DIMLT2 G1 CE	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 110/170...240/1A0 1DIMLT2 G1 CE	110	80	220	1050	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 40/120…277/1A0 4DIMLT2 E	40	15	56	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 60/170…240/1A0 4DIMLT2 E	60	30	115	1050	-40...+60^{0}C	-	-	-	-	-	-	-
OT 90/170…240/1A0 4DIMLT2 E	90	57	186	1050	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 165/170…240/1A0 4DIMLT2 E	165	90	285	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
OT 50/120…277/800 2DIMLT2 P	50	30	115	800	-40...+55^{0}C	-	-	-	-	-	-	-
OT 50/120…277/1A2 2DIMLT2 P	50	20	55	1250	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/120…277/800 2DIMLT2 P	100	50	186	800	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 110/120…277/1A4 2DIMLT2 P	110	35	85	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 60/220…240/1A4 1DIMA P7	60	43	86	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/220…240/1A4 1DIMA P7	100	72	144	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 150/220…240/1A4 1DIMA P7	150	91	350	1400	-40...+55^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
OT 200/220…240/1A4 1DIMA P7	200	121	286	1400	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
Xitanium 40W 0.7A Prog+ GL-J sXt	40	29	57	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.35-0.70A GL Prog+ sXt	75	80	152	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.1-1.05A Prog GL F sXt	75	36	75	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 100W 0.7A Prog+ GL-Z sXt	100	71	143	700	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
Xitanium 150W 0.1-1.05A Prog+ GL F sXt	150	70	148	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 0.35-0.70A GL Prog sXt	150	125	280	700	-40...+55^{0}C	-	compatible	-	-	-	-	-
Xitanium 300W 1.5A Prog+ GL-R sXt	300	80	280	1050	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi BP 12W 0.1-0.5A S 230V C100	12	13	39	500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 22W 0.2-0.7A S 230V C123	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 40W 0.2-0.7A S 230V C123	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi BP 40W 0.3-1.0A S 230V C123	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.2-0.7A S1 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.3-1.0A S1 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A S1 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A S1 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A S1 230V C133 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.3-1.0A S1 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.5-1.5A S1 230V C133 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 110W 0.2-0.7A S1 230V C133 sXt	110	70	220	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi LP 110W 0.3-1.0A S1 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	-	-	-	compatible	-	-	-
Xi LP 165W 0.2-0.7A S1 230V C170 sXt	165	100	300	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi LP 165W 0.3-1.0A S1 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi LP 165W 0.5-1.5A S1 230V C170 sXt	165	54	157	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.2-0.7A S1 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 22W 0.3-1.0A S1 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	40	23	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A SL 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A S1 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.3-1.0A SL 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 40W 0.2-0.7A SN 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A S1 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A SL 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.3-1.0A S1 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.3-1.0A SL 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.2-0.7A SN 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 75W 0.5-1.5A S1 230V S240 sXt	75	25	75	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.2-0.7A S1 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi LP 150W 0.2-0.7A SL 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi LP 150W 0.3-1.0A SL 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi LP 150W 0.5-1.5A S1 230V S240 sXt	150	50	142	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.2-0.7A SN 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 70W 0.3-1.0A NLD C150 230V sXt	70	30	100	1000	-30...+60^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	75	25	71	1500	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	100	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	110	70	220	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi FP 110W 0.3-1.0A NLD C150 230V sXt	110	60	200	1000	-30...+60^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	110	50	160	1000	-40...+55^{0}C	-	-	-	compatible	-	-	-
Xi FP 165W 0.3-1.0A SNLDAE 230V C170 sXt	165	80	235	1000	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi FP 165W 0.2-0.7A SNLDAE 230V C170 sXt	165	100	300	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi FP 330W 0.2-0.75A SNDAE 230V C240 sXt	330	100	300	750	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	22	8	32	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	40	20	54	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	75	35	108	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXt	150	70	214	1000	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	12	8	32	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	22	16	48	700	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	40	25	77	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	75	50	150	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	110	70	220	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	150	90	283	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xitanium 100W 2.1-4.2A AOC 230V I220	100	12	48	4200	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 2.5-4.9A AOC 230V I220	150	15	61	4900	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 200W 2.8-5.6A AOC 230V I250	200	18	71	5600	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 100W 0.3-1.05A S1 230V I175	100	46	143	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xi LP 150W 0.3-1.05A S1 230V I175	150	72	214	1000	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xi LP 220W 0.3-1.05A S1 230V I230	220	104	314	1000	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xi LP 220W 0.5-1.5A S1 230V I230	220	73	210	1500	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xitanium Dim 35W 0.7A 1-10V TWE I175	35	18	50	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 100W 0.7A 1-10V TWE I220	100	71	143	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 150W 0.7A 1-10V TWE I220	150	90	214	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xitanium 75W 0.7A TWE I175	75	40	117	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 0.7A TWE I220	150	90	214	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xitanium 75W 1.05A 1-10V 230V C165 sXt	75	36	75	1000	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 75W 0.70A 1-10V 230V C165 sXt	75	52	107	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 0.70A 1-10V 230V S240 sXt	150	100	214	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1000	-40...+55^{0}C	-	-	-	-	-	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
Xitanium Dim 250W 0 70A 1-10V 230V Q	250	178	357	700	-40...+55^{0}C	-	-	compatible	-	compatible	-	-
Xitanium Dim 75W 0.70A 1-10V 230V I220	75	52	107	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium Dim 150W 0.70A 1-10V 230V I220	150	90	214	700	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
Xitanium Dim 250W 0.70A 1-10V 230V I220	250	178	357	700	-40...+55^{0}C	-	-	compatible	-	compatible	-	-
Xitanium 75W 1-10V 230V C165	75	52	107	700	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 150W 1.05A 1-10V 230V S240 sXt	150	72	150	1050	-40...+55^{0}C	-	-	-	-	-	-	-
Xitanium 250W 1-10V 230V I220	250	118	238	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Xitanium 250W 1-10V 230V Q	250	118	238	700	-40...+55^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
LCO 14/100-500/38 NF C ADV3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 NF C ADV3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 NF C ADV3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 60/200-1050/100 NF C ADV3	60	28	100	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 90/200-1050/165 NF C ADV3	90	46	165	1050	-40...+70^{0}C	-	-	-	compatible	-	compatible	compatible
LCO 135/200-1050/220 NF C ADV3	135	62	220	1050	-40...+70^{0}C	compatible	-	-	compatible	-	compatible	compatible
LCO 200/200-1050/355 NF C ADV3	200	100	355	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
LCO 14/100-500/38 o4a NF C EXC3	14	12	38	500	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 24/200-1050/39 o4a NF C EXC3	24	11	39	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 40/200-1050/64 o4a NF C EXC3	40	18	64	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 60/200-1050/100 o4a NF C EXC3	60	28	100	1050	-40...+70^{0}C	-	-	-	-	-	-	-
LCO 90/200-1050/165 o4a NF C EXC3	90	46	165	1050	-40...+70^{0}C	-	-	-	compatible	-	compatible	compatible
LCO 135/200-1050/220 o4a NF C EXC3	135	62	220	1050	-40...+70^{0}C	compatible	-	-	compatible	-	compatible	compatible

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
LCO 200/200-1050/355 o4a NF C EXC3	200	100	355	1050	-40...+70^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible
LCO 100/1050/95 fixC L SNC2	100	29	95	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 100/1400/71 fixC L SNC2	100	21	71	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 100/500/200 fixC L SNC2	100	60	200	500	-40...+65^{0}C	compatible	-	-	compatible	-	compatible	compatible
LCO 100/700/143 fixC L SNC2	100	43	143	700	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 150/1050/142 fixC L SNC2	150	43	142	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 150/1400/107 fixC L SNC2	150	32	107	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 150/500/300 fixC L SNC2	150	90	300	500	-40...+65^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
LCO 150/700/214 fixC L SNC2	150	64	214	700	-40...+65^{0}C	compatible	-	-	compatible	-	compatible	compatible
LCO 200/1050/190 fixC L SNC2	200	63	190	1050	-40...+65^{0}C	compatible	-	-	compatible	-	compatible	compatible
LCO 200/1400/142 fixC L SNC2	200	47	142	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 200/500/400 fixC L SNC2	200	133	400	500	-40...+65^{0}C	-	compatible	compatible	-	compatible	-	-
LCO 200/700/285 fixC L SNC2	200	95	285	700	-40...+65^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
LCO 75/1050/72 fixC L SNC2	75	22	72	1050	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/1400/53 fixC L SNC2	75	16	53	1400	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/500/150 fixC L SNC2	75	45	150	500	-40...+65^{0}C	-	-	-	-	-	-	-
LCO 75/700/108 fixC L SNC2	75	32	108	700	-40...+65^{0}C	-	-	-	-	-	-	-
OT 165/220...240/1A0 1DIM G2 CE	165	130	260	1050	-40...+55^{0}C	-	compatible	-	-	-	-	-
OT 165/170...240/1A0 4DIMLT2 G2 CE	165	130	260	1050	-40...+55^{0}C	-	compatible	-	-	-	-	-
LCO 200W 200–1050mA 355V pD+ NFC C PRE3	200	169	355	1050	-40...+60^{0}C	-	compatible	compatible	-	compatible	-	-

Driver's						Module's						
						ML1924108.XXX	ML1701402.XXX	ML1701403.XXX	ML2027202.XXX	ML2027203.XXX	ML2027200.XXX	ML2027201.XXX
						U max [V]						
Name	**P [W]**	**U min [V]**	**U max [V]**	**I max [mA]**	**Ta [min..max]**	166	236	315	158	315	161	161
LCO 135W 200–1050mA 220V pD+ NFC C PRE3	135	104	220	1050	-40...+65^{0}C	compatible	-	-	compatible	-	compatible	compatible
LCO 90W 200–1050mA 165V pD+ NFC C PRE3	90	78	165	1050	-40...+70^{0}C	-	-	-	compatible	-	compatible	compatible
OT 75/UNV/1A0 2DIM P7 - brak karty	75	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 100/UNV/1A0 2DIM P7	100	75	150	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 150/UNV/1A0 2DIM P7	150	107	214	1050	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 200/UNV/1A0 2DIM P7	200	143	286	1050	-40...+55^{0}C	-	compatible	-	-	-	-	-
OT 240/UNV/1A0 2DIM P7 - brak karty	240	-	-	1050	-40...+55^{0}C	-	-	-	-	-	-	-
OT 320/UNV/1A1 2DIM P7	320	235	457	1100	-40...+55^{0}C	-	-	compatible	-	compatible	-	-
OT 100/ 220-240/1A4 2DIM P7	100	61	144	1400	-40...+55^{0}C	-	-	-	-	-	-	-
OT 150/ 220-240/1A4 2DIM P7	150	91	214	1400	-40...+55^{0}C	compatible	-	-	compatible	-	compatible	compatible
OT 200/ 220-240/1A4 2DIM P7	200	121	286	1400	-40...+55^{0}C	compatible	compatible	-	-	-	-	-
OT 240/ 220-240/1A0 2DIM P7	240	180	343	1050	-40...+55^{0}C	-	-	compatible	-	compatible	-	-
Inventronics EUM – 100S	100	17	143	2100	-40...+75^{0}C	-	-	-	-	-	-	-
Inventronics EUM – 150S	150	18	214	3150	-40...+75^{0}C	compatible	-	-	compatible	-	compatible	compatible
Inventronics EUM – 200S	200	18	286	4200	-40...+75^{0}C	compatible	compatible	-	compatible	-	compatible	compatible
Inventronics EUM – 240S	240	18	343	4900	-40...+75^{0}C	compatible	compatible	compatible	compatible	compatible	compatible	compatible

After review of technical documentation, model series, characteristic of particular models, differences between models, technical parameters, class of luminaires, IP code, light sources, components, etc., luminaire 130222.3LR7B27S1765.246.Z.V.K and 130222.3LR7B40S2765.238.P have been tested as the representative of all models of luminaires.
The tests were performed for worst power supply parameters of the product

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.2 (0)	**GENERAL TEST REQUIREMENTS**		P
3.2 (0.3)	More sections applicable ..... :	Yes ☒ No ☐ Section/s:	—
3.2 (0.5)	Components	(see Annex 1)	—
3.2 (0.7)	**Information for luminaire design in light sources standards**		—
3.2 (0.7.2)	Light source safety standard ..... :	EN62031	—
	Luminaire design in the light source safety standard		P

3.4 (2)	**CLASSIFICATION OF LUMINAIRES**		P
3.4 (2.2)	Type of protection ..... :	Class II	P
3.4 (2.3)	Degree of protection ..... :	IP 66	P
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces ..... :	Yes ☒ No ☐	—
3.4 (2.5)	Luminaire for normal use ..... :	Yes ☒ No ☐	—
	Luminaire for rough service ..... :	Yes ☐ No ☒	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes ☒ No ☐	—
	b) on a mast arm	Yes ☒ No ☐	—
	c) on a post top	Yes ☒ No ☐	—
	d) on span or suspension wires	Yes ☐ No ☒	—
	e) on a wall	Yes ☐ No ☒	—

3.5 (3)	**MARKING**		P
3.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions		P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz		P
3.5 (3.3.3)	Operating temperature		P
3.5 (3.3.5)	Wiring diagram		P
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.8)	Limitation for semi-luminaires		N/A
3.5 (3.3.9)	Power factor and supply current		P
3.5 (3.3.10)	Suitability for use indoors		N/A
3.5 (3.3.11)	Luminaires with remote control		N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply		P
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm’s reach		N/A
3.5 (3.3.21)	Non-replaceable and non-user replaceable light sources information provided		P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.3.23)	Luminaire without controlgear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
3.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		P
	e) Cross-sectional area of wires if applicable		N/A
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		P
3.6 (4)	**CONSTRUCTION**		P
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	**Lampholders**		N/A
3.6 (4.4.1)	Integral lampholder		N/A
3.6 (4.4.2)	Wiring connection		N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N) ..... :	N/A	—
	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) ..... :	N/A	—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	**Starter holders**		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	**Terminal blocks**		N/A
	Tails		N/A
	Unsecured blocks		N/A
3.6 (4.7)	**Terminals and supply connections**		P
3.6 (4.7.1)	Contact to metal parts		N/A
3.6 (4.7.2)	Test 8 mm live conductor		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
3.6 (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
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (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
3.6 (4.9)	**Insulating lining and sleeves**		P
3.6 (4.9.1)	Retainment		P
	Method of fixing ..... :	Screwed	P
3.6 (4.9.2)	Insulated linings and sleeves:		
	Resistant to a temperature > 20 °C to the wire temperature or		P
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) ..... :	N/A	N/A
3.6 (4.10)	**Double or reinforced insulation**		P
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		P
	Safe installation fixed luminaires		P
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.10.2)	Assembly gaps:		
	- not coincidental		P
	- no straight access with test probe		P
3.6 (4.10.3)	Retainment of insulation:		
	- fixed		P
	- unable to be replaced; luminaire inoperative		P
	- sleeves retained in position		P
	- lining in lampholder		N/A
3.6 (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
3.6 (4.11)	**Electrical connections and current-carrying parts**		P
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:		
	- spring washer		N/A
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		P
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.6 (4.12)	**Screws and connections (mechanical) and glands**		P
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	lid of control gear chamber: 2,0Nm control gear, screws: 1,2 Nm connector: 0,8 Nm	P
	Torque test: torque (Nm); part..... :	glass: 1,2 Nm	P
	Torque test: torque (Nm); part..... :	spigot: 20 Nm	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.12.4)	Locked connections:		
	- fixed arms; torque (Nm) ..... :		N/A
	- lampholder; torque (Nm) ..... :		N/A
	- push-button switches; torque 0,8 Nm ..... :		N/A
3.6 (4.12.5)	Screwed glands; force (Nm)..... :		N/A
3.6 (4.13)	**Mechanical strength**		P
3.6 (4.13.1)	Impact tests:		
	- fragile parts; energy (Nm) ..... :	0,5 Nm	P
	- other parts; energy (Nm)..... :	0,7 Nm	P
	1) live parts		P
	2) linings		P
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		N/A
3.6 (4.13.3)	Straight test finger		P
3.6 (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
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	**Suspensions, fixings and means of adjusting**		P
3.6 (4.14.1)	Mechanical load:		
	A) four times the weight		P
	B) torque 2,5 Nm		P
	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
3.6 (4.14.2)	Load to flexible cables		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Mass (kg) ..... :	N/A	—
	Stress in conductors (N/mm²) ..... :		N/A
	Mass (kg) of semi-luminaire ..... :		N/A
	Bending moment (Nm) of semi-luminaire ..... :		N/A
3.6 (4.14.3)	Adjusting devices:		
	- flexing test; number of cycles..... :		N/A
	- strands broken ..... :		N/A
	- electric strength test afterwards		N/A
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	**Flammable materials**		N/A
	- glow-wire test 650°C ..... :	See Test Table 3.15 (13.3.2)	N/A
	- spacing ≥30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (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
3.6 (4.16)	**Luminaires for mounting on normally flammable surfaces**		P
	No lamp control gear..... :	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		
	- in lamp control gear		P
	- external		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- fixed position		N/A
	- temperature marked lamp control gear	130 °C	P
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	**Drain holes**		N/A
	Clearance at least 5 mm		N/A
3.6 (4.18)	**Resistance to corrosion**		P
3.6 (4.18.1)	- rust-resistance		P
3.6 (4.18.2)	- season cracking in copper		P
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Ignitors compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	**Protective shield**		N/A
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	**Photobiological hazards**		P
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 ..... :	RG1 - for all tested the luminaires Unlimited Risk Group 0 for distance ≥ 3,88 m	—
	Luminaires with E_{thr} :		
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 . :		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

IEC 60598-2-3			
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
3.6 (4.25)	**Mechanical hazard**		P
	No sharp point or edges		P
3.6 (4.26)	**Short-circuit protection**		N/A
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (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
3.6 (4.27)	**Terminal blocks with integrated screwless earthing contacts**		P
	Test according Annex V		P
	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
3.6 (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) .....:	N/A	—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	**Luminaires with non-replaceable light source**		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (4.30)	**Luminaires with non-user replaceable light source**		P
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		
	Minimum two fixing means		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.31)	**Insulation between circuits**		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
3.6 (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
3.6 (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
3.6 (4.31.3)	Other circuits		P
	Other circuits insulated from accessible parts according Table X.1		P
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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
3.6 (4.32)	**Overvoltage protective devices**		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP .....:	IPX6	P
	Column-integrated luminaires:		N/A
	- parts below 2,5 m. IP .....:		N/A
	- parts above 2,5 m. IP .....:		N/A
3.6.2 (-)	Suspension on span wires		N/A
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		P
3.6.3.1 (-)	Static load test		P
	- drag coefficient.....:	1,2	P
	- loaded area (m²).....:	0,2 m^2	P
	- used load (N).....:	478 N	P
	- measured deformation (cm/m) .....:	0 cm/m	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or		P
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40.....:		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6.5.2 (-)	Protection by the use of high impact resistant glass		P
3.6.5.2.1 (-)	Glass covers have high mechanical strength		P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample	See Test Report BT_13_087_20	P
3.6.5.2.2 (-)	Glass covers not break into large pieces		N/A
	- test according 3.6.5.1, number of particles is more than 20 .....:		N/A
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A
3.6.7 (-)	Compliance with ISO standard or other .....:		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		
	- dimension of the cable entry slot (mm).....:		N/A
	- cable path from the slot to the connection compartment (mm) .....:		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A
3.7 (11)	**CREEPAGE DISTANCES AND CLEARANCES**		P
3.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	—
	Category III according Annex U		N/A
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		
	- Controlgear marked with $\hat{U}_{OUT}$ and $f_{U_{OUT}}$ according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- Controlgear marked with U_P	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.8 (7)	**PROVISION FOR EARTHING**		N/A
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		N/A
	Metal parts in contact with supporting surface		N/A
	Resistance < 0,5 Ω..... :		N/A
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
3.8 (7.2.4)	Locking of clamping means		N/A
	Compliance with 4.7.3		N/A
	Terminal conn with integrated screwless earthing contacts tested according Annex V		N/A
3.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		N/A
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		N/A
3.8 (7.2.8)	Material of earth terminal		N/A
	Contact surface bare metal		N/A
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Earthing core coloured green-yellow		N/A
	Length of earth conductor		N/A
3.8.1 (-)	Attachment prevented from rotation		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.9 (14)	**SCREW TERMINALS**		P
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 3)	N/A
3.9 (15)	**SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS**		P
	Separately approved; component list..... :	(see Annex 1)	P
	Part of the luminaire ..... :	(see Annex 4)	P
3.10 (5)	**EXTERNAL AND INTERNAL WIRING**		P
3.10 (5.2)	**Supply connection and external wiring**		P
3.10 (5.2.1)	Means of connection ..... :	130222.3LR7B27S1765.246.Z. V.K: connector (screws) 130222.3LR7B40S2765.238.P: connector (screwsless)	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV ≤ 25 V a.c./60 V d.c. or protected from outdoor environment		N/A
3.10 (5.2.2)	Type of cable..... :		N/A
	Nominal cross-sectional area (mm²) ..... :		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
3.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		
	- suitable for introduction		P
	- adequate degree of protection		N/A
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
3.10 (5.2.8)	Insulating bushings:		
	- 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
3.10 (5.2.9)	Locking of screwed bushings		N/A
3.10 (5.2.10)	Cord anchorage:		
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		
	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
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
3.10 (5.2.10.3)	Tests:		
	- impossible to push cable; unsafe		N/A
	- pull test: 25 times; pull (N) ..... :		N/A
	- torque test: torque (Nm) ..... :		N/A
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
3.10 (5.2.11)	External wiring passing into luminaire		N/A
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
3.10 (5.3)	**Internal wiring**		P
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) ..... :		N/A
	- temperatures ..... :	(see Annex 2)	N/A
	Green-yellow for earth only		N/A
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)..... :	0,5 mm^2	P
	Insulation thickness (mm) ..... :	0.6 mm	P
	Extra insulation added where necessary		P
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm²)..... :		N/A
3.10 (5.3.1.3)	Double or reinforced insulation for class II		P
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV current-carrying parts		N/A
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (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°		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.3)	Insulating bushings:		
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		P
3.10 (5.4)	**Test to determine suitability of conductors having a reduced cross-sectional area**		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		N/A
	- pull test: 25 times; pull (N) .....:	60 N	P
	- torque test: torque (Nm) .....:	0,25 Nm	P
3.11 (8)	**PROTECTION AGAINST ELECTRIC SHOCK**		P
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (8.2.3.a)	Class II luminaire:		
	- basic insulated metal parts not accessible during starter or lamp replacement		P
	- basic insulation not accessible other than during starter or lamp replacement		P
	- glass protective shields not used as supplementary insulation		P
3.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		
	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
3.11 (8.2.4)	Portable luminaire has protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
3.11 (8.2.6)	Covers reliably secured		P
3.11 (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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12)	**ENDURANCE TEST AND THERMAL TEST**		P
3.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 3.13		—
3.12 (12.2)	**Selection of lamps and ballasts**		—
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	—
3.12 (12.3)	**Endurance test**		P
	a) mounting-position ..... :	on a mast arm	—
	b) test temperature (°C) ..... :	50°C + 5°C	—
	c) total duration (h) ..... :	240 h	—
	d) supply voltage (V) ..... :	264 V	—
	d) if not equipped with controlgear, constant voltage/current (V) or (A) ..... :	N/A	—
	e) luminaire ceases to operate	N/A	—
3.12 (12.3.2)	After endurance test:		
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	**Thermal test (normal operation)**	(see Annex 2)	P
3.12 (12.5)	**Thermal test (abnormal operation)**	(see Annex 2)	N/A
3.12 (12.6)	**Thermal test (failed lamp control gear condition):**		
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) ..... :	N/A	—
	- case of abnormal conditions ..... :	N/A	—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .... :	N/A	—
	- measured mounting surface temperature (°C) at 1,1 Un ..... :		N/A
	- calculated mounting surface temperature (°C) ..... :		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions ..... :	N/A	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- 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
3.12 (12.7)	**Thermal test (failed lamp control gear in plastic luminaires):**		
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W ..... :	N/A	—
	Test according to 12.7.1.1:		
	- case of abnormal conditions ..... :	N/A	—
	- Ballast failure at supply voltage (V) ..... :	N/A	—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		
	- case of abnormal conditions ..... :	N/A	—
	- measured winding temperature (°C): at 1,1 Un ..... :	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :	N/A	—
	- calculated temperature of fixing point/exposed part (°C) ..... :	N/A	—
	Ball-pressure test .....:	See Test Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions ..... :	N/A	—
	- measured winding temperature (°C): at 1,1 Un ..... :	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un ..... :	N/A	—
	- calculated temperature of fixing point/exposed part (°C) ..... :	N/A	—
	Ball-pressure test ..... :	See Test Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions ..... :	N/A	—
	- Components retained in place after the test		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link ..... :	Yes ☐ No ☐	—
	- manual reset cut-out ..... :	Yes ☐ No ☐	—
	- auto reset cut-out ..... :	Yes ☐ No ☐	—
	- case of abnormal conditions ..... :	N/A	—
	- highest measured temperature of fixing point/ exposed part (°C): ..... :	N/A	—
	Ball-pressure test: ..... :	See Test Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		P
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		N/A

3.13 (9)	**RESISTANCE TO DUST AND MOISTURE**		P
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		
	- classification according to IP ..... :	IP66	—
	- mounting position during test ..... :	on a mast arm	—
	- fixing screws tightened; torque (Nm) ..... :	lid control gear chamber: 1,3Nm	—
	- tests according to clauses ..... :	9.2.2, 9.2.7	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire	IP6X	P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	IPX6	P
	c.1) For luminaires without drain holes – no water entry	IPX6	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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	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
3.13 (9.3)	Humidity test 48 h		P
3.14 (10)	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø ..... :	Metal foil	—
	Insulation resistance (MΩ) ..... :	See below	—
	SELV		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire..... :		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
	Other than SELV		P
	- between live parts of different polarity ..... :	>2MΩ	P
	- between live parts and mounting surface ..... :	>4MΩ	P
	- between live parts and metal parts ..... :	>4MΩ	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..... :	>2MΩ	P
	- Insulation bushings as described in Section 5 .....:		N/A
3.14 (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) ..... :	See below	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	SELV		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface ..... :		N/A
	- between current-carrying parts and metal parts of the luminaire ..... :		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
	Other than SELV		P
	- between live parts of different polarity ..... :	1480V	P
	- between live parts and mounting surface ..... :	2960V	P
	- between live parts and metal parts ..... :	2960V	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 ..... :	1480V	P
	- Insulation bushings as described in Section 5 ..... :		N/A
3.14 (10.3)	Touch current or protective conductor current (mA).:	130222.3LR7B27S1765.246.Z.V.K: 0,15 mA 130222.3LR7B40S2765.238.P: 0,20 mA	P

3.15 (13)	**RESISTANCE TO HEAT, FIRE AND TRACKING**		P
3.15 (13.2.1)	Ball-pressure test ..... :	See Test Table 3.15 (13.2.1)	P
3.15 (13.3.1)	Needle-flame test (10 s) ..... :	See Test Table 3.15 (13.3.1)	P
3.15 (13.3.2)	Glow-wire test (650°C) ..... :	See Test Table 3.15 (13.3.2)	P
3.15 (13.4)	Proof tracking test (IEC 60112) ..... :	See Test Table 3.15 (13.4)	N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	**TABLE I: Creepage distances and clearances**						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						P
	Insulation type **	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:	R	8,5mm	>2,6mm for 220V >2,9mm for 240V	11.1	14,4mm	>4,4mm for 220V >4,8mm for 240V	11.1
Working voltage (V) .....:					220 – 240V		—
PTI .....:					< 600 ☒	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV) .....:					-		—
Supplementary information:							
Distance 2:							
Working voltage (V) .....:							—
PTI .....:					< 600 ☐	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV) .....:					-		—
Supplementary information:							
Distance 3:							
Working voltage (V) .....:							—
PTI .....:					< 600 ☐	≥ 600 ☐	—
Pulse voltage or U_P if applicable (kV) .....:							—
Supplementary information:							

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

3.7 (11.2)	**TABLE II: Creepage distances and clearances**						N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages							
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2							
Distances	**Insulation type ****	**Measured clearance**	**Required**		**Measured creepage**	**Required**	
			clearance	***Table**		**creepage**	***Table**
Distance 1:							
Working voltage (V) .....:							—
Frequency if applicable (kHz) .....:							—
PTI .....:					< 600 ☐	≥ 600 ☐	—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....:							—
Supplementary information:							

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Distance 2:							
Working voltage (V) .....:							—
Frequency if applicable (kHz) .....:							—
PTI .....:	< 600 ☐ ≥ 600 ☐						—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....:							—
Supplementary information:							
Distance 3:							
Working voltage (V) .....:							—
Frequency if applicable (kHz) .....:							—
PTI .....:	< 600 ☐ ≥ 600 ☐						—
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV) .....:							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

3.15 (13.2.1)	**TABLE: Ball Pressure Test of Thermoplastics**		P
Allowed impression diameter (mm) ..... :		2	—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Connector	BJB (46.414)	125	1,0
Connector	EMC Colosio (M26B)	125	0,9
Supplementary information:			

3.15 (13.3.1)	**TABLE: Needle-flame test (IEC 60695-11-5)**				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Connector	BJB (46.414)	10	No	0	P
Connector	EMC Colosio (M26B)	10	No	0	P
Supplementary information:					

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

3.15 (13.3.2)	**TABLE: Glow-wire test (IEC 60695-2-11)**			P
Glow wire temperature ..... :	650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Pressboard	-	No	0	P
Supplementary information:				

3.15 (13.4)	**TABLE: Proof tracking test (IEC 60112)**				N/A
Test voltage PTI ..... :		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					

IEC 60598-2-3			
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])**
LED Module	B	LUG	ML1401700.W740.03A ML1401700.W740.03B ML1401700.W740.03C	24LED, Tc -40°C to +105°C,	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1401701.W740.03A ML1401701.W740.03B ML1401701.W740.03C	24LED, Tc -40°C to +105°C,	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1302080.W740.03A ML1302080.W740.03B ML1302080.W740.03C	36LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1302090.W740.03A ML1302090.W740.03B ML1302090.W740.03C	36LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924900.W730.01A ML1924900.W730.01B ML1924900.W730.01C	48LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924900.W740.01A ML1924900.W740.01B ML1924900.W740.01C	48LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924901.W730.01A ML1924901.W730.01B ML1924901.W730.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924901.W740.01A ML1924901.W740.01B ML1924901.W740.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924902.W730.01A ML1924902.W730.01B ML1924902.W730.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

LED Module	B	LUG	ML1924902.W740.01A ML1924902.W740.01B ML1924902.W740.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701405.W730.01A ML1701405.W730.01B ML1701405.W730.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML1701405.W740.01A ML1701405.W740.01B ML1701405.W740.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027100.W722.01A ML2027100.W722.01B ML2027100.W722.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027100.W727.01A ML2027100.W727.01B ML2027100.W727.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027100.W730.01A ML2027100.W730.01B ML2027100.W730.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027100.W740.01A ML2027100.W740.01B ML2027100.W740.01C	72LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027101.W722.01A ML2027101.W722.01B ML2027101.W722.01C	108LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027101.W727.01A ML2027101.W727.01B ML2027101.W727.01C	108LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027101.W730.01A ML2027101.W730.01B ML2027101.W730.01C	108LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

LED Module	B	LUG	ML2027101.W740.01A ML2027101.W740.01B ML2027101.W740.01C	108LED, Tc -40°C to +85°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027102.W722.01A ML2027102.W722.01B ML2027102.W722.01C	72LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027102.W727.01A ML2027102.W727.01B ML2027102.W727.01C	72LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027102.W730.01A ML2027102.W730.01B ML2027102.W730.01C	72LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027102.W740.01A ML2027102.W740.01B ML2027102.W740.01C	72LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027103.W722.01A ML2027103.W722.01B ML2027103.W722.01C	108LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027103.W727.01A ML2027103.W727.01B ML2027103.W727.01C	108LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027103.W730.01A ML2027103.W730.01B ML2027103.W730.01C	108LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML2027103.W740.01A ML2027103.W740.01B ML2027103.W740.01C	108LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/136/B/20
LED Module	B	LUG	ML1500300.W740.02A ML1500300.W740.02B ML1500300.W740.02C	12LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

LED Module	B	LUG	ML1500301.W740.05A ML1500301.W740.05B ML1500301.W740.05C	16LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1500301.W765.04A ML1500301.W765.04B ML1500301.W765.04C	16LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1500301.W740.04A ML1500301.W740.04B ML1500301.W740.04C	24LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1401010.W740.03A ML1401010.W740.03B ML1401010.W740.03C	36LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1500302.W740.03A ML1500302.W740.03B ML1500302.W740.03C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701400.W730.01A ML1701400.W730.01B ML1701400.W730.01C	24LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701400.W740.01A ML1701400.W740.01B ML1701400.W740.01C	24LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701401.W730.02A ML1701401.W730.02B ML1701401.W730.02C	32LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701401.W740.02A ML1701401.W740.02B ML1701401.W740.02C	32LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701401.W730.01A ML1701401.W730.01B ML1701401.W730.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

LED Module	B	LUG	ML1701402.W730.01A ML1701402.W730.01B ML1701402.W730.01C	72LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1701403.W730.01A ML1701403.W730.01B ML1701403.W730.01C	96LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924107.W740.01A ML1924107.W740.01B ML1924107.W740.01C	6x8LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924106.W740.01A ML1924106.W740.01B ML1924106.W740.01C	4x12LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924105.W740.01A ML1924105.W740.01B ML1924105.W740.01C	3x16LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML1924108.W740.01A ML1924108.W740.01B ML1924108.W740.01C	2x24LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. BS-3/136/B/19
LED Module	B	LUG	ML2027200.W722.01A ML2027200.W722.01B ML2027200.W722.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027200.W727.01A ML2027200.W727.01B ML2027200.W727.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027200.W730.01A ML2027200.W730.01B ML2027200.W730.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

LED Module	B	LUG	ML2027200.W740.01A ML2027200.W740.01B ML2027200.W740.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027201.W722.01A ML2027201.W722.01B ML2027201.W722.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027201.W727.01A ML2027201.W727.01B ML2027201.W727.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027201.W730.01A ML2027201.W730.01B ML2027201.W730.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027201.W740.01A ML2027201.W740.01B ML2027201.W740.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027202.W722.01A ML2027202.W722.01B ML2027202.W722.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027202.W727.01A ML2027202.W727.01B ML2027202.W727.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027202.W730.01A ML2027202.W730.01B ML2027202.W730.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027202.W740.01A ML2027202.W740.01B ML2027202.W740.01C	48LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

LED Module	B	LUG	ML2027203.W722.01A ML2027203.W722.01B ML2027203.W722.01C	96LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027203.W727.01A ML2027203.W727.01B ML2027203.W727.01C	96LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027203.W730.01A ML2027203.W730.01B ML2027203.W730.01C	96LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
LED Module	B	LUG	ML2027203.W740.01A ML2027203.W740.01B ML2027203.W740.01C	96LED, Tc -40°C to +105°C	EN 62031	Tested and accepted by ITE PREDOM Division Test Report No. Z7-3/185/B/20
Control gear	A	OSRAM	OT 165/220...240/1A0 1DIM G2 CE	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 165/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200W 200–1050mA 355V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 135W 200–1050mA 220V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=95^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 90W 200–1050mA 165V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 165/170-240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 60/170-240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT180W/UNV/800C/2D IMLT2/P6	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT100W/UNV/800C/2D IMLT2/P6	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	OSRAM	OT 20/170-240/1A0 1DIM LT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=75^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Philips Xi Dim 250W 0.7A 1-10V 230V	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Philips Xi LP 150W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 165W 0.3-1.0A S1 230V C170 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 75W 250–750mA one	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 120W 350–1050mA o	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 160W 350–1050mA o	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 40/220…240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 75/220…240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 110/220…240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 165/220…240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170…240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=75^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/170…240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/170…240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/170…240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=75^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170…240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	OSRAM	OT 40/170…240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/120…277/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 60/170…240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 90/170…240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...550^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 165/170…240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 50/120…277/800 2DIMLT2 P	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 50/120…277/1A2 2DIMLT2 P	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/120…277/800 2DIMLT2 P	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/120…277/1A4 2DIMLT2 P	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 60/220…240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/220…240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 150/220…240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 200/220…240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=75^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.35-0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 0.1-1.05A Prog+ GL F sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Philips	Xitanium 150W 0.35-0.70A GL Prog sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 300W 1.5A Prog+ GL-R sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 165W 0.2-0.7A S1 230V C170 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 165W 0.5-1.5A S1 230V C170 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 150W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 150W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 150W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 150W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 150W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 165W 0.3-1.0A SNLDAE 230V C170 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 165W 0.2-0.7A SNLDAE 230V C170 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 330W 0.2-0.75A SNDAE 230V C240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 150W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 150W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 2.5-4.9A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 200W 2.8-5.6A AOC 230V I250	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 150W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 220W 0.3-1.05A S1 230V I230	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 220W 0.5-1.5A S1 230V I230	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 150W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 0.7A TWE I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 1.05A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.70A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 0.70A 1-10V 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 250W 0 70A 1-10V 230V Q	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 150W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 250W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 1-10V 230V C165	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 1.05A 1-10V 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 250W 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 250W 1-10V 230V Q	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 135/200-1050/220 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/200-1050/355 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 24/200-1050/39 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 135/200-1050/220 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/200-1050/355 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/1050/95 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/1400/71 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/500/200 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/700/143 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 150/1050/142 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 150/1400/107 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	Tridonic	LCO 150/500/300 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 150/700/214 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/1050/190 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/1400/142 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/500/400 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/700/285 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/1050/72 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/1400/53 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/500/150 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/700/108 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 150/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 200/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 240/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 320/UNV/1A1 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 150/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Control gear	A	OSRAM	OT 200/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 240/ 220-240/1A0 2DIM P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 150S	100..277V, 50-60Hz, ta= -40...+75^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 200S	100..277V, 50-60Hz, ta= -40...+75^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 240S	100..277V, 50-60Hz, ta= -40...+75^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Wires LED	B	Mrowiec	H05V-K	500 V; 0,5 mm2	EN 50525	BBJ
Internal wires	B	Mrowiec	H05V-K	500 V; 0,5 mm2	EN 50525	BBJ
Terminal block	B	Stucchi	651/652	16A; 400 V	EN-61984	IMQ
Terminal block	B	Stucchi	661/662	6A; 400 V	EN-61984	IMQ
Connector	B	BJB	48.281	16A; 400 V	EN 60998-2-2	VDE
Connector	B	BJB	46.412	16A; 450 V	EN 60998-2-2	VDE
Connector	B	BJB	46.413	16A; 450 V	EN 60998-2-2	VDE
Connector	B	BJB	46.414	16A; 450 V	EN 60998-2-2	VDE
Connector	B	BJB	46.415	16A; 450 V	EN 60998-2-2	VDE
Connector	B	BJB	46.455	16A; 450 V	EN 60998-2-2	VDE
Connector	B	WAGO	224-101	24A; 400 V	EN 60998-2-2	VDE
Connector	B	WAGO	224-112	24A; 400 V	EN 60998-2-2	VDE
Terminal block	B	Wieland	GST18I4S	20A; 400 V	EN 61535	VDE
Terminal block	B	Wieland	GST 15I2	16A; 250 V	EN 61535	VDE
Connector	B	EMC Colosio	M26B	17A; 300 V	EN 60598-1	IMQ
Knife switch (connector)	B	Longran	M29 M29 mini	16A; 450 V 16A; 250 V	EN 61984 EN 60998-2-1 EN 60998-1	TUV
Connector system	B	Tyco Electronics Corp.	2213795, 2213831, 2213837, 2213858, 2328823, 2329013	30V AC/DC 50/60Hz, 1.5A	EN 61984	CB certificate, UL EU, IEC
Connector system	B	Tyco Electronics Corp.	1-2213871-1, 1-2213871-2, 2213871-1, 2213871-2, X-2213362-X, X-2213627-X	t= -40...+80^{0}C, tc max=80^{0}C 150/240/300VAC, 50/60Hz, 15/7.5/6 A, Signal Contacts: 30VDC, 1.5A	EN 61984	CB certificate, UL EU, IEC
Connector system	B	LUG	iBlock	230V, 50Hz, Ta =-40°C do 70°C	EN61347-2-11	Tested and accepted by ITE PREDOM Division Test Report No. Z7-2/016/B/20

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

Luminaire protection	B	Vossloh schwabe	SP / 230 / 10K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	VDE

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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	**TABLE: Thermal tests of Section 12**		P
	Type reference ..... :	130222.3LR7B27S1765.246.Z.V.K	—
	Lamp used..... :	ML2027202 W727-01A	—
	Lamp control gear used..... :	OSRAM OPTOTRONIC OT DX 165/220-240/1A0 DIMA LT2E	—
	Mounting position of luminaire ..... :	on a mast arm	—
	Supply wattage (W) ..... :	159 W	—
	Supply current (A) ..... :	0,70 A	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	50 °C	—
	- abnormal operating mode ..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	N/A	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254 V	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	N/A	—

Temperature measurements (°C)

Part	Ambient	**Cl. 12.4 – normal**				**Cl. 12.5 – abnormal**	
		test 1	test 2	test 3	limit	test 4	limit
LED Module	50	N/A	82	N/A	105	N/A	N/A
Control gear	50	N/A	97*	N/A	90	N/A	N/A
Connector (46.414)	50	N/A	67	N/A	85	N/A	N/A
Internal wires	50	N/A	75	N/A	90	N/A	N/A
Connector (M26B)	50	N/A	68	N/A	120	N/A	N/A

Supplementary information:

* - acc. to standard temperature has been reduced by 10°C

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	**TABLE: Thermal tests of Section 12**		P
	Type reference ..... :	130222.3LR7B40S2765.238.P	—
	Lamp used..... :	ML2027203 W740-01A	—
	Lamp control gear used..... :	TRIDONIC LCO 200/200 1050/355 o4a NF C EXC3	—
	Mounting position of luminaire ..... :	on a mast arm	—
	Supply wattage (W) ..... :	204 W	—
	Supply current (A) ..... :	0,89 A	—
	Temperatures in test 1 - 4 below are corrected for ta (°C) ..... :	50 °C	—
	- abnormal operating mode ..... :	N/A	—
1.12 (12.4)	- test 1: rated voltage ..... :	N/A	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	254 V	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage ..... :	N/A	—
	Through wiring or looping-in wiring loaded by a current of A during the test ..... :	N/A	—
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current ..... :	N/A	—

Temperature measurements (°C)

Part	Ambient	**Cl. 12.4 – normal**				**Cl. 12.5 – abnormal**	
		test 1	test 2	test 3	limit	test 4	limit
LED Module	50	N/A	90	N/A	105	N/A	N/A
Control gear	50	N/A	101*	N/A	95	N/A	N/A
Connector (46.414)	50	N/A	77	N/A	85	N/A	N/A
Internal wires	50	N/A	85	N/A	90	N/A	N/A
Luminaire protection	50	N/A	72	N/A	80	N/A	N/A

Supplementary information:

* - acc. to standard temperature has been reduced by 10°C

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	**Screw terminals (part of the luminaire)**		N/A
(14)	**SCREW TERMINALS**		N/A
(14.2)	Type of terminal.....:	N/A	—
	Rated current (A).....:	N/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).....:	N/A	—
(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 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	**Screwless terminals (part of the luminaire)**		P
(15)	**SCREWLESS TERMINALS**		P
(15.2)	Type of terminal.....:	screwless terminal	—
	Rated current (A).....:	16 A	—
(15.3.1)	Material		P
(15.3.2)	Clamping		P
(15.3.3)	Stop		P
(15.3.4)	Unprepared conductors		P
(15.3.5)	Pressure on insulating material		P
(15.3.6)	Clear connection method		P
(15.3.7)	Clamping independently		P
(15.3.8)	Fixed in position		P
(15.3.10)	Conductor size		P
	Type of conductor		P
(15.5)	Terminals and connections for internal wiring		P
(15.5.1)	Mechanical tests		P
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) .....:		P
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples) .....:		P
	Insertion force not exceeding 50 N		P
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		P
	Voltage drop (mV) after 1 h (4 samples).....:	13,0mV	P
	Voltage drop of two inseparable joints		P
	Number of cycles:	100	—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:	14,5 mV	P
	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) .....:	15,7 mV	P
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

(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)										N/A
	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)										N/A
	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)										N/A
	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)										N/A
	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)										N/A
										N/A
Supplementary information:										

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

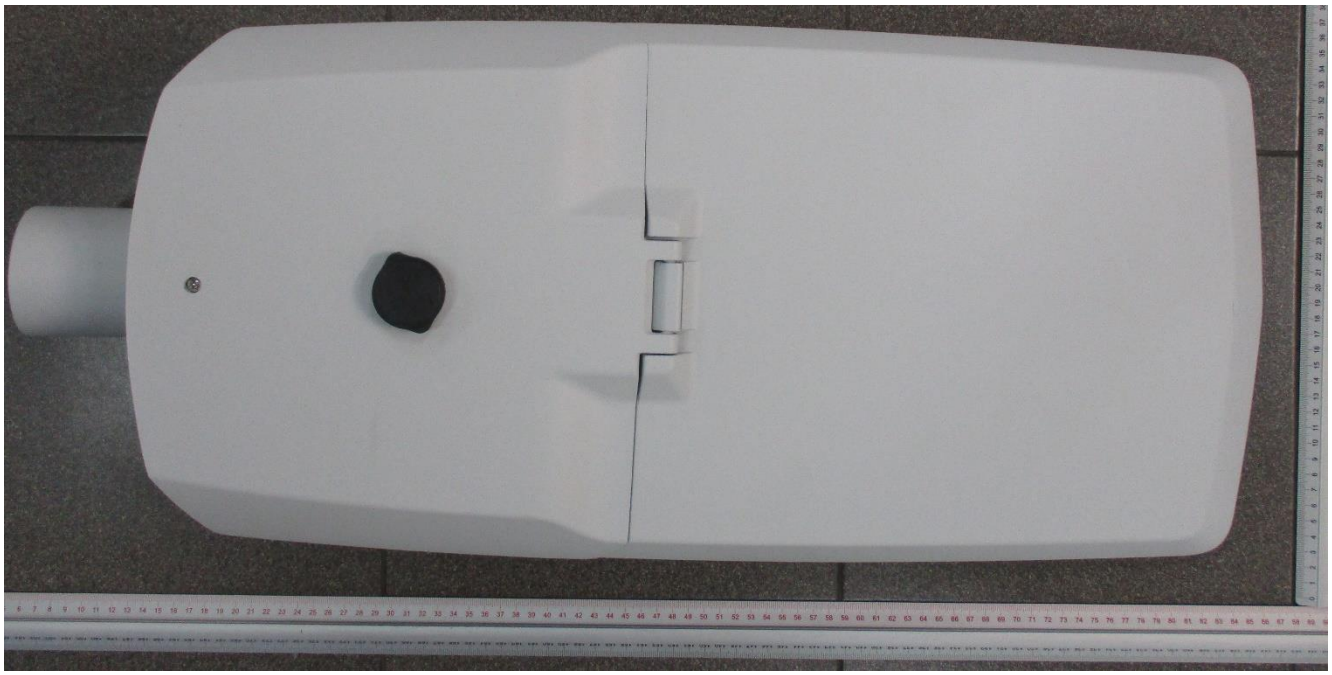
List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Customer's Testing Facility according to CTF stage 1 or CTF stage 2 procedure has been used.
Other forms with a different layout but containing corresponding information are also acceptable.
Note: This page may be removed when CTF stage 1 CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

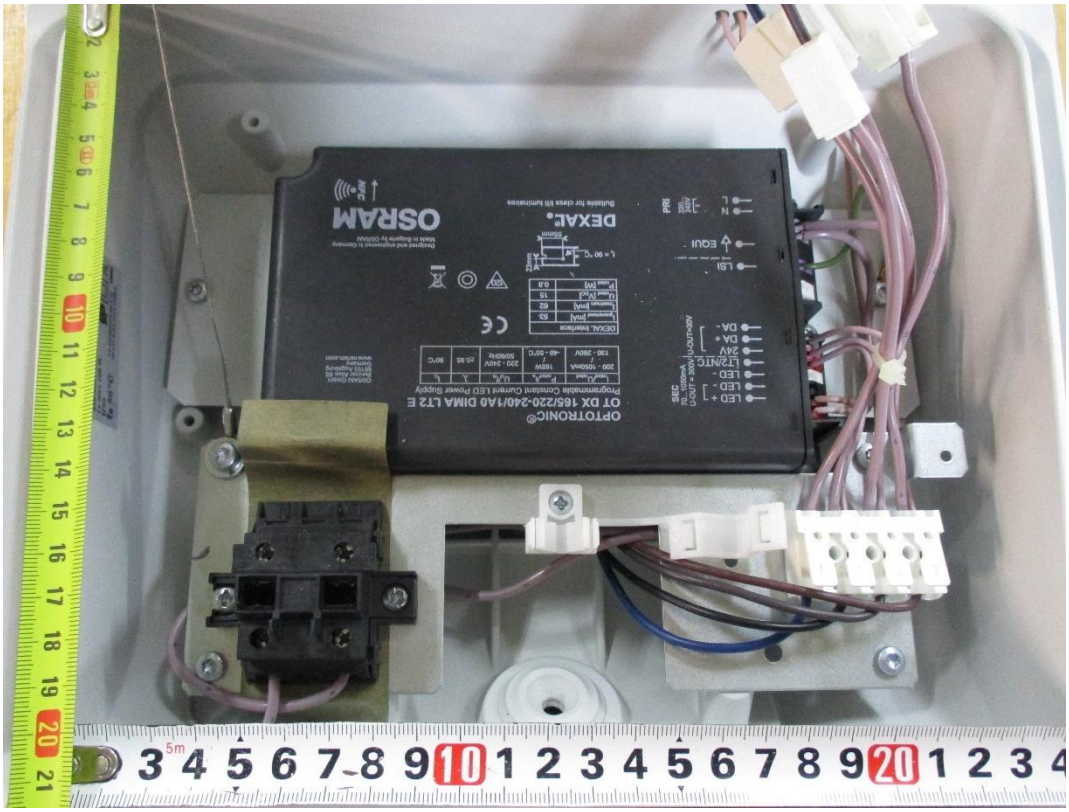
Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date

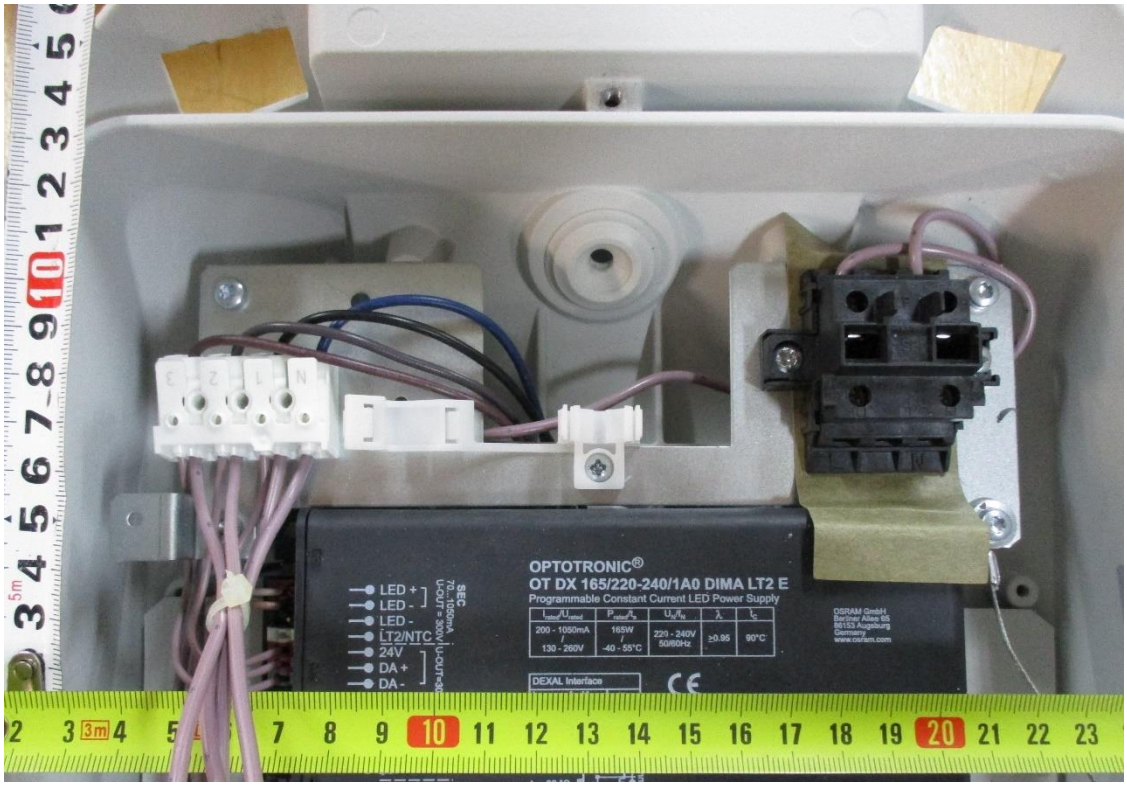
IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

130222.3LR7B27S1765.246.Z.V.K

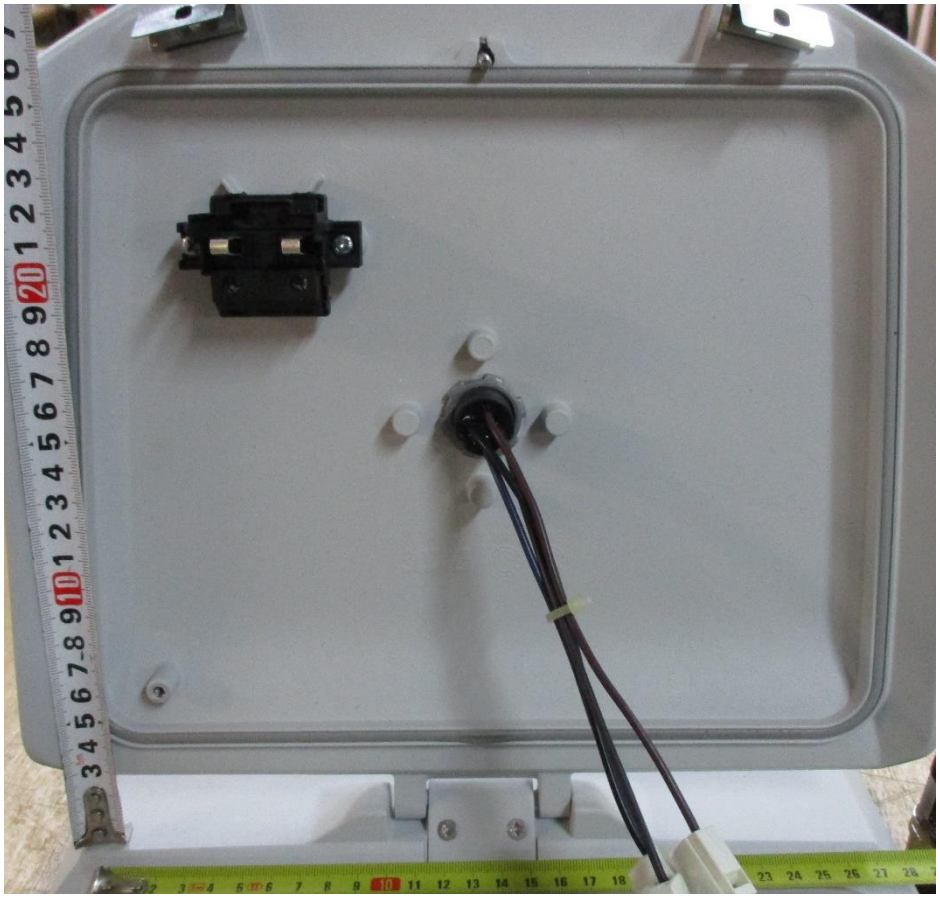


IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

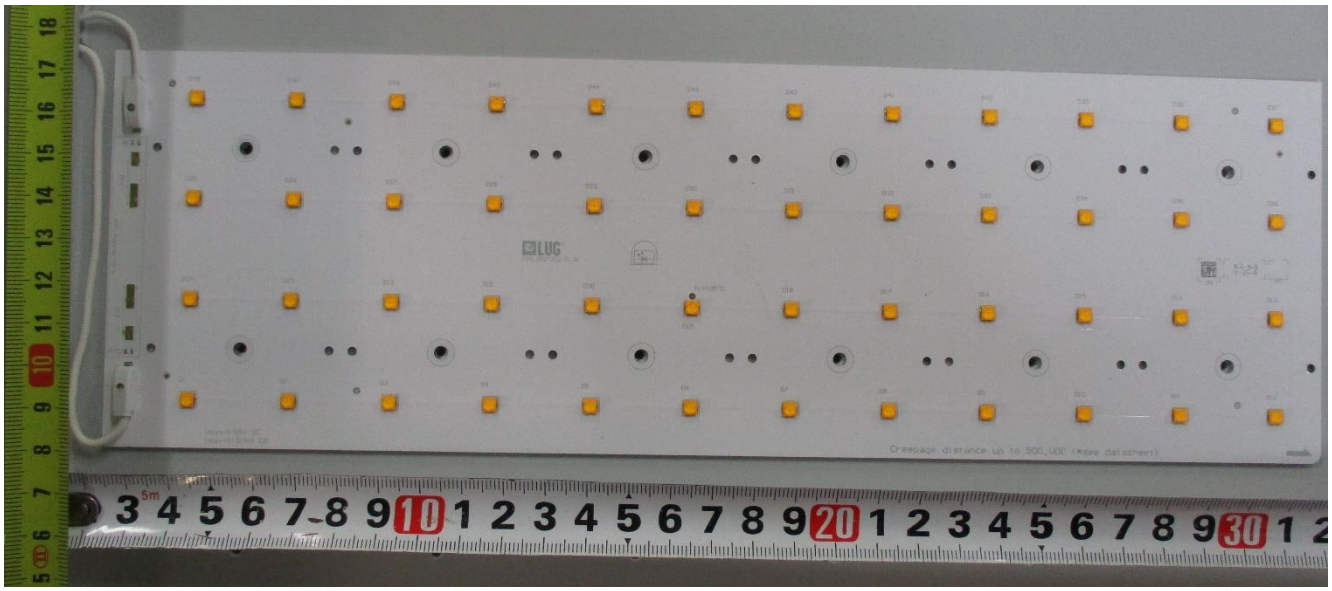


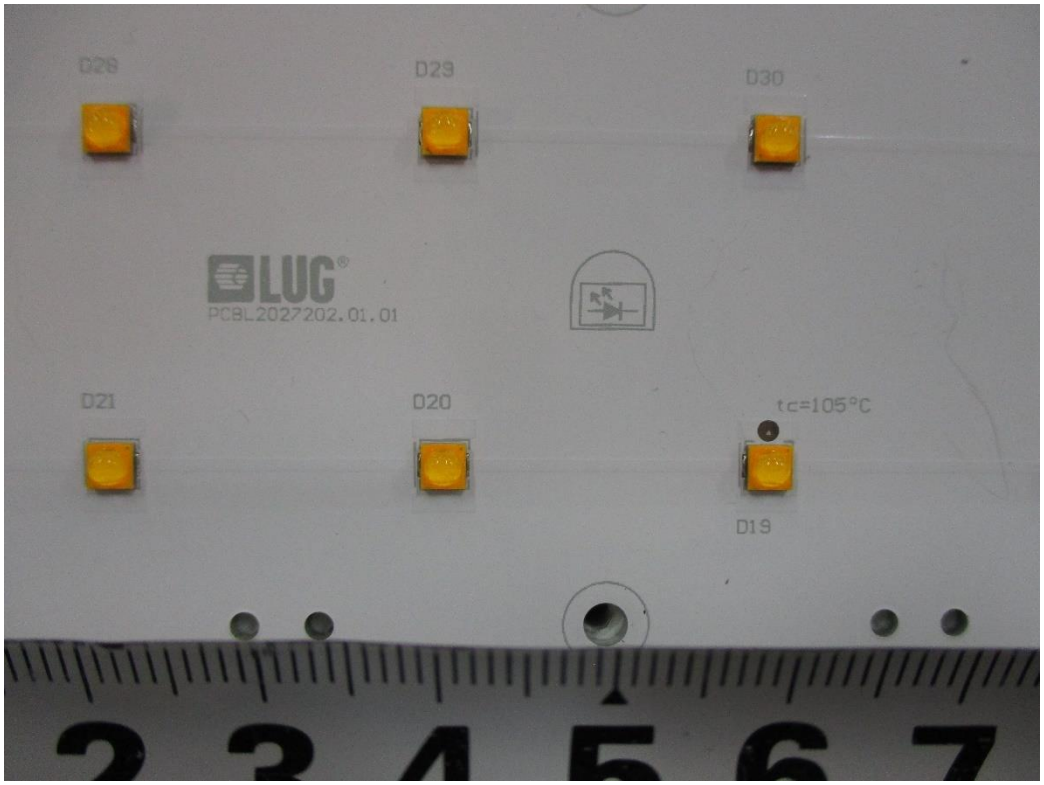


IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



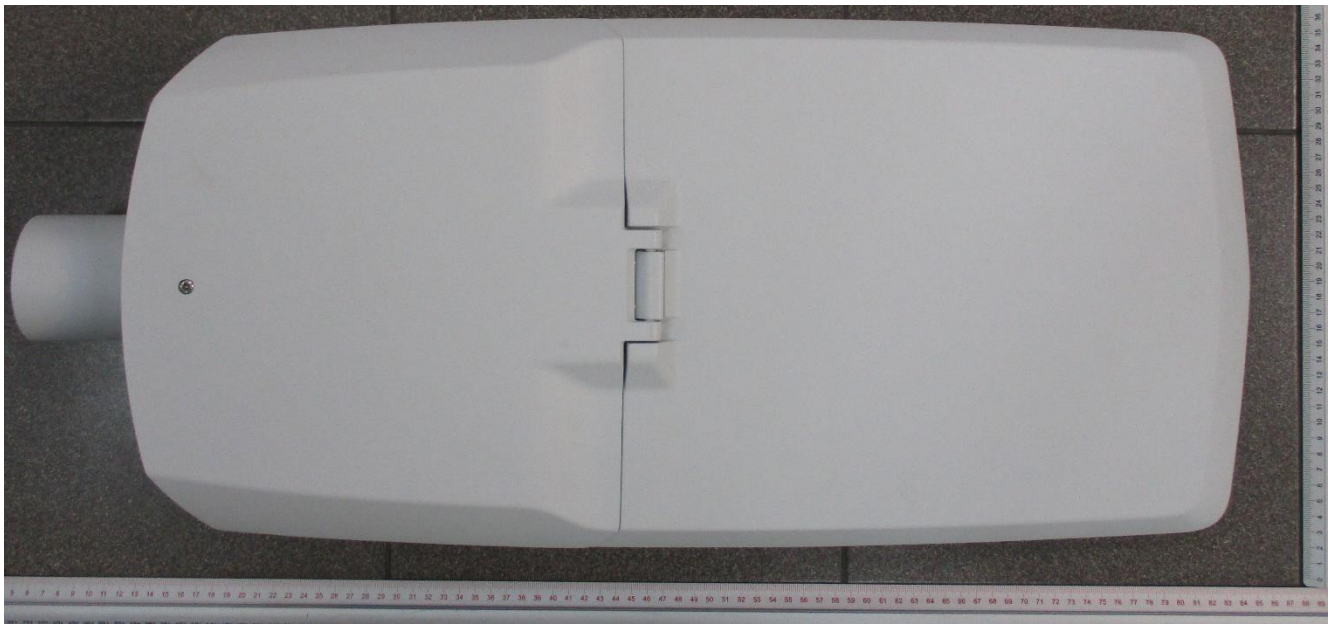
IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



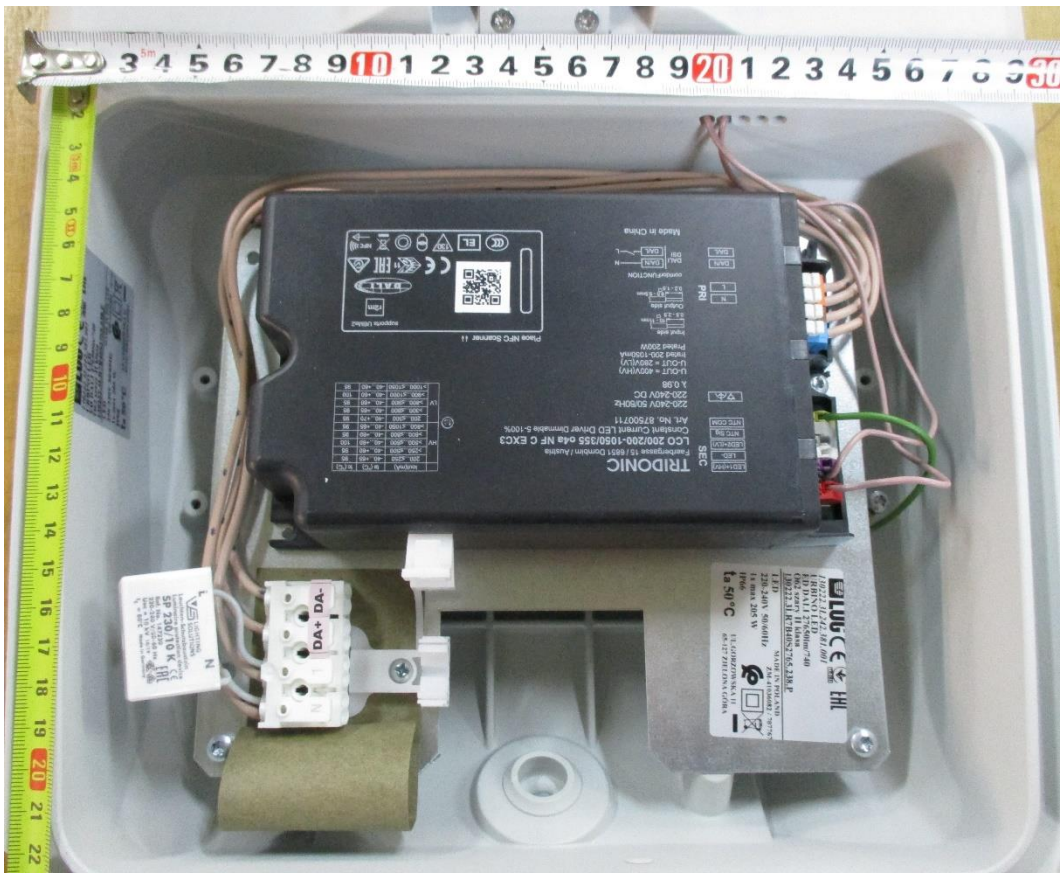


IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

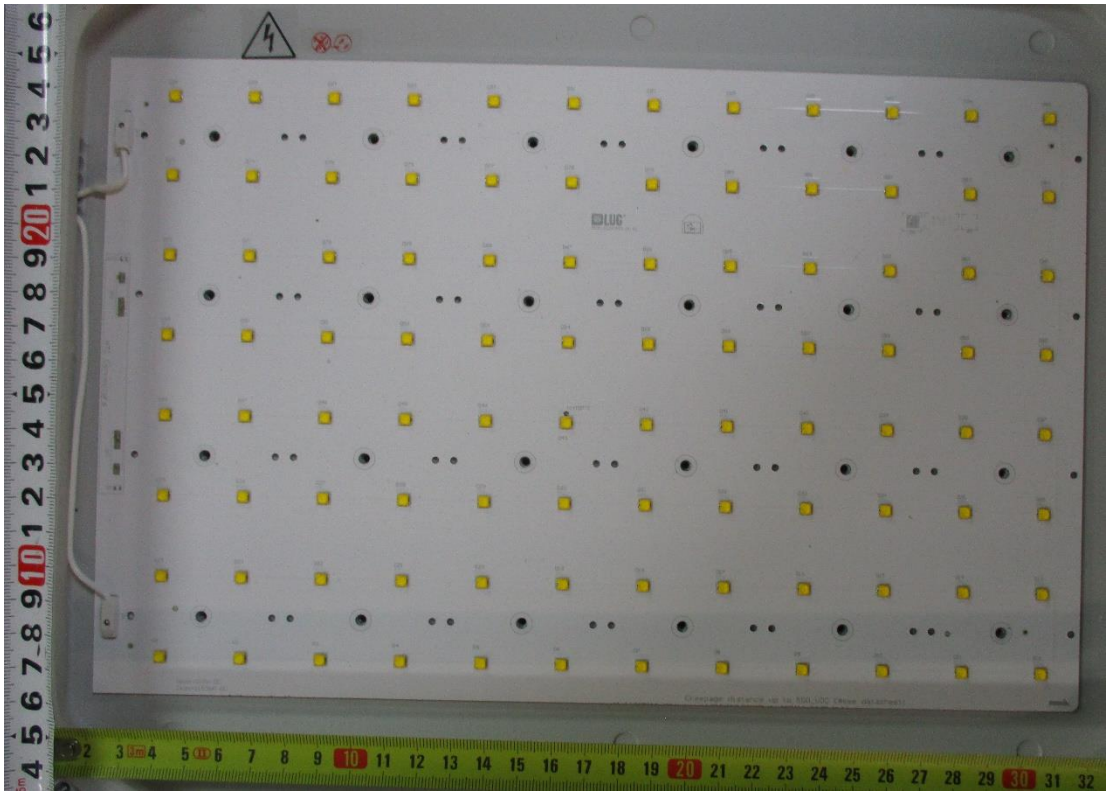
130222.3LR7B40S2765.238.P



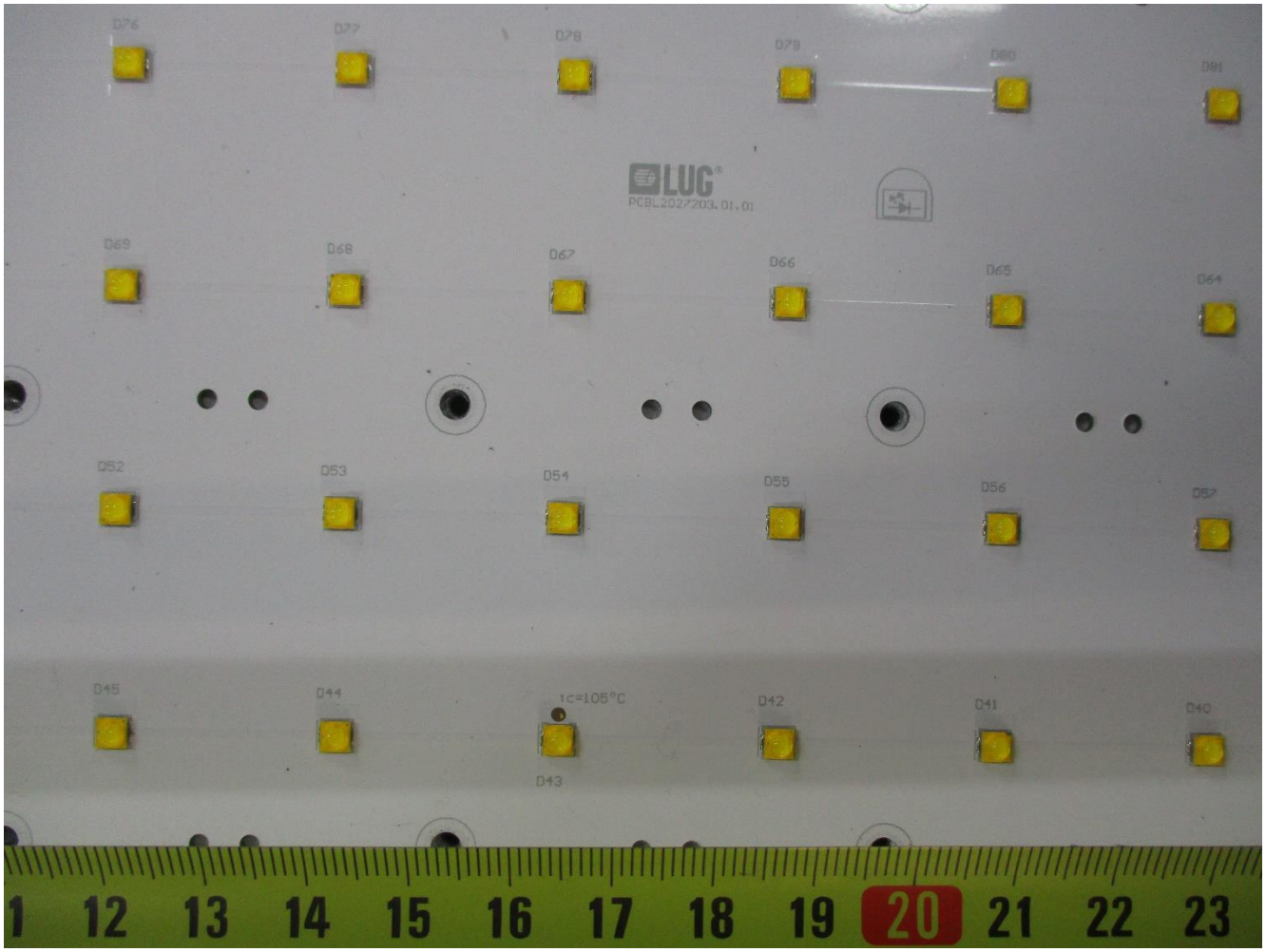
IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict



IEC60598_2_3L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT No.1 TO TEST REPORT IEC 60598-2-3 **Report Ref. No BS-3/134/B/19/M1** **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting			
Differences according to..... EN 60598-2-3:2003, AMD1:2011 used in conjunction with EN 60598-1:2015, AMD1:2018			
Annex Form No...... EU_GD_IEC60598_2_3L **Annex Form Originator**..... Intertek Semko AB **Master Annex Form**..... 2018-12-07			
	CENELEC COMMON MODIFICATIONS (EN)		P
3.6 (4)	**CONSTRUCTION**		N/A
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.10 (5)	**EXTERNAL AND INTERNAL WIRING**		N/A
3.10 (5.2.2)	Cables equal to EN 50525		N/A
	Replace table 5.1 – Supply cord		N/A
3.12 (12)	**ENDURANCE TESTS AND THERMAL TESTS**		P
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		N/A
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(4.5.1)	DK: socket-outlets		N/A
(5.2.1)	CY, DK, FI, GB: type of plug		N/A
ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		N/A
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings *(Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)* Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	GB: Requirements according to United Kingdom Building Regulation		N/A

Cahul project

EN

URBINO LED

220-240V
50/60 Hz

LED

IP 66

IK 09

Professional streetlight luminaire for LED light sources.

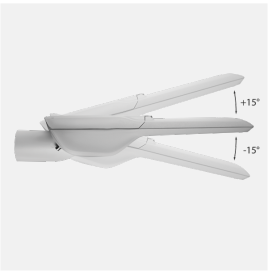
- Possible illuminance control
- Modern design
- Reliability

Other pictures














Date of issue: 19-03-2024

EN

URBINO LED

Code	Type of optics	Luminaire power [W]	Lumen luminaire [lm]	Efficacy [lm/W]	Colour temperature [K]	CRI/Ra	Operating temperature range [°C]
130222.7L782.681.002	O92	59,5	9300	156	4000	>70	* max +50
130222.7L102.991.003	O28	80	11200	140	4000	>70	* max +50

Technical data

Mounting
on pillar ø60/40mm, on pillar ø76mm - modification .829, on outriggers ø60/40mm, on outriggers ø76mm - modification .829

Body colour
gray

Optimum operating temperature
25˚C

RAL
7035

Body
high pressure die-cast aluminum

Lateral Surface Wind Exposed
0.039 m²

Electrical data

Power supply efficiency
≥93%

Power
220-240V 50/60Hz (permissible range 198-242 V)

Includes light source
yes

Type of equipment
DALI

Optical data

Way of lighting
direct

Type of optic
O28, O92

Diffuser
tempered glass

Colour temperature [K]
4000

CRI/Ra
>70

MacAdam's steps
5

ULOR / DLOR
0% / 100%

Photobiological risk group
RG1

General data

Additional information Tilt adjustment: -15° to +15° (every 5°), CRI/Ra >70, Tool-free access to the power supply, ZHAGA**, Corrosion protection, NTC, Power cable 2x1.5 mm² - 1.5m, 10kV surge protection, power supply with dimming function from 100% to 50% in 10% steps, power supply with protection against voltage fluctuations, overvoltage, temperature and overload, THD <8%, internal marking of the luminaire (manufacturer's name, model number, year of manufacture, rated voltage, rated frequency, luminaire power, colour temperature)

Other remarks
the pole and boom are not part of the luminaire

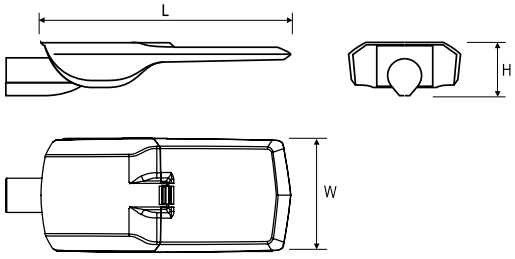
Lifetime LED L90
100 000 h

Warranty
10 years

* Lower temperature range: -40°C to -20°C, depending on the type of power supply used (consultation with the LUG Technical Preparation of Production Branch is required).
** Pictures and dimensions of the standard luminaire (does not include the ZHAGA socket).
Changing the power supply model* does not affect the luminous flux behaviour tolerance (+/-10%) and luminaire power consumption +/-5% (*While maintaining the same current settings)
In order to apply the luminaire in an aggressive environment, for example with an increased concentration of sulfur, salt or other aggressive substances, a consultation with the LUG Technical Preparation of Production Branch is required.
Luminous flux tolerance +/- 10%.
Power tolerance +/- 5%.
Lighting beam, light intensity distribution and light efficiency were examined in accordance with the EN ISO 17025:2005 norm for EN13032 norm series and the LM-79 norm.
General Warranty Terms available on our website www.luglightfactory.com
Detailed information on luminous fluxes and powers for individual indexes are indicated on the product data sheet.
The parameters in the data sheet are given for Ta=25°C.
The operating temperature ranges apply only to luminaires used in the outdoor environment.
Colour temperature tolerance +/- 5%.

Dimensions

Dimensions** [mm] LxWxH	Pallet quantity	Quantity in package	Net weight [kg]
550x250x100	50	1	6.8



EN URBINO LED

Accessories

■ 150173.00906
▨ 150170.00818

Wall bracket ø60mm

■ 150175.01107
▨ 150172.01097

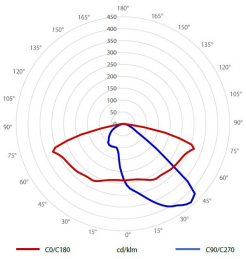
Side louvers for URBINO LED luminaires

■ 150175.01106
▨ 150172.01096

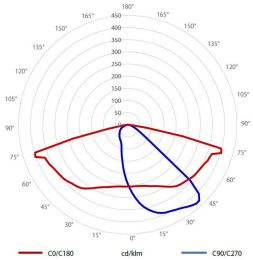
Rear-side louvers for URBINO LED luminaires

Light beam curves

O92



O28



EN

Cahul project

URBINO LED
PLUS version

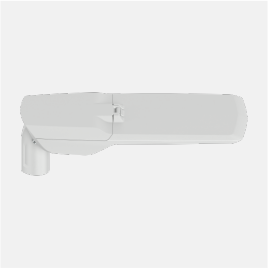
220-240V 50/60 Hz | LED | IP 66 | IK 09 | TR 054

Professional streetlight luminaire for LED light sources.

- Possible illuminance control
- Modern design
- Reliability

Other pictures








Code	Type of optics	Luminaire power [W]	Lumen luminaire [lm]	Efficacy [lm/W]	Colour temperature [K]	CRI/Ra	Operating temperature range [°C]
130222.7L492.491.002	O73	150	21000	140	4000	>70	-35 ... +50

EN

URBINO LED
PLUS version

Technical data

Mounting
on pillar ø60/40mm, on pillar ø76mm - modification .829, on outriggers ø60/40mm, on outriggers ø76mm - modification .829

Body colour
gray

Optimum operating temperature
25˚C

RAL
7035

Body
high pressure die-cast aluminum

Lateral Surface Wind Exposed
0.045 m²

Electrical data

Power supply efficiency
≥90%

Power
220-240V 50/60Hz (permissible range 198-242 V)

Includes light source
yes

Type of equipment
D4i

Optical data

Way of lighting
direct

Type of optic
O73

Diffuser
tempered glass

Colour temperature [K]
4000

CRI/Ra
>70

MacAdam's steps
5

ULOR / DLOR
0% / 100%

Photobiological risk group
RG1

General data

Additional information Tilt adjustment: -15° to +15° (every 5°), CRI/Ra >70, Tool-free access to the power supply, ZHAGA*, Corrosion protection, NTC, Power cable 2x1.5 mm² - 1.5m, 10kV surge protection, power supply with dimming function from 100% to 50% in 10% steps, power supply with protection against voltage fluctuations, overvoltage, temperature and overload, THD <8%, internal marking of the luminaire (manufacturer's name, model number, year of manufacture, rated voltage, rated frequency, luminaire power, colour temperature)

Other remarks
the pole and boom are not part of the luminaire

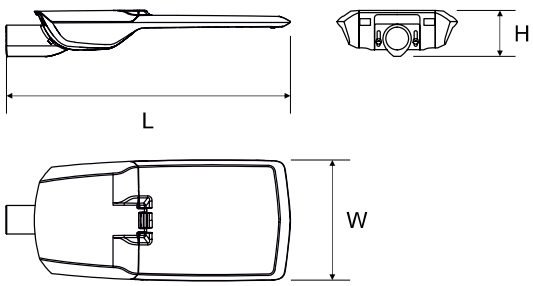
Lifetime LED L90
100 000 h

Warranty
10 years

*Pictures and dimensions of the standard luminaire (does not include the ZHAGA socket).
Changing the power supply model* does not affect the luminous flux behaviour tolerance (+/-10%) and luminaire power consumption +/-5% (*While maintaining the same current settings)
In order to apply the luminaire in an aggressive environment, for example with an increased concentration of sulfur, salt or other aggressive substances, a consultation with the LUG Technical Preparation of Production Branch is required.
Luminous flux tolerance +/- 10%.
Power tolerance +/- 5%.
Lighting beam, light intensity distribution and light efficiency were examined in accordance with the EN ISO 17025:2005 norm for EN13032 norm series and the LM-79 norm.
General Warranty Terms available on our website www.luglightfactory.com
Detailed information on luminous fluxes and powers for individual indexes are indicated on the product data sheet.
The parameters in the data sheet are given for Ta=25°C.
The operating temperature ranges apply only to luminaires used in the outdoor environment.
Colour temperature tolerance +/- 5%.

Dimensions

Dimensions* [mm] LxWxH	Mounting dimensions [mm] ØS	Pallet quantity	Quantity in package	Net weight [kg]
670x320x105	60	20	1	10.3



EN

URBINO LED
PLUS version

Accessories

- 150175.01351
- 150172.01350

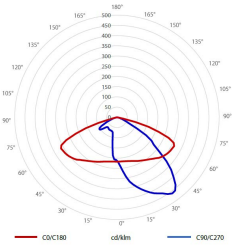
Side louvers for URBINO LED PLUS luminaires

- 150175.01349
- 150172.01348

Rear-side louvers for URBINO LED PLUS luminaires

Light beam curves

O73 - for express roads



AB 003

TEST REPORT
IEC CISPR15
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

Report Number. ..... :	Z7-4/043/EMC/21
Date of issue ..... :	2021-03-29
Total number of pages ..... :	65
Name of Testing Laboratory preparing the Report ..... :	Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland
Applicant's name ..... :	LUG Light Factory Sp. z o. o.
Address ..... :	65-127 Zielona Góra ul. Gorzowska 11, Poland
Test specification:	
Standard ..... :	PN-EN IEC 55015:2019-11+A11:2020-07, PN-EN 61547:2009, PN-EN IEC 61000-3-2:2019-04, PN-EN 61000-3-3:2013-10+A1:2019-10, EN IEC 55015:2019+A11:2020, EN 61547:2009, EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019, CISPR 15:2018, IEC 61547:2009, IEC 61000-3-2:2018, IEC 61000-3-3:2013+AMD1:2017
Test procedure ..... :	EMC
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	PREDOM IEC CISPR15_ IEC 61547/20
Test Report Form(s) Originator .... :	Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland
Master TRF ..... :	Dated 2020-05

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 Luminaire
Trade Mark(s) .....:	LUG
Original Product/Equipment Manufacturer .....:	LUG Light Factory Sp. z o. o. 65-127 Zielona Góra ul. Gorzowska 11, Poland
Branding Manufacturer(s).....:	LUG
Model/Type reference.....:	URBINO LED ED 1-10V 27650lm/740
Ratings.....:	220-240V; 50/60Hz; 1x max 205W; IP66; cl.I

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**Testing Laboratory:**	Łukasiewicz - IMiF PREDOM Division	
Testing location/ address ..... :		02-255 Warszawa, ul. Krakowiaków 53, Poland	
Tested by (name, function, signature) ..... :		Bartłomiej Wysokiński	
Approved by (name, function, signature) .. :		Tomasz Małyska	
Supervised by (name, function, signature).:		Aleksander Piotrowski	
☐	**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: Positive

Tests performed (name of test and test clause):	**Testing location:**
Conducted EMISSIONS Radiated electromagnetic disturbances Radiated EMISSIONS Harmonic Currents Voltage Fluctuations and Flicker Electrostatic Discharges RF Electromagnetic Fields Power frequency magnetic fields Electrical Fast Transients Conducted Disturbances Induced by RF Fields Surge Voltage Dips and short Interruptions	Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland

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

Statement concerning the uncertainty of the measurement systems used for the tests

no required (N/A)

☒ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title: General concept of methodologies for determining uncertainty of measurement, dated : October 2013

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

☐ **Statement not required by the standard used for type testing**

Copy of marking plate:

Test item particulars .....:	For test item particulars refer to item 1
Classification of installation and use .....:	LED Luminaire
Supply Connection.....:	Power 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 ..... :	2021-03-04
Date (s) of performance of tests..... :	2021-03-08 ÷ 2021-03-24

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).....: LUG Light Factory Sp. z o. o.
65-127 Zielona Góra ul. Gorzowska 11, Poland

General product information (GPI) and other remarks:

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

According to the information from our applicant, the tests were done on 230V/50Hz supply.

Table of Contents:

1 General description of test item(s)

Description .....:	LED Luminaire				
Model number .....:	130222.2L241.381.001 URBINO LED ED 1-10V 27650lm/740				
Serial number.....:	130222.2LR7B40S2765.138.V				
Brand name.....:	LUG				
Ports.....:	Port name and description		Cable		
			Specified length [m]	Attached during test	Shielded
Local wired ports .....:	Mains, Supply Connection: power cord		1.3	☒	☐
				☐	☐
				☐	☐
				☐	☐
Wired network ports .....:				☐	☐
				☐	☐
				☐	☐
				☐	☐
Supplemental information to the ports .....:	N/A				
Rated power supply .....:		Voltage and frequency	1 ph/ PE	2 ph/N/PE	3 ph/N/PE
	☒	AC: 230V/50Hz	☒ / ☒	☐ / ☐ / ☐	☐ / ☐/ ☐
	☐	DC:			
Rated power.....:	1x max 205W				
Protection class.....:	cl. I				
Clock frequencies.....:	No available data for these selection criteria				
Other parameters.....:	---				
Software version .....:	---				
Hardware version .....:	---				
Dimensions in cm (W x H x D):	33 x 11 x 75				
Mounting position:	☐	Table top equipment			
	☐	Wall/Ceiling mounted equipment			
	☐	Floor standing equipment			
	☐	Hand-held equipment			
	☒	Other: In accordance with the manufacturer’s instructions			

Modules / parts.....:	**Module / parts of test item**	**Type**	**Manufacturer**
	LED Power Supply	OPTOTRONIC OT 200/UNV/1A0 2DIM P7	OSRAM
	See section Annex A *Supplementary information: See section Annex B*		

Operating modes.....:	**No.**	**Operating mode of test item**	**Applied for testing**	
			Emission	**Immunity**
	1	Powered by 230VAC 50Hz, in accordance with the manufacturer's instructions	☒	☒
	2	Powered by 110VAC 60Hz, in accordance with the manufacturer's instructions	☐	☐
	3	EUT with battery power Powered by ...VDC (built-in battery), in accordance with the manufacturer's instructions	☐	☐
Supplemental information to the operating modes .....:	N/A			

Accessories (not part of the test item).....:	**Accessory**	**Type**	**Manufacturer**
	N/A	N/A	N/A

Documents as provided by the applicant.....:	**Description**	**File name**	**Issue date**
	N/A	N/A	N/A

Modifications to the test item during testing.....:	N/A

1.1 Description of test item(s) according to CISPR 15 and IEC 61000-3-2

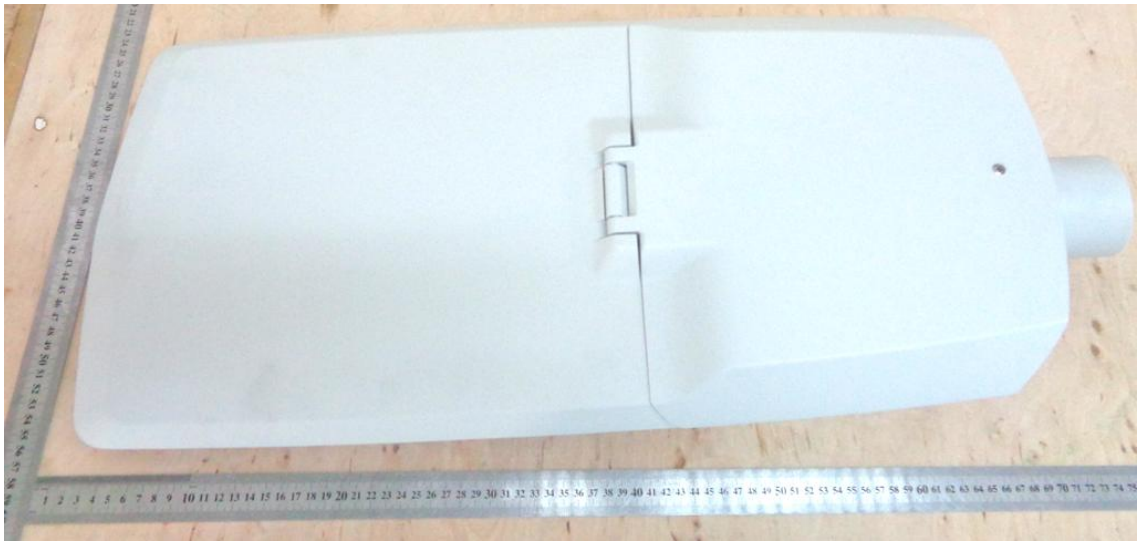
Description of the test item..... :	☒	Luminaire
	☐	Rope light (6.3)
	☐	Internal Module (6.4.3)
	☐	External module (6.4.4)
	☐	Module having multiple applications (6.4.2)
	☐	Single capped self-ballasted lamp (6.4.5)
	☐	Double-capped self-ballasted lamps, double-capped lamp adapters, double-capped semi-luminaires and double-capped retrofit lamps used in fluorescent lamp luminaires (6.4.6)
	☐	ELV lamps (6.4.7)
	☐	Single-capped semi-luminaires (6.4.8)
	☐	Independent igniter (6.4.9)
	☐	Replaceable starters for fluorescent lamps (6.4.10)
	☐	Others: ---
Lamp technology used ..... :	☒	Light emitting diode (LED/OLED)
	☐	High pressure discharge lamp (HID)
	☐	Fluorescent lamp
	☐	Tungsten halogen lamp
	☐	Incandescent lamp
	☐	Others: ---
Control Gear..... :	☒	Electronic control gear
	☐	Magnetic control gear / transformer
	☐	Others: ---

Dimming ..... :	☒	Test item has NO dimming functions	
	☐	Test item includes dimming functions other than phase control	
	☐	Test item has phase control dimming functions with the following characteristic(s):	
		☐	rated power less than or equal to 1 kW when operating incandescent lamps
		☐	rated power less than or equal to 200 W for trailing edge dimmers, and universal phase control dimmers with the default mode set to trailing edge, when operating lighting equipment other than incandescent lamps
		☐	rated power less than or equal to 100 W for leading edge dimmers, and universal phase control dimmers without default mode set to trailing edge, when operating lighting equipment other than incandescent lamps
		☐	Other: ---

Type of equipment..... :	☒	Not for professional use
	☐	For professional use
	☐	Others: ---

1.2 Photos of the test item

Photo of test item:



2 Verdict summary section

CISPR15			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
4.3	Assessment of wired network ports Table 1, Table 2, Table 3	CISPR 16-1-1:2019 CISPR 16-1-2:2014+AMD1:2017 CISPR 16-2-1:2014+AMD1:2017 CISPR 32:2015	Pass
4.4	Assessment of local wired ports Table 4, Table 5, Table 6		N/A
4.5	Assessment of the enclosure port	---	---
4.5.2	Frequency range 9 kHz to 30 MHz Table 8, Table 9	CISPR 16-1-4:2019 CISPR 15:2018	Pass
4.5.3	Frequency range 30 MHz to 1 GHz Table 10	CISPR 16-2-3:2016+AMD1:2019	Pass
IEC 61000-3-2			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
6.2 6.3	Harmonic current emissions	IEC 61000-3-2:2018 IEC 61000-4-7:2002+AMD1:2008	Pass
IEC 61000-3-3			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
4	Voltage changes, voltage fluctuations and flicker	IEC 61000-3-3:2013+AMD1:2017 IEC 61000-4-15:2010	Pass
IEC 61547			
Clause	**Requirement – Test case**	**Basic standard**	**Verdict**
5.2	Electrostatic discharge	IEC 61000-4-2:2008	Pass
5.3	Radio-frequency electromagnetic fields	IEC 61000-4-3:2006+AMD1:2007+ +AMD2:2010	Pass
5.4	Power frequency magnetic fields	IEC 61000-4-8:2009	Pass
5.5	Fast transients	IEC 61000-4-4:2012	Pass
5.6	Injected currents (radio-frequency common mode)	IEC 61000-4-6:2013	Pass
5.7	Surges	IEC 61000-4-5:2014+AMD1:2017	Pass
5.8	Voltage dips and short interruptions	IEC 61000-4-11:2004+AMD1:2017	Pass
Supplementary information: N/A			

3 Test conditions

3.1 General

<table>
<tr><td>Environmental reference conditions..... :</td><td>The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.
The climatic conditions during the tests were within the following limits:
<table>
<tr><th>Temperature</th><th>Humidity</th><th>Atmospheric pressure</th></tr>
<tr><td>15 °C – 35 °C</td><td>30 % - 60 %</td><td>860 hPa – 1060 hPa</td></tr>
</table>
If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.</td></tr>
<tr><td>Measurement uncertainties..... :</td><td>For all measurements where guidance for the calculation of the instrumentation uncertainty of a measurement is specified in CISPR 16-4-2 , IEC 61000-4 series or a product standard, the measurement instrumentation uncertainty has been calculated an applied in accordance with these standards.
In all cases if the test laboratory uncertainty is larger than the value for UCISPR given in CISPR 16-4-2 the uncertainty are included in the test report annex.
In case the standards in the IEC 61000-4 series or the product standard requires the indication of the uncertainty in the report these uncertainty values are included in the annex.</td></tr>
</table>

3.2 Specific test conditions for CISPR 15

Test set up..... :	☒	CISPR 15
	☐	CISPR 30 technical report applied for built-in appliances
Type of test item (Clause 6.2 of CISPR 15) ..... :	☒	Active EUT
	☐	Passive EUT (Deemed to comply without further testing)
	☐	Others: ---
Maximum clock frequency (Clause 3.2.2) ..... :	☐	≤ 30 MHz → Measurement of radiated emissions up to 300 MHz is sufficient.
*No available data for these selection criteria	☒*	> 30 MHz → Measurement of radiated emissions up to 1000 MHz is required.

4 Emission

4.1 Conducted disturbances

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-18	
Test Location (stand) ..... :	Disturbance voltage stand Faraday Cage U-11	
Test set-up description..... :	☐	Set-up Type A (40 cm distance to vertical ground plane, 80 cm o ground plane)
	☒	Set-up Type B (40 cm distance to horizontal ground plane)
	☐	Floor standing equipment set-up (10 cm over ground plane)
	☐	Other: ---
	☐	Artificial hand applied (See photo)
Supplementary Test set-up description..... :	Operating mode: 1	
Test method applied..... :	☒	Voltage disturbance measurement (Table 1, Table 2, Table 4, Table 5)
	☐	Current disturbance measurement (Table 3, Table 6)
	☐	Other: ---
Supplementary information ..... :	During the tests the EUT operated at the rated frequency and voltage specified for the equipment. Level of the disturbance is steady, level tested - maximum disturbance.	

Test set-up photo:	

Graphical presentation of the result:

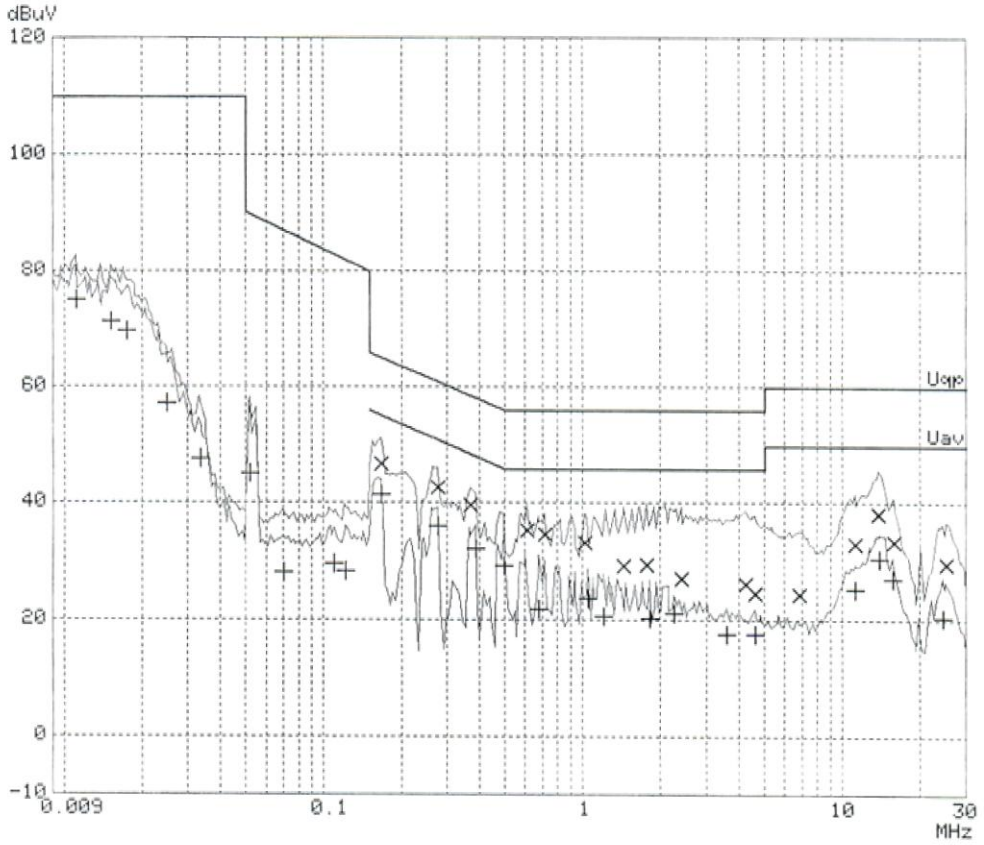
IMiF PREDOM Division
Disturbance Voltage Measurement

EUT: URBINO LED
Manuf: LUG Light Factory Sp. z o.o.
Test Spec: EN 55015
File name: _55015_.RES
Date: 18. Mar 21 13:55

Overview Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
9k	150k	61.0Hz	200Hz	PK+AV	10ms	60dBLN	OFF
150k	30M	3.9k	9k	PK+AV	10ms	15dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 25dB



IMiF PREDOM Division
Disturbance Voltage Measurement

EUT: URBINO LED
Manuf: LUG Light Factory Sp. z o.o.
Test Spec: EN 55015
File name: _55015_.RES
Date: 18. Mar 21 13:55

Final Measurement Results:

Indicated Phase/PE shows Configuration of max. Emission

Frequency MHz	QP Level dBuV	Delta Limit dB	Phase -	PE -
0.16563	46.8	-18.4	N	gnd
0.27500	42.7	-18.3	N	gnd
0.36875	39.6	-18.9	N	gnd
0.60703	35.4	-20.5	N	gnd
0.71641	34.7	-21.2	N	gnd
1.02109	33.3	-22.7	N	gnd
1.43906	29.3	-26.6	L1	gnd
1.76719	29.5	-26.4	N	gnd
2.40391	27.1	-28.8	L1	gnd
4.24766	26.2	-29.7	L1	gnd
4.59531	24.6	-31.3	L1	gnd
6.85313	24.4	-35.5	L1	gnd
11.24766	33.1	-26.8	L1	gnd
13.73594	38.2	-21.7	L1	gnd
15.81016	33.3	-26.6	L1	gnd
25.22813	29.6	-30.3	N	gnd

Frequency MHz	AV Level dBuV	Delta Limit dB	Phase -	PE -
0.0111362	75.1		N	gnd
0.0150425	71.3		N	gnd
0.0174229	69.7		L1	gnd
0.0248081	57.2		L1	gnd
0.0335361	47.8		N	gnd
0.05203	45.2		L1	gnd
0.06955	28.2		N	gnd
0.10952	29.5		N	gnd
0.12112	28.3		L1	gnd
0.16563	41.5	-13.7	N	gnd
0.27500	36.0	-14.9	N	gnd
0.38438	32.2	-15.9	N	gnd
0.49375	29.3	-16.8	N	gnd
0.67734	21.9	-24.0	N	gnd
1.04453	23.7	-22.2	L1	gnd
1.20078	20.6	-25.3	L1	gnd
1.81406	20.3	-25.6	L1	gnd
2.25156	21.1	-24.8	L1	gnd
3.57578	17.6	-28.3	L1	gnd
4.61875	17.6	-28.3	L1	gnd
11.25156	25.2	-24.7	L1	gnd
13.94297	30.5	-19.4	L1	gnd
15.71641	27.1	-22.8	L1	gnd
24.45859	20.5	-29.4	L1	gnd

4.2 Radiated electromagnetic disturbances (9 kHz to 30 MHz)

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-19	
Test Location (stand) ..... :	Radiated electromagnetic disturbances (9 kHz to 30 MHz) stand	
Applied Limit for antenna measurement (Table 9)..... :	☐	Loop antenna radiated disturbance limit 9 kHz – 30 MHz for equipment with a dimension > 1,6 m
Applied limit according to LLAS diameter (Table 8)..... :	☒	2 m for equipment length not exceeding 1,6m
	☐	3 m for equipment length between 1,6 m and 2,6 m
	☐	4 m for equipment length between 2,6 m and 3,6 m
Test set-up description..... :	☒	Equipment placed in the centre of the LLAS
	☐	Equipment on a table 80 cm height
	☐	Equipment on the floor (isolated from ground plane)
	☐	Other: ---
Supplementary test set-up description..... :	Position: Vertical and Horizontal Operating mode: 1	
Supplementary information ..... :	---	

Test set-up photo:

Graphical presentation of the result:

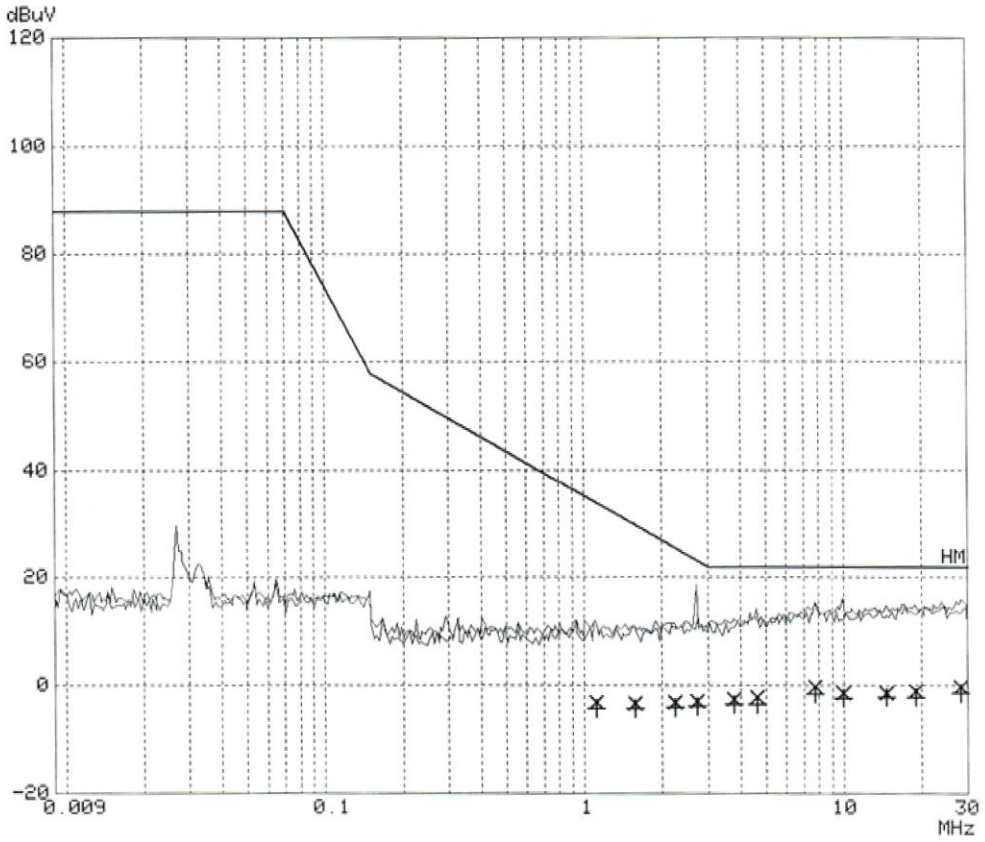
IMiF PREDOM Division
Measurement of Radiation Disturbances

EUT: URBINO LED
Manuf: LUG Light Factory Sp. z o.o.
Test Spec: EN 55015
Comment: Horizontal
File name: 55015_H.RES
Date: 19. Mar 21 07:50

Overview Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
9k	150k	61.0Hz	200Hz	PK	10ms	35dBLN	OFF
150k	30M	3.9k	9k	PK	10ms	10dBLN	OFF

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 25
Acc Margin: 25dB



IMiF PREDOM Division
Measurement of Radiation Disturbances

EUT: URBINO LED
Manuf: LUG Light Factory Sp. z o.o.
Test Spec: EN 55015
Comment: Horizontal
File name: 55015_H.RES
Date: 19. Mar 21 07:50

Final Measurement Results:

Frequency MHz	QP Level dBuV	Delta Limit dB
1.10313	-2.9	-37.0
1.56797	-3.2	-33.1
2.23203	-3.1	-28.9
2.71641	-2.8	-26.2
3.75547	-2.4	-24.4
4.60703	-2.0	-24.0
7.73203	-0.2	-22.2
9.90781	-1.3	-23.3
14.49375	-1.2	-23.2
18.82578	-1.0	-23.0
28.23984	-0.1	-22.1

Frequency MHz	AV Level dBuV	Delta Limit dB
1.10313	-4.2	
1.56797	-4.3	
2.23203	-4.0	
2.71641	-3.8	
3.75547	-3.4	
4.60703	-3.4	
7.73203	-1.5	
9.90781	-2.3	
14.49375	-2.0	
18.82578	-2.0	
28.23984	-1.3	

* limit exceeded

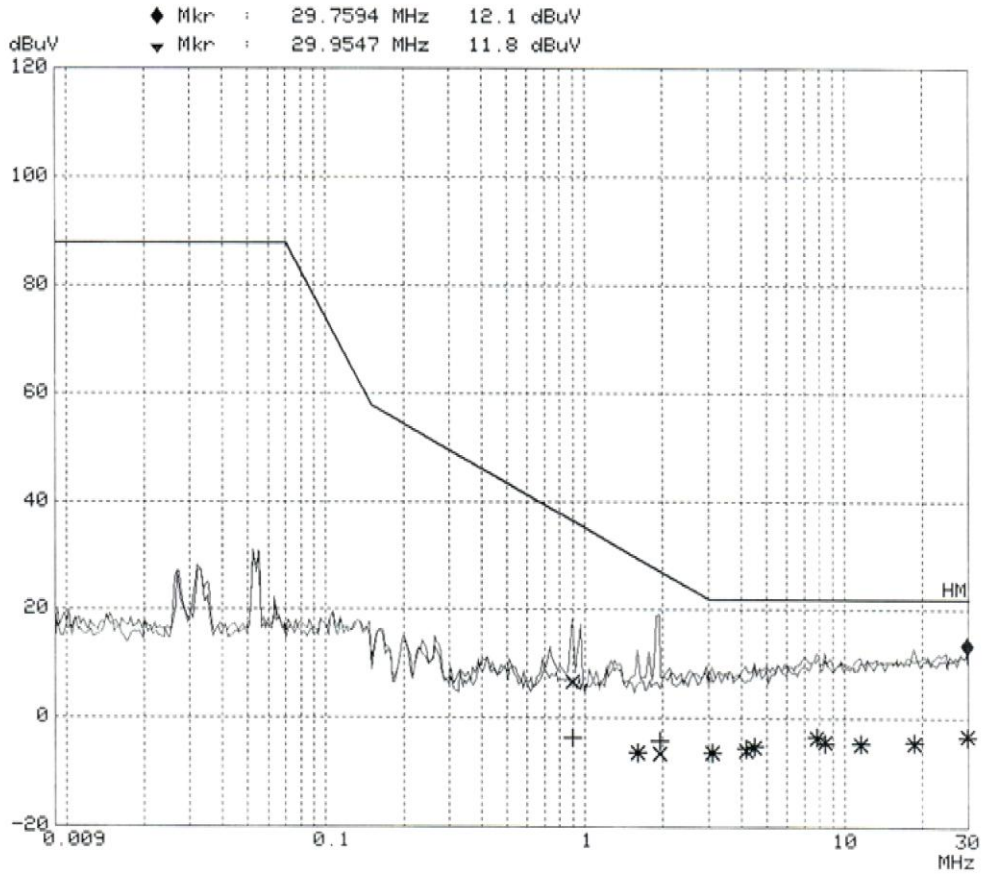
IMiF PREDOM Division
Measurement of Radiation Disturbances

EUT: URBINO LED
Manuf: LUG Light Factory Sp. z o.o.
Test Spec: EN 55015
Comment: Vertical
File name: 55015_V.RES
Date: 19. Mar 21 08:31

Overview Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
9k	150k	61.0Hz	200Hz	PK	10ms	35dBLN	OFF
150k	30M	3.9k	9k	PK	10ms	5dBLN	OFF

Final Measurement: x Hor-Max / + Vert-Max
Meas Time: 1 s
Subranges: 25
Acc Margin: 25dB



IMiF PREDOM Division
Measurement of Radiation Disturbances

EUT: URBINO LED
Manuf: LUG Light Factory Sp. z o.o.
Test Spec: EN 55015
Comment: Vertical
File name: 55015_V.RES
Date: 19. Mar 21 08:31

Final Measurement Results:

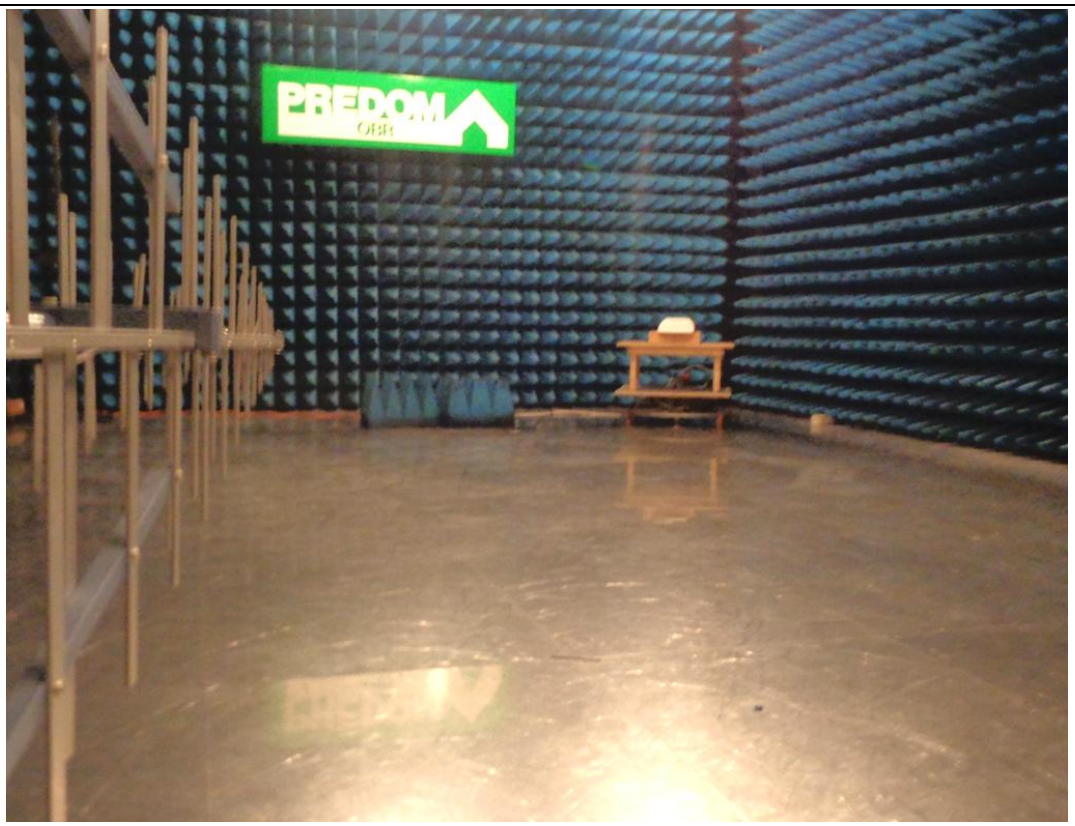
Frequency MHz	QP Level hor. dBuV	QP Level vert. dBuV	Delta Limit dB
0.89219	6.7	-3.5	-30.0
1.58750	-6.1	-6.2	-35.8
1.93516	-6.3	-4.0	-31.5
3.08359	-6.0	-6.1	-28.0
4.15391	-5.7	-5.3	-27.3
4.50547	-5.1	-5.0	-27.0
7.79453	-3.4	-3.2	-25.2
8.36875	-4.2	-4.4	-26.2
11.53672	-4.5	-4.4	-26.4
18.54844	-4.3	-4.1	-26.1
29.75938	-3.1	-3.2	-25.1

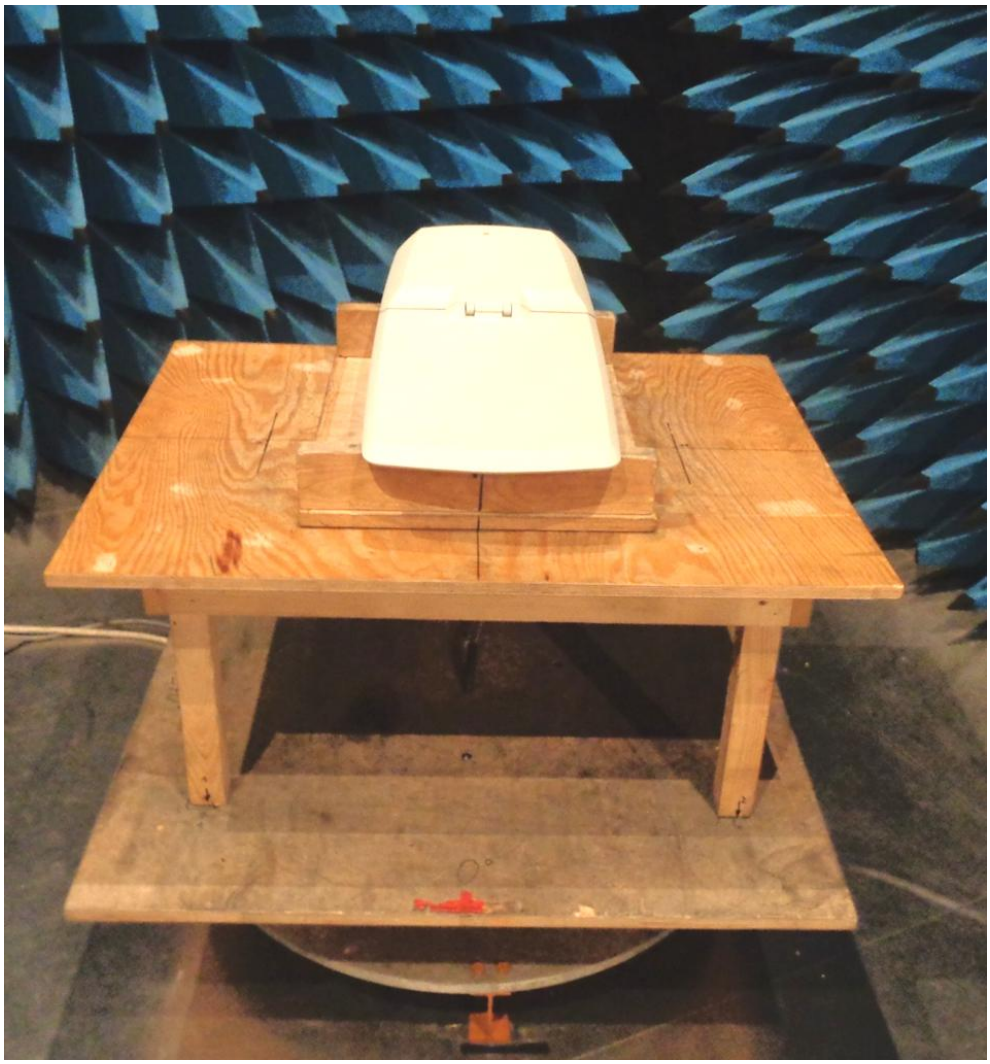
* limit exceeded

4.3 Radiated electromagnetic disturbances (30 MHz to 1000 MHz)

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-16 ÷ 2021-03-17	
Test Location (stand) ..... :	Radiated electromagnetic disturbances stand Semi- anechoic chamber U-86	
Applied limit class..... :	☒	Table 10 Radiated disturbance limits
	☐	Other: ---
Test set-up description..... :	☒	Equipment on a table of 80 cm height
	☐	Equipment on the floor (insulated from ground plane)
	☐	Equipment located approximately in the middle of the validated test volume (FAR)
	☐	Equipment on a 10 cm support over the ground plane according CDNE-Method
	☐	Other: ---
Supplementary test set-up description..... :	Operating mode: 1	
Test method applied..... :	☐	CDN(E)
	☒	OATS or SAC with measurement distance [m]: 10
	☐	FAR with measurement distance [m]: ---
	☐	TEM Waveguide (test item without cables and max. 300 mm dimension)
	☐	Other: ---
Supplementary information ..... :	---	

Test set-up photo:

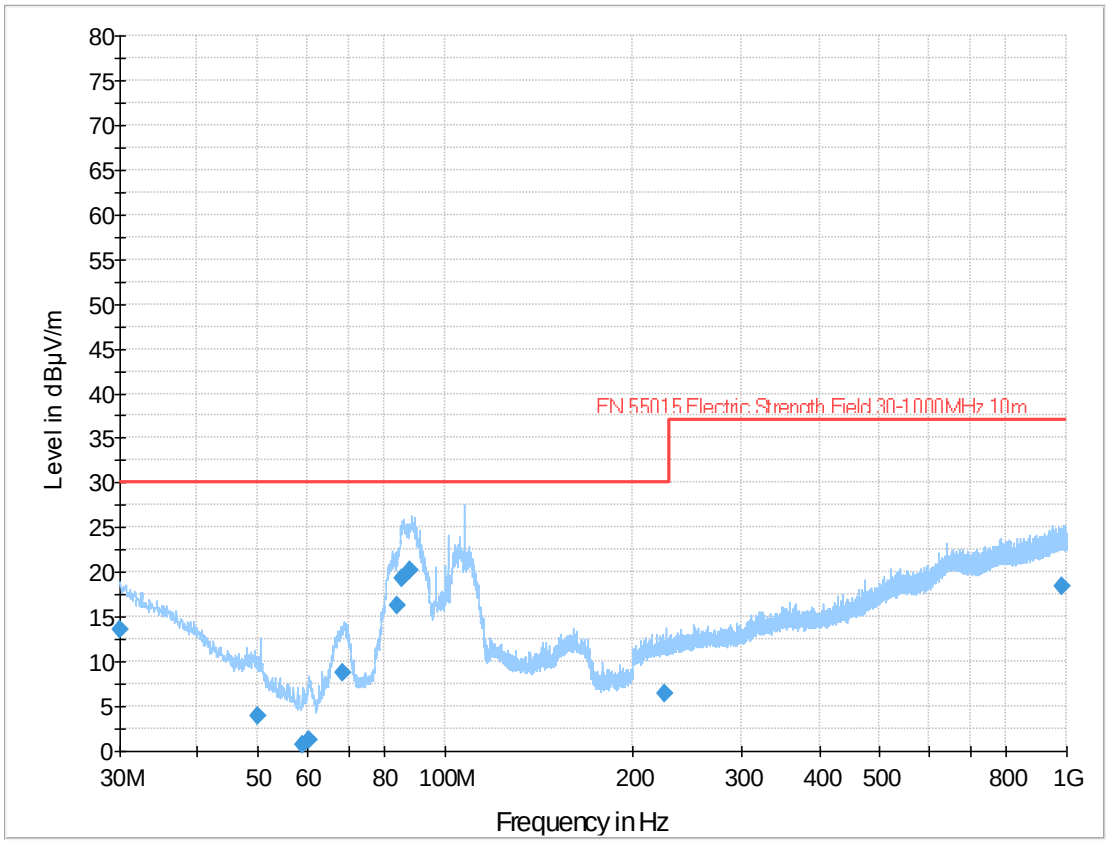




EMC32 Report 0deg

EMI Auto Test Template: 55015 EMI Test Auto 30MHz-1000MHz - 10m

Hardware Setup:	HL562 EMI
Measurement Type:	Open-Area-Test-Site
Frequency Range:	30 MHz - 1 GHz
Graphics Level Range:	0 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	EMI Prescan auto
Frequency Zoom:	
Zoom Scan Template:	EMI Zoom auto
Maximization Measurements:	
Template for Single Meas.:	EMI Prescan auto
Final Measurements:	
Template for Single Meas.:	EMI Final auto



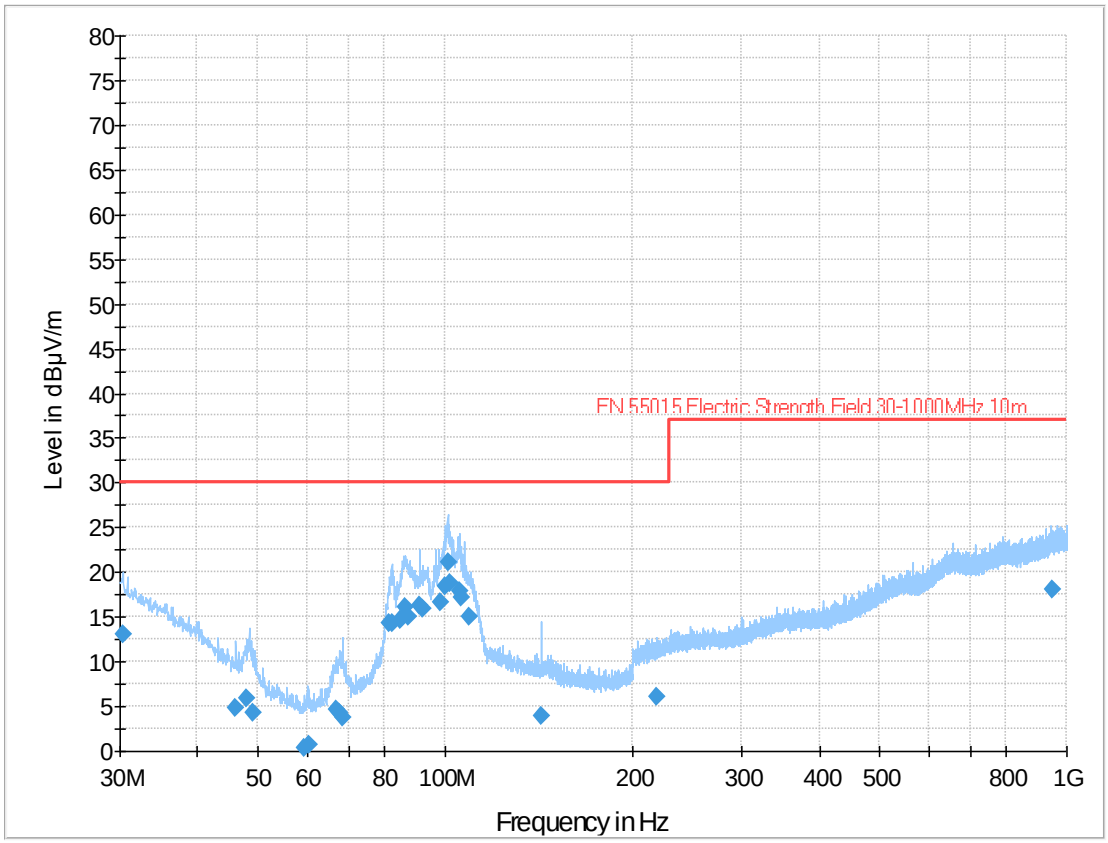
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.030000	13.54	30.00	16.46	1000.0	120.000	400.0	H	0.0	22
49.920000	3.85	30.00	26.15	1000.0	120.000	110.0	V	0.0	11
59.160000	0.76	30.00	29.24	1000.0	120.000	210.0	V	0.0	8
60.420000	1.25	30.00	28.75	1000.0	120.000	110.0	V	0.0	8
68.476500	8.77	30.00	21.23	1000.0	120.000	210.0	V	0.0	10
83.580000	16.30	30.00	13.70	1000.0	120.000	210.0	V	0.0	12
85.380000	19.37	30.00	10.63	1000.0	120.000	210.0	V	0.0	11
87.729300	20.27	30.00	9.73	1000.0	120.000	310.0	V	0.0	11
226.108500	6.42	30.00	23.58	1000.0	120.000	310.0	H	0.0	12
984.993000	18.41	37.00	18.59	1000.0	120.000	400.0	H	0.0	26

EMC32 Report 90deg

EMI Auto Test Template: 55015 EMI Test Auto 30MHz-1000MHz - 10m

Hardware Setup:	HL562 EMI
Measurement Type:	Open-Area-Test-Site
Frequency Range:	30 MHz - 1 GHz
Graphics Level Range:	0 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	EMI Prescan auto
Frequency Zoom:	
Zoom Scan Template:	EMI Zoom auto
Maximization Measurements:	
Template for Single Meas.:	EMI Prescan auto
Final Measurements:	
Template for Single Meas.:	EMI Final auto



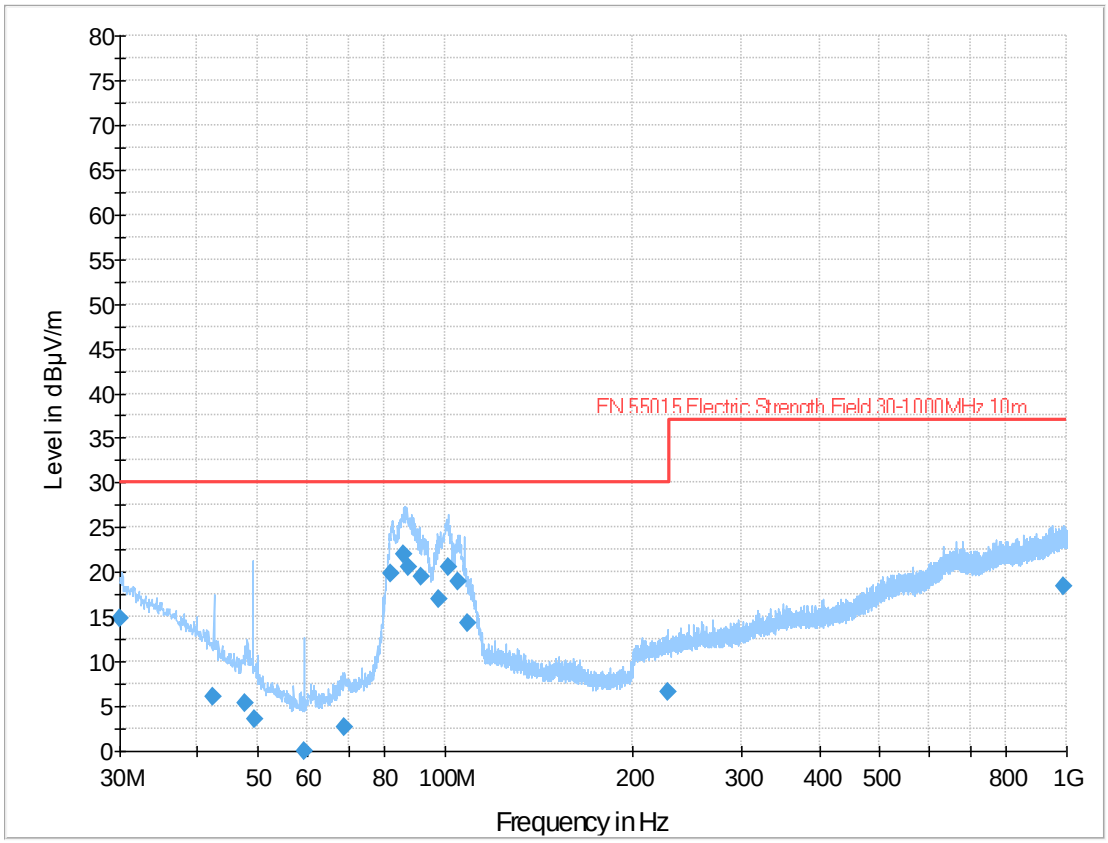
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.428500	13.11	30.00	16.89	1000.0	120.000	400.0	V	90.0	21
46.080000	4.88	30.00	25.12	1000.0	120.000	110.0	V	90.0	13
48.000000	5.87	30.00	24.13	1000.0	120.000	110.0	V	90.0	12
49.140000	4.25	30.00	25.75	1000.0	120.000	110.0	V	90.0	12
59.460000	0.34	30.00	29.66	1000.0	120.000	110.0	V	90.0	8
60.300000	0.69	30.00	29.31	1000.0	120.000	110.0	V	90.0	8
66.780000	4.61	30.00	25.39	1000.0	120.000	210.0	V	90.0	10
67.680000	4.37	30.00	25.63	1000.0	120.000	310.0	V	90.0	10
68.577700	3.74	30.00	26.26	1000.0	120.000	310.0	V	90.0	10
81.420000	14.40	30.00	15.60	1000.0	120.000	400.0	H	90.0	11
82.320000	14.29	30.00	15.71	1000.0	120.000	400.0	H	90.0	11
84.900000	14.61	30.00	15.39	1000.0	120.000	310.0	H	90.0	11
86.100000	16.12	30.00	13.88	1000.0	120.000	310.0	H	90.0	11
87.420000	15.04	30.00	14.96	1000.0	120.000	310.0	H	90.0	11
91.080000	16.30	30.00	13.70	1000.0	120.000	110.0	V	90.0	11
91.920000	15.84	30.00	14.16	1000.0	120.000	310.0	V	90.0	11
98.340000	16.58	30.00	13.42	1000.0	120.000	310.0	V	90.0	11
99.960000	18.42	30.00	11.58	1000.0	120.000	310.0	V	90.0	11
101.035000	21.16	30.00	8.84	1000.0	120.000	310.0	V	90.0	11
102.000000	18.83	30.00	11.17	1000.0	120.000	310.0	V	90.0	11
105.240000	17.92	30.00	12.08	1000.0	120.000	400.0	V	90.0	11
106.080000	17.16	30.00	12.84	1000.0	120.000	400.0	V	90.0	11
109.620000	14.98	30.00	15.02	1000.0	120.000	400.0	V	90.0	12
142.535500	3.93	30.00	26.07	1000.0	120.000	210.0	V	90.0	11
218.984500	6.14	30.00	23.86	1000.0	120.000	210.0	H	90.0	12
948.744000	18.09	37.00	18.91	1000.0	120.000	310.0	H	90.0	26

EMC32 Report 180deg

EMI Auto Test Template: 55015 EMI Test Auto 30MHz-1000MHz - 10m

Hardware Setup:	HL562 EMI
Measurement Type:	Open-Area-Test-Site
Frequency Range:	30 MHz - 1 GHz
Graphics Level Range:	0 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	EMI Prescan auto
Frequency Zoom:	
Zoom Scan Template:	EMI Zoom auto
Maximization Measurements:	
Template for Single Meas.:	EMI Prescan auto
Final Measurements:	
Template for Single Meas.:	EMI Final auto



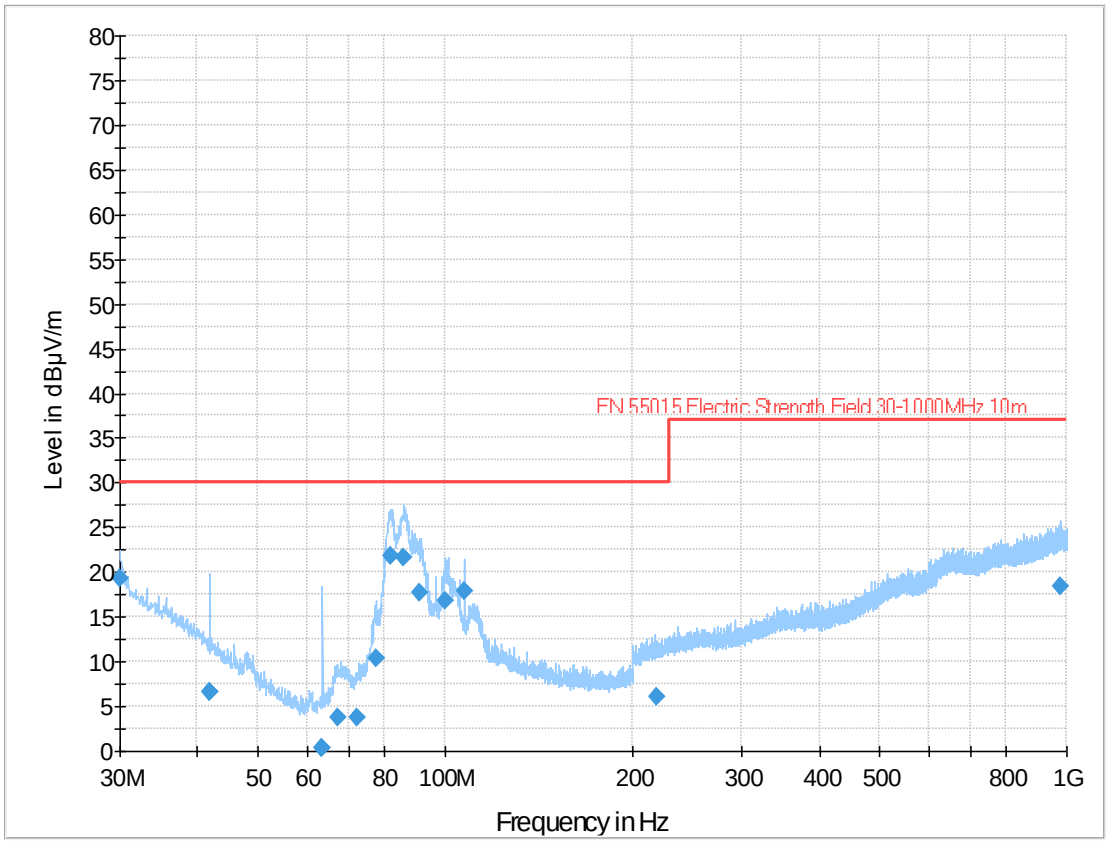
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.088800	14.81	30.00	15.19	1000.0	120.000	310.0	H	180.0	22
42.267600	6.17	30.00	23.83	1000.0	120.000	400.0	H	180.0	15
47.640000	5.37	30.00	24.63	1000.0	120.000	110.0	V	180.0	12
49.284600	3.51	30.00	26.49	1000.0	120.000	210.0	V	180.0	12
59.263600	0.04	30.00	29.96	1000.0	120.000	400.0	V	180.0	8
69.000000	2.74	30.00	27.26	1000.0	120.000	310.0	V	180.0	10
81.720000	19.78	30.00	10.22	1000.0	120.000	310.0	V	180.0	12
85.859200	22.06	30.00	7.94	1000.0	120.000	310.0	V	180.0	11
87.420000	20.60	30.00	9.40	1000.0	120.000	310.0	V	180.0	11
91.440000	19.53	30.00	10.47	1000.0	120.000	310.0	V	180.0	11
97.440000	16.95	30.00	13.05	1000.0	120.000	310.0	V	180.0	11
101.105000	20.57	30.00	9.43	1000.0	120.000	310.0	V	180.0	11
105.180000	18.92	30.00	11.08	1000.0	120.000	400.0	V	180.0	11
109.020000	14.33	30.00	15.67	1000.0	120.000	400.0	V	180.0	12
228.628000	6.58	30.00	23.42	1000.0	120.000	310.0	H	180.0	12
988.176500	18.47	37.00	18.53	1000.0	120.000	400.0	H	180.0	26

EMC32 Report 270deg

EMI Auto Test Template: 55015 EMI Test Auto 30MHz-1000MHz - 10m

Hardware Setup:	HL562 EMI
Measurement Type:	Open-Area-Test-Site
Frequency Range:	30 MHz - 1 GHz
Graphics Level Range:	0 dBµV/m - 80 dBµV/m
Preview Measurements:	
Scan Test Template:	EMI Prescan auto
Frequency Zoom:	
Zoom Scan Template:	EMI Zoom auto
Maximization Measurements:	
Template for Single Meas.:	EMI Prescan auto
Final Measurements:	
Template for Single Meas.:	EMI Final auto



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.030000	19.35	30.00	10.65	1000.0	120.000	400.0	V	270.0	21
41.700600	6.70	30.00	23.30	1000.0	120.000	400.0	V	270.0	16
41.880000	6.58	30.00	23.42	1000.0	120.000	400.0	V	270.0	16
63.332300	0.41	30.00	29.59	1000.0	120.000	310.0	V	270.0	9
63.540000	0.33	30.00	29.67	1000.0	120.000	400.0	V	270.0	9
67.320000	3.78	30.00	26.22	1000.0	120.000	110.0	V	270.0	10
72.300000	3.69	30.00	26.31	1000.0	120.000	210.0	V	270.0	11
77.520000	10.33	30.00	19.67	1000.0	120.000	310.0	V	270.0	12
81.660000	21.89	30.00	8.11	1000.0	120.000	310.0	V	270.0	12
85.751900	21.70	30.00	8.30	1000.0	120.000	310.0	V	270.0	11
90.720000	17.74	30.00	12.26	1000.0	120.000	310.0	V	270.0	11
100.109500	16.81	30.00	13.19	1000.0	120.000	110.0	H	270.0	12
107.592000	17.81	30.00	12.19	1000.0	120.000	110.0	V	270.0	11
218.462000	6.14	30.00	23.86	1000.0	120.000	110.0	H	270.0	12
978.527500	18.37	37.00	18.63	1000.0	120.000	310.0	H	270.0	26

5 Harmonic current emissions according to IEC 61000-3-2

Tested by..... :	Bartłomiej Wysokiński			
Test date ..... :	2021-03-22			
Test Location (stand) ..... :	U-84			
Version of measurement instrument standard used IEC 61000-4-7 (Clause 7) ..... :	☐	IEC 61000-4-7:1991		
	☒	IEC 61000-4-7:2002 + AMD1:2008		
Test set-up description..... :	---			
Operating modes of EUT ..... :	1			
Limit classification in accordance with the standard..... :	☐	Class A		
	☐	Class B		
	☒	Class C with rated power > 25 W (Table 2)		
	☐	Class C with rated power ≥ 5 and ≤ 25 W (First requirement, Table 3 column 2)		
		☐	Table 3, column 2 (Power related limits)	
		☐	3^{rd} harmonic ≤ 86 %, 5^{th} harmonic ≤ 61 % and waveform conditions	
		☐	THD ≤ 70 %, Harmonics: 3^{rd}≤35 %, 5^{th}≤ 25 %, 7^{th}≤ 30 %, 9^{th} and 11^{th}≤ 20 %, 2^{nd}≤ 5 %	
		☐	Other: ---	
	☐	Class D		
Observation period..... :	Description			Period selected T_{obs}
	☒	Quasi stationary		2.5 min
	☐	Short cyclic		T_{obs}≥ 10 cycles =
	☐	Random		T_{obs} =
	☐	Long cyclic		Full program cycle or 2.5 min. with highest THC T_{obs} =
Control method used in the sample according clause 6.2 of the standard ..... :	☒	The EUT **does not** utilize half-wave rectification or any other method to control the active input power. Such equipment is in conformity with the standard if the measured values comply with the applicable limit.		
	☐	The EUT **uses** half-wave rectification directly on the mains supply, or it uses symmetrical or asymmetrical methods to control the active input power. Such equipment is permitted under conditions only. An evaluation on the control method is required. However, the equipment shall still comply with the harmonic requirements of the standard.		
Supplementary information ..... :	---			

Test set-up photo:

Tabulated/Graphical Results for Harmonic Current Emissions:

Name:		Serial no:	
Department:		Operating modes:	
Company:	IMiF PREDOM Division	Comment1:	
Test report no:	Z7-4/043/EMC/21	Comment2:	
Device:	URBINO LED	Comment3:	
Specimen:		Comment4:	
Manufacturer:	LUG Light Factory	Date:	22.03.2021
Type:		Test date:	22.03.2021

Voltage:	231.12 Vrms		THD=0.01 %	THV=0.013 V	POHV=0.006 V	PWHD=0.02 %
Current:	0.920 Arms	1.317 Apk	THD=2.89 %	THC=0.027 A	POHC=0.011 A	PWHD=7.21 %
Power:	209.4 W	P1=209.4 W	212.6 VA			
Power factor:	0.985	CosPhi1: 0.985				

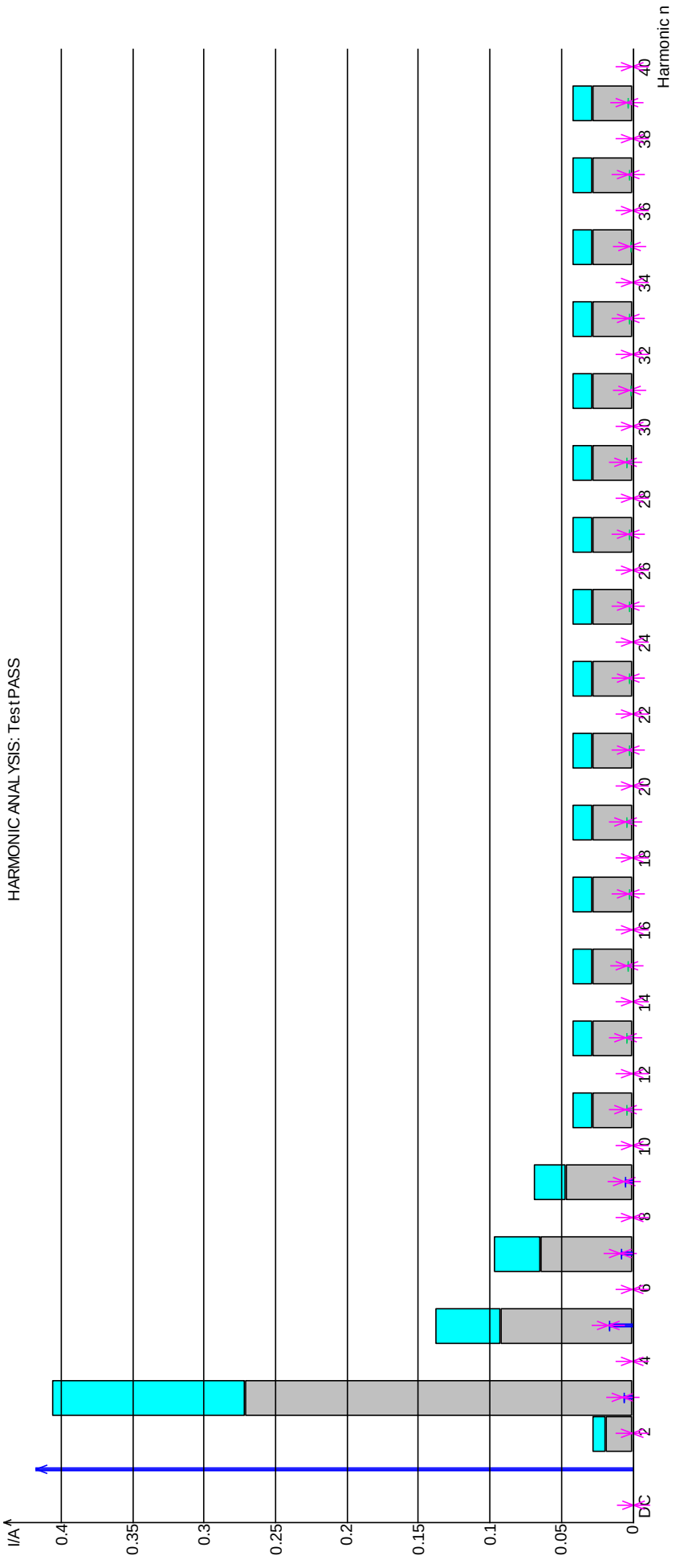
Test conditions: EN 61000-3-2, f=50 Hz, Phase=L1, Range=0.80 A
Time window=10/12 (200ms), Grouping (>2nd harm.)=on, Rated I1=3.0 A, Rated pf=1.0
No Ztest selected
harmonic currents < 0.6 % of I or < 5 mA are disregard for calc. of THD, THC, POHC, PWHD

HARMONIC ANALYSIS: Test PASS in Timewindow 1 of 750
Rated I1/Pf exceeded, changed to 0.92 A / 1.000

Ha	Value	Percent	Angle	EN61000-3-2 Class C a)	Margin	PASS	FAIL
DC	-0.0005 A	-0.06 %	- - - . - Deg	- . - - - -	- - - . -	X	
1	0.9195 A	100.00 %	9.8 Deg	- . - - - -	- - - . -	X	
2	0.0003 A	0.03 %	157.3 Deg	0.0184 A	-98.4 %	X	
3	0.0073 A	0.79 %	-83.4 Deg	0.2759 A	-97.4 %	X	
4	0.0002 A	0.02 %	172.1 Deg	- . - - - -	- - - . -	X	
5	0.0174 A	1.89 %	-15.0 Deg	0.0920 A	-81.1 %	X	
6	0.0002 A	0.02 %	-74.2 Deg	- . - - - -	- - - . -	X	
7	0.0091 A	0.99 %	-27.6 Deg	0.0644 A	-85.9 %	X	
8	0.0003 A	0.03 %	-139.8 Deg	- . - - - -	- - - . -	X	
9	0.0064 A	0.70 %	-48.7 Deg	0.0460 A	-86.1 %	X	
10	0.0002 A	0.02 %	-22.1 Deg	- . - - - -	- - - . -	X	
11	0.0054 A	0.59 %	-37.5 Deg	0.0276 A	-80.4 %	X	
12	0.0002 A	0.02 %	-171.8 Deg	- . - - - -	- - - . -	X	
13	0.0050 A	0.54 %	-53.4 Deg	0.0276 A	-81.9 %	X	
14	0.0002 A	0.03 %	23.7 Deg	- . - - - -	- - - . -	X	
15	0.0050 A	0.54 %	-58.0 Deg	0.0276 A	-82.0 %	X	
16	0.0002 A	0.02 %	159.2 Deg	- . - - - -	- - - . -	X	
17	0.0036 A	0.39 %	-59.1 Deg	0.0276 A	-87.0 %	X	
18	0.0003 A	0.03 %	133.3 Deg	- . - - - -	- - - . -	X	
19	0.0048 A	0.52 %	-83.1 Deg	0.0276 A	-82.7 %	X	
20	0.0003 A	0.03 %	-18.6 Deg	- . - - - -	- - - . -	X	
21	0.0029 A	0.32 %	-64.1 Deg	0.0276 A	-89.5 %	X	
22	0.0003 A	0.03 %	107.3 Deg	- . - - - -	- - - . -	X	
23	0.0035 A	0.38 %	-92.4 Deg	0.0276 A	-87.4 %	X	
24	0.0002 A	0.02 %	-27.1 Deg	- . - - - -	- - - . -	X	
25	0.0035 A	0.38 %	-87.8 Deg	0.0276 A	-87.4 %	X	
26	0.0002 A	0.03 %	-176.4 Deg	- . - - - -	- - - . -	X	
27	0.0028 A	0.31 %	-82.0 Deg	0.0276 A	-89.8 %	X	
28	0.0003 A	0.03 %	66.8 Deg	- . - - - -	- - - . -	X	
29	0.0048 A	0.52 %	-85.0 Deg	0.0276 A	-82.7 %	X	
30	0.0002 A	0.03 %	174.3 Deg	- . - - - -	- - - . -	X	
31	0.0025 A	0.28 %	-105.0 Deg	0.0276 A	-90.8 %	X	
32	0.0002 A	0.03 %	-92.9 Deg	- . - - - -	- - - . -	X	
33	0.0033 A	0.36 %	-106.8 Deg	0.0276 A	-88.1 %	X	
34	0.0001 A	0.02 %	54.9 Deg	- . - - - -	- - - . -	X	
35	0.0026 A	0.29 %	-109.5 Deg	0.0276 A	-90.4 %	X	
36	0.0003 A	0.03 %	-88.7 Deg	- . - - - -	- - - . -	X	
37	0.0031 A	0.33 %	-140.2 Deg	0.0276 A	-88.9 %	X	
38	0.0004 A	0.04 %	34.0 Deg	- . - - - -	- - - . -	X	
39	0.0038 A	0.42 %	-94.5 Deg	0.0276 A	-86.1 %	X	
40	0.0004 A	0.05 %	119.1 Deg	- . - - - -	- - - . -	X	

value < 0.6 % of I or < 5 mA

Tested with SPS EMC 4.1.3 / PAS5000 by Spitzenberger & Spies GmbH & Co. KG, Schmidstr. 32-34, 94234 Viechtach, Germany, 22.03.2021


HARMONIC ANALYSIS: Test PASS
I/A
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
DC
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
Harmonic n

6 Voltage changes, voltage fluctuations and flicker according to IEC 61000-3-3

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-22	
Test Location (stand) ..... :	U-84	
Test set-up description..... :	---	
Test method ..... :	☒	4.2.2 Flickermeter according IEC 61000-4-15
	☐	4.2.3 Simulation
	☐	4.2.4 Analytical method
	☐	4.2.5 Use of P_{st} = 1 curve
Observation time selected..... :	☒	10 Minutes
	☐	120 Minutes
	☐	24 times switching according to Annex B
Limit for dmax applied ..... :	☐	4 %
	☒	6 %
	☐	7 %
Supplementary information ..... :	---	

Test set-up photo:

Tabulated Results for Voltage Fluctuations and Flicker:

Name:		Serial no:	
Department:		Operating modes:	
Company:	IMiF PREDOM Division	Comment1:	
Test report no:	Z7-4/043/EMC/21	Comment2:	
Device:	URBINO LED	Comment3:	
Specimen:		Comment4:	
Manufacturer:	LUG Light Factory	Date:	22.03.2021
Type:		Test date:	22.03.2021

Test conditions: EN 61000-3-3 / 230 V / 50 Hz / Phase L1
EN 61000-4-15/ Obs 1 x 10 min / Ztest (0.400+j0.250) Ohm
Ra+jXa (0.2400+j0.1500) Ohm / Rn+jXn (0.1600+j0.1000) Ohm

FLICKER: Test PASS!

Time	Pmax	Pst	Sliding Plt	Tmax [s]	|dmax| [%]	|dc| [%]	PASS	FAIL
11:35:17	0.000	0.0070	0.0070	0.000	0.000	- . - - -	X	
Limits:		1.000	0.650	0.500	6.000	3.300		
Plt: 0.007000								
Evaluated: PST, dc, dmax, Tmax								

FLICKER: Source test PASS!

Time	Pmax	Pst	Sliding Plt	Tmax [s]	|dmax| [%]	|dc| [%]	PASS	FAIL
11:35:17	0.000	0.0040	- . - - - -	0.000	0.000	- . - - -	X	
Plt: 0.004000								
Evaluated: PST <= 0.4 dmax < 20 % dmax1								

Tested with SPS EMC 4.1.3 / PAS5000 by Spitzenberger & Spies GmbH & Co. KG, Schmidstr. 32-34, 94234 Viechtach, Germany, 22.03.2021

7 Immunity

7.1 General information

Performance criteria as defined by the standard	
Criterion	**Description from standard**
A	During the test, no change of the luminous intensity shall be observed and the regulating control, if any shall operate during the test as intended.
B	During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test, the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
C	During and after the test, any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal, if necessary by temporary interruption of the mains supply and/or operating the regulating control. Additional requirement for lighting equipment incorporating a starting device: After the test, the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended.
Other:	---

Manufacturer defined performance criteria..... :	**Criterion**	**Description**
	A	N/A
	B	N/A
	C	N/A
	D	N/A
Monitoring during the tests..... :	Radio-frequency electromagnetic fields: visual EUT observation using a camera.	
Mains voltage applied during the testing if not otherwise specified...:	AC 230V/50Hz	

7.2 Electrostatic discharges

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-24	
Test Location(Stand)..... :	ESD stand	
Test set-up ..... :	☒	Table top equipment
	☐	Floor standing equipment
	☐	Wall or ceiling mounted equipment (Treated as table top)
Supplementary test set-up description..... :	Operating mode: 1	
Size of horizontal coupling plate . :	1.6 x 0.8 m	
Size of vertical coupling plate:	0.5 x 0.5 m	
Number of discharges for each test point..... :	10 positive / 10 negative	
Discharge interval ..... :	1/s	
Performance criterion..... :	B	
Supplementary information ..... :	---	

Test set-up photo:

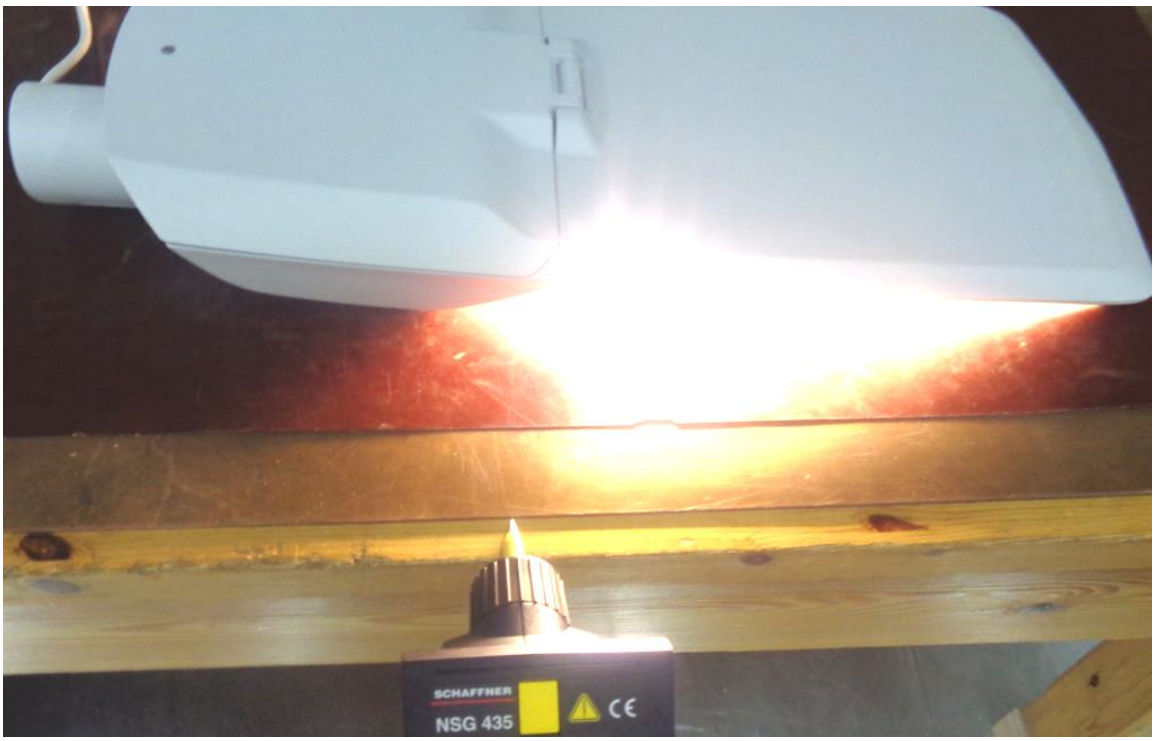
Photo of selected test points: Contact	
Photo of selected test points: Contact	

Table: Test results for electrostatic discharges

No.	Location of discharge	Polarity	Discharge	Number of discharges	Test level [kV]	Operating mode	Observations
1	HCP	P	C	10	4	1	Pass
2	HCP	N	C	10	4	1	Pass
3	VCP	P	C	10	4	---	X
4	VCP	N	C	10	4	---	X
5	Points on conductive surface as indicated in the picture above	P	C	10	4	1	Pass
6	Points on conductive surface as indicated in the picture above	N	C	10	4	1	Pass
7	Points on non-conductive surface as indicated in the picture above	P	A	10	8	---	X
8	Points on non-conductive surface as indicated in the picture above	N	A	10	8	---	X

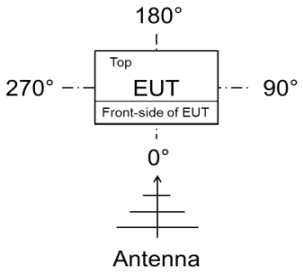
HCP = Horizontal coupling plate
VCP = Vertical coupling plate

N = Negative
P = Positive

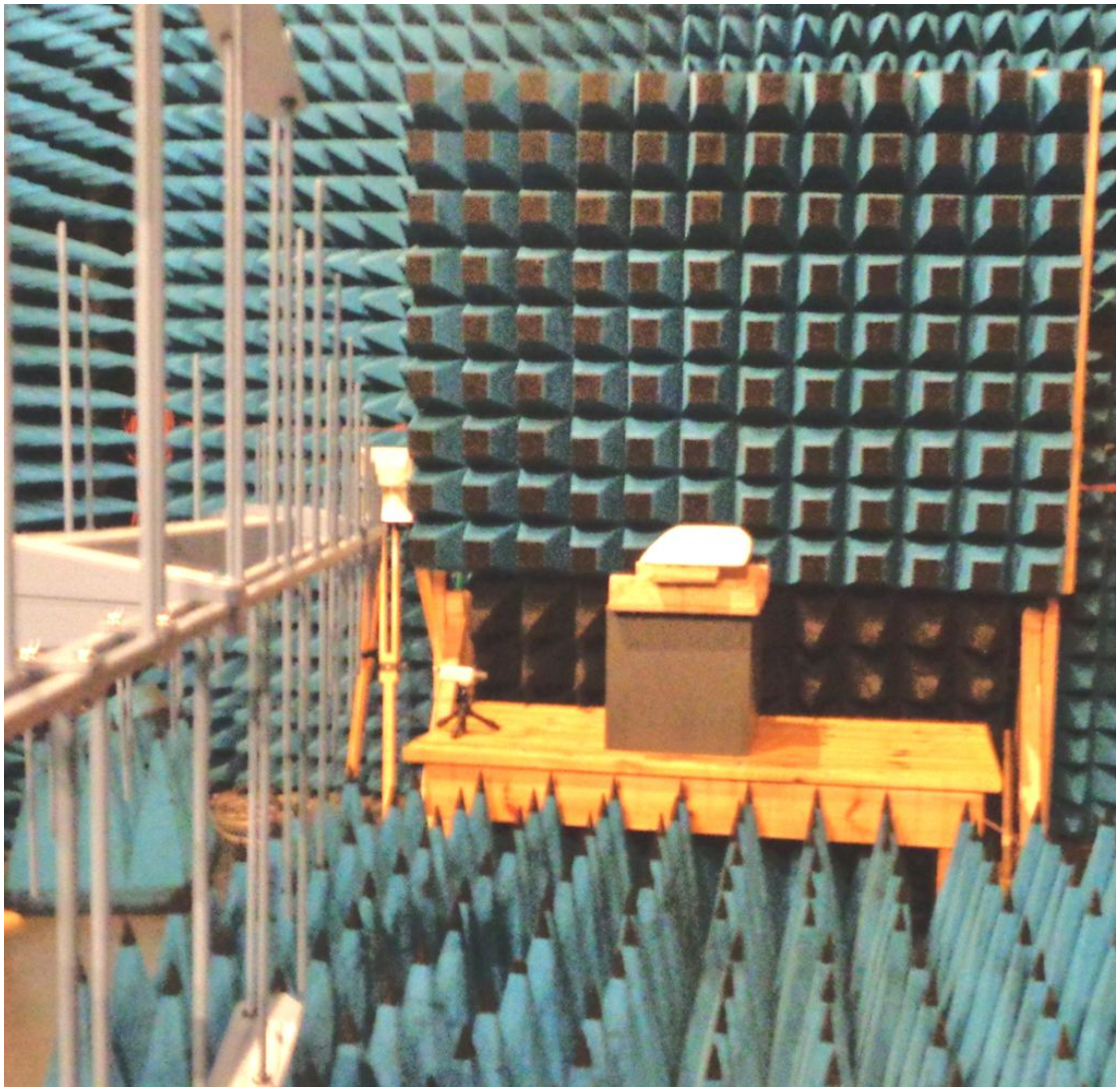
A = Air discharge
C = Contact discharge
X = Not performed nor required

Supplementary information: No observed response from EUT

7.3 Radio-frequency electromagnetic fields

Tested by..... :	Bartłomiej Wysokiński		
Test date ..... :	2021-03-17		
Test location (stand)..... :	Radio-frequency electromagnetic fields stand Semi-anechoic chamber U-86		
Test set-up ..... :	☒	Equipment on the table (see photos below)	
	☐	Equipment standing on floor (0,05 – 0,15 m height)	
Supplementary test set up description ..... :	Operating mode: 1		
Exposed side of EUT ..... :	☒	0° (Front)	
	☒	90 °	
	☒	180 ° (Rear)	
	☒	270 °	
	☐	Top side	
	☒	Bottom side	
Reason for not exposing a side... :	As a result of the analysis, it was found that the EUT (front) side is the most susceptible to radiation, see below photos, next page.		
Distance Antenna to EUT..... :	3 m		
Step size [%] ..... :	1		
Performance criterion..... :	A		
Supplementary information ..... :	---		

Test set-up photo:



Test results for radiated electromagnetic field

Frequency range	Test Level [V/m]	Polarization	Modulation	Operating mode	Dwell time [s]	Observations
80 MHz ÷ 1 GHz	3.0	V	AM: 80.0 %; 1.0 kHz	1	1.0	Pass
80 MHz ÷ 1 GHz	3.0	H	AM: 80.0 %; 1.0 kHz	1	1.0	Pass

H = Horizontal
V = Vertical
X = Not performed nor required

Supplementary information: No observed response from EUT

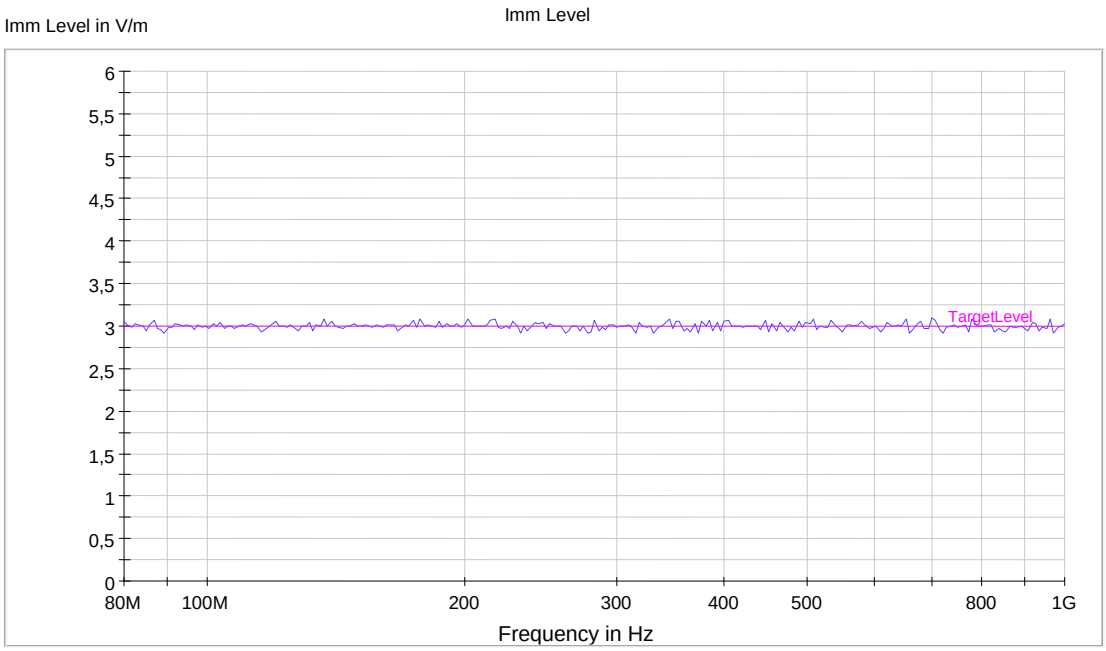
EMC32 Report position antenna: H

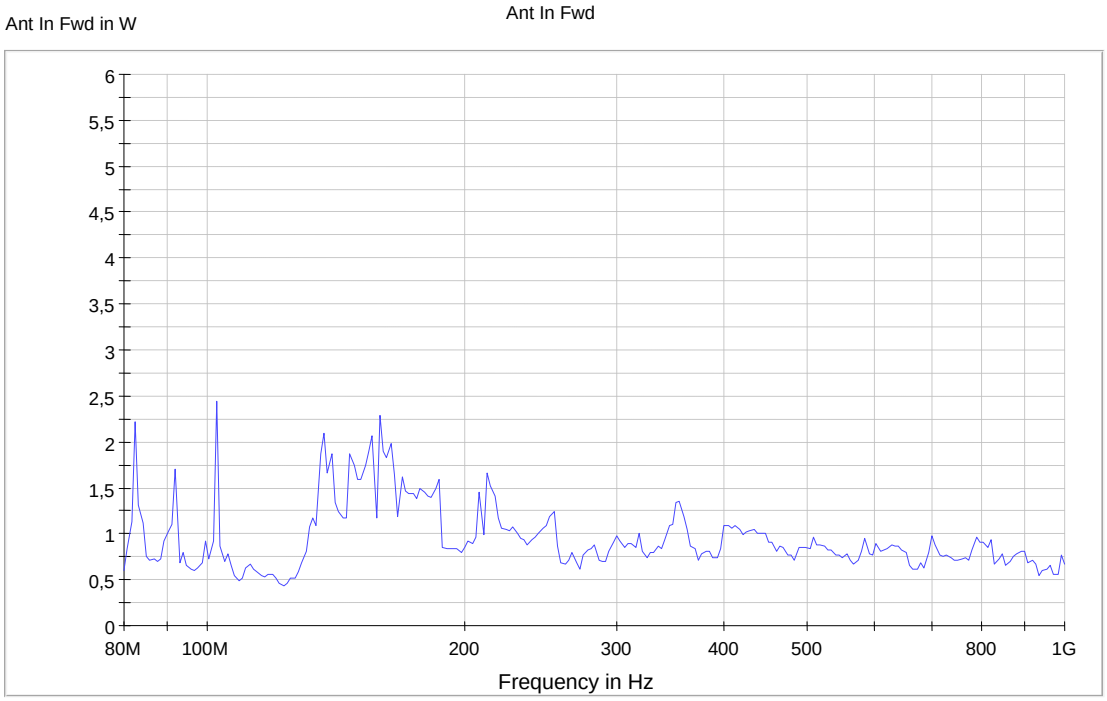
EMS Scan Template: EMS Scan 3Vm 80-1000MHz [EMS Radiated]

Hardware Setup: EMS radiated\Copy of Hardware Setup 80-1000MHz 24.05.2017_SMBV100A

Level On: Substitution Method: EMS radiated\.Kalibracja pola EMS\C28Vm_80-1000

Subrange	Step Width	Level	Modulation	Dwell Time
80MHz - 1GHz	1% LOG	3V/m	AM: 80,0%; 1,0kHz	1s





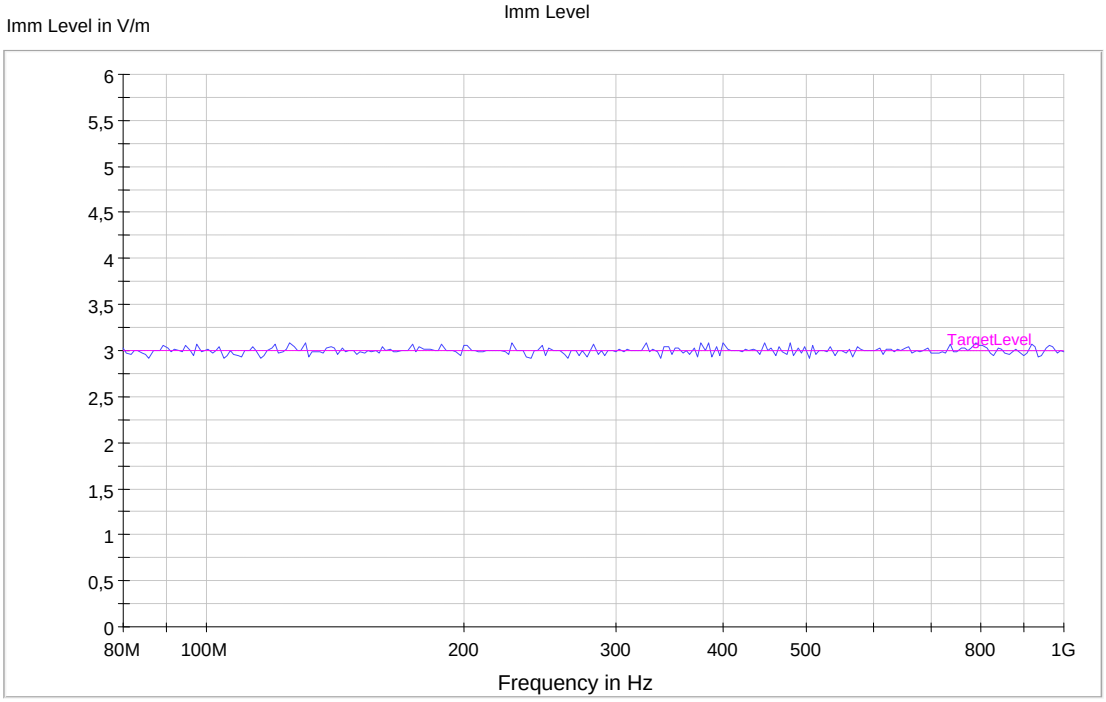
EMC32 Report position antenna: V

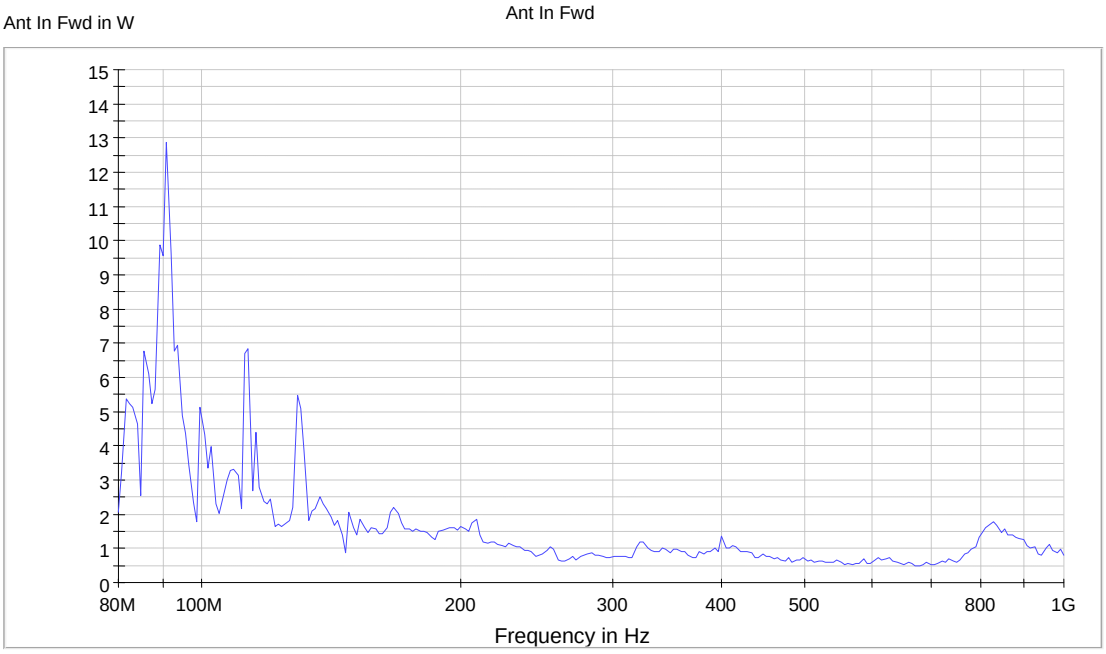
EMS Scan Template: EMS Scan 3Vm 80-1000MHz [EMS Radiated]

Hardware Setup: EMS radiated\Copy of Hardware Setup 80-1000MHz 24.05.2017_SMBV100A

Level On: Substitution Method: EMS radiated\.Kalibracja pola EMS\C28Vm_80-1000

Subrange	Step Width	Level	Modulation	Dwell Time
80MHz - 1GHz	1% LOG	3V/m	AM: 80,0%; 1,0kHz	1s





7.4 Power frequency magnetic fields

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-19	
Test location (Stand) ..... :	PMM 1008	
Applicability ..... :	☒	The test was performed
	☐	The test was not performed
		Reason: According to the manufacturers information there are no magnetic sensitive components in the product.
Test set-up ..... :	☐	0,1 m above metal surface
	☐	Homogeneous field (Helmholtz coil). Dimensions: ---
	☒	Single Coil. Dimensions: 1 x 1 m
	☐	Single Coil. Dimensions: 1 x 2,6 m
Performance criterion..... :	A	
Supplementary information ..... :	---	

Test set-up photo:

Test results for power frequency magnetic field immunity test

Test frequency	Test Level [A/m]	Test time [s]	Coil size/type	Axis	Operating mode	Mains voltage/ frequency	Observations
50Hz/60Hz	3	180	1m x 1m	X	1	230V/50Hz	Pass
50Hz/60Hz	3	180	1m x 1m	Y	1	230V/50Hz	Pass
50Hz/60Hz	3	180	1m x 1m	Z	1	230V/50Hz	Pass

X = Not performed nor required

Supplementary information: No observed response from EUT

7.5 Fast transients

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-24	
Test location (stand)..... :	Fast transient stand	
Test set-up ..... :	☒	Equipment on the table (0,1 ± 0,01) m above ground plane
	☐	Equipment standing on floor at (0,1 ± 0,01) m above ground plane
	☐	Artificial hand applied. Location see photo.
Supplementary test set-up description ..... :	Operating mode: 1	
Repetition frequency ..... :	5 kHz	
Test time..... :	4 min	
Performance criterion..... :	B	
Supplementary information ..... :	---	

Test set-up photo:

Test results fast transients

Port	Coupling	Level [kV]	Polarity	Operating mode	Mains voltage/ frequency	Observation
Mains	L1 N	1	Positive	---	---	X
Mains	L1 N	1	Negative	---	---	X
Mains	L1 N PE	1	Positive	1	230V/50Hz	Pass
Mains	L1 N PE	1	Negative	1	230V/50Hz	Pass

X = Not performed nor required

Supplementary information: No observed response from EUT

7.6 Injected currents (radio-frequency common mode)

Tested by..... :	Bartłomiej Wysokiński	
Test date ..... :	2021-03-22	
Test location (Stand) ..... :	Injected currents stand	
Test set-up ..... :	☒	Equipment located (0,1 ± 0,05) m above ground plane
	☐	Elevated ground plane according to Annex F
	☐	Artificial hand applied. Location see photo.
Supplementary test set-up description ..... :	Operating mode: 1	
Modulation..... :	☒	80 % AM with 1 kHz
	☐	Other: ---
Step size..... :	1 %	
Performance criterion..... :	A	
Supplementary information ..... :	---	

Test set-up photo:	

Test results for conducted disturbances, induced by radio-frequency fields

Frequency range	Test Level [V]	Port under test	CDN type	Port with terminated CDN	Operating mode	Dwell time [s]	Observations
0.15 ÷ 80 MHz	3,0	Mains	CDN-M2	---	---	---	X
0.15 ÷ 80 MHz	3,0	Mains	CDN-M3	ATT 6	1	1,0	Pass

X = Not performed nor required

Supplementary information: No observed response from EUT

7.7 Surges

Tested by..... :	Bartłomiej Wysokiński
Test date ..... :	2021-03-24
Test location(Stand) ..... :	Surge stand
Test set-up description..... :	Operating mode: 1
Repetition rate ..... :	1 / min
Number of pulses for each coupling ..... :	5
Performance criterion..... :	C
Supplementary information ..... :	---

Test set-up photo:

Test results for surges

Port	Coupling	CDN	Level [kV]	Polarity	Phase angles [°]	Operating mode	Mains voltage/ frequency	Observation
Mains	L1-N	MCN	1	Positive	90	1	230V/50Hz	Pass
Mains	L1-N	MCN	1	Negative	270	1	230V/50Hz	Pass
Mains	N-PE	MCN	2	Positive	90	1	230V/50Hz	Pass
Mains	L1-PE	MCN	2	Positive	90	1	230V/50Hz	Pass
Mains	N-PE	MCN	2	Negative	270	1	230V/50Hz	Pass
Mains	L1-PE	MCN	2	Negative	270	1	230V/50Hz	Pass

Lower test levels:	☐	Tested
	☒	Not tested

P = Positive	MCN = Mains Coupling Network
N = Negative	ICN = Coupling Network for interconnection lines
X = Not performed nor required	D = Direct Coupling (shielded lines)

Supplementary information: No observed response from EUT.

7.8 Voltage dips and short interruptions

Tested by..... :	Bartłomiej Wysokiński
Test date ..... :	2021-03-22
Test Location (Stand)..... :	U-84
Test set-up description..... :	Operating mode: 1
Repetition rate..... :	10 s
Number of dips or interruptions... :	3
Performance criterion..... :	B (Voltage dips) C (Short interruptions U_N= 0 %)
Supplementary information ..... :	---

Test results voltage dips

U_N [V]	Frequency in Hz	Test Level [% of U_N]	Phase angle	Duration [Cycles]	Operating mode	Observations
230	50	70	0º	10	1	Pass
Supplementary information: see below Tabulated Results for Voltage Dips and Interruptions						

Test results voltage interruptions

U_N [V]	Frequency [Hz]	Test Level [% of U_N]	Phase angle	Duration [Cycles]	Operating mode	Observations
230	50	0	0º	0.5	1	Pass
Supplementary information: see below Tabulated Results for Voltage Dips and Interruptions						

Test set-up photo:

Tabulated Results for Voltage Dips and Interruptions:

Name:		Serial no:	
Department:		Operating modes:	
Company:	IMiF PREDOM Division	Comment1:	
Test report no:	Z7-4/043/EMC/21	Comment2:	
Device:	URBINO LED	Comment3:	
Specimen:		Comment4:	
Manufacturer:	LUG Light Factory	Date:	22.03.2021
Type:		Test date:	22.03.2021

Test conditions: EN 61000-4-11 voltage dips, short interruptions and variations test

Voltage / frequency:	230.0 V / 50.0 Hz
Test phase:	Single phase / L1-N
Executed test:	61547 short interruption
Test description:	--
Disturbances per step:	3 (per phase angle) / 10.5 sec delay between

Step	Disturbance	Test level	Duration	Phase angle(s) (Ref. L1)
1	Voltage dip / short interruption	0 %	0.5 periods	0° L1

Test results:

- Normal performance within limits specified by manufacturer, requestor or purchaser
- Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention
- Temporary loss of function or degradation of performance, the correction of which requires operator intervention
- Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data

Comments:

TEST PASS

Tested with SPS EMC 4.13 / PAS5000 by Spitzenberger & Spies GmbH & Co. KG, Schmidstr. 32-34, 94234 Viechtach, Germany, 22.03.2021

Name:		Serial no:	
Department:		Operating modes:	
Company:	IMiF PREDOM Division	Comment1:	
Test report no:	Z7-4/043/EMC/21	Comment2:	
Device:	URBINO LED	Comment3:	
Specimen:		Comment4:	
Manufacturer:	LUG Light Factory	Date:	22.03.2021
Type:		Test date:	22.03.2021

Test conditions: EN 61000-4-11 voltage dips, short interruptions and variations test

Voltage / frequency:	230.0 V / 50.0 Hz
Test phase:	Single phase / L1-N
Executed test:	61547 dips
Test description:	--
Disturbances per step:	3 (per phase angle) / 10.5 sec delay between

Step	Disturbance	Test level	Duration	Phase angle(s) (Ref. L1)
1	Voltage dip / short interruption	70 %	10 periods	0° L1

Test results:

- • Normal performance within limits specified by manufacturer, requestor or purchaser
- ○ Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention
- ○ Temporary loss of function or degradation of performance, the correction of which requires operator intervention
- ○ Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data

Comments:

TEST PASS

Tested with SPS EMC 4.13 / PAS5000 by Spitzenberger & Spies GmbH & Co. KG, Schmidstr. 32-34, 94234 Viechtach, Germany, 22.03.2021

8 List of test equipment

Equipment	Type	Inventory number	Manufacturer
Test Stand:	Disturbance voltages		
EMI Test Receiver	ESCS 30	P-395	Rohde & Schwarz
Artificial Mains Network	ESH 2-Z5	U-57/A	Rohde & Schwarz
Faraday Cage	EK-1	U-11	UnitraUnima Olsztyn
Test Stand:	Disturbance powerstand		
EMI Test Receiver	ESCS 30	P-395	Rohde & Schwarz
Absorbing clamp	MDS-21	P-395/A	Rohde & Schwarz
Faraday Cage	EK-1	U-11	UnitraUnima Olsztyn
Test Stand:	Harmonic current emissions, Voltage changes, voltage fluctuations and flicker, Voltage Dips, Short Interruptions and Voltage Variations		
Test System	EMV D 15000/PAS	U-84	Spitzenberger+Spies GmbH
Test Stand:	Electrostatic discharges		
Simulator ESD	NSG 435	P-396	Schaffner
Test Stand:	Fast Transients / Surges		
Multifunctional Test Generator	COMPACT NX5	U-55/1	EM TEST
Combined 3-Phase Coupling/ Decoupling Networks	COUPLING NX5	U-55/3	EM TEST
Test Stand:	Conducted Disturbances Immunity		
Continuous Wave Simulator	CWS 500	U-56	EM TEST
Coupling-Decoupling Network	CDN-M5,M3,M2	U-56/D,C,B	EM TEST
Attenuator	ATT 6	U-56/F	EM TEST
Test Stand:	Radiated electromagnetic disturbances stand Semi-anechoic chamber U-86		
EMI Test Receiver	ESIB 26	P-377	Rohde & Schwarz
Antenna	HL 562	P-382	Rohde & Schwarz
Coupling Decoupling Network Emission	CDN-M5,M3,M2 with 50 Ω impedance	U-56/D,C,B	EM TEST
Test Stand:	Radiated, radio-frequency, electromagnetic field stand Semi-anechoic chamber U-86		
Vector Signal Generator	SMBV100A	P-601	Rohde & Schwarz
Power Amplifier	BLWA 0810-250/75D	P-370	BONN Elektronik
Power Amplifier	BLMA 4060-10	P-467	BONN Elektronik
Power Meter	NRVD	P-375	Rohde & Schwarz
Power Sensor	URV5-Z2	P-373/374	Rohde & Schwarz
Ultra log antenna	HL 046	P-434	Rohde & Schwarz
Test Stand:	Power frequency magnetic fields		
Magnetic field generator	1008	P-326	PMM
Test Stand:	Radiated electromagnetic disturbances		
Large Loop Antenna	HM 020	P-312	Rohde & Schwarz
EMI Test Receiver	ESCS 30	P-395	Rohde & Schwarz

9 Measurement instrumentation uncertainties

Type of disturbance test method	Used test equipment (only main instruments, no details)	Calculated uncertainty	U_{CISPR}
Disturbance voltage Mains terminals 9 kHz … 150 kHz 150 kHz … 30 MHz	EMI Test Receiver Artificial Mains Network	3.6 dB	4.0 dB 3.6 dB
Electric field strength Horiz. 30 MHz … 200 MHz Horiz. 200 MHz … 1000 MHz Vert. 30 MHz … 130 MHz Vert. 130 MHz … 200 MHz Vert. 200 MHz … 1000 MHz	EMI Test Receiver Antenna	Horiz. 30 MHz … 200 MHz 4.9 dB Horiz. 200 MHz … 300 MHz 5.2 dB Vert. 30 MHz … 200 MHz 5.1 dB Vert. 30 MHz … 200 MHz 5.2 dB Vert. 200 MHz … 300 MHz 5.2 dB	5.2 dB

10 Annex

10.1 Annex A:

Component/ Part No.	Type No./model No.	Manufacturer/Trademark
LED Power Supply	OPTOTRONIC OT 200/UNV/1A0 2DIM P7	OSRAM

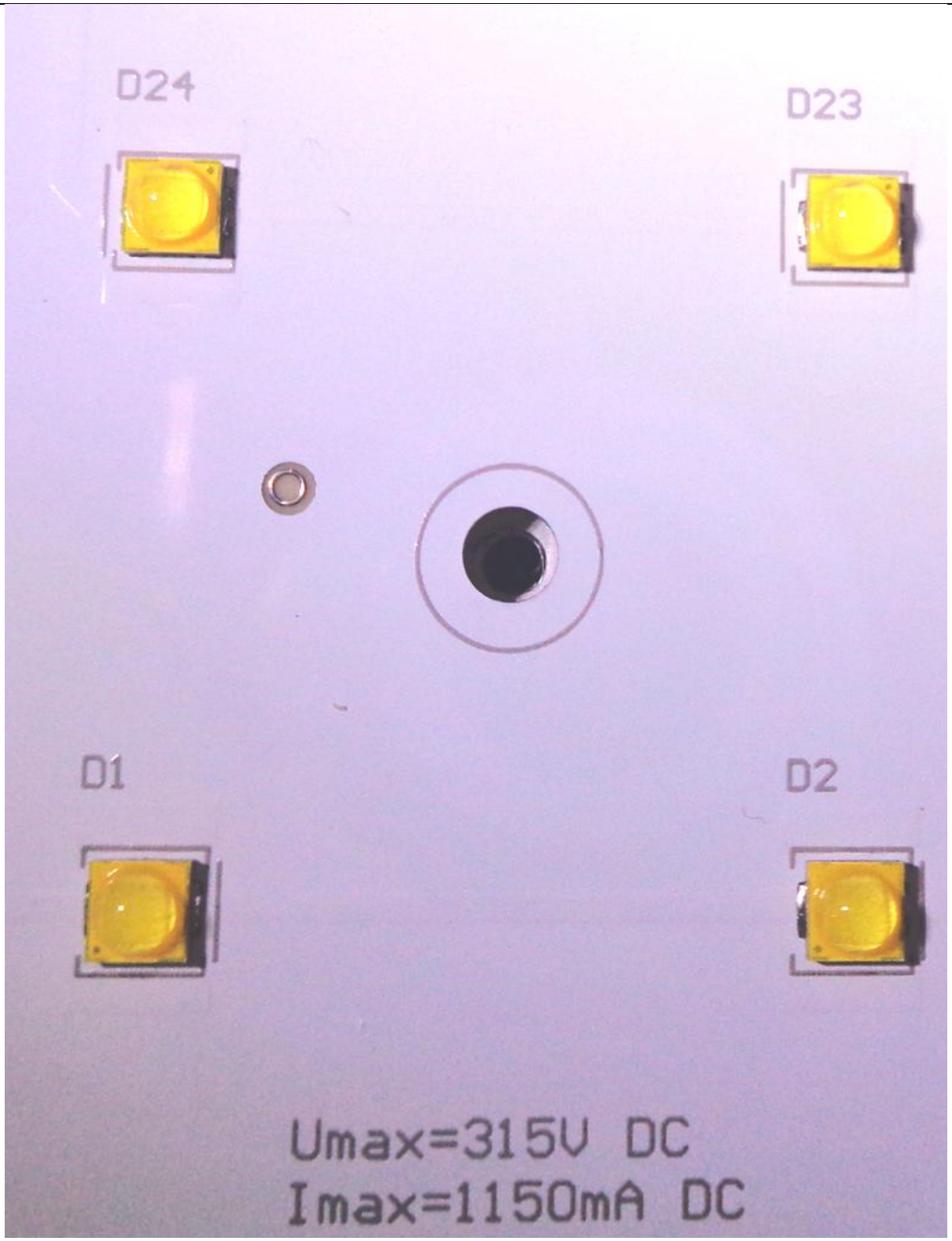
See Technical documentation and photos Annex B.

10.2 Annex B:

TABLE: Photography of the components	
Component/ Part No.	Photography
EUT	
LED Power supply	

LED Module	
LED Module	

LED Module



End of the Report

Łukasiewicz- IMiF PREDOM Division
53, Krakowiaków Str.
02-255 WARSAW, POLAND

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LICENCE

CERTIFICATE/*CERTYFIKAT*
to use the European Mark
Licencja na używanie europejskiego Znaku

30

Licence/Certificate No. / *Licencja/ Certyfikat Nr* **0224/ENEC/20/M1**

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LUG Light Factory Sp. z.o.o.
ul. Gorzowska 11; 65-127 Zielona Góra, Poland

For the products: *Dla wyrobów:*

Luminaires for road and street lighting *Oprawy oświetleniowe drogowe i uliczne*

Manufacturing place: *Miejsce Produkcji*

LUG Light Factory Sp. z.o.o.
ul. Gorzowska 11; 65-127 Zielona Góra, Poland

Trade name: *Znak towarowy:*

LUG®

Type(s)/Model(s): *Typ(y), model(e):*

URBINO LED family cl. II – series (see Appendix/ *patrz Załącznik*)
Technical data/ *Dane Techniczne*: 220-240V, 50/60Hz, IP 66; cl.II – details in the Appendix/*Szczegóły w Załączniku*

Complying with the following European Standards: *Zgodnymi z następującymi normami europejskimi*

EN 60598-2-3:2003;
EN 60598-2-3:2003/ A1:2011
EN 60598-1:2015;
EN 60598-1:2015/A1:2018

the Test Reports/ *raporty z badań:* Ref. No. BS-3/134/B/19 + Att. No. 1 (EU GD and ND rep. ref. BS-3/134/B/1/19) dated 9.01.2020; BS-3/134/B/19/M1 + Att. No. 1 (EU GD and ND rep. ref. BS-3/134/B/1/19/M1) dated 14.12.2020 performed by the Testing Laboratory Łukasiewicz-IMiF PREDOM Division (Accreditation PCA AB 003).

Note: This licence/certificate has been issued because the products modifications: choice sheet have been modified, new components have been added, list of LED's and control gear's system and components list have been completed. *Uwaga: niniejsza licencja/certyfikat została wydana ponieważ wyroby zostały zmodyfikowane: zmieniono arkusz wyboru, dodano szereg komponentów, wykaz systemu konfiguracji i wykaz komponentów zostały uzupełnione..*

This licence/certificate replaces the licence/ certificate */Niniejsza licencja/certyfikat zastępuje licencję/certyfikat* **0224/ENEC/20 dated/** *z dnia* **24-01-2020.**

Date:*Data* 15-12-2020

Signature:

Name:	Joanna Walczak-Złotkowska	Aleksander Piotrowski
Position:	Manager of Certification Office	Deputy Director of the Łukasiewicz- IMiF PREDOM Division

Additional information – see the Appendix.
Dodatkowe informacje – patrz Załącznik.

EU DECLARATION OF CONFORMITY

CLS/2024/03/132

We

LUG Light Factory Ltd.
Gorzowska 11
65-127 Zielona Góra, Poland

declare under our sole responsibility that the product

Name	**URBINO LED**
Group	**Infrastructural lighting**
Factory number	**Attachment**

is in conformity with the provisions of the following acts:

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products

Commision regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 244/2009, (EC) No 245/2009 and (EU) No 1194/2012

and the following harmonized standards:

PN-EN 60598-1:2015-04
PN-EN IEC 55015:2019-11
PN-EN IEC 55015:2019-11/A11:2020-07
PN-EN 61547:2009
PN-EN IEC 61000-3-2:2019-04
PN-EN IEC 61000-3-2:2019-04/A1:2021-08
PN-EN 61000-3-3:2013-10
PN-EN 61000-3-3:2013-10/A1:2019-10
PN-EN 62493:2015-11
PN-EN IEC 63000:2019-01
PN-EN 62471:2010
PN-EN 60598-2-3:2006/A1:2012
PN-EN 60598-2-3:2006/A1:2012
PN-EN 62722-1:2016-07
PN-EN 62722-2-1:2016-07
PN-EN 62717:2017-11
PN-EN 62717:2017-11/A2:2019-07

LUG Light Factory Sp. z o. o.
Kierownik Laboratorium/Laboratory Manager
mgr inż. Marcin Białas

Issued by

DYREKTOR
DS. TECHNICZNYCH
mgr inż. Mariusz Ejsmont

Authorized person signature

EU DECLARATION OF CONFORMITY

CLS/2024/03/132

ATTACHMENT

Factory number

130222.7L782.681.002	130222.7L102.991.003

Accessory factory numbers

150173.00906	150170.00818	150175.01107	150172.01097
150175.01106	150172.01096		

This declaration applies to all serial numbers produced under the given factory symbol.

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
tel. +48 68 411 72 68

NIP: PL 929-17-85-452, REGON 080212116
WEE E0001382WZ, KRS 0000290498
Sąd Rejonowy w Zielonej Górze

EU DECLARATION OF CONFORMITY

CLS/2024/03/133

We

LUG Light Factory Ltd.
Gorzowska 11
65-127 Zielona Góra, Poland

declare under our sole responsibility that the product

Name	**URBINO LED PLUS version**
Group	**Infrastructural lighting**
Factory number	**ATTACHMENT**

is in conformity with the provisions of the following acts:

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products

and the following harmonized standards:

PN-EN 60598-1:2015-04
PN-EN IEC 55015:2019-11
PN-EN 61547:2009
PN-EN 61000-3-2:2019-14
PN-EN 61000-3-3:2013-10
PN-EN IEC 63000:2019-01
PN-EN 62471:2010
PN-EN 62493:2015-11
PN-EN 60598-2-3:2006/A1:2012
PN-EN 62717:2017-11/A2:2019-07
PN-EN 62722-2-1:2016-07
PN-EN 62722-1:2016-07
PN-EN 62262:2003
PN-EN 61347-1:2015-09
PN-EN 61347-2-13:2015-04/A1:2017-07
PN-EN 60598-1:2015-04/A1:2018-04

LUG Light Factory Sp. z o. o.
Kierownik Laboratorium/Laboratory Manager
mgr inż. Marcin Białas

.....
Issued by

DYREKTOR
DS. TECHNICZNYCH
mgr inż. Mariusz Ejsmont
Mariusz Ejsmont

.....
Authorized person signature

EU DECLARATION OF CONFORMITY

CLS/2024/03/133

ATTACHMENT

Factory numbers

130222.7L492.491.002

This declaration applies to all serial numbers produced under the given factory symbol.

LUG Light Factory Ltd.
Gorzowska 11
65-127 Zielona Góra, Poland
tel. +48 68 411 72 68

NIP: PL 929-17-85-452, REGON 080212116
WEE E0001382WZ, KRS 0000290498
District Court in Zielona Gora

IEC62471B ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT No.1 TO TEST REPORT IEC 62471 **Report Ref. No Z7-3/184/B/20** **EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES** Photobiological safety of lamps and lamps systems			
Differences according to..... EN 62471:2008			
Annex Form No..... EU_GD_IEC62471B **Annex Form Originator .....** OVE **Master Annex Form.....** 2019-01-24			

	CENELEC COMMON MODIFICATIONS (EN)		**P**
4	**EXPOSURE LIMITS**		**P**
	Contents of the whole Clause 4 of IEC 62471:2006 moved into a new informative Annex ZB		—
	Clause 4 replaced by the following:		
	Limits of the Artificial Optical Radiation Directive (2006/25/EC) have been applied instead of those fixed in IEC 62471:2006	See appended Table 6.1	P
4.1	General		P
	First paragraph deleted		—

Table 6.1	Emission limits for risk groups of continuous wave lamps (based on EU Directive 2006/25/EC) for URBINO LED ED 29300lm/730	P

Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_S	$W \cdot m^{-2}$	0,001	5,715e-08	-	-	-	-
Near UV		E_{UVA}	$W \cdot m^{-2}$	0,33	0,000763	-	-	-	-
Blue light	B(λ)	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	46,69	10000	N/A	4000000	N/A
Blue light, small source	B(λ)	E_B	$W \cdot m^{-2}$	0,01*	N/A	1,0	N/A	400	N/A
Retinal thermal	R(λ)	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/α	-	28000/α	N/A	71000/α	N/A
Retinal thermal, weak visual stimulus**	R(λ)	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	545000 0,0017≤ α ≤ 0,011	N/A				
				6000/α 0,011≤ α ≤ 0,1	N/A				
IR radiation, eye		E_{IR}	$W \cdot m^{-2}$	100	0	570	N/A	3200	N/A

* Small source defined as one with α < 0,011 radian. Averaging field of view at 10000 s is 0,1 radian.
** Involves evaluation of non-GLS source

NOTE The action functions: see Table 4.1 and Table 4.2
The applicable aperture diameters: see 4.2.1
The limitations for the angular subtenses: see 4.2.2
The related measurement condition 5.2.3 and the range of acceptance angles: see Table 5.5.

Table 6.1	Emission limits for risk groups of continuous wave lamps (based on EU Directive 2006/25/EC) for URBINO LED ED DALI 27650lm/740								P
Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_s	$W \cdot m^{-2}$	0,001	2e-07	-	-	-	-
Near UV		E_{UVA}	$W \cdot m^{-2}$	0,33	0,001579	-	-	-	-
Blue light	B(λ)	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	64,87	10000	N/A	4000000	N/A
Blue light, small source	B(λ)	E_B	$W \cdot m^{-2}$	0,01*	N/A	1,0	N/A	400	N/A
Retinal thermal	R(λ)	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/α	-	28000/α	N/A	71000/α	N/A
Retinal thermal, weak visual stimulus**	R(λ)	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	545000 0,0017≤ α ≤ 0,011	N/A				
				6000/α 0,011≤ α ≤ 0,1	N/A				
IR radiation, eye		E_{IR}	$W \cdot m^{-2}$	100	0	570	N/A	3200	N/A

* Small source defined as one with α < 0,011 radian. Averaging field of view at 10000 s is 0,1 radian.
** Involves evaluation of non-GLS source

NOTE The action functions: see Table 4.1 and Table 4.2
The applicable aperture diameters: see 4.2.1
The limitations for the angular subtenses: see 4.2.2
The related measurement condition 5.2.3 and the range of acceptance angles: see Table 5.5.

Test Report issued under the responsibility of:
PL-3 - PREDOM DIVISION

TEST REPORT
IEC 62471
Photobiological safety of lamps and lamp systems

Report Reference No. ..... :	Z7-3/184/B/20
Date of issue..... :	11.12.2020
Total number of pages ..... :	24
Name of Testing Laboratory preparing the Report ..... :	Łukasiewicz- IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland
Applicant's name ..... :	LUG LIGHT FACTORY SP. Z O.O.
Address..... :	65-127 Zielona Góra, ul. Gorzowska 11, Poland
Test specification:	
Standard ..... :	IEC 62471:2006
Test procedure ..... :	CB
Non-standard test method……:	N/A
Test Report Form No. ..... :	IEC62471B
TRF Originator..... :	VDE Testing and Certification Institute
Master TRF ..... :	Dated 2018-08-16

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 .....:	Fixed general purpose luminaires
Trade Mark .....:	LUG
Manufacturer.....:	LUG LIGHT FACTORY SP. Z O.O. 65-127 Zielona Góra, ul. Gorzowska 11, Poland
Model/Type reference .....:	URBINO … family cl. I/II
Ratings .....:	220-240V, 50/60Hz, IP66

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**CB Testing** Laboratory**:**	Łukasiewicz- IMiF PREDOM Division	
Testing location/ address ..... :		02-255 Warszawa, ul. Krakowiaków 53, Poland	
Tested by (name, function, signature) ..... :		B. Stankiewicz	
Approved by (name, function, signature) .. :		T. Małyska	
Supervised by (name, function, signature) :		A. Piotrowski	
☐	**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):
See Attachment No.1 to this test report (Report No. Z7-3/184/B/1/20) – 3 pages

Summary of testing: Positive

Tests performed (name of test and test clause):	**Testing location:**
IEC 62471:2006	Łukasiewicz- IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland

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

See Attachment No.1 to this test report (Report No. Z7-3/184/B/1/20)

☒ **The product fulfils the requirements of EN 62471:2008.**

Copy of marking plate:

Test item particulars ..... :	Fixed general purpose luminaires
Tested lamp ..... :	☒ continuous wave lamps ☐ pulsed lamps
Tested lamp system ..... :	URBINO PLUS … family cl. I/II
Lamp classification group ..... :	☒ exempt ☐ risk 1 ☐ risk 2 ☐ risk 3
Lamp cap ..... :	N/A
Bulb ..... :	Diode: Cree XPG3, Duris S8
Rated of the lamp ..... :	for both luminaires 205 W, 220-240 V, 50-60Hz, IP66
Furthermore marking on the lamp ..... :	N/A
Seasoning of lamps according IEC standard ..... :	IEC 60589-2-3
Used measurement instrument ..... :	StellarNet UVN-50, IC2 Integrating cube
Temperature by measurement ..... :	25°C
Information for safety use ..... :	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 ..... : 25.11.2020

Date (s) of performance of tests ..... : 25.11.2020 – 10.12.2020

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:

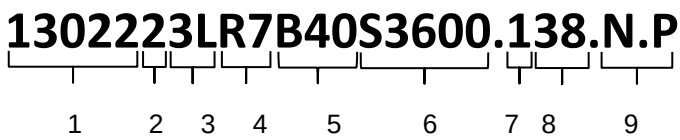
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

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

Name and address of factory (ies) ..... : LUG LIGHT FACTORY SP. Z O.O.
65-127 Zielona Góra, ul. Gorzowska 11, Poland

General product information and other remarks:

Choice sheet of the luminaires URBINO LED cl. I - series:
Example of symbol:



Designations used on the marking of luminaries (some designation may not appear in the name) :

1. 13022	- Code of the series (URBINO)
2. 2	- Color: 2: grey 5: graphite 0: another
3. 3L	- Type of power sypply: 2L - DIMM 1-10V 3L – DALI 5L – on-off 6L – on-off / DALI 7L/PL – programmable
4. R7	- CRI: R7 = 70-79 R8 = 80-89
5. B40	- Color temperature: B22 = 2200 B27 = 2700 B30 = 3000 B40 = 4000
6. S3600	- Max. luminous flux (e.g. S3600 = 36000lm)
7. 1	- Safety Class I
8. 38	- Optic: 01 O2 - for expressways 02 O3 - for municipal roads 03 O4 - for city roads 04 O5 - for residential roads 05 O6P - for pedestrian crossings, right-hand traffic 09 O6L - for pedestrian crossings, left-hand traffic 06 O7 - for area lighting 08 O8 - for city and commune roads 10 O26 - for wet surfaces 12 O33 - for expressways 13 O34 - to municipal roads 14 O35 - for city roads 15 O36 - for residential roads 16 O37P - for pedestrian crossings, right-hand traffic 17 O37L - for pedestrian crossings, left-hand traffic 18 O38 - for area lighting 19 O39 - for city and commune roads 20 O40 - for wet surfaces 30 O13 - for expressways 31 O14 - to municipal roads 32 O15 - for city roads 33 O16 - to residential roads

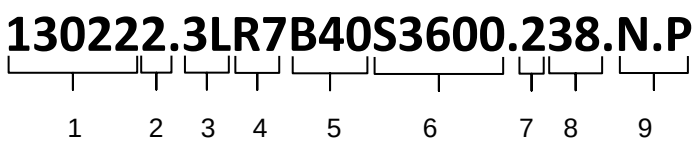
35 O59 - for municipal roads
36 O60 - for city roads
37 O61 - for residential roads
38 O62 - for expressways
39 O63 - for local roads
40 O64 - for city roads
41 O65 - for residential roads
42 O66 - for pedestrian crossings, left-hand traffic
43 O67 - for pedestrian crossings, right-hand traffic
44 O68 - for area lighting
45 O69 - for city and commune roads
46 O70 - for wet surfaces
47 O71 - for road lighting
48 O72 - for road lighting
49 O73 - for road lighting
50 O74 - for road lighting
51 O75 - for road lighting
52 O76 - for road lighting
53 O77 - for road lighting
54 O78 - for road lighting
55 O79 - for road lighting
56 O80 - for road lighting
57 O81 - for road lighting
58 O82 - for road lighting
59 O83 - for road lighting
60 O84 - for road lighting
61 O85 - for road lighting
62 O86 - for road lighting
63 O87 - for road lighting
64 O89- for road lighting
65 O90 - for road lighting
66 O91 - for road lighting
67 O92 - for road lighting
68 O93 - for road lighting
69 O94 - for road lighting
70 O95 - for road lighting
71 O96 - for road lighting
72 O97 - for road lighting
73 O98 - for road lighting
74 O99 - for road lighting
XX OXX – for investment optics

9. N.P

- Additional equipment
A - additional corrosion protection
B - Tool-free access to the LED Driver
U - ø76mm pole
N - NEMA Socket
Z - ZHAGA Socket
T - NTC Sensor
W - Twilight Sensor
V - Surge Device Protector 10kV
P- Anti pressure vent
I- iBloc (“URBAN” smart city system)
K- Knife switch connector

Choice sheet of the luminaires URBINO LED cl. II - series:

Example of symbol:



Designations used on the marking of luminaries (some designation may not appear in the name) :

1. 13022 - Code of the series (URBINO)

2. 2 - Color:
2: grey
5: graphite
0: another

3. 3L - Type of power sypply:
2L - DIMM 1-10V
3L – DALI
5L – on-off
6L – on-off / DALI
7L/PL – programmable

4. R7 - CRI:
R7 = 70-79
R8 = 80-89

5. B40 - Color temperature:
B22 = 2200
B27 = 2700
B30 = 3000
B40 = 4000

6. S3600 - Max. luminous flux (e.g. S3600 = 36000lm)

7. 2 - Safety Class II

8. 38 - Optic:
01 O2 - for expressways
02 O3 - for municipal roads
03 O4 - for city roads
04 O5 - for residential roads
05 O6P - for pedestrian crossings, right-hand traffic
09 O6L - for pedestrian crossings, left-hand traffic
06 O7 - for area lighting
08 O8 - for city and commune roads
10 O26 - for wet surfaces
12 O33 - for expressways
13 O34 - to municipal roads
14 O35 - for city roads
15 O36 - for residential roads
16 O37P - for pedestrian crossings, right-hand traffic
17 O37L - for pedestrian crossings, left-hand traffic
18 O38 - for area lighting
19 O39 - for city and commune roads
20 O40 - for wet surfaces
30 O13 - for expressways

	31 O14 - to municipal roads 32 O15 - for city roads 33 O16 - to residential roads 35 O59 - for municipal roads 36 O60 - for city roads 37 O61 - for residential roads 38 O62 - for expressways 39 O63 - for local roads 40 O64 - for city roads 41 O65 - for residential roads 42 O66 - for pedestrian crossings, left-hand traffic 43 O67 - for pedestrian crossings, right-hand traffic 44 O68 - for area lighting 45 O69 - for city and commune roads 46 O70 - for wet surfaces 47 O71 - for road lighting 48 O72 - for road lighting 49 O73 - for road lighting 50 O74 - for road lighting 51 O75 - for road lighting 52 O76 - for road lighting 53 O77 - for road lighting 54 O78 - for road lighting 55 O79 - for road lighting 56 O80 - for road lighting 57 O81 - for road lighting 58 O82 - for road lighting 59 O83 - for road lighting 60 O84 - for road lighting 61 O85 - for road lighting 62 O86 - for road lighting 63 O87 - for road lighting 64 O89- for road lighting 65 O90 - for road lighting 66 O91 - for road lighting 67 O92 - for road lighting 68 O93 - for road lighting 69 O94 - for road lighting 70 O95 - for road lighting 71 O96 - for road lighting 72 O97 - for road lighting 73 O98 - for road lighting 74 O99 - for road lighting XX OXX – for investment optics
9. N.P	- Additional equipment A - additional corrosion protection B - Tool-free access to the LED Driver U - ø76mm pole N - NEMA Socket Z - ZHAGA Socket T - NTC Sensor W - Twilight Sensor V - Surge Device Protector 10kV P- Anti pressure vent I- iBloc (“URBAN” smart city system) K- Knife switch connector

After review of technical documentation, model series, characteristic of particular models, differences between models, technical parameters, class of luminaires, IP code, light sources, components, etc., luminaire Urbino LED ED 29300lm/730 and Urbino LED ED DALI 27650lm/740 have been tested as representatives of all models of luminaires.

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict
4	**EXPOSURE LIMITS**		P
4.1	General		P
	The exposure limits in this standard is not less than 0,01 ms and not more than any 8-hour period and should be used as guides in the control of exposure		P
	Detailed spectral data of a light source are generally required only if the luminance of the source exceeds 10^4 cd·m^{-2}	see clause 4.3	P
4.3	Hazard exposure limits		P
4.3.1	Actinic UV hazard exposure limit for the skin and eye		P
	The exposure limit for effective radiant exposure is 30 J·m^{-2} within any 8-hour period		P
	To protect against injury of the eye or skin from ultraviolet radiation exposure produced by a broad-band source, the effective integrated spectral irradiance , E_S, of the light source shall not exceed the levels defined by:		P
	$E_s \cdot t = \sum_{200}^{400} \sum_{t} E_\lambda(\lambda,t) \cdot S_{UV}(\lambda) \cdot \Delta t \cdot \Delta\lambda \le 30$ J·m^{-2}		P
	The permissible time for exposure to ultraviolet radiation incident upon the unprotected eye or skin shall be computed by:		P
	$t_{max} = \frac{30}{E_s}$ s		P
4.3.2	Near-UV hazard exposure limit for eye		P
	For the spectral region 315 nm to 400 nm (UV-A) the total radiant exposure to the eye shall not exceed 10000 J·m^{-2} for exposure times less than 1000 s. For exposure times greater than 1000 s (approximately 16 minutes) the UV-A irradiance for the unprotected eye, E_{UVA}, shall not exceed 10 W·m^{-2}.		P
	The permissible time for exposure to ultraviolet radiation incident upon the unprotected eye for time less than 1000 s, shall be computed by:		P
	$t_{max} \le \frac{10\,000}{E_{UVA}}$ s		P
4.3.3	Retinal blue light hazard exposure limit		P
	To protect against retinal photochemical injury from chronic blue-light exposure, the integrated spectral radiance of the light source weighted against the blue-light hazard function, B(λ), i.e., the blue-light weighted radiance , L_B, shall not exceed the levels defined by:		P
	$L_B \cdot t = \sum_{300}^{700} \sum_{t} L_\lambda(\lambda,t) \cdot B(\lambda) \cdot \Delta t \cdot \Delta\lambda \le 10^6$ J · m^{-2} · sr^{-1}	for t ≤ 10^4 s $t_{max} = \frac{10^6}{L_B}$	P

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	$L_B = \sum_{300}^{700} L_\lambda \cdot B(\lambda) \cdot \Delta\lambda \le 100$ $W \cdot m^{-2} \cdot sr^{-1}$	for t > 10^4 s	P
4.3.4	Retinal blue light hazard exposure limit - small source		N/A
	Thus the spectral irradiance at the eye E_λ, weighted against the blue-light hazard function B(λ) shall not exceed the levels defined by:	see table 4.2	N/A
	$E_B \cdot t = \sum_{300}^{700} \sum_{t} E_\lambda(\lambda,t) \cdot B(\lambda) \cdot \Delta t \cdot \Delta\lambda \le 100$ $J \cdot m^{-2}$	for t ≤ 100 s	N/A
	$E_B = \sum_{300}^{700} E_\lambda \cdot B(\lambda) \cdot \Delta\lambda \le 1$ $W \cdot m^{-2}$	for t > 100 s	N/A
4.3.5	Retinal thermal hazard exposure limit		P
	To protect against retinal thermal injury, the integrated spectral radiance of the light source, L_λ, weighted by the burn hazard weighting function R(λ) (from Figure 4.2 and Table 4.2), i.e., the burn hazard weighted radiance, shall not exceed the levels defined by:		P
	$L_R = \sum_{380}^{1400} L_\lambda \cdot R(\lambda) \cdot \Delta\lambda \le \frac{50\,000}{\alpha \cdot t^{0,25}}$ $W \cdot m^{-2} \cdot sr^{-1}$	(10 µs ≤ t ≤ 10 s)	P
4.3.6	Retinal thermal hazard exposure limit – weak visual stimulus		N/A
	For an infrared heat lamp or any near-infrared source where a weak visual stimulus is inadequate to activate the aversion response, the near infrared (780 nm to 1400 nm) radiance, L_{IR}, as viewed by the eye for exposure times greater than 10 s shall be limited to:		N/A
	$L_{IR} = \sum_{780}^{1400} L_\lambda \cdot R(\lambda) \cdot \Delta\lambda \le \frac{6\,000}{\alpha}$ $W \cdot m^{-2} \cdot sr^{-1}$	t > 10 s	N/A
4.3.7	Infrared radiation hazard exposure limits for the eye		P
	The avoid thermal injury of the cornea and possible delayed effects upon the lens of the eye (cataractogenesis), ocular exposure to infrared radiation, E_{IR}, over the wavelength range 780 nm to 3000 nm, for times less than 1000 s, shall not exceed:		P
	$E_{IR} = \sum_{780}^{3\,000} E_\lambda \cdot \Delta\lambda \le 18\,000 \cdot t^{-0,75}$ $W \cdot m^{-2}$	t ≤ 1000 s	P
	For times greater than 1000 s the limit becomes:		P
	$E_{IR} = \sum_{780}^{3\,000} E_\lambda \cdot \Delta\lambda \le 100$ $W \cdot m^{-2}$	t > 1000 s	P
4.3.8	Thermal hazard exposure limit for the skin		P
	Visible and infrared radiant exposure (380 nm to 3000 nm) of the skin shall be limited to:		

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	$E_H \cdot t = \sum_{380}^{3\,000} \sum_{t} E_\lambda(\lambda,t) \cdot \Delta t \cdot \Delta\lambda \le 20\,000 \cdot t^{0,25}$ J · m^{-2}		P
5	**MEASUREMENT OF LAMPS AND LAMP SYSTEMS**		P
5.1	Measurement conditions		P
	Measurement conditions shall be reported as part of the evaluation against the exposure limits and the assignment of risk classification.		P
5.1.1	Lamp ageing (seasoning)		P
	Seasoning of lamps shall be done as stated in the appropriate IEC lamp standard.		P
5.1.2	Test environment		P
	For specific test conditions, see the appropriate IEC lamp standard or in absence of such standards, the appropriate national standards or manufacturer's recommendations.		P
5.1.3	Extraneous radiation		P
	Careful checks should be made to ensure that extraneous sources of radiation and reflections do not add significantly to the measurement results.		P
5.1.4	Lamp operation		P
	Operation of the test lamp shall be provided in accordance with:		P
	– the appropriate IEC lamp standard, or		N/A
	– the manufacturer' s recommendation		P
5.1.5	Lamp system operation		P
	The power source for operation of the test lamp shall be provided in accordance with:		P
	– the appropriate IEC standard, or		N/A
	– the manufacturer' s recommendation		P
5.2	Measurement procedure		P
5.2.1	Irradiance measurements		P
	Minimum aperture diameter 7mm.		P
	Maximum aperture diameter 50 mm.		P
	The measurement shall be made in that position of the beam giving the maximum reading.		P
	The measurement instrument is adequate calibrated.		P
5.2.2	Radiance measurements		P
5.2.2.1	Standard method		N/A
	The measurements made with an optical system.		N/A
	The instrument shall be calibrated to read in absolute radiant power per unit receiving area and per unit solid angle to acceptance averaged over the		N/A

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	field of view of the instrument.		
5.2.2.2	Alternative method		P
	Alternatively to an imaging radiance set-up, an irradiance measurement set-up with a circular field stop placed at the source can be used to perform radiance measurements.		P
5.2.3	Measurement of source size		P
	The determination of α, the angle subtended by a source, requires the determination of the 50% emission points of the source.		P
5.2.4	Pulse width measurement for pulsed sources		N/A
	The determination of Δt, the nominal pulse duration of a source, requires the determination of the time during which the emission is > 50% of its peak value.		N/A
5.3	Analysis methods		P
5.3.1	Weighting curve interpolations		P
	To standardize interpolated values, use linear interpolation on the log of given values to obtain intermediate points at the wavelength intervals desired.	see table 4.1	P
5.3.2	Calculations		P
	The calculation of source hazard values shall be performed by weighting the spectral scan by the appropriate function and calculating the total weighted energy.		P
5.3.3	Measurement uncertainty		P
	The quality of all measurement results must be quantified by an analysis of the uncertainty.	see Annex C in the norm	P
6	**LAMP CLASSIFICATION**		P
	For the purposes of this standard it was decided that the values shall be reported as follows:	see table 6.1	P
	– for lamps intended for general lighting service, the hazard values shall be reported as either irradiance or radiance values at a distance which produces an illuminance of 500 lux, but not at a distance less than 200 mm		P
	– for all other light sources, including pulsed lamp sources, the hazard values shall be reported at a distance of 200 mm		P
6.1	Continuous wave lamps		P
6.1.1	Except Group		P
	In the except group are lamps, which does not pose any photobiological hazard. The requirement is met by any lamp that does not pose:		P
	– an actinic ultraviolet hazard (E_S) within 8-hours exposure (30000 s), nor		P

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	– a near-UV hazard (E_{UVA}) within 1000 s, (about 16 min), nor		P
	– a retinal blue-light hazard (L_B) within 10000 s (about 2,8 h), nor		P
	– a retinal thermal hazard (L_R) within 10 s, nor		P
	– an infrared radiation hazard for the eye (E_{IR}) within 1000 s		P
6.1.2	Risk Group 1 (Low-Risk)		N/A
	In this group are lamps, which exceeds the limits for the except group but that does not pose:		N/A
	– an actinic ultraviolet hazard (E_S) within 10000 s, nor		N/A
	– a near ultraviolet hazard (E_{UVA}) within 300 s, nor		N/A
	– a retinal blue-light hazard (L_B) within 100 s, nor		N/A
	– a retinal thermal hazard (L_R) within 10 s, nor		N/A
	– an infrared radiation hazard for the eye (E_{IR}) within 100 s		N/A
	Lamps that emit infrared radiation without a strong visual stimulus and do not pose a near-infrared retinal hazard (L_{IR}), within 100 s are in Risk Group 1.		N/A
6.1.3	Risk Group 2 (Moderate-Risk)		N/A
	This requirement is met by any lamp that exceeds the limits for Risk Group 1, but that does not pose:		N/A
	– an actinic ultraviolet hazard (E_S) within 1000 s exposure, nor		N/A
	– a near ultraviolet hazard (E_{UVA}) within 100 s, nor		N/A
	– a retinal blue-light hazard (L_B) within 0,25 s (aversion response), nor		N/A
	– a retinal thermal hazard (L_R) within 0,25 s (aversion response), nor		N/A
	– an infrared radiation hazard for the eye (E_{IR}) within 10 s		N/A
	Lamps that emit infrared radiation without a strong visual stimulus and do not pose a near-infrared retinal hazard (L_{IR}), within 10 s are in Risk Group 2.		N/A
6.1.4	Risk Group 3 (High-Risk)		N/A
	Lamps which exceed the limits for Risk Group 2 are in Group 3.		N/A
6.2	Pulsed lamps		N/A
	Pulse lamp criteria shall apply to a single pulse and to any group of pulses within 0,25 s.		N/A
	A pulsed lamp shall be evaluated at the highest nominal energy loading as specified by the manufacturer.		N/A

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	The risk group determination of the lamp being tested shall be made as follows:		N/A
	– a lamp that exceeds the exposure limit shall be classified as belonging to Risk Group 3 (High-Risk)		N/A
	– for single pulsed lamps, a lamp whose weighted radiant exposure or weighted radiance does is below the EL shall be classified as belonging to the Exempt Group		N/A
	– for repetitively pulsed lamps, a lamp whose weighted radiant exposure or weighted radiance dose is below the EL, shall be evaluated using the continuous wave risk criteria discussed in clause 6.1, using time averaged values of the pulsed emission		N/A

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 4.1	Spectral weighting function for assessing ultraviolet hazards for skin and eye		P
Wavelength[1] λ, nm	**UV hazard function $S_{UV}(\lambda)$**	**Wavelength λ, nm**	**UV hazard function $S_{UV}(\lambda)$**
200	0,030	313*	0,006
205	0,051	315	0,003
210	0,075	316	0,0024
215	0,095	317	0,0020
220	0,120	318	0,0016
225	0,150	319	0,0012
230	0,190	320	0,0010
235	0,240	322	0,00067
240	0,300	323	0,00054
245	0,360	325	0,00050
250	0,430	328	0,00044
254*	0,500	330	0,00041
255	0,520	333*	0,00037
260	0,650	335	0,00034
265	0,810	340	0,00028
270	1,000	345	0,00024
275	0,960	350	0,00020
280*	0,880	355	0,00016
285	0,770	360	0,00013
290	0,640	365*	0,00011
295	0,540	370	0,000093
297*	0,460	375	0,000077
300	0,300	380	0,000064
303*	0,120	385	0,000053
305	0,060	390	0,000044
308	0,026	395	0,000036
310	0,015	400	0,000030

[1] Wavelengths chosen are representative: other values should be obtained by logarithmic interpolation at intermediate wavelengths.
* Emission lines of a mercury discharge spectrum.

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 4.2	Spectral weighting functions for assessing retinal hazards from broadband optical sources	P

Wavelength nm	**Blue-light hazard function B (λ)**	**Burn hazard function R (λ)**
300	0,01	
305	0,01	
310	0,01	
315	0,01	
320	0,01	
325	0,01	
330	0,01	
335	0,01	
340	0,01	
345	0,01	
350	0,01	
355	0,01	
360	0,01	
365	0,01	
370	0,01	
375	0,01	
380	0,01	0,1
385	0,013	0,13
390	0,025	0,25
395	0,05	0,5
400	0,10	1,0
405	0,20	2,0
410	0,40	4,0
415	0,80	8,0
420	0,90	9,0
425	0,95	9,5
430	0,98	9,8
435	1,00	10,0
440	1,00	10,0
445	0,97	9,7
450	0,94	9,4
455	0,90	9,0
460	0,80	8,0
465	0,70	7,0
470	0,62	6,2
475	0,55	5,5
480	0,45	4,5
485	0,40	4,0
490	0,22	2,2
495	0,16	1,6
500-600	$10^{[(450-\lambda)/50]}$	1,0
600-700	0,001	1,0
700-1050		$10^{[(700-\lambda)/500]}$
1050-1150		0,2
1150-1200		$0{,}2 \cdot 10^{0{,}02(1150-\lambda)}$
1200-1400		0,02

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 5.4	Summary of the ELs for the surface of the skin or cornea (irradiance based values)	P

Hazard Name	Relevant equation	Wavelength range nm	Exposure duration sec	Limiting aperture rad (deg)	EL in terms of constant irradiance $W \cdot m^{-2}$
Actinic UV skin & eye	$E_S = \sum E_\lambda \cdot S(\lambda) \cdot \Delta\lambda$	200 – 400	< 30000	1,4 (80)	30/t
Eye UV-A	$E_{UVA} = \sum E_\lambda \cdot \Delta\lambda$	315 – 400	≤1000 >1000	1,4 (80)	10000/t 10
Blue-light small source	$E_B = \sum E_\lambda \cdot B(\lambda) \cdot \Delta\lambda$	300 – 700	≤100 >100	< 0,011	100/t 1,0
Eye IR	$E_{IR} = \sum E_\lambda \cdot \Delta\lambda$	780 –3000	≤1000 >1000	1,4 (80)	$18000/t^{0,75}$ 100
Skin thermal	$E_H = \sum E_\lambda \cdot \Delta\lambda$	380 – 3000	< 10	2π sr	$20000/t^{0,75}$

Table 5.5	Summary of the ELs for the retina (radiance based values)	P

Hazard Name	Relevant equation	Wavelength range nm	Exposure duration sec	Field of view radians	EL in terms of constant radiance $W \cdot m^{-2} \cdot sr^{-1}$)
Blue light	$L_B = \sum L_\lambda \cdot B(\lambda) \cdot \Delta\lambda$	300 – 700	0,25 – 10 10-100 100-10000 ≥ 10000	$0,011 \cdot \sqrt{(t/10)}$ 0,011 $0,0011 \cdot \sqrt{t}$ 0,1	$10^6/t$ $10^6/t$ $10^6/t$ 100
Retinal thermal	$L_R = \sum L_\lambda \cdot R(\lambda) \cdot \Delta\lambda$	380 – 1400	< 0,25 0,25 – 10	0,0017 $0,011 \cdot \sqrt{(t/10)}$	$50000/(\alpha \cdot t^{0,25})$ $50000/(\alpha \cdot t^{0,25})$
Retinal thermal (weak visual stimulus)	$L_{IR} = \sum L_\lambda \cdot R(\lambda) \cdot \Delta\lambda$	780 – 1400	> 10	0,011	6000/α

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 6.1 Emission limits for risk groups of continuous wave lamps for URBINO LED ED 29300lm/730 — P

Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_s	$W \cdot m^{-2}$	0,001	5,715e-08	0,003	N/A	0,03	N/A
Near UV		E_{UVA}	$W \cdot m^{-2}$	10	0,000763	33	N/A	100	N/A
Blue light	B(λ)	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	46,69	10000	N/A	4000000	N/A
Blue light, small source	B(λ)	E_B	$W \cdot m^{-2}$	1,0*	N/A	1,0	N/A	400	N/A
Retinal thermal	R(λ)	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/α	-	28000/α	N/A	71000/α	N/A
Retinal thermal, weak visual stimulus**	R(λ)	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	6000/α	-	6000/α	N/A	6000/α	N/A
IR radiation, eye		E_{IR}	$W \cdot m^{-2}$	100	0	570	N/A	3200	N/A

* Small source defined as one with α < 0,011 radian. Averaging field of view at 10000 s is 0,1 radian.
** Involves evaluation of non-GLS source

IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 6.1 Emission limits for risk groups of continuous wave lamps for URBINO LED ED DALI 27650lm/740 — P

Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_s	$W \cdot m^{-2}$	0,001	2e-07	0,003	N/A	0,03	N/A
Near UV		E_{UVA}	$W \cdot m^{-2}$	10	0,001579	33	N/A	100	N/A
Blue light	B(λ)	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	64,87	10000	N/A	4000000	N/A
Blue light, small source	B(λ)	E_B	$W \cdot m^{-2}$	1,0*	N/A	1,0	N/A	400	N/A
Retinal thermal	R(λ)	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/α	-	28000/α	N/A	71000/α	N/A
Retinal thermal, weak visual stimulus**	R(λ)	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	6000/α	-	6000/α	N/A	6000/α	N/A
IR radiation, eye		E_{IR}	$W \cdot m^{-2}$	100	0	570	N/A	3200	N/A

* Small source defined as one with α < 0,011 radian. Averaging field of view at 10000s is 0,1 radian.
** Involves evaluation of non-GLS source

List of test equipment used:

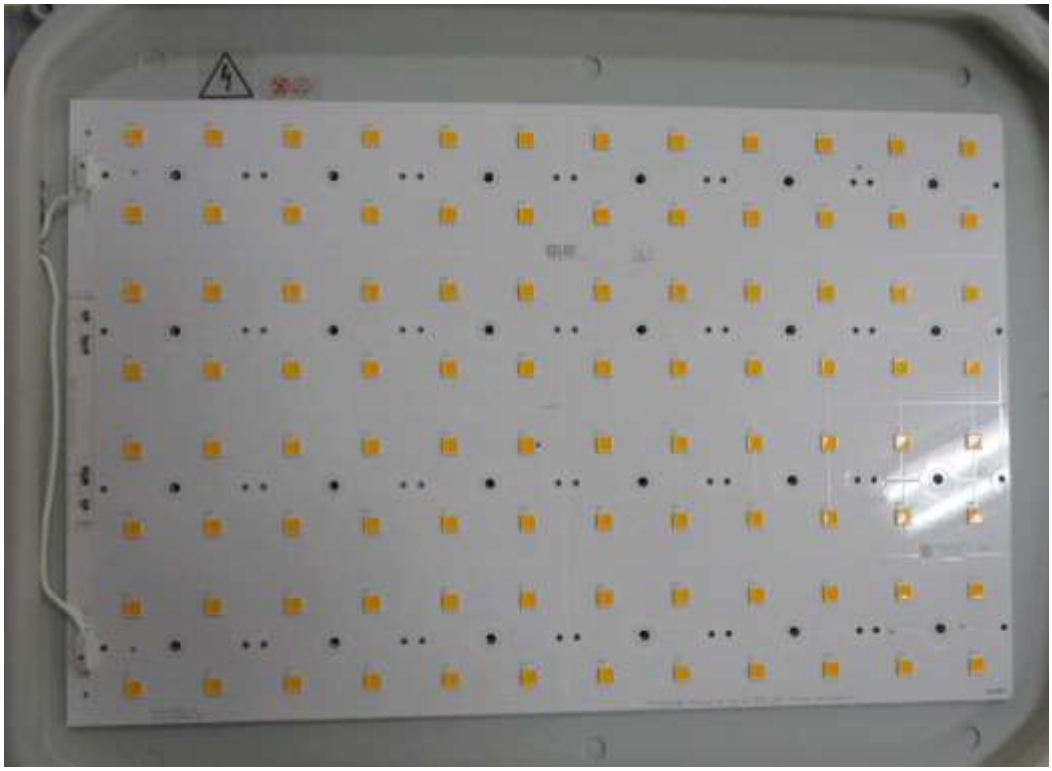
A completed list of used test equipment shall be provided in the Test Reports when a Customer's Testing Facility according to CTF stage 1 or CTF stage 2 procedure has been used.
Note: This page may be removed when CTF stage 1 or CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date

URBINO LED ED 29300lm/730, URBINO LED ED DALI 27650lm/740

ML2027203.W740.01A

ML2027201.W730.01A



TEST REPORT
EN 62262
Degree of protection provided
by enclosures for electrical equipment
against external mechanical impacts (IK code)

Report Number. .....:	**Z7-3/234/B/II/21**
Date of issue .....:	17.03.2022
Total number of pages.....	16
Name of Testing Laboratory preparing the Report.....:	**Łukasiewicz - IMiF PREDOM Division** **02-255 Warszawa, ul. Krakowiaków 53, Poland**
Applicant's name.....:	**LUG Light Factory Sp. z.o.o.**
Address .....:	**65-127 Zielona Góra, ul. Gorzowska 11, Poland**
Test specification:	
Standard.....:	EN 62262:2002 (in conjunction with IEC/TR 62696:2011)
Test procedure .....:	☒ ENEC ☐ CCA NTR ☐ Other: _____
Non-standard test method.....:	N/A
Test Report Form No.....:	EN_EN62262A
Test Report Form(s) Originator ....:	Łukasiewicz - IMiF PREDOM Division
Master TRF.....:	Dated 2021-11-22

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 ECS 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 .....:	**Luminaires for road and street lighting**
Trade Mark .....:	**LUG**
Manufacturer.....:	**LUG Light Factory Sp. z.o.o.** ul. Gorzowska 11, 65-127 Zielona Góra, Poland
Model/Type reference .....:	**URBINO LED cl. II – series –** see also "General product information"
Ratings .....:	220-240 V 50/60 Hz, IP66, IK09, cl. II (see details – pages 3-7)

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):

☒	**ECS Testing Laboratory:**	Łukasiewicz - IMiF PREDOM Division	
	Testing location/ address .....:	02-255 Warszawa, ul. Krakowiaków 53, Poland	
	Tested by (name, function, signature) .....:	M. Kujawski	
	Approved by (name, function, signature) .....:	T. Małyska	
	Supervised by (name, function, signature) .....:	F. Walczak	
☐	**Testing procedure: TMP/CTF Stage 1:**		
	Testing location/ address .....:		
	Tested by (name, function, signature) .....:		
	Approved by (name, function, signature) .....:		
☐	**Testing procedure: WMT/CTF Stage 2:**		
	Testing location/ address .....:		
	Tested by (name + signature) .....:		
	Witnessed by (name, function, signature) .....:		
	Approved by (name, function, signature) .....:		

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

Summary of testing: Positive

According to ISO / IEC Guide 98-4 for the assessment of compliance of the measurement result with the requirements, criterion B was chosen. 50% risk of incorrect assessment decision belongs to the customer and 50% risk of incorrect assessment belongs to the laboratory.

Tests performed (name of test and test clause):	**Testing location:**
EN 62262:2002 (in conjunction with IEC/TR 62696:2011) - all clauses.	Łukasiewicz- IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland

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

☐ **The product fulfils the requirements of _____ (insert standard number and edition and delete the text in parenthesis, leave it blank or delete the whole sentence, if not applicable)**

Copy of marking plate:

Test item particulars ..... :	Luminaire for road and street lighting
Classification of installation and use ..... :	Normal
Supply Connection ..... :	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 ..... :	01.03.2021
Date (s) of performance of tests ..... :	15.03.2022-17.03.2022

General remarks:

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

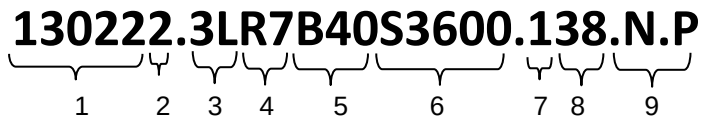
Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Name and address of factory (ies) ..... :	LUG Light Factory Sp. z.o.o. ul. Gorzowska 11; 65-127 Zielona Góra, Poland

General product information and other remarks:

Name and address of the license holder:	**LUG Light Factory Sp. z o.o. . ul. Gorzowska 11 65-127 Zielona Góra Poland**
Name and address of manufacturer:	**LUG Light Factory Sp. z o.o. . ul. Gorzowska 11 65-127 Zielona Góra Poland**
Name and address of manufacturing place:	**LUG Light Factory Sp. z o.o. . ul. Gorzowska 11 65-127 Zielona Góra Poland**
Name of product:	**URBINO**
Trade mark :	**LUG**
Technical data:	
Rated voltage	***220-240 V***
Rated frequency:	***50/60 Hz***
Max Power	***102 W***
Protection against electric shock:	***Class II***
Degree of protection:	***IP66; IK09***
ta	***50°C***

Choice sheet of the luminaires URBINO LED CL I & CL II - series:
Example of symbol:



Designations used on the marking of luminaries (some designation may not appear in the name) :

1. 13022 - Code of the series (URBINO) – XPG3& LUXEON LED

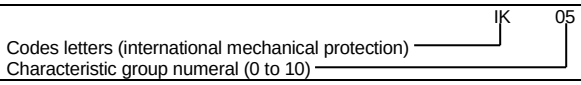
2. 2 - Color:
2: grey
5: graphite
0: another

3. 3L - Type of power sypply:
2L - DIMM 1-10V
3L – DALI
5L – on-off
6L – on-off / DALI
7L – Zhaga D4i
PL – programmable

4. R7 - CRI:
R7 = 70-79
R8 = 80-89

5. B40	- Color temperature: B22 = 2200 B27 = 2700 B30 = 3000 B40 = 4000
6. S3600	- Max. luminous flux (e.g. S3600 = 36000lm)
7. 1	- 1 - Safety Class I 2 – Safety Class II
8. 38	- Optic: 01 O2 - for expressways 02 O3 - for municipal roads 03 O4 - for city roads 04 O5 - for residential roads 05 O6P - for pedestrian crossings, right-hand traffic 09 O6L - for pedestrian crossings, left-hand traffic 06 O7 - for area lighting 08 O8 - for city and commune roads 10 O26 - for wet surfaces 12 O33 - for expressways 13 O34 - to municipal roads 14 O35 - for city roads 15 O36 - for residential roads 16 O37P - for pedestrian crossings, right-hand traffic 17 O37L - for pedestrian crossings, left-hand traffic 18 O38 - for area lighting 19 O39 - for city and commune roads 20 O40 - for wet surfaces 30 O13 - for expressways 31 O14 - to municipal roads 32 O15 - for city roads 33 O16 - to residential roads 35 O59 - for municipal roads 36 O60 - for city roads 37 O61 - for residential roads 38 O62 - for expressways 39 O63 - for local roads 40 O64 - for city roads 41 O65 - for residential roads 42 O66 - for pedestrian crossings, left-hand traffic 43 O67 - for pedestrian crossings, right-hand traffic 44 O68 - for area lighting 45 O69 - for city and commune roads 46 O70 - for wet surfaces 47 O71 - for road lighting 48 O72 - for road lighting 49 O73 - for road lighting 50 O74 - for road lighting 51 O75 - for road lighting 52 O76 - for road lighting 53 O77 - for road lighting 54 O78 - for road lighting

	55 O79 - for road lighting 56 O80 - for road lighting 57 O81 - for road lighting 58 O82 - for road lighting 59 O83 - for road lighting 60 O84 - for road lighting 61 O85 - for road lighting 62 O86 - for road lighting 63 O87 - for road lighting 64 O89- for road lighting 65 O90 - for road lighting 66 O91 - for road lighting 67 O92 - for road lighting 68 O93 - for road lighting 69 O94 - for road lighting 70 O95 - for road lighting 71 O96 - for road lighting 72 O97 - for road lighting 73 O98 - for road lighting 74 O99 - for road lighting XX OXX – for investment optics
9. N.P	- Additional equipment A - additional corrosion protection B - Tool-free access to the LED Driver U - ø76mm pole N - NEMA Socket Z - ZHAGA Socket T - NTC Sensor W - Twilight Sensor V - Surge Device Protector 10kV P- Anti pressure vent I- iBloc (“URBAN” smart city system) **K**- Knife switch connector
After review of technical documentation, model series, characteristic of particular models, technical parameters, and components, etc., the luminaire 130222.5L102.021.003 has been tested as the representative of all models of luminaires.	

EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict
4.	**DESTIGNATION**		P
4.1	**Arrangement of the IK code**		P
		IK09	P
4.2	**Characteristic group numerals of the IK code and their meanings**	Each characteristic group numeral, represents an impact energy value as shown in Table1. See table 1 of EN 62262, IK09 Impact energy: 10 J	P
4.3	**Application of the IK code**		N/A
	In general the degree of protection applies to the complete enclosure. If parts of the enclosure have differing degrees of protection, the latter shall be separately indicated		N/A
4.4	**Marking**		P
	In case where the relevant product committee decides that marking of the IK-code shall be required, the marking requirements shall be detailed in the relevant product standard		P
	Where appropriate, such a standard should also specify the method of marking which is to be used when:		
	— one part of an enclosure has different degree of protection to that of another part of the same enclosure;		N/A
	— the mounting position has an influence on the degree of protection		N/A
5.	**GENERAL REQUIREMENTS FOR TESTS**		P
5.1	**Atmospheric conditions for tests**		P
	Unless otherwise specified in the relevant product standard, the test shall be carried out under the standard atmospheric conditions for tests described in IEC60068-1 as:		
	Temperature range 15°C to 35°C	24°C	P
	Air pressure 86 kPa to 106 kPa (860mbar to 1060 mbar)	98 kPa	P
	When the altitude at which the test is performed is higher than 2000 m the height of fall shall be adjusted where necessary to result in the specified impact energy.		N/A
5.2	**Enclosures under test**		P
	each enclosure under test shall be in a clean and new condition, complete with all their parts in place unless otherwise specified in the relevant product standard		P
5.3	**Specifications to be given in the relevant product standard**		P
	The relevant product standard shall specify:		

EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict
	— the definition of “enclosure” as it applies to the particular type of equipment;		P
	— the test equipment (e.g. pendulum hammer, spring hammer or vertical hammer, see Clause7);		P
	— the number of samples to be tested;		P
	— the conditions for mounting, assembling and positioning the samples, e.g. by the use of an artificial surface(ceiling, floor or wall), in order to stimulate intended service conditions as far as possible;		P
	— the pre-conditioning, if any, which is to be used;		P
	— whether to be tested energized; No energized		P
	— whether to be tested with any moving parts in motion; No moving parts	No moving parts	P
	— the number of impacts and their points of application (see 6.3).		P
	In the absence of such specifications in the relevant product standard, conditions of this standard shall apply.		P
XXX	**IEC TR 62696 Requirements**		**P**
XXX 3	Conditions of testing (IEC TR 62696)		P
XXX 3.1	In general, testing is conducted in accordance with lEG 62262, having regard to the general test conditions specified by lEG 60598-1, Subclause 4.13, and the following conditions which are specific for the 1K testing and rating of luminaires, (IEC TR 62696)		P
XXX3.2	Impacts should not be applied through openings in the luminaire enclosure with an area less than 64 cm2. NOTE For example, no impact should be applied through the individual openings in optical controls (louvers) it their size is less than 64 cm2. (IEC TR 62696)		P
XXX3.3	Luminaires should be tested fully assembled and installed for use. (IEC TR 62696)		P
	Luminaires for ceiling or wall mounting should be mounted on a rigid wooden board. (IEC TR 62696)		N/A
	Suspended luminaires should be tested as in normal use, with the minimum suspension length detailed by the manufacturer’s instructions. (IEC TR 62696)		N/A

EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict
	Luminaires to be installed on a pole, with or without a mast arm, should be installed on a rigid portion of the pole. (IEC TR 62696)		P
	Floor mounted luminaires should be tested in a suitable rigid structure to simulate normal use. (IEC TR 62696)		N/A
XXX3.4	Luminaires should not to be energised during test and no preconditioning of the luminaire sample is required. (IEC TR 62696)		P
XXX3.5	Testing should be conducted on a single luminaire sample unless the results of impact testing of other areas of the luminaire could influence assessment of the result. Three impact blows should be applied to the point(s) of the luminaire considered to be the weakest. (IEC TR 62696)		P
XXX3.6	Impact testing should be conducted using striking elements with head radius and material type as specified by IEC 60068-2-75. Spring hammer apparatus should be used for ratings up to and including 1K06. For ratings lKO7 and above, the use of pendulum or vertical hammer apparatus is acceptable, as most appropriate for the luminaire design and its intended installation (IEC TR 62696)		P
XXX3.7	Impact testing should be conducted with the luminaire in its intended mounting orientation whenever this is possible, and when this could affect the outcome of the test (e.g. for assessment of mounting surface fixing security). (IEC TR 62696)		P
	When impact testing of a ceiling-mounted luminaire is required from below the luminaire, and this is impractical, the luminaire may be rotated 90° (to a wall mounted position) for the purposes of this testing. (IEC TR 62696)		N/A
XXX3.8	In cases where it may be impossible to carry out the impact test due to the luminaire construction, it is acceptable to use a specially-prepared luminaire to perform the test- For this situation, the modification should not impair the mechanical strength characteristics of the luminaire. (IEC TR 62696)		N/A
6	**TEST TO VERIFY THE PROTECTION AGAINST MECHANICAL IMPACTS**		P
6.1	The tests specified in this standard are type tests		P

EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict
	6.2 In order to verify the protection against mechanical impacts blows shall be applied to the enclosure to be tested. The device to be used for this test are described in Clause7		P
6.3	During the test the enclosure shall be mounted, according to the manufacturer instructions for use, on a rigid support. A support is considered to be sufficiently rigid if its displacement is less than or equal to 0,1mm under the effect of an impact directly applied and whose energy corresponds to the degree of protection. Alternative mounting and support, suitable for the product, may be specified in the relevant product standard	Displacement is less than or equal to 0,1 mm	P
6.4	The number of impacts shall be five on each exposed face unless otherwise specified in the relevant product standard. The impacts shall be evenly distributed on the faces of the enclosure (s) under test. In no case shall more than three impacts be applied in the surroundings of the same 5 points	3 times per point	P
6.5	**Test evaluation**		P
	The relevant product standard shall specify the criteria upon which the acceptance or rejection of the enclosure is to be based on particularly:		P
	—admissible damages;		P
	—verification criteria relative to the continuity of the safety and reliability of the equipment		P
XXX4	Conditions of acceptance (IEC TR 62696)		P
XXX4.1	Safety of the luminaire is to be maintained as per the criteria given in IEG 60598-1, Subclause 4.13. Furthermore, the fixings of the luminaire to the mounting surface should remain secure. Non safety critical damage to the luminaire enclosure and optics is accepted, but no parts of the luminaire should become detached. Acceptance is checked by visual inspection, and test/measurement where required. (IEC TR 62696)		P
XXX4.2	Protection of the light source should be provided and basic functioning of the luminaire should be maintained. Acceptance is checked by visual inspection and by operation of the luminaire following the test. (IEC TR 62696)		P
7.	**TEST APPARATUS**		P
	The test shall be done by using one of the test apparatus as described in EN 60068-2-75		P

EN 62262			
Clause	Requirement + Test	Result - Remark	Verdict
	The striking surface shall be visually examined before each impact in order to ensure that there is no damage that might affect the result of the test		P
7.1	Test Ehc: Vertical hammer		P
7.2	The hammer consists basically of a striking element which falls freely from rest through a vertical height, selected from table2, on to the specimen surface held in a horizontal plane. The characteristics of the striking element shall comply with table 1. The fall of the striking element shall be along a guide way, for example a tube, with negligible braking. This guide way shall not rest on the specimen and the striking element shall be free of the guide way on striking the specimen. In order to reduce the friction, the length l of the striking element shall not be smaller than its diameter D, and a small gap (for example 1 mm) shall be provided between the striking element and the guide way.		P
7.3	Height of fall		P
	The height of fall shall be as given in table2, the equivalent mass stated therein being equal to the actual mass of the striking element		P

Note (XXX – requirements of IEC/TR 62696:2011)

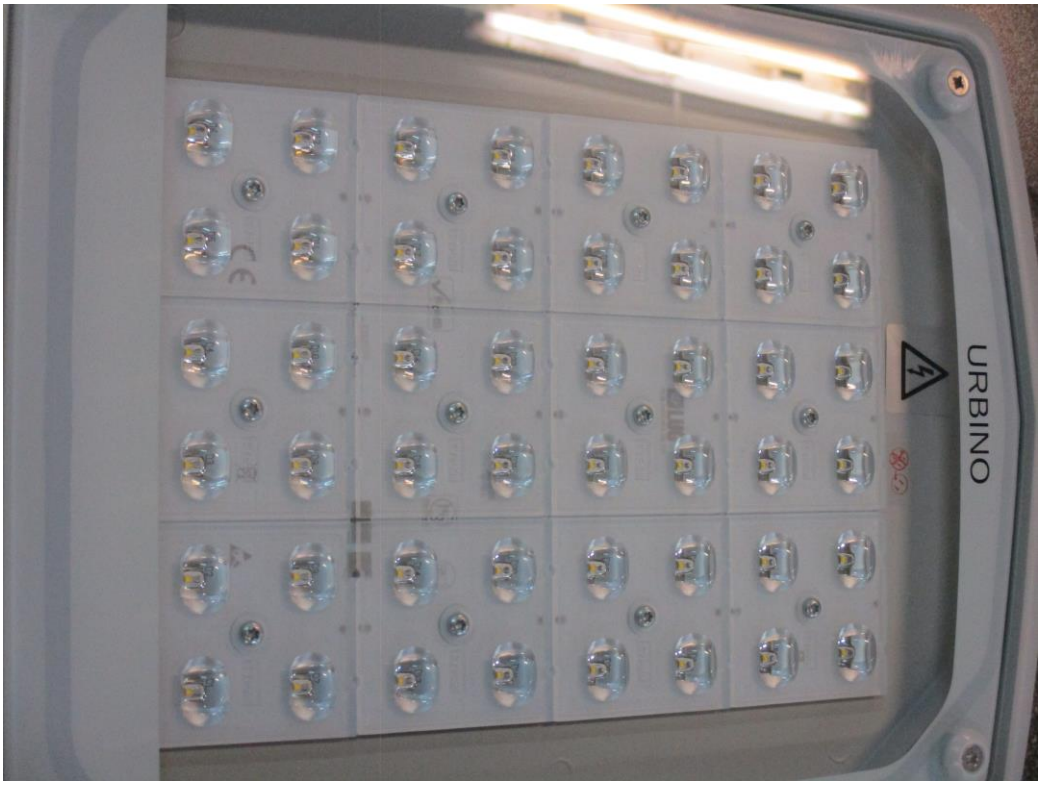
	TABLE: Critical components information				**N/A**
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Supplementary information: N/A					

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or TMP/CTF stage 2 procedure has been used.
Note: This page may be removed when CTF stage 1 CTF stage 2 are not used.

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date

Photos of the EUT




URBINO