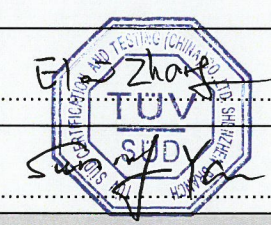


	Test Report issued under the responsibility of: NCB TÜV SÜD PSB Pte Ltd. 1 Science Park Drive, 118221 Singapore Singapore	
TEST REPORT IEC 60598-2-3 Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting		
Report Number.....: 211-14180651-000 Date of issue 2019-06-25 Total number of pages 62 (not including attachments)		
Name of Testing Laboratory preparing the Report.....: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch		
Applicant's name Peony Lighting Technology Co., Ltd. Address 5/F, Building B, Junxinglong Industrial Park, Zhoushi Road, Shiyao Town, Baoan District, 518108 Shenzhen, PEOPLE'S REPUBLIC OF CHINA		
Test specification: Standard.....: IEC 60598-2-3:2002, AMD1:2011 used in conjunction with IEC 60598-1:2014, AMD1:2017 Test procedure.....: CB Scheme + CE-LVD 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		
Copyright © 2018 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved. This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context. 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 Street Light
Trade Mark..... :	--
Manufacturer..... :	Same as applicant.
Model/Type reference..... :	PL-LD-057-50W; PL-LD-057-80W; PL-LD-057-100W; PL-LD-057-115W; PL-LD-057-120W; PL-LD-057-130W; PL-LD-057-150W; PL-LD-057-180W; PL-LD-057-200W; PL-LD-057-250W; PL-LD-057S-50W; PL-LD-057S-80W; PL-LD-057S-100W; PL-LD-057S-115W; PL-LD-057S-120W; PL-LD-057S-130W; PL-LD-057S-150W; PL-LD-057S-180W; PL-LD-057S-200W; PL-LD-057S-250W; PL-LD-058-80W; PL-LD-058-100W; PL-LD-058-115W; PL-LD-058-120W; PL-LD-058-130W; PL-LD-058-150W; PL-LD-058-180W; PL-LD-058-200W; PL-LD-058-250W; PL-LD-058S-80W; PL-LD-058S-100W; PL-LD-058S-115W; PL-LD-058S-120W; PL-LD-058S-130W; PL-LD-058S-150W; PL-LD-058S-180W; PL-LD-058S-200W; PL-LD-058S-250W; PL-LD-060-30W; PL-LD-060-40W; PL-LD-060-50W; PL-LD-060-60W; PL-LD-060-70W; PL-LD-060-80W; PL-LD-060-90W; PL-LD-060-100W; PL-LD-060-115W; PL-LD-060-120W; PL-LD-060-130W; PL-LD-060-150W; PL-LD-060-180W; PL-LD-060-200W; PL-LD-061-30W; PL-LD-061-40W; PL-LD-061-50W; PL-LD-061-60W; PL-LD-061-70W; PL-LD-061-80W; PL-LD-061-90W; PL-LD-061-100W; PL-LD-061-115W; PL-LD-061-120W; PL-LD-061-130W; PL-LD-061-150W; PL-LD-061-180W; PL-LD-061-200W; PL-LD-062-30W; PL-LD-062-40W; PL-LD-062-50W; PL-LD-062-60W; PL-LD-062-70W; PL-LD-062-80W; PL-LD-062-90W; PL-LD-062-100W; PL-LD-062-115W; PL-LD-062-120W; PL-LD-062-130W; PL-LD-062-150W; PL-LD-065-100W; PL-LD-065-115W; PL-LD-065-120W; PL-LD-065-130W; PL-LD-065-150W; PL-LD-065-180W; PL-LD-065-200W; PL-LD-066-50W; PL-LD-066-60W; PL-LD-066-100W; PL-LD-066-115W; PL-LD-066-120W; PL-LD-066-130W; PL-LD-066-150W; PL-LD-066-180W; PL-LD-066-200W; PL-LD-066-240W; PL-LD-067-30W; PL-LD-067-40W; PL-LD-067-50W; PL-LD-067-60W; PL-LD-067-70W; PL-LD-067-80W; PL-LD-067-90W; PL-LD-067-100W; PL-LD-067-115W; PL-LD-067-120W; PL-LD-067-130W; PL-LD-067-150W; PL-LD-067-180W; PL-LD-067-200W; PL-LD-067S-30W; PL-LD-067S-40W; PL-LD-067S-50W; PL-LD-067S-60W; PL-LD-067S-70W; PL-LD-067S-80W; PL-LD-067S-90W; PL-LD-067S-100W; PL-LD-067S-115W; PL-LD-067S-120W; PL-LD-067S-130W; PL-LD-067S-150W; PL-LD-067S-180W; PL-LD-067S-200W; PL-LD-068-80W; PL-LD-068-100W; PL-LD-068-115W; PL-LD-068-120W; PL-LD-068-130W; PL-LD-068-150W; PL-LD-068-180W; PL-LD-068-200W; PL-LD-068-250W; PL-LD-068S-80W; PL-LD-068S-100W; PL-LD-068S-115W; PL-LD-068S-120W; PL-LD-068S-130W; PL-LD-068S-150W; PL-LD-068S-180W; PL-LD-068S-200W; PL-LD-068S-250W; PL-LD-069-30W; PL-LD-069-40W; PL-LD-069-50W; PL-LD-069-60W; PL-LD-069-70W; PL-LD-069-80W; PL-LD-069-90W; PL-LD-069-100W; PL-LD-069-115W; PL-LD-069-120W; PL-LD-069-130W; PL-LD-069-150W; PL-LD-069-180W; PL-LD-069-200W; PL-LD-069-250W; PL-LD-069S-30W; PL-LD-069S-40W; PL-LD-069S-50W; PL-LD-069S-60W; PL-LD-069S-70W; PL-LD-069S-80W;

	PL-LD-069S-90W; PL-LD-069S-100W; PL-LD-069S-115W; PL-LD-069S-120W; PL-LD-069S-130W; PL-LD-069S-150W; PL-LD-069S-180W; PL-LD-069S-200W; PL-LD-069S-250W
Ratings..... :	220-240VAC; 50/60Hz; ta:45°C Other parameters see 'General product information' for details

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Testing location/ address		Building 12&13, Zhiheng Wisdomland Business Park Nantou Checkpoint Road 2, Nanshan District 518052 Shenzhen CHINA
Tested by (name, function, signature)		Elain Zhang Project Handler
Approved by (name, function, signature) ..		Sunny Yan Designated Reviewer
		
☐	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:

2 pages of test report for European group differences and national differences;

Attachment No. 2:

17 pages of test report for national differences for Australia and New Zealand for standard AS/NZS 60598.1:2017/Amdt 1:2017 compared to IEC 60598-1:2014;

1 page of test report for standard differences between IEC 60598-1:2014 and IEC 60598-1:2014/AMD1:2017;

1 page of test report for national differences for Australia and New Zealand for standard AS/NZS 60598.2.3:2015 compared to IEC 60598-2-3:2002 and IEC 60598-2-3:2002/AMD1:2011.

Attachment No.3:

5 pages of test report for IEC 62031:2008, IEC 62031:2008/AMD1:2012, IEC 62031:2008/AMD2:2014;

1 page of test report for European group differences and national differences for EN 62031:2008+A1:2013+A2:2015 (for LED module);

Attachment No.4:

2 pages of test report for IEC TR 62778:2014 (for blue light risk);

Attachment No.5:

55 pages of test report for Photo documentation.

Summary of testing:
Tests performed (name of test and test clause):

IEC 60598-1:2014	EN 60598-2-3:2003+A1:2011
IEC 60598-1:2014/AMD1:2017	EN 60598-1:2015+A1:2018
IEC 60598-2-3:2002	EN 62493:2015
IEC 60598-2-3:2002/AMD1:2011	IEC60529

The LED modules in products were found to comply with the requirements of

IEC 62031:2008;

IEC 62031:2008/AMD1:2012;

IEC 62031:2008/AMD2:2014;

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

The submitted samples were classified as RG1 according to IEC TR 62778:2014.

The submitted samples were LED-light-source technology, they were found to comply with the requirement IEC 62493:2015 and

EN 62493:2015 without test.

Models with glass cover were comply with IK08 test, other models were comply with IK09 test according to IEC 62262:2002 and EN 62262:2002.

The submitted samples were found to comply with the requirements of above test specification.

Testing location:

Building 12 &13, Zhiheng
Wisdomland Business Park
Nantou Checkpoint Road 2,
Nanshan District 518052
Shenzhen CHINA

Summary of compliance with National Differences:

List of countries addressed

-European Group difference and national difference

- EN 60598-2-3:2003+A1:2011
- EN 60598-1:2015+A1:2018
- EN 62493:2015

-Australia and New Zealand differences (not for models with LED driver EUC-035S070SVM):

- AS/NZS 60598.2.3:2015;
- AS/NZS 60598.1:2017/Amdt 1:2017

-Russia national differences:

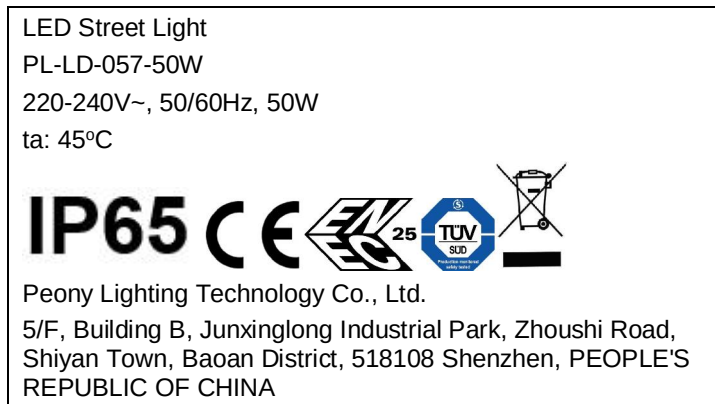
- GOST R IEC 60598-1-2011 (correspondence to IEC 60598-1:2008, Identical)
- GOST IEC 60598-2-3-2012 (correspondence to IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1:2011, Identical)

IEC 60598-1:2014, IEC 60598-1:2014/AMD1:2017 scope and clauses cover IEC 60598-1:2008, no additional differences list.

Copy of marking plate:

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

1. Label for luminaire. Location: sticking on the front metal enclosure of luminaire. Size: 60mm x 40mm.



The labels of other models are similar with above label, except that the model number, IP degree and rated power are different, see 'model list' for details

2.Location: sticking on the input cord of luminaire.



3.Location: sticking on the input cord of luminaire.



Size: 40mmx20mm (for Australia and New Zealand only)

Remark:

Height of WEEE mark at least 7mm, height of letters and numerals at least 2mm, height of other marks at least 5mm.

According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Test item particulars:	
Classification of installation and use: Fixed for indoor and outdoor use	
Supply Connection: Supply cord without plug	
Protection Class: I	
Degree of Protection: See 'General product information' for details	
ta: 45°C	
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: 2019-02-11; 2019-03-20	
Date (s) of performance of tests: 2019-02-11 to 2019-06-25	
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 The manufacturer/ Importer has to ensure the appliance placing on the EU market conforms to the applicable EU directives which provide the affixing of the CE marking, such as LVD, EMC, RoHS, ErP, and so on. The relevant CE-LVD report no. is 68.140.18.0651.01.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1:	
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): Same as applicant	

General product information:

LED street light for indoor and outdoor use.

The mounting height is max.15m.

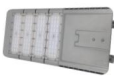
Model list:

Model No.	Rated Power (W)	MEANWELL LED Driver Model	INVENTRONICS LED Driver Model	G-POWER LED Driver Model	Size (mm)	Weight (kg)	LED Quantity / LED Module Quantity (pcs)	LED Type	IP Degree	Max. Projected Area (m ²)	Cover type / Representative Photo
057 series models											
PL-LD-057-50W	50	ELG-75-36A	EUC-060S105SVM	HT-HLB-60H-42	350*320*83	3,00	72 / 1	A	IP65	0,112	Plastic cover 
PL-LD-057-80W	80	ELG-75-36A	EUP-075S280SV	HT-HLB-80H-42	425*320*83	4,00	144 / 2	A	IP65	0,136	
PL-LD-057-100W	100	ELG-100-36A	EUP-096S350SV	HT-HLB-100H-42	425*320*83	4,00	144 / 2	A	IP65	0,136	
PL-LD-057-115W	115	ELG-150-36A	EUP-150S560SV	HT-HLB-120H-42	425*320*83	4,00	144 / 2	A	IP65	0,136	
PL-LD-057-120W	120	ELG-150-36A	EUP-150S560SV	HT-HLB-120H-42	425*320*83	4,00	144 / 2	A	IP65	0,136	
PL-LD-057-130W	130	ELG-150-36A	EUP-150S560SV	HT-HLB-150H-42	500*320*83	5,00	216 / 3	A	IP65	0,16	
PL-LD-057-150W	150	ELG-150-36A	EUP-150S560SV	HT-HLB-150H-42	500*320*83	5,00	216 / 3	A	IP65	0,16	
PL-LD-057-180W	180	ELG-200-36A	EUP-200S560SV	HT-HLB-200H-42	500*320*83	5,00	216 / 3	A	IP65	0,16	
PL-LD-057-200W	200	ELG-200-36A	EUP-200S560SV	HT-HLB-200H-42	575*320*83	6,00	288 / 4	A	IP65	0,184	
PL-LD-057-250W	250	ELG-240-36A	EUP-240S670SV	/	650*320*83	7,00	360 / 5	A	IP65	0,208	
057S series models											
PL-LD-057S-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	350*320*83	3,00	28 / 1	B	IP65	0,112	Plastic cover 
PL-LD-057S-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	425*320*83	4,00	56 / 2	B	IP65	0,136	
PL-LD-057S-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	425*320*83	4,00	56 / 2	B	IP65	0,136	
PL-LD-057S-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	425*320*83	4,00	56 / 2	B	IP65	0,136	
PL-LD-057S-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	425*320*83	4,00	56 / 2	B	IP65	0,136	
PL-LD-057S-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	500*320*83	5,00	84 / 3	B	IP65	0,16	
PL-LD-057S-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	500*320*83	5,00	84 / 3	B	IP65	0,16	
PL-LD-057S-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	500*320*83	5,00	84 / 3	B	IP65	0,16	
PL-LD-057S-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	575*320*83	6,00	112 / 4	B	IP65	0,184	
PL-LD-057S-250W	250	ELG-240-48A	EUP-240S670SV	/	650*320*83	7,00	140 / 5	B	IP65	0,208	

058 series models											Plastic cover / 
PL-LD-058-80W	80	ELG-75-36A	EUP-075S280SV	HT-HLB-80H-42	550*330*110	5,50	144 / 2	A	IP66	0,182	
PL-LD-058-100W	100	ELG-100-36A	EUP-096S350SV	HT-HLB-100H-42	550*330*110	5,50	144 / 2	A	IP66	0,182	
PL-LD-058-115W	115	ELG-150-36A	EUP-150S560SV	HT-HLB-120H-42	550*330*110	5,50	144 / 2	A	IP66	0,182	
PL-LD-058-120W	120	ELG-150-36A	EUP-150S560SV	HT-HLB-120H-42	550*330*110	5,50	144 / 2	A	IP66	0,182	
PL-LD-058-130W	130	ELG-150-36A	EUP-150S560SV	HT-HLB-150H-42	640*330*110	6,65	216 / 3	A	IP66	0,211	
PL-LD-058-150W	150	ELG-150-36A	EUP-150S560SV	HT-HLB-150H-42	640*330*110	6,65	216 / 3	A	IP66	0,211	
PL-LD-058-180W	180	ELG-200-36A	EUP-200S560SV	HT-HLB-200H-42	640*330*110	6,65	216 / 3	A	IP66	0,211	
PL-LD-058-200W	200	ELG-200-36A	EUP-200S560SV	HT-HLB-200H-42	720*330*110	8,25	288 / 4	A	IP66	0,238	
PL-LD-058-250W	250	ELG-240-36A	EUP-240S670SV	/	810*330*110	9,85	360 / 5	A	IP66	0,267	
058S series models											Plastic cover / 
PL-LD-058S-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	550*330*110	5,50	56 / 2	B	IP66	0,182	
PL-LD-058S-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	550*330*110	5,50	56 / 2	B	IP66	0,182	
PL-LD-058S-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	550*330*110	5,50	56 / 2	B	IP66	0,182	
PL-LD-058S-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	550*330*110	5,50	56 / 2	B	IP66	0,182	
PL-LD-058S-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	640*330*110	6,65	84 / 3	B	IP66	0,211	
PL-LD-058S-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	640*330*110	6,65	84 / 3	B	IP66	0,211	
PL-LD-058S-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	640*330*110	6,65	84 / 3	B	IP66	0,211	
PL-LD-058S-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	720*330*110	8,25	112 / 4	B	IP66	0,238	
PL-LD-058S-250W	250	ELG-240-48A	EUP-240S670SV	/	810*330*110	9,85	140 / 5	B	IP66	0,267	
060 series models											Glass cover / 
PL-LD-060-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	530*250*75	4,65	72 / 1	A	IP66	0,133	
PL-LD-060-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	530*250*75	4,65	72 / 1	A	IP66	0,133	
PL-LD-060-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	530*250*75	4,65	72 / 1	A	IP66	0,133	
PL-LD-060-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	530*250*75	4,65	72 / 1	A	IP66	0,133	
PL-LD-060-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	600*282*75	5,70	144 / 1	A	IP66	0,169	
PL-LD-060-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	600*282*75	5,70	144 / 1	A	IP66	0,169	
PL-LD-060-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	600*282*75	5,70	144 / 1	A	IP66	0,169	
PL-LD-060-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	600*282*75	5,70	144 / 1	A	IP66	0,169	
PL-LD-060-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	600*282*75	5,70	144 / 1	A	IP66	0,169	
PL-LD-060-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	600*282*75	5,70	144 / 1	A	IP66	0,169	
PL-LD-060-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	693*340*75	8,10	240 / 1	A	IP66	0,236	
PL-LD-060-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	693*340*75	8,10	240 / 1	A	IP66	0,236	
PL-LD-060-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	693*340*75	8,10	240 / 1	A	IP66	0,236	
PL-LD-060-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	693*340*75	8,10	240 / 1	A	IP66	0,236	

061 series models										
PL-LD-061-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	535*200*120	4,00	96 / 1	A	IP66	0,107
PL-LD-061-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	535*200*120	4,00	96 / 1	A	IP66	0,107
PL-LD-061-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	535*200*120	4,00	96 / 1	A	IP66	0,107
PL-LD-061-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	535*200*120	4,00	96 / 1	A	IP66	0,107
PL-LD-061-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	620*235*125	4,80	144 / 1	A	IP66	0,146
PL-LD-061-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	620*235*125	4,80	144 / 1	A	IP66	0,146
PL-LD-061-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	620*235*125	4,80	144 / 1	A	IP66	0,146
PL-LD-061-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	620*235*125	4,80	144 / 1	A	IP66	0,146
PL-LD-061-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	620*235*125	4,80	144 / 1	A	IP66	0,146
PL-LD-061-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	690*260*130	6,05	192 / 1	A	IP66	0,179
PL-LD-061-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	690*260*130	6,05	192 / 1	A	IP66	0,179
PL-LD-061-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	690*260*130	6,05	192 / 1	A	IP66	0,179
PL-LD-061-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	810*320*135	8,35	320 / 1	A	IP66	0,259
PL-LD-061-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	810*320*135	8,35	320 / 1	A	IP66	0,259
062 series models										
PL-LD-062-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	555*250*110	4,00	144 / 1	A	IP66	0,139
PL-LD-062-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	670*275*110	6,05	192 / 1	A	IP66	0,184
PL-LD-062-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	670*275*110	6,05	192 / 1	A	IP66	0,184
PL-LD-062-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	670*275*110	6,05	192 / 1	A	IP66	0,184
PL-LD-062-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	670*275*110	6,05	192 / 1	A	IP66	0,184
065 series models										
PL-LD-065-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	713*342*91	8,60	192 / 1	A	IP66	0,244
PL-LD-065-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	713*342*91	8,60	192 / 1	A	IP66	0,244
PL-LD-065-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	713*342*91	8,60	192 / 1	A	IP66	0,244
PL-LD-065-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	713*342*91	8,60	192 / 1	A	IP66	0,244
PL-LD-065-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	713*342*91	8,60	192 / 1	A	IP66	0,244
PL-LD-065-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	713*342*91	8,60	256 / 1	A	IP66	0,244
PL-LD-065-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	713*342*91	8,60	256 / 1	A	IP66	0,244



066 series models											
PL-LD-066-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	395*320*107	5,50	112 / 1	A	IP66	0,126	Plastic cover / 
PL-LD-066-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	395*320*107	5,50	112 / 1	A	IP66	0,126	
PL-LD-066-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	481*320*107	5,82	224 / 2	A	IP66	0,154	
PL-LD-066-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	481*320*107	5,82	224 / 2	A	IP66	0,154	
PL-LD-066-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	481*320*107	5,82	224 / 2	A	IP66	0,154	
PL-LD-066-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	567*320*107	8,05	336 / 3	A	IP66	0,181	
PL-LD-066-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	567*320*107	8,05	336 / 3	A	IP66	0,181	
PL-LD-066-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	567*320*107	8,05	336 / 3	A	IP66	0,181	
PL-LD-066-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	653*320*107	8,80	488 / 4	A	IP66	0,209	
PL-LD-066-240W	240	ELG-240-48A	EUP-240S670SV	/	653*320*107	8,80	488 / 4	A	IP66	0,209	
067 series models											
PL-LD-067-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	600*210*109	3,30	96 / 1	A	IP66	0,126	Glass cover / 
PL-LD-067-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	600*210*109	3,30	96 / 1	A	IP66	0,126	
PL-LD-067-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	600*210*109	3,30	96 / 1	A	IP66	0,126	
PL-LD-067-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	600*210*109	3,30	96 / 1	A	IP66	0,126	
PL-LD-067-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	706*265*119	6,50	192 / 1	A	IP66	0,187	
PL-LD-067-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	706*265*119	6,50	192 / 1	A	IP66	0,187	
PL-LD-067-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	706*265*119	6,50	192 / 1	A	IP66	0,187	
PL-LD-067-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	706*265*119	6,50	192 / 1	A	IP66	0,187	
PL-LD-067-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	706*265*119	6,50	192 / 1	A	IP66	0,187	
PL-LD-067-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	706*265*119	6,50	192 / 1	A	IP66	0,187	
PL-LD-067-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	880*352*140	9,50	320 / 1	A	IP66	0,310	
PL-LD-067-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	880*352*140	9,50	320 / 1	A	IP66	0,310	
PL-LD-067-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	880*352*140	9,50	320 / 1	A	IP66	0,310	
PL-LD-067-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	880*352*140	9,50	320 / 1	A	IP66	0,310	

067S series models											
PL-LD-067S-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	600*210*109	3,30	24 / 1	B	IP66	0,126	Glass cover / 
PL-LD-067S-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	600*210*109	3,30	24 / 1	B	IP66	0,126	
PL-LD-067S-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	600*210*109	3,30	24 / 1	B	IP66	0,126	
PL-LD-067S-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	600*210*109	3,30	24 / 1	B	IP66	0,126	
PL-LD-067S-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	706*265*119	6,50	48 / 1	B	IP66	0,187	
PL-LD-067S-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	706*265*119	6,50	48 / 1	B	IP66	0,187	
PL-LD-067S-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	706*265*119	6,50	48 / 1	B	IP66	0,187	
PL-LD-067S-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	706*265*119	6,50	48 / 1	B	IP66	0,187	
PL-LD-067S-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	706*265*119	6,50	48 / 1	B	IP66	0,187	
PL-LD-067S-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	706*265*119	6,50	48 / 1	B	IP66	0,187	
PL-LD-067S-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	880*352*140	9,50	80 / 1	B	IP66	0,310	
PL-LD-067S-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	880*352*140	9,50	80 / 1	B	IP66	0,310	
PL-LD-067S-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	880*352*140	9,50	80 / 1	B	IP66	0,310	
PL-LD-067S-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	880*352*140	9,50	80 / 1	B	IP66	0,310	
068 series models											
PL-LD-068-80W	80	ELG-75-36A	EUP-075S280SV	HT-HLB-80H-42	545*356*115	6,00	144 / 2	A	IP66	0,194	Plastic cover / 
PL-LD-068-100W	100	ELG-100-36A	EUP-096S350SV	HT-HLB-100H-42	545*356*115	6,00	144 / 2	A	IP66	0,194	
PL-LD-068-115W	115	ELG-150-36A	EUP-150S560SV	HT-HLB-120H-42	545*356*115	6,00	144 / 2	A	IP66	0,194	
PL-LD-068-120W	120	ELG-150-36A	EUP-150S560SV	HT-HLB-120H-42	545*356*115	6,00	144 / 2	A	IP66	0,194	
PL-LD-068-130W	130	ELG-150-36A	EUP-150S560SV	HT-HLB-150H-42	625*356*115	8,00	216 / 3	A	IP66	0,223	
PL-LD-068-150W	150	ELG-150-36A	EUP-150S560SV	HT-HLB-150H-42	625*356*115	8,00	216 / 3	A	IP66	0,223	
PL-LD-068-180W	180	ELG-200-36A	EUP-200S560SV	HT-HLB-200H-42	625*356*115	8,00	216 / 3	A	IP66	0,223	
PL-LD-068-200W	200	ELG-200-36A	EUP-200S560SV	HT-HLB-200H-42	785*356*115	9,00	288 / 4	A	IP66	0,251	
PL-LD-068-250W	250	ELG-240-36A	EUP-240S670SV	/	785*356*115	11,50	360 / 5	A	IP66	0,279	

068S series models											
PL-LD-068S-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	545*356*115	6,00	56 / 2	B	IP66	0,194	Plastic cover / 
PL-LD-068S-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	545*356*115	6,00	56 / 2	B	IP66	0,194	
PL-LD-068S-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	545*356*115	6,00	56 / 2	B	IP66	0,194	
PL-LD-068S-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	545*356*115	6,00	56 / 2	B	IP66	0,194	
PL-LD-068S-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	625*356*115	8,00	84 / 3	B	IP66	0,223	
PL-LD-068S-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	625*356*115	8,00	84 / 3	B	IP66	0,223	
PL-LD-068S-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	625*356*115	8,00	84 / 3	B	IP66	0,223	
PL-LD-068S-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	785*356*115	9,00	112 / 4	B	IP66	0,251	
PL-LD-068S-250W	250	ELG-240-48A	EUP-240S670SV	/	785*356*115	11,50	140 / 5	B	IP66	0,279	
069 series model											
PL-LD-069-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	622*320*119	4,50	128 / 1	A	IP66	0,199	Glass cover / 
PL-LD-069-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	622*320*119	4,50	128 / 1	A	IP66	0,199	
PL-LD-069-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	622*320*119	4,50	128 / 1	A	IP66	0,199	
PL-LD-069-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	622*320*119	4,50	128 / 1	A	IP66	0,199	
PL-LD-069-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	622*320*119	4,50	192 / 1	A	IP66	0,199	
PL-LD-069-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	622*320*119	4,50	192 / 1	A	IP66	0,199	
PL-LD-069-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	622*320*119	4,50	192 / 1	A	IP66	0,199	
PL-LD-069-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	622*320*119	4,50	192 / 1	A	IP66	0,199	
PL-LD-069-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	622*320*119	4,50	192 / 1	A	IP66	0,199	
PL-LD-069-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	622*320*119	4,50	192 / 1	A	IP66	0,199	
PL-LD-069-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	720*320*119	8,50	320 / 1	A	IP66	0,230	
PL-LD-069-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	720*320*119	8,50	320 / 1	A	IP66	0,230	
PL-LD-069-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	720*320*119	8,50	320 / 1	A	IP66	0,230	
PL-LD-069-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	902*320*119	9,70	512 / 1	A	IP66	0,289	
PL-LD-069-250W	250	ELG-240-48A	EUP-240S670SV	/	902*320*119	9,70	512 / 1	A	IP66	0,289	

069S series models											
PL-LD-069S-30W	30	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	622*320*119	4,50	32 / 1	B	IP66	0,199	Glass cover / 
PL-LD-069S-40W	40	ELG-75-48A	EUC-035S070SVM	HT-HLB-40H-48	622*320*119	4,50	32 / 1	B	IP66	0,199	
PL-LD-069S-50W	50	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	622*320*119	4,50	32 / 1	B	IP66	0,199	
PL-LD-069S-60W	60	ELG-75-48A	EUC-060S105SVM	HT-HLB-60H-48	622*320*119	4,50	32 / 1	B	IP66	0,199	
PL-LD-069S-70W	70	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	622*320*119	4,50	48 / 1	B	IP66	0,199	
PL-LD-069S-80W	80	ELG-75-48A	EUP-075S175SV	HT-HLB-80H-48	622*320*119	4,50	48 / 1	B	IP66	0,199	
PL-LD-069S-90W	90	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	622*320*119	4,50	48 / 1	B	IP66	0,199	
PL-LD-069S-100W	100	ELG-100-48A	EUP-096S210SV	HT-HLB-100H-48	622*320*119	4,50	48 / 1	B	IP66	0,199	
PL-LD-069S-115W	115	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	622*320*119	4,50	48 / 1	B	IP66	0,199	
PL-LD-069S-120W	120	ELG-150-48A	EUP-150S350SV	HT-HLB-120H-48	622*320*119	4,50	48 / 1	B	IP66	0,199	
PL-LD-069S-130W	130	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	720*320*119	8,50	80 / 1	B	IP66	0,230	
PL-LD-069S-150W	150	ELG-150-48A	EUP-150S350SV	HT-HLB-150H-48	720*320*119	8,50	80 / 1	B	IP66	0,230	
PL-LD-069S-180W	180	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	720*320*119	8,50	80 / 1	B	IP66	0,230	
PL-LD-069S-200W	200	ELG-200-48A	EUP-200S560SV	HT-HLB-200H-48	902*320*119	9,70	128 / 1	B	IP66	0,289	
PL-LD-069S-250W	250	ELG-240-48A	EUP-240S670SV	/	902*320*119	9,70	128 / 1	B	IP66	0,289	
Remark: For LED type, 'A' is 'LUXEON 3030 2D LINE'. 'B' is 'LUXEON 5050'.											

Model PL-LD-057-250W was chosen as representative model to perform IP65 and IK09 tests.

Models PL-LD-058S-250W, PL-LD-066-240W and PL-LD-068S-250W were chosen as representative models to perform IP66 and IK09 tests.

Models PL-LD-060-200W, PL-LD-061-200W, PL-LD-062-150W, PL-LD-065-200W, PL-LD-067-200W and PL-LD-069-250W were chosen as representative models to perform IP66 and IK08 tests.

Models PL-LD-057-250W with 6500K LED: LUXEON 3030 2D LINE and PL-LD-068S-250W with 6500K LED: LUXEON 5050 were chosen as representative models to perform blue light risk tests.

Unless otherwise specified, the models PL-LD-057-250W (with LED driver ELG-240-36A), PL-LD-068S-250W (with LED driver ELG-240-48A) and PL-LD-069-250W (with LED driver EUP-240S670SV) were chosen as representative models to perform all other tests.

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

3.2 (0)	GENERAL TEST REQUIREMENTS		¾
3.2 (0.3)	More sections applicable	Yes ☐ No ☒	¾
3.2 (0.5)	Components	(see Annex 1)	¾
3.2 (0.7)	Information for luminaire design in light sources standards		¾
3.2 (0.7.2)	Light source safety standard	IEC/EN 62031	¾
	Luminaire design in the light source safety standard		P

3.4 (2)	CLASSIFICATION OF LUMINAIRES		¾
3.4 (2.2)	Type of protection	Class I	P
3.4 (2.3)	Degree of protection	See 'General product information'	¾
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes ☒ No ☐	¾
3.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	¾
	Luminaire for rough service	Yes ☐ No ☒	¾
3.4 (-)	Modes of installation of road or street lighting		¾
	a) on a pipe	Yes ☐ No ☒	¾
	b) on a mast arm	Yes ☒ No ☐	¾
	c) on a post top	Yes ☐ No ☒	¾
	d) on span or suspension wires	Yes ☐ No ☒	¾
	e) on a wall	Yes ☐ No ☒	¾

3.5 (3)	MARKING		¾
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	English	P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz	50/60Hz	P
3.5 (3.3.3)	Operating temperature		N/A
3.5 (3.3.5)	Wiring diagram		N/A
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.9)	Power factor and supply current		N/A
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	Type Y	P
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	Non-user replaceable light sources	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		P
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		P
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	i) Maximum mounting height		P
3.6 (4)	CONSTRUCTION		¾
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)		—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N)		—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
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
	Test 8 mm earth conductor		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
3.6 (4.9.1)	Retainment		N/A
	Method of fixing		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C)		N/A
3.6 (4.10)	Double or reinforced insulation		N/A
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
	Interference suppression capacitors according to IEC 60384-14		N/A
3.6 (4.10.2)	Assembly gaps:		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
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:		N/A
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
3.6 (4.11.3)	Screw locking:		N/A
	- 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		P
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.....:	For models with plastic cover: Screws for fixing plastic cover: 0,5Nm	P
	Torque test: torque (Nm); part.....:	For models with glass cover: Screws for fixing glass cover: 2,0Nm	P
	Torque test: torque (Nm); part.....:	Screws for fixing mounting bracket: 2,5Nm/8,0Nm/17,0Nm	P
	Torque test: torque (Nm); part.....:	Screws for earthing terminal and fixing LED module: 0,5Nm;	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Torque test: torque (Nm); part.....:	Screws for fixing LED driver: 1,2Nm	P
	Torque test: torque (Nm); part.....:	Screws for fixing metal enclosure: 1,2Nm/2,0Nm	P
	Torque test: torque (Nm); part.....:	Screws for fixing metal clip; 1,2Nm	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm).....:		N/A
	- lampholder; torque (Nm).....:		N/A
	- push-button switches; torque 0,8 Nm.....:		N/A
3.6 (4.12.5)	Screwed glands; force (Nm).....:	Plastic gland; 3,25Nm; Metal gland; 6,25Nm	P
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	Glass cover, plastic cover; 0,5Nm	P
	- other parts; energy (Nm).....:	Metal enclosure; 0,7Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		P
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:		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	A) four times the weight	For PL-LD-057-250W: 28,0kg; For PL-LD-066-240W: 35,2kg; For PL-LD-067-200W: 38,0kg; For PL-LD-068S-250W: 46,0kg; For PL-LD-069-250W: 38,8kg	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
	Mass (kg)		—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A
	Bending moment (Nm) of semi-luminaire		N/A
3.6 (4.14.3)	Adjusting devices:		P
	- flexing test; number of cycles.....	45 cycles	P
	- strands broken	No strands broken	P
	- electric strength test afterwards		P
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		P
	- glow-wire test 650°C.....	See Test Table 3.15 (13.3.2)	P
	- spacing ³ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		P
	- thermal protection		N/A
	- electronic circuits exempted		N/A
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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	c) surface temperature		N/A
3.6 (4.16)	Luminaires for mounting on normally flammable surfaces		N/A
	No lamp control gear		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:		N/A
	- spacing 35 mm	Electronic control gears are exempt from the requirements of this clause	N/A
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		N/A
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear		N/A
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		P
	Clearance at least 5 mm	For 057, 057S, 068 and 068S series models	P
3.6 (4.18)	Resistance to corrosion		P
3.6 (4.18.1)	- rust-resistance		N/A
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Igniters 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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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	—
	Luminaires with E_{thr} :		N/A
	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
	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		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 W		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 W		N/A
	Voltage drop test, resistance < 0,05 W		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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C):		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
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		N/A
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		N/A
	Minimum two fixing means		N/A
3.6 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	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		P
	Used SELV source		P
	Voltage ≤ ELV		P
	Insulating of SELV circuits from LV supply		P
	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		P
	Plugs not able to enter socket-outlets of other voltage systems		P
	Socket outlets does not admit plugs of other voltage systems		P
	Plugs and socket-outlets does not have protective conductor contact		P
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Voltage $\leq$ 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		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
3.6 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP :	IP65 or IP66	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 (m ²)..... :	Max.0,31	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- used load (N)..... :	Max.740N	P
	- measured deformation (cm/m) :	Max.1,74	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	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	For models with glass cover	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		P
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
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		P
3.6.5.2.2 (-)	Glass covers not break into large pieces		P
	- test according 3.6.5.1, number of particles is more than 20..... :	98 pcs	P
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:		N/A
	- 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:		N/A
	- dimension of the cable entry slot (mm)..... :		N/A
	- cable path from the slot to the connection compartment (mm) :		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		¾
3.7 (11.2.1)	Impulse withstand category (Normal category II)	Category II ☒ Category III ☐	¾
	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:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} 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:		N/A
	- 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		¾
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 W.....: Max.0,05W		P
	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	For all models except 057 and 057S series	P
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		P
3.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Terminal blocks 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		P
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
3.8 (7.2.8)	Material of earth terminal		P
	Contact surface bare metal		P
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		P
	Length of earth conductor		P
3.8.1 (-)	Attachment prevented from rotation		N/A
3.9 (14)	SCREW TERMINALS		¾
	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		¾
	Separately approved; component list	(see Annex 1)	P
	Part of the luminaire	(see Annex 4)	P
3.10 (5)	EXTERNAL AND INTERNAL WIRING		¾
3.10 (5.2)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection.....	Supply cord without plug	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.....	H05RN-F	P
	Nominal cross-sectional area (mm²).....	3x1,0mm²	P
	Cables equal to IEC 60227 or IEC 60245		P
3.10 (5.2.3)	Type of attachment, X, Y or Z	Type Y	P
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		P
	- suitably fixed		P
	- material in bushings		P
	- material not likely to deteriorate		P
	- 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:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment	Type Y	P
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N):	See clause 3.10.1(-)	P
	- torque test: torque (Nm).....:	See clause 3.10.1(-)	P
	- displacement $\pm$ 2 mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- function independent of electrical connection		P
3.10 (5.2.11)	External wiring passing into luminaire		P
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		P
	No unsafe compatibility		P
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		N/A
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		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm²)	See Annex 1	P
	Insulation thickness (mm)	Approved cord	P
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Cross-sectional area (mm²)	See Annex 1	P
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		P
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.		P
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
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		P
	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		P
	- pull test: 25 times; pull (N)	60N	P
	- torque test: torque (Nm).....	0,25Nm	P

3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		¾
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		P
	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		N/A
	Double-ended high-pressure discharge lamp		N/A
	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:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
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:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V)		N/A
	- no-load voltage (V)		N/A
	- touch current if applicable (mA)		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- nominal voltage (V)		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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 nF not exceed 50 V 1 min after disconnection		P
	Portable luminaire with capacitor > 0,1 nF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 nF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

3.12 (12)	ENDURANCE TEST AND THERMAL TEST		¾
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		¾
3.12 (12.2)	Selection of lamps and ballasts		¾
	Lamp used according Annex B	(Lamp used see Annex 2)	¾
	Controlgear if separate and not supplied	(Controlgear used see Annex 2)	¾
3.12 (12.3)	Endurance test		P
	a) mounting-position	As in normal use	¾
	b) test temperature (°C).....	55°C	¾
	c) total duration (h)	240h	¾
	d) supply voltage (V).....	264V	¾
	d) if not equipped with controlgear, constant voltage/current (V) or (A)		¾
	e) luminaire ceases to operate		¾
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	P
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		¾
	- case of abnormal conditions		¾
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un		¾
	- 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		¾
	- 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):		N/A
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		¾
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions		¾
	- Ballast failure at supply voltage (V)		¾
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions		¾
	- measured winding temperature (°C): at 1,1 Un		¾
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		¾
	- calculated temperature of fixing point/exposed part (°C)		¾
	Ball-pressure test.....	See Test Table 3.15 (13.2.1)	N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		¾
	- measured winding temperature (°C): at 1,1 Un		¾
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		¾
	- calculated temperature of fixing point/exposed part (°C)		¾
	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		¾
	- Components retained in place after the test		N/A
	- 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 ☐	¾
	- manual reset cut-out.....	Yes ☐ No ☐	¾
	- auto reset cut-out	Yes ☐ No ☐	¾
	- case of abnormal conditions		¾
	- highest measured temperature of fixing point/exposed part (°C):		¾
	Ball-pressure test.....	See Test Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		N/A
3.12.2 (-)	(See above)		¾
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer	For models with glass cover	P

3.13 (9)	RESISTANCE TO DUST AND MOISTURE		¾
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:		P
	- classification according to IP.....	IP65 [for 057 and 057S series models]; IP66 [for other models]	¾
	- mounting position during test.....	As in normal use	¾

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- fixing screws tightened; torque (Nm).....:	Plastic gland: 2,17Nm; Metal gland: 4,17Nm; Screws for plastic cover: 0,33Nm; Screws for glass cover: 1,33Nm	¾
	- tests according to clauses	9.2.2 and 9.2.6 [for 057 and 057S series models]; 9.2.2 and 9.2.7 [for other models]	¾
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry	For 057, 057S, 068 and 068S series models	P
	d) no water in watertight or pressure watertight luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope	For models with glass cover	P
3.13 (9.3)	Humidity test 48 h	25°C; R.H. 93%	P

3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		¾
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		¾
	Insulation resistance (MW).....:		¾
	SELV		P
	- between current-carrying parts of different polarity:		N/A
	- between current-carrying parts and mounting surface	100 MW(required: 1MW)	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- between current-carrying parts and metal parts of the luminaire.....:	Between current-carrying parts and metal parts/ translucent cover/ glass cover: 100 MW (required: 1MW)	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		P
	- between live parts of different polarity		N/A
	- between live parts and mounting surface	100MW(required: 2MW)	P
	- between live parts and metal parts.....:	100MW(required: 2MW)	P
	- between live parts of different polarity through action of a switch.....:		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
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)		N/A
	SELV		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface	500V	P
	- between current-carrying parts and metal parts of the luminaire.....:	Between current-carrying parts and metal parts/ translucent cover/ glass cover: 500V	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV		P
	- between live parts of different polarity		N/A
	- between live parts and mounting surface	1480V	P
	- between live parts and metal parts.....:	1480V	P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- between live parts of different polarity through action of a switch.....:		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
3.14 (10.3)	Touch current or protective conductor current (mA):	Protective conductor current: Max. 0,61mA (limit: 3,5 mA)	P

3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		¾
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)	N/A
3.15 (13.4)	Proof tracking test (IEC 60112).....:	See Test Table 3.15 (13.4)	P

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:	B	1,8	0,5	11.1.B	1,8	1,25	11.1.A
Distance 2:	B	2,2	0,5	11.1.B	2,2	1,4	11.1.A
Distance 3:	B	2,8	1,5	11.1.B	2,8	2,5	11.1.A
Distance 4:	B	3,0	1,5	11.1.B	3,0	2,5	11.1.A
Working voltage (V)					See below		¾
PTI					< 600 ☒ ≥ 600 ☐		¾
Pulse voltage or U_P if applicable (kV)					--		¾
Supplementary information: min. values were recorded.							
Distance 1: Current-carrying parts of LED module and metal enclosure for 058, 058S, 065, 068 and 068S series models (85VDC).							
Distance 2: Current-carrying parts of LED module and metal enclosure for other models (100VDC).							
Distance 3: Between input terminal block and metal enclosure for models except 057 and 057S series models (240VAC).							
Distance 4: Between input connector and metal enclosure for 057 and 057S series models (240VAC).							
Approved SELV LED drivers, AC/DC waterproof connector and terminal block used.							

** 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)					--		¾
Frequency if applicable (kHz)					--		¾
PTI					< 600 ☐ ≥ 600 ☐		¾
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)					--		¾
Supplementary information: --							

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

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

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)		≤ 2mm		¾
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
AC/DC waterproof connector for 057 and 057S series models	Dongguan De Zhi Hermetic technique	125	1,2	
Bifurcate terminal for models with more than one LED module except 066 series models	LI LU TONG	125	1,4	
Waterproof connector of bifurcate terminal for models with more than one LED module except 066 series models	LI LU TONG	125	1,4	
Bifurcate terminal for 066 series models	LI LU TONG	125	1,1	
SMT connector on LED module	Shenzhen Bo da	125	1,1	
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
Bifurcate terminal for models with more than one LED module except 066 series models	LI LU TONG	10	No	0,7	Pass
Waterproof connector of bifurcate terminal for models with more than one LED module except 066 series models	LI LU TONG	10	No	0,9	Pass
Bifurcate terminal for 066 series models	LI LU TONG	10	No	4,8	Pass
SMT connector on LED module	Shenzhen Bo da	10	No	2,1	Pass
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		¾
Object/ Part No./ Material		Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Plastic cover and lens		ARKEMA	No	0	P
Supplementary information: --					

3.15 (13.4)	TABLE: Proof tracking test (IEC 60112)				P
Test voltage PTI		175 V			¾
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Bifurcate terminal for models with more than one LED module except 066 series models	LI LU TONG	YES	YES	YES	PASS
Waterproof connector of bifurcate terminal for models with more than one LED module except 066 series models	LI LU TONG	YES	YES	YES	PASS
Bifurcate terminal for 066 series models	LI LU TONG	YES	YES	YES	PASS
Plastic cover	ARKEMA	YES	YES	YES	PASS
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 driver for models, see 'General product information' (not for AS/NZS)	B	INVENTRONIC S (HANGZHOU)	EUC-035S070SVM	I/P:120-240VAC; 50/60Hz; Max.0,38A; O/P: 25-64VDC; 0,7A; Max.80VDC; Max.35W; CC; ta:70°C; tc:90°C; Independent; SELV; Class I; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62493	TÜV SÜD B 17 12 79136 216	
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUC-060S105SVM	I/P:120-240VAC; 50/60Hz; Max.0,6A; O/P: 34-80VDC; 1,05A; Max.100VDC; 60W; CC; ta:55°C; tc:90°C; Independent; SELV; Class I; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62493 AS/NZS 61347.1 AS/NZS IEC 61347.2.13	TÜV SÜD B 17 09 79136 181 SAA-182655-EA	
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUP-075S175SV	I/P:100-240V; 50/60Hz; Max.0,91A; O/P: 22-63VDC; Max. 1,75A; Max.75W; Max. 78VDC; CC; Independent; Class I; SELV; ta:50°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384 AS/NZS 61347.1 AS/NZS IEC 61347.2.13	TÜV Rheinland ENEC18 HN 69261356 0001 Global-mark GMA-501621-EA	
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUP-075S280SV	I/P:100-240V; 50/60Hz; Max.0,91A; O/P: 14-39VDC; Max. 2,8A; Max.75W; Max. 59VDC; CC; Independent; Class I; SELV; ta:50°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384 AS/NZS 61347.1 AS/NZS IEC 61347.2.13	TÜV Rheinland ENEC18 HN 69261356 0001 Global-mark GMA-501621-EA	

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUP-096S210SV	I/P:100-240V; 50/60Hz; Max.1,2A; O/P: 24-69VDC; Max.2,1A; Max.96W; Max. 85VDC; CC; Independent; Class I; SELV; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC18 HN 69258449
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	Global-mark GMA- 501620-EA
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUP-096S350SV	I/P:100-240V; 50/60Hz; Max.1,2A; O/P: 14-36VDC; Max.3,5A; Max.96W; Max. 42VDC; CC; Independent; Class I; SELV; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC18 HN 69258449
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	Global-mark GMA- 501620-EA
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUP-150S350SV	I/P:100-240V; 50/60Hz; Max.1,65A; O/P: 22-61VDC; Max.3,5A; Max.150W; Max. 70VDC; CC; Independent; Class I; SELV; ta:45°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC18 HN 69261082 0001
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	Global-mark GMA- 501593-EA
LED driver for models, see 'General product information'	B	INVENTRONIC S (HANGZHOU)	EUP-150S560SV	I/P:100-240V; 50/60Hz; 1,65A max.; O/P:14-36VDC; Max.5,6A; Max.150W; Max. 40VDC; CC; Independent; Class I; SELV; ta:45°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC18 HN 69261082 0001
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	Global-mark GMA- 501593-EA

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for models, see 'General product information'	B	INVENTRONICS (HANGZHOU)	EUP-200S560SV	I/P:220-240V; 50/60Hz; 2,25A max.; O/P: 18-52VDC; Max.5,6A; Max.200W; Max. 60VDC; CC; Independent; Class I; SELV; ta: 55°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC18 HN 69257905
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	Global-mark GMA-502901-EA
LED driver for models, see 'General product information'	B	INVENTRONICS (HANGZHOU)	EUP-240S670SV	I/P:220-240V; 50/60Hz; 2,9A max.; O/P: 18-52VDC; Max.6,7A; Max.240W; Max. 70VDC; CC; Independent; Class I; SELV; ta:50°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC18 HN 69257905
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	Global-mark GMA-502901-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-75-48A	I/P:100-240VAC; 50/60Hz; 0,7A; O/P: 48VDC; 60W (100-240VAC); 76,8W (220-240VAC); CV; Independent; SELV; Class I; ta:60°C; tc:85°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC HN 69260141
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-171226-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-75-36A	I/P:100-240VAC; 50/60Hz; 0,7A; O/P: 36VDC; 60W (100-240VAC); 75,6W (220-240VAC); CV; Independent; SELV; Class I; ta:60°C; tc:85°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC HN 69260141
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-171226-EA

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-100-48A	I/P:100-240VAC; 50/60Hz; 1,1A; O/P: 48VDC; 96W (input:200-240Vac); 70W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:60°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	DEKRA ENEC 35-103341
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-171311-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-100-36A	I/P:100-240VAC; 50/60Hz; 1,1A; O/P: 36VDC; 95,76W (input:200-240Vac); 70W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:60°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	DEKRA ENEC 35-103341
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-171311-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-150-48A	I/P:100-240VAC; 50/60Hz; 1,7A; O/P: 48VDC; 150,2W (input:200-240Vac); 105W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:55°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	DEKRA ENEC 35-103225
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-171915-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-150-36A	I/P:100-240VAC; 50/60Hz; 1,7A; O/P: 36VDC; 150,1W (input:200-240Vac); 105W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:55°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	DEKRA ENEC 35-103225
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-171915-EA

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-200-48A	I/P:100-240VAC; 50/60Hz; 1,8A; O/P: 48VDC; 199,68W (input:200-240Vac); 149,76W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:50°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC HN 69260037
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-170901-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-200-36A	I/P:100-240VAC; 50/60Hz; 1,8A; O/P: 36VDC; 199,8W (input:200-240Vac); 149,76W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:50°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC HN 69260037
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-170901-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-240-48A	I/P:100-240VAC; 50/60Hz; 2,2A; O/P: 48VDC; 240W (input:200-240Vac); 180W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:50°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC HN 69260037
					AS/NZS IEC 61347-1 AS/NZS IEC 61347-2-13	SAA-170901-EA
LED driver for models, see 'General product information'	B	MEAN WELL	ELG-240-36A	I/P:100-240VAC; 50/60Hz; 2,2A; O/P: 36VDC; 239,76W (input:200-240Vac); 180W (input: 100-240Vac); CV; Independent; SELV; Class I; ta:50°C; tc:90°C; IP65; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland ENEC HN 69260037
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-170901-EA

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-40H-48	I/P: 100-277VAC; 50/60Hz; 0,6A; O/P: 36-48VDC; Max.60VDC; 900mA; 44W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-60H-48	I/P: 100-277VAC; 50/60Hz; 0,85A; O/P: 36-48VDC; Max.60VDC; 1300mA; 62W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-80H-48	I/P: 100-277VAC; 50/60Hz; 1,0A; O/P: 36-48VDC; Max.63VDC; 1800mA; 86W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-100H-48	I/P: 100-277VAC; 50/60Hz; 1,3A; O/P: 36-48VDC; Max.63VDC; 2100mA; 101W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-120H-48	I/P: 100-277VAC; 50/60Hz; 1,6A; O/P: 36-48VDC; Max.60VDC; 2700mA; 130W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-150H-48	I/P: 100-277VAC; 50/60Hz; 1,8A; O/P: 36-48VDC; Max.60VDC; 3100mA; 149W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-180H-48	I/P: 100-277VAC; 50/60Hz; 2,2A; O/P: 36-48VDC; Max.60VDC; 3750mA; 180W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67; Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
LED driver for models, see 'General product information'	B	G-POWER SUPPLY	HT-HLB-200H-48	I/P: 100-277VAC; 50/60Hz; 2,4A; O/P: 36-48VDC; Max.60VDC; 4200mA; 202W; CC; Independent; SELV; Class I; ta:60°C; tc:90°C; IP67 Input cord (H05RN-F; 3x1,0mm ²); Output cord (H05RN-F; 2x1,0mm ²)	IEC/EN 61347-1 IEC/EN 61347-2-13 IEC/EN 62384	TÜV Rheinland R 50425023
					AS/NZS 61347.1 AS/NZS IEC 61347.2.13	SAA-173142-EA
Earthing wire	B	DONGGUAN CHENG XING ELECTRONIC	1007; 1015	Min. 300VAC; Min. 20AWG; Min. 80°C	--	UL E249743
Supply cord	B	Wuxi Zhonghui Wire & Cable	H05RN-F	3*1,0 mm ²	EN 50525-2-21	VDE 40020334

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
Supply cord (for Australia and New Zealand)	B	Wuxi Zhonghui Wire & Cable	H05RN-F	3*1,0 mm ²	AS/NZS 3191	SAA101170 EA
AC/DC waterproof connector for 057 and 057S series models	B	Dongguan De Zhi Hermetic technique	JXC	400VAC/DC; IP68; 2,5mm ² ; Screw type; Multiway: 2 (for DC waterproof connector) or 3 (for AC waterproof connector)	EN 60998-1 EN 60998-2-1 IEC/EN 60598-1 IEC/EN 60598-2-3	TÜV SÜD B 16 09 87842 003 Tested with appliance
Terminal block for input/output of LED driver for models except 057 and 057S series models	B	Foshan Ojun	OJ-863	450V; T110; 0,5-2,5mm ²	EN 60998-1 EN 60998-2-1	Dekra ENEC 2196743.01
Bifurcate terminal for 066 series models	B	LI LU TONG	LLT-M12	With 2 or 3 or 4 splitter	IEC/EN 60598-1 IEC/EN 60598-2-3	Tested with appliance
-Plastic enclosure	B	LI LU TONG	PA66	--	IEC/EN 60598-1 IEC/EN 60598-2-3	Tested with appliance
-PCB	B	SHENZHEN JIA LI CHUANG TECHNOLOGY DEVELOPMENT	JLC-1; JLC-2	130°C; V-0	--	UL E479892
- Input cord	B	Guangdong Wasung Cable	H05RN-F	2x1,0mm ²	DIN EN 50525-2-21	VDE 40047092
Bifurcate terminal for models with more than one LED module except 066 series models	B	LI LU TONG	LJT connector	--	IEC/EN 60598-1 IEC/EN 60598-2-3	Tested with appliance
- Waterproof connector of bifurcate terminal	B	LI LU TONG	LJT connector	--	IEC/EN 60598-1 IEC/EN 60598-2-3	Tested with appliance

IEC 60598-2-3						
Clause	Requirement + Test			Result - Remark		Verdict
Input cord of bifurcate terminal	B	Wuxi Zhonghui Wire & Cable	H05RN-F	2*1,0mm ²	EN 50525-2-21	VDE 40020334
Input wire of LED module for 067, 069, 069S series models	B	DONGGUAN CHENG XING ELECTRONIC	1007; 1015	Min. 300VAC; Min. 20AWG; Min. 80°C	--	UL E249743
Input cord of LED module for other models	B	Wuxi Zhonghui Wire & Cable	H05RN-F	2*0,75mm ²	EN 50525-2-21	VDE 40020334
SMT connector on LED module (optional)	B	Shenzhen Boda	2062	--	IEC/EN 60598-1 IEC/EN 60598-2-3	Tested with appliance
LED	B	LUMILEDS	LUXEON 3030 2D LINE	I _F :120mA; V _F :5,8-6,6V; CCT: 3000-6500K; View angle: 116°	IEC TR 62778	Tested with appliance
LED	B	LUMILEDS	LUXEON 5050	I _F :240mA; V _F : 23,5-26,5V; CCT:2700-6500K; View angle: 116°	IEC TR 62778	Tested with appliance
LED module PCB	B	SHENZHEN NAILIDE TECHNOLOGY	ULNLD01	Metal base; V-0; 120°	--	UL E479351
Plastic cover and lens	B	ARKEMA	V040	Min. 1,5mm; HB	--	UL E228285
Glass cover	B	DONGGUAN CSG SOLAR GLASS	Dongguan Delangfei	Thickness: min. 6mm; 160°C; Δt: 140°C	IEC/EN 60598-1 IEC/EN 60598-2-3	Tested with appliance
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	PL-LD-057-250W	¾				
	Lamp used.....	LED	¾				
	Lamp control gear used	ELG-240-36A	¾				
	Mounting position of luminaire.....	As in normal use	¾				
	Supply wattage (W)	250,0W (240V)	¾				
	Supply current (A).....	1,068A (240V)	¾				
	Temperatures in test 1 - 4 below are corrected for ta (°C)	45°C	¾				
	- abnormal operating mode	Short circuit output of LED driver, LED driver shut down immediately, the temperature was less than temperature under normal operation, so no temperature was recorded.	¾				
1.12 (12.4)	- test 1: rated voltage	240V	¾				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,06x240V=254,4V	¾				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	¾				
	Through wiring or looping-in wiring loaded by a current of A during the test	--	¾				
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,1x240V=264V	¾				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord (clamped position)	45	--	63,1	--	75	--	--
AC waterproof connector	45	--	58,7	--	Ref.	--	--
Input cord of LED driver	45	--	69,3	--	90	--	--
tc of LED driver	45	83,0	--	--	90	--	--
Output cord of LED driver	45	--	76,8	--	90	--	--
DC waterproof connector	45	--	70,4	--	Ref.	--	--
Bifurcate terminal	45	--	64,2	--	Ref.	--	--
Waterproof connector of bifurcate terminal	45	--	73,4	--	Ref.	--	--
Input cord of LED module	45	--	85,3	--	90	--	--

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
LED module PCB	45	--	88,8	--	120	--	--
Plastic cover	45	--	78,2	--	Ref.	--	--
Metal enclosure near LED (outside)	45	--	70,3	--	Ref.	--	--
Metal enclosure near LED driver (outside)	45	--	53,5	--	Ref.	--	--
Mounting surface	45	--	49,4	--	90	--	--
Supplementary information: max. values were recorded.							

ANNEX 2	TABLE: Thermal tests of Section 12			P			
	Type reference	PL-LD-068S-250W	¾				
	Lamp used.....	LED	¾				
	Lamp control gear used	ELG-240-48A	¾				
	Mounting position of luminaire.....	As in normal use	¾				
	Supply wattage (W)	251,4W (240V)	¾				
	Supply current (A).....	1,075A (240V)	¾				
	Temperatures in test 1 - 4 below are corrected for ta (°C)	45°C	¾				
	- abnormal operating mode	Short circuit output of LED driver, LED driver shut down immediately, the temperature was less than temperature under normal operation, so no temperature was recorded.	¾				
1.12 (12.4)	- test 1: rated voltage	240V	¾				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,06x240V=254,4V	¾				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	¾				
	Through wiring or looping-in wiring loaded by a current of A during the test	--	¾				
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,1x240V=264V	¾				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord (clamped position)	45	--	50,5	--	75	--	--
Terminal block (input of LED driver)	45	--	55,3	--	110	--	--

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
Input cord of LED driver	45	--	54,9	--	90	--	--
tc of LED driver	45	79,8	--	--	90	--	--
Terminal block (output of LED driver)	45	--	64,4	--	110	--	--
Bifurcate terminal	45	--	64,8	--	Ref.	--	--
Waterproof connector of bifurcate terminal	45	--	69,1	--	Ref.	--	--
Input cord of LED module	45	--	75,0	--	90	--	--
LED module PCB	45	--	77,4	--	120	--	--
Plastic cover	45	--	73,5	--	Ref.	--	--
Metal enclosure near LED (outside)	45	--	61,3	--	Ref.	--	--
Metal enclosure near LED driver (outside)	45	--	51,7	--	Ref.	--	--
Mounting surface	45	--	45,2	--	90	--	--
Supplementary information: max. values were recorded.							

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference	PL-LD-069-250W	¾
	Lamp used.....	LED	¾
	Lamp control gear used	EUP-240S670SV	¾
	Mounting position of luminaire.....	As in normal use	¾
	Supply wattage (W)	242,1W (240V)	¾
	Supply current (A).....	1,064A (240V)	¾
	Temperatures in test 1 - 4 below are corrected for ta (°C)	45°C	¾
	- abnormal operating mode	Short circuit output of LED driver, LED driver shut down immediately, the temperature was less than temperature under normal operation, so no temperature was recorded.	¾
1.12 (12.4)	- test 1: rated voltage	240V	¾
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,06x240V=254,4V	¾
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	¾
	Through wiring or looping-in wiring loaded by a current of A during the test	--	¾

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark			Verdict
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current			1,1x240V=264V			¾
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Supply cord (clamped position)	45	--	55,2	--	75	--	--
Terminal block (input of LED driver)	45	--	61,5	--	110	--	--
Input cord of LED driver	45	--	50,5	--	90	--	--
tc of LED driver	45	80,2	--	--	90	--	--
Output cord of LED driver	45	--	64,9	--	90	--	--
Terminal block (output of LED driver)	45	--	66,9	--	110	--	--
Input wire of LED module	45	--	57,7	--	80	--	--
SMT connector on LED	45	--	57,9	--	Ref.	--	--
LED module PCB	45	--	65,2	--	120	--	--
Lens	45	--	70,5	--	Ref.	--	--
Glass cover	45	--	60,3	--	160	--	--
Metal enclosure near LED (outside)	45	--	56,7	--	Ref.	--	--
Metal enclosure near LED driver (outside)	45	--	51,9	--	90	--	--
Mounting surface	45	--	46,3	--	90	--	--
Supplementary information: max. values were recorded.							

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference	1). PL-LD-061-200W; 2). PL-LD-068-150W; 3). PL-LD-062-150W; 4). PL-LD-065-200W	¾
	Lamp used.....	LED	¾
	Lamp control gear used	1). EUP-200S560SV; 2). EUP-150S560SV; 3). ELG-150-48A; 4). ELG-200-48A	¾
	Mounting position of luminaire.....	As in normal use	¾

IEC 60598-2-3							
Clause	Requirement + Test			Result - Remark		Verdict	
	Supply wattage (W):			1). 193,9W (240V); 2). 153,0W (240V); 3). 150,6W (240V); 4). 198,2W (240V)		¾	
	Supply current (A).....:			1). 0,833A (240V); 2). 0,683A (240V); 3). 0,660A (240V); 4). 0,857A (240V)		¾	
	Temperatures in test 1 - 4 below are corrected for ta (°C):			45°C		¾	
	- abnormal operating mode.....:			Short circuit output of LED driver, LED driver shut down immediately, the temperature was less than temperature under normal operation, so no temperature was recorded.		¾	
1.12 (12.4)	- test 1: rated voltage:			240V		¾	
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current:					¾	
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage:			--		¾	
	Through wiring or looping-in wiring loaded by a current of A during the test:			--		¾	
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current:			1,1x240V=264V		¾	
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
1). tc of LED driver	45	80,8	--	--	90	--	--
2). tc of LED driver	45	85,6	--	--	90	--	--
3). tc of LED driver	45	85,8	--	--	90	--	--
4). tc of LED driver	45	69,6	--	--	90	--	--
Supplementary information: max. values were recorded.							

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

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference	1). PL-LD-067-40W; 2). PL-LD-067-60W; 3). PL-LD-067-80W; 4). PL-LD-067-80W; 5). PL-LD-067-100W; 6). PL-LD-067-100W	¾
	Lamp used.....	LED	¾
	Lamp control gear used	1). EUC-035S070SVM; 2). EUC-060S105SVM; 3). EUP-075S280SV; 4). ELG-75-48A; 5). EUP-096S-210SV; 6). ELG-100-48A	¾
	Mounting position of luminaire.....	As in normal use	¾
	Supply wattage (W)	1). 35,0W (240V); 2). 55,9W (240V); 3). 81,9W (240V); 4). 78,5W (240V); 5). 99,6W (240V); 6). 102,0W (240V);	¾
	Supply current (A).....	1). 0,153A (240V); 2). 0,240A (240V); 3). 0,349A (240V); 4). 0,372A (240V); 5). 0,444A (240V); 6). 0,446A (240V);	¾
	Temperatures in test 1 - 4 below are corrected for ta (°C)	45°C	¾
	- abnormal operating mode	Short circuit output of LED driver, LED driver shut down immediately, the temperature was less than temperature under normal operation, so no temperature was recorded.	¾
1.12 (12.4)	- test 1: rated voltage	240V	¾
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current		¾
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	¾
	Through wiring or looping-in wiring loaded by a current of A during the test	--	¾
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	1,1x240V=264V	¾

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

Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
1). tc of LED driver	45	67,8	--	--	90	--	--
2). tc of LED driver	45	75,0	--	--	90	--	--
3). tc of LED driver	45	73,6	--	--	90	--	--
4). tc of LED driver	45	72,3	--	--	85	--	--
5). tc of LED driver	45	80,6	--	--	90	--	--
6). tc of LED driver	45	84,7	--	--	90	--	--
Supplementary information: max. values were recorded.							

ANNEX 2	TABLE: Thermal tests of Section 12		P
	Type reference	1). PL-LD-061-200W; 2). PL-LD-067-100W; 3). PL-LD-067-60W	¾
	Lamp used.....	LED	¾
	Lamp control gear used	1). HT-HLB-200H-48; 2). HT-HLB-100H-48; 3). HT-HLB-60H-48	¾
	Mounting position of luminaire.....	As in normal use	¾
	Supply wattage (W)	1). 217,1W (240V); 2). 116,2W (240V); 3). 64,4W (240V);	¾
	Supply current (A).....	1). 0,932A (240V); 2). 0,564A (240V); 3). 0,349A (240V);	¾
	Temperatures in test 1 - 4 below are corrected for ta (°C)	45°C	¾
	- abnormal operating mode	Short circuit output of LED driver, LED driver shut down immediately, the temperature was less than temperature under normal operation, so no temperature was recorded.	¾
1.12 (12.4)	- test 1: rated voltage	240V	¾
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current		¾
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	¾

IEC 60598-2-3							
Clause	Requirement + Test				Result - Remark		Verdict
	Through wiring or looping-in wiring loaded by a current of A during the test:				--		¾
1.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current				1,1x240V=264V		¾
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
1). tc of LED driver	45	83,5	--	--	90	--	--
2). tc of LED driver	45	85,2	--	--	90	--	--
3). tc of LED driver	45	76,3	--	--	90	--	--
Supplementary information: max. values were recorded.							

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

ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		¾
(14.2)	Type of terminal.....:		¾
	Rated current (A).....:		¾
(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)		¾
(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) (SMT terminal on LED module)		P
(15)	SCREWLESS TERMINALS		¾
(15.2)	Type of terminal.....:	Spring terminal	¾
	Rated current (A).....:	5,2A (Tested with appliance)	¾
(15.3.1)	Material		P
(15.3.2)	Clamping		P
(15.3.3)	Stop		P
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(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	Assembled by manufacturer	N/A
	Type of conductor		N/A
(15.5.1)	Terminals internal wiring		P
(15.5.1.1)	Pull test spring-type terminals (4 N, 4 samples).....:	4N	P
(15.5.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		P
	Voltage drop (mV) after 1 h (4 samples).....:	1#: 8,2; 2#: 8,2; 3#: 8,5; 4#: 8,3	P
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		¾
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)	1#: 8,9; 2#: 8,8; 3#: 8,9; 4#: 8,9	P
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:	1#: 9,5; 2#: 9,6; 3#: 9,6; 4#: 9,6	P
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:		N/A
(15.6)	Terminals external wiring		N/A
	Terminal size and rating		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A

IEC 60598-2-3										
Clause	Requirement + Test								Result - Remark	Verdict
	Pull test pin or tab terminals (4 samples); pull (N)									N/A
(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests									N/A
	Voltage drop (mV) after 1 h									¾
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop of two inseparable joints									N/A
	Voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV)..... :								--	¾
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV)..... :								--	¾
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 10th alt. 25th cycle									N/A
	Max. allowed voltage drop (mV)..... :								--	¾
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
	Continued ageing: voltage drop after 50th alt. 100th cycle									N/A
	Max. allowed voltage drop (mV)..... :								--	¾
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)	--	--	--	--	--	--	--	--	--	--
Supplementary information: --										

Attachment No. 1

Page 1 of 2

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-2-3 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting			
Differences according.....: EN 60598-2-3:2003 +A1:2011 used in conjunction with EN 60598-1:2015+A1:2018			
Annex Form No.: EU_GD_IEC60598_2_3L			
Annex Form Originator.....: Intertek Semko AB			
Master Annex Form.....: 2018-12-07			
Copyright © 2018 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			

	CENELEC COMMON MODIFICATIONS (EN)		¾
3.6 (4)	CONSTRUCTION		P
3.6 (4.11.6)	Electro-mechanical contact systems		P
3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2.2)	Cables equal to EN 50525		P
	Replace table 5.1 – Supply cord		P
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)		¾
(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)		¾
(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



Attachment No. 1

Page 2 of 2

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	GB: Requirements according to United Kingdom Building Regulation		N/A



Attachment No. 2

Page 1 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-1 Australia and New Zealand NATIONAL DIFFERENCES Luminaires Part 1: General requirements and tests			
Differences according to: AS/NZS 60598.1:2017/Amdt 1:2017 compared to IEC 60598-1:2014			

	National Differences		—
Appendix ZZ	Variations to IEC 60598-1 Ed 8.0 (2014) Normative		—
ZZ1	Scope This Appendix sets out variations between this Standard and IEC 60598-1, Ed. 8.0 (2014) and additional requirements to cover issues that have not been addressed by the International Standard		—
ZZ2	Variations The following modifications are required for Australian/New Zealand conditions		—
0.1	Addition Add the following text at the end of Clause 0.1 Where the term “lamp” is used in this Standard, it is taken to include electric light sources. LED light sources are subject to the same test parameters as “other discharge lamps”.		—
	NOTE Portable rechargeable battery operated luminaires should comply with Annex B, ‘Appliances powered by rechargeable batteries’ of AS/NZS 60335.1, Household and similar electrical appliances—Safety, Part 1: General requirements (IEC 60335-1 ED. 5, MOD). In addition, portable, rechargeable, battery-operated luminaires with lithium ion batteries should have overvoltage protection		—
0.2	Normative references		—

Attachment No. 2

Page 2 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
0.2	Addition Add the following normative references: IEC 61048, Auxiliaries for lamps – Capacitors for use in tubular fluorescent and other discharge lamp circuits – General and safety requirements IEC 61049, Auxiliaries for lamps – Capacitors for use in tubular fluorescent and other discharge lamp circuits – Performance requirements IEC 61995-1, Devices for the connection of luminaires for household and similar purposes – Part 1: General ISO 8124-1, Safety of toys – Part 1: Safety aspects related to mechanical and physical properties AS/NZS 3112, Approval and test specification—Plugs and socket-outlets AS/NZS 3120, Approval and test specification—Cord extension sockets AS/NZS 3133, Approval and test specification—Air-break switches AS/NZS 3191, Electric flexible cords AS/NZS 60335.2.29, Household and similar electrical appliances—Safety, Part 2.29: Particular requirements for battery chargers AS/NZS 60669, Switches for household and similar fixed electrical installations (series) AS/NZS 60695.2.11, Fire hazard testing, Part 2.11: Glowing/hot wire based test methods—Glow-wire flammability test method for end-products (IEC 60695-2-11:2000, MOD) AS/NZS 60695.11.5, Fire hazard testing, Part 11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance AS/NZS 60884.1, Plugs and socket-outlets for household and similar purposes, Part 1: General requirements AS/NZS 61058.1, Switches for appliances, Part 1: General requirements (IEC 61058-1, Ed.3.1 (2000), MOD) AS/NZS 61347, Lamp controlgear (series) AS/NZS 61558, Safety of transformers, reactors, power supply units and similar products for voltages up to 1 100 V (series)		—
0.4	General test requirements and verification		—

Attachment No. 2

Page 3 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
0.4.2	Addition After the first paragraph, insert the following text: In Australia, for equipment, other than class III equipment, that is intended for connection to the supply mains and not marked with: — a rated voltage of at least 240 V for single-phase equipment or a rated voltage of at least 415 V for three-phase equipment; or — a rated voltage range that includes 240 V for single-phase equipment and 415 V for three-phase equipment, the rated voltage is equal to 240 V for single-phase equipment and 415 V for three-phase equipment, and the upper limit of the voltage range is equal to 240 V for single-phase equipment and 415 V for three-phase equipment.	220-240VAC	P
0.5	Addition <i>Insert</i> the following text as the first paragraph: Throughout this document, where there is a relevant Australian/New Zealand Standard, it replaces the IEC Standard unless otherwise specified		P
0.5.101 (new)	After Clause 0.5.4, add new Clause 0.5.101 as follows:		N/A
	0.5.101 Capacitors Capacitors shall be of a type to ensure that any capacitor failure results in a failsafe outcome (i.e. the capacitor type will fail in the open-circuit mode only and is protected against fire or shock hazard). Capacitors (other than those incorporated in control gear that comply with the relevant standard) shall comply with one of the following:		N/A
	Capacitors likely to be permanently subjected to the supply voltage, used for radio interference suppression or for voltage dividing shall comply with IEC 60384-14		N/A

Attachment No. 2

Page 4 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	Other capacitors shall be not less than Type B capacitors with metal body and break action protection in accordance with IEC 61048 and IEC 61049. A capacitor complying with EIA-456-A, Metallized Film Dielectric Capacitors for Alternating Current Applications, shall comply with IEC 61049 and IEC 61048:2006 excluding the endurance test of 18.1.1. NOTE Capacitors of Class S2 (formerly referred to as P2) of IEC 60252 (all parts) do not meet the safety requirements of a Type B capacitor.		N/A
0.5.102 (new)	After Clause 0.5.101, add new Clause 0.5.102 as follows:		P
	0.5.102 Control gear Power supplies shall comply with the relevant part 2 of the AS/NZS 61558 series		N/A
	Control gear shall comply with the relevant part 2 of the AS/NZS 61347 series		P
	Battery chargers used for lighting other than emergency lighting shall comply with AS/NZS 60335.2.29.		N/A
	Sensor switches and similar control circuits, including those incorporated in other equipment, are considered electronic switches (see Clause 4.8).		N/A

Attachment No. 2

Page 5 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
1.2.101 (new)	After Clause 1.2.91, add the following definitions: 1.2.101 installation coupler connecting device consisting of an installation female connector and an installation male connector provided with retaining means for permanent connection not intended to be engaged or disengaged under load nor to be engaged or disengaged other than during first installation, during maintenance of the wiring system or during re-configuration of the wiring system 1.2.103 installation male connector load side portion of an installation coupler which contains the male contacts 1.2.104 installation female connector supply side portion of an installation coupler which contains the female contacts 1.2.105 installation coupler system family of installation couplers consisting of one or more installation female connectors compatible by mechanical coding features with one or more installation male connectors, with the same ratings produced according to the specification of one manufacturer (AS/NZS 61058.1:2017)		N/A
2.2	Addition At the end of Clause 2.2, insert the following text: Class 0 luminaires are not permitted in Australia or New Zealand		N/A
3.1	Addition After the first paragraph, insert the following text: In Australia and New Zealand, instructions and other texts required by this Standard shall at least be written in English. Compliance is checked by inspection.		P
3.2	Variation Delete the second paragraph beginning with 'Marking may be on ballast provided...'		N/A
Table 3.1	Variation 1. Second column, second row, delete Item 3.2.21. 2. Third column, second row, add the following new item: 3.2.21 The relevant symbol for luminaires not suitable for covering with thermally insulating material		N/A

Attachment No. 2

Page 6 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
3.2.3	Variation Delete the text ', if other than 25 °C'.		P
3.2.12	Addition At the end of the Clause, insert the following text: In Australia, luminaires for household use and similar with supply cords that are not fitted with a plug shall be marked with a cord tag with the symbol for "must be installed by a licensed electrician".		P
3.2.23	Addition At the end of the Clause, insert the following text: The additional information shall include the symbol "Do not stare at the operating light source" (see Figure 1) along with an explanation of the symbol.		N/A
3.3.7	Variation Delete Clause 3.3.7 and replace with the following: 3.3.7 Luminaires for use with metal halide lamps shall be provided with instructions that state the substance of the following: To avoid potential unsafe lamp failure, the luminaire shall be switched off for at least 30 minutes at least once a week. In addition, the luminaire shall be operated: — complete with its protective shield; or — with a double jacketed lamp		N/A
3.3.18	Deletion Delete the text ', i.e. for indoor use only'.		P
3.3.21	Deletion Delete the text 'Caution, risk of electric shock' and the symbol.		N/A
3.3.101 and 3.3.102 (new)	After Clause 3.3.22, add new Clauses 3.3.101 and 3.3.102 as follows		N/A
3.3.101	The instructions shall contain details of the components in the luminaire that require replacement as part of a maintenance program		P



Attachment No. 2

Page 7 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
3.3.102	The instructions for luminaires, including for remotes or other accessories containing coin/button cell batteries and batteries designated R1, shall include the safety warnings below. Equipment containing one or more coin/button cell/R1 batteries shall have the safety warnings in the instructions accompanying the equipment. The safety warnings are not required where these batteries are not intended to be replaced or are only accessible after damaging the equipment. The safety warnings shall be as follows: – CAUTION: Do not ingest battery—Chemical burn hazard [or equivalent wording]. – [The remote control supplied with] this product contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death. – Keep new and used batteries away from children. – If the battery compartment does not close securely, stop using the product and keep it away from children. – If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention. NOTE 1 Coin/button cell batteries are small, single cell devices having a diameter greater than their height. NOTE 2 Battery designations are specified in IEC 60086-2.		N/A
4.7.2	Variation <i>Delete</i> the first paragraph and <i>replace</i> with the following: 4.7.2 Terminals shall be located or shielded in such a way that, if a wire of a stranded conductor escapes from a terminal when the conductors are fitted, there is no risk of contact between live parts and metal parts that can be touched with the standard test finger, nor shall it be possible to touch a live free wire with the standard test finger when the luminaire is fully assembled for use or open for the replacement of replaceable light sources or starters.		P

Attachment No. 2

Page 8 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
4.8	Variation After the third paragraph, insert the following text: Switches shall comply with AS/NZS 3133, the AS/NZS 60669 series or AS/NZS 61058.1. Switches that indicate an off position shall have contacts with an air break and comply with AS/NZS 3133, AS/NZS 60669.1 or AS/NZS 61058.1.		N/A
	Fourth paragraph, delete the text 'IEC 61058-1' and replace with 'AS/NZS 60669.2.1 or IEC 61058-1 classified for 10,000 operating cycles'.		N/A
4.10.4	Variation First paragraph, delete the last sentence and replace with the following: If the working voltage does not exceed the rated voltage of the capacitor, accessible conductive parts separated from live parts by double or reinforced insulation, as above, may be bridged by a single Y1 capacitor with qualification approval as specified in IEC 60384-14.		N/A
4.14.6	After the first paragraph, insert the following text: A fixed socket-outlet complying with AS/NZS 3112 or AS/NZS 60884.1 is used for the following test.		N/A
4.32	Addition At the end of the Clause, insert the following text: Metal oxide varistors shall comply with the requirements of AS/NZS 3100 for metal oxide varistors incorporated in accessories. NOTE The test and assessment is conducted on any circuits connected between phases (between actives and between actives and neutral) and circuits connected between phases and earth (actives-to-earth and neutral-to-earth).		N/A
4.101 (new)	After Clause 4.32, add new Clauses as follows:		N/A
4.101.1	Small batteries		N/A
	Batteries that fit wholly within the small parts cylinder as specified in Clause 5.2 of ISO 8124-1 shall not be removable without the aid of a tool. Luminaires intended for children under the age of three, or parts of such luminaires that contain batteries, shall not fit wholly within the small parts cylinder as specified in Clause 5.2 of ISO 8124-1. For luminaires or parts of luminaires containing batteries that fit wholly within the small parts cylinder as specified in Clause 5.2 of ISO 8124-1,		N/A

Attachment No. 2

Page 9 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	the batteries shall not be accessible without the aid of a tool. Compliance is checked by inspection and by the following test. A force is applied without jerks for 10 s in the most unfavourable direction to parts likely to be weak. The force is as follows: – push force, 50 N; – pull force; 30 N; – if the shape of the part is such that the fingertips cannot easily slip off, 50 N; – if the projection of the part that is gripped is less than 10 mm in the direction of removal, 30 N. The push force is applied by test probe 11 of IEC 61032. The pull force is applied by a suitable means, such as a suction cup, so that the test results are not affected. While the force is being applied, the test fingernail of Figure 7 of AS/NZS 60335.1 is inserted in any aperture or joint with a force of 10 N. The fingernail is then slid sideways with a force of 10 N but is not twisted or used as a lever. If the shape of the part is such that an axial pull is unlikely, the pull force is not applied but the test fingernail is inserted in any aperture or joint with a force of 10 N and is then pulled for 10 s by means of the loop with a force of 30 N in the direction of removal. If the part is likely to be twisted, the following torque is applied at the same time as the pull or push force: – 2 Nm, for major dimensions up to 50 mm. – 4 Nm, for major dimensions over 50 mm. This torque is also applied when the test fingernail is pulled by means of the loop. If the projection of the part that is gripped is less than 10 mm, the torque is reduced by 50 %. NOTE The types and dimensions of batteries are specified in IEC 60086-2.		
4.101.2	Battery compartment fasteners		N/A

Attachment No. 2

Page 10 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	If screws or similar fasteners are used to secure a door or cover providing access to the battery compartment, the screw or similar fastener shall be captive to ensure that it remains with the door, cover or equipment. Compliance is checked by inspection and by the following test. A force of 20 N is applied to the screw or similar fastener without jerks for a duration of 10 s in any direction.		N/A
5.2.1	Variation <i>Delete</i> the first paragraph and replace with the following: Luminaires shall be provided with only one of the following means of connection and isolation to the supply. Fixed luminaires: — device for the connection of luminaires; — terminals; — plug for engagement with socket-outlets; — connecting lead (tails); in accordance with Clause 4.6 requirements; — supply cord; — supply cord and plug; — adapter for engagement with supply tracks; — appliance inlet; — installation coupler; — luminaire coupler; Portable luminaires: — supply cord with plug; — appliance inlet; — inlet plug complying with AS/NZS 3120. Track-mounted luminaires: — adaptor; — connector.	Supply cord	P
	<i>Delete</i> the second and third paragraph.		—

Attachment No. 2

Page 11 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	After Note 3, <i>insert</i> the following text: In Australia, non-portable luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112 or a coupler complying with its standard, except where the luminaire has markings and instructions that comply with Clause 3.2.12, in which case, a plug or coupler is not required. However, for other than portable luminaires a plug is not required if the luminaire has markings and instructions in accordance with Clause 3.2.12. The plug portion of a luminaire with integral pins shall comply with the relevant requirements of AS/NZS 3112. NOTE 4 PVC-insulated connection cords should not be used with outdoor luminaires in cold alpine locations.		N/A
5.2.2	Variation <i>Delete</i> the first paragraph and <i>replace</i> with the following: Supply cords used as a means of connection to the supply, when supplied by the luminaire manufacturer, shall be at least equal in their mechanical and electrical properties to those specified in IEC 60227 and IEC 60245, as indicated in Table 5.1, or AS/NZS 3191, and shall be capable of withstanding, without deterioration, the highest temperature to which they may be exposed under normal conditions of use.		P
	1. <i>Delete</i> the third paragraph and replace with the following: To provide adequate mechanical strength, the nominal cross-sectional area of the conductors shall be not less than: — 0,75 mm²; — 1,0 mm² for portable rough service luminaires.		P

Attachment No. 2

Page 12 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT

Clause	Requirement - Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

Table 5.1	Variation Delete Table 5.1 and replace with the following: Table 5.1 — Supply cord		P																												
	<table border="1"> <thead> <tr> <th>Luminaire</th><th>Rubber</th><th>PVC</th><th>No insulation</th></tr> </thead> <tbody> <tr> <td>Ordinary class I luminaires</td><td>60245 IEC 51S ^a</td><td>60227 IEC 52 ^a</td><td></td></tr> <tr> <td>Ordinary class II luminaires</td><td>60245 IEC 53 ^a</td><td>60227 IEC 52 ^a</td><td></td></tr> <tr> <td>Luminaires which are other than ordinary class I and II</td><td>60245 IEC 57 ^a</td><td>60227 IEC 53 ^{aa}</td><td></td></tr> <tr> <td>Portable rough service luminaires</td><td>60245 IEC 66 ^a</td><td>PVC insulated and sheathed heavy duty flexible cord</td><td></td></tr> <tr> <td>Class III or with SELV circuits luminaires (up to 25 V a.c./60 V d.c.)</td><td></td><td></td><td>Un-insulated conductor ^b</td></tr> <tr> <td>Class III or with SELV circuits luminaires (above 25 V a.c./60 V d.c.), including 50 V a.c./120 V d.c.</td><td>Unsheathed basic insulated conductor</td><td></td><td></td></tr> </tbody> </table> ^a For indoor use only. ^{aa} AS/NZS 3000 may restrict the use of un-insulated conductors in certain special installations. ^b For supply voltages greater than 250 V, higher voltage grade cables and cords than those given in the above table may be necessary.	Luminaire	Rubber	PVC	No insulation	Ordinary class I luminaires	60245 IEC 51S ^a	60227 IEC 52 ^a		Ordinary class II luminaires	60245 IEC 53 ^a	60227 IEC 52 ^a		Luminaires which are other than ordinary class I and II	60245 IEC 57 ^a	60227 IEC 53 ^{aa}		Portable rough service luminaires	60245 IEC 66 ^a	PVC insulated and sheathed heavy duty flexible cord		Class III or with SELV circuits luminaires (up to 25 V a.c./60 V d.c.)			Un-insulated conductor ^b	Class III or with SELV circuits luminaires (above 25 V a.c./60 V d.c.), including 50 V a.c./120 V d.c.	Unsheathed basic insulated conductor				
Luminaire	Rubber	PVC	No insulation																												
Ordinary class I luminaires	60245 IEC 51S ^a	60227 IEC 52 ^a																													
Ordinary class II luminaires	60245 IEC 53 ^a	60227 IEC 52 ^a																													
Luminaires which are other than ordinary class I and II	60245 IEC 57 ^a	60227 IEC 53 ^{aa}																													
Portable rough service luminaires	60245 IEC 66 ^a	PVC insulated and sheathed heavy duty flexible cord																													
Class III or with SELV circuits luminaires (up to 25 V a.c./60 V d.c.)			Un-insulated conductor ^b																												
Class III or with SELV circuits luminaires (above 25 V a.c./60 V d.c.), including 50 V a.c./120 V d.c.	Unsheathed basic insulated conductor																														
5.2.16	Addition At the end of the Clause, insert the following text: Class II luminaires for fixed wiring incorporating an appliance coupler shall not have means to allow further luminaires to be connected by cascading including connection by looping-in. Luminaire couplers incorporated with the luminaire shall comply with IEC 61995-1. Luminaires incorporating installation couplers may have means to allow further luminaires to be connected by cascading provided the through wiring is rated for the current rating of the installation coupler.		N/A																												
5.2.18	Variation Delete Clause 5.2.18 and replace with the following: 5.2.18 All portable luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112. Other luminaires with a supply cord shall be fitted with a plug complying with AS/NZS 3112, unless they have the warning specified by Clause 3.2.12.		P																												

Attachment No. 2

Page 13 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
5.3.1	Variation Delete the third paragraph and <i>replace</i> with the following: Internal wires coloured green, yellow or green/yellow combination shall be used for making protective earth connections only. Functional earth connections shall not be made by wires coloured green, yellow or green/yellow combination. NOTE 101 Internal wires of other colours are not precluded from making protective earthing connections		P
5.3.1.3	Variation Delete Clause and <i>replace</i> with the following: In class II luminaires, where the internal wiring has a live conductor and the wiring insulation may touch accessible metal parts under normal operating conditions, the insulation, at least at the places of contact, shall comply with the requirements for double or reinforced insulation, e.g. by applying sheathed cables or sleeves.		N/A
7.2.11	Variation Delete the third paragraph and <i>replace</i> with the following: All conductors, whether internal or external, coloured green, yellow or green/yellow combination, shall only be connected to an earthing terminal		P

Attachment No. 2

Page 14 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
8.2.1	Variation <i>Delete</i> the first two paragraphs including Note 1 and replace with the following: Luminaires shall be so constructed that their live parts and basic insulation are not accessible when the luminaire has been installed and wired as in normal use. Live parts shall not be accessible when the luminaire is opened as necessary for user cleaning or maintenance, or for replacement of lamps, replaceable light sources or (replaceable) starters, even if the operation cannot be achieved by hand. Luminaires with non-replaceable light sources are subjected to the tests of Clause 4.29 prior to applying the tests and inspections of Section 8 of this Standard. NOTE 1 Examples of parts with basic insulation are cables intended for internal wiring, controlgear for building-in, etc. This does not apply to the non-current-carrying parts of lamp caps that comply with the relevant IEC safety standard.		P
	<i>Delete</i> the ninth paragraph beginning with 'Covers in fixed luminaires that cannot be removed...'		P
9.2	After Note 1, insert the following new Note: NOTE 101A designation of IPX7 or IPX8 is considered unsuitable for exposure to water jets (designated by IPX5 or IPX6) and may not comply with requirements for second numeral 5 or 6 unless it is dual coded.		N/A
Table 10.3	Deletion <i>Delete</i> the second row beginning with 'Class I luminaires rated up to and including 16 A...'		N/A
	First column, third row, <i>delete</i> the word 'Metal'.		N/A

Attachment No. 2

Page 15 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
Table 12.1	First column, first row, <i>delete</i> the text — 'Case (of capacitor, starting device, electronic ballast or convertor, etc.)' and <i>replace</i> with the following: 'Case (of control gear, capacitor, starting device, electronic ballast or convertor, etc.)' Addition Add the following new Note after Table 12.1 NOTE 101 Luminaire manufacturers should consider the maximum ambient air temperature in the vicinity of components such as starting devices and electronic ballasts or converters. Component performance specifications advise manufacturers to mark or supply life data as maximum ambient air temperature based on 50,000 h. This t-life is often marked as t_a and is the temperature of the air in the vicinity of the component and is not related to the luminaire t_a. As such, luminaire manufacturers should measure air temperature in the vicinity of such components, within the luminaire, as even those complying with their t_c point measurements can still fail prematurely if t-life is exceeded.		P
13.3	Variation <i>Delete</i> Clause 13.3 and <i>replace</i> with the following: 13.3 Resistance to flame and ignition Parts of non-metallic material shall be resistant to flame and ignition. For materials other than ceramic, compliance is checked by the tests of 13.3.1 and 13.3.2, and 13.3.3 as appropriate. This requirement does not apply to decorative trims, knobs, wiring insulation and other parts not likely to be ignited or to propagate flames from inside the luminaire. This Clause applies to all parts, including components, even if they have been tested to their own IEC or equivalent standard.		P

Attachment No. 2

Page 16 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
	13.3.1 Parts of non-metallic material supporting connections that could become an ignition source, and parts of non-metallic material within a distance of 3 mm of such connections, shall withstand the glow wire test. Welded connections, soldered connections on printed circuit boards and other connections carrying less than 0.2 A during normal operation are not considered to be an ignition source. The test apparatus, test procedure and criteria shall be those specified in AS/NZS 60695.2.11. The glow wire is heated to 750 °C and applied to one test sample for 30 s or glowing of the sample shall extinguish within 30 s of withdrawing the glow-wire, and any burning or molten drop shall not ignite a single layer of tissue paper specified in 4.187 of ISO 4046-4:2002, spread out horizontally 200 mm ± 5 mm below the sample.	Terminal block for input/output of LED driver for models except 057 and 057S series models; AC/DC water connector for 057 and 057S series models; Bifurcate terminal for models more than one LED module except 066 series models; Waterproof connector of bifurcate terminal for models more than one LED module except 066 series models; Bifurcate terminal for 066 series models; SMT connector on LED module	P
	13.3.2 All other parts of non-metallic material which do not support connections that could become an ignition source, but provide protection against electric shock or maintain creepage and clearances, shall withstand the glow wire test. The test apparatus, test procedure and criteria shall be those specified in AS/NZS 60695.2.11. The glow wire is heated to 650 °C and applied to one test sample for 30 s.	Plastic cover and lens	P
	13.3.3 During the application of the glow wire test of Clause 13.3.1 and 13.3.2, if a flame is produced that persists for longer than 2 s, the luminaire is further tested as follows: The needle-flame test of AS/NZS 60695.11.5 is applied to non-metallic parts that encroach within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm above the point of application of the glow wire. Parts shielded by a barrier that meets the needle-flame test of AS/NZS 60695.11.5 are not tested. NOTE This requires the needle flame to be applied to all parts likely to be impinged upon by the glow-wire flame within the hypothetical envelope of a vertical cylinder positioned above the point of application of the glow-wire. This applies to all parts unless there is a barrier that passes the needle-flame test and is within the cylinder and would protect the part from the glow-wire flame.	Terminal block for input/output of LED driver for models except 057 and 057S series models; AC/DC water connector for 057 and 057S series models; Bifurcate terminal for 066 series models	P



Attachment No. 2

Page 17 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict
Bibliography	Addition <i>Add</i> the following new informative references: IEC 60252, AC motor capacitors (all parts) AS/NZS 60335.1, Household and similar electrical appliances—Safety, Part 1: General requirements (IEC 60335-1 Ed. 5, MOD)		N/A



Attachment No. 2

Page 18 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-1
STANDARD DIFFERENCES BETWEEN IEC 60598-1:2014 AND
IEC 60598-1:2014/AMD1:2017
Luminaires
Part 1: General requirements and tests

Differences according to.....: IEC 60598-1:2014

Note: IEC 60598-1:2014/AMD1:2017 scope and clause cover IEC 60598-1:2014, no additional differences list.

Attachment No. 2

Page 19 of 19

Report No.: 211-14180651-000

IEC60598_2_3L ATTACHMENT			
Clause	Requirement - Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60598-2-3 Australia and New Zealand NATIONAL DIFFERENCES Luminaires Part 2.3: Particular requirements– Luminaires for road and street lighting			
Differences according to AS/NZS 60598.2.3:2015 Compared to IEC 60598-2-3:2002; IEC 60598-2-3:2002/AMD1:2011			

	Variations to IEC 60598-2-3, Ed.3.1 (2011) form the Australian/New Zealand variations for the purposes of the IECEE Scheme for recognition of testing to standards for safety of electrical equipment (the CB Scheme). They are listed in this Appendix for easy reference and will be published in the CB bulletin (AS/NZS 60598.2.3:2015)		
3.1	At the end of Clause 3.1, add the following test: This standard also specified the safety requirements for road and street light luminaires to provide adequate protection from water and ambient temperature conditions that may be expected in Australia and New Zealand. This Standard is to be read in conjunction with AS/NZS 60598.1		p
3.2	Addition After the second paragraph, <i>add</i> the following text: In Australia, the declared ambient temperature t_a shall be 40 °C or above, for the thermal tests of Clause 3.12. In Australia and New Zealand, the IP rating for water tests of Clause 3.12 or 3.13 shall be IPX4. (AS/NZS 60598.2.3:2015)	t_a: 45°C; IP66 or IP65 (see 'General product information' for details)	P
3.6.1	In Australia and New Zealand, all luminaires shall have protection against ingress of moisture of at least IPX4, except for tunnel-lighting luminaires and glazing of column-integrated luminaires with an open-sided external part, for which IPX5 is required. (AS/NZS 60598.2.3:2015)	IP66 or IP65 (see 'General product information' for details)	P



Attachment No. 3

Page 1 of 6

Report No.: 211-14180651-000

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict

TEST REPORT IEC 62031 LED modules for general lighting – Safety specifications			
---	--	--	--

	GENERAL REQUIREMENTS		¾
4.4	Integral modules tested assembled in the luminaire		P
4.5	Independent modules complies with requirements in IEC 60598-1		N/A

5	GENERAL TEST REQUIREMENTS		¾
5.5	SELV-operated LED modules comply with Annex I of IEC 61347-2-13	(see Annex 1)	N/A
	General conditions for tests in Annex A	(see Annex A)	P

6	CLASSIFICATION		¾
	Built-in module	Yes ☐ No ☒	¾
	Independent module.....	Yes ☐ No ☒	¾
	Integral module	Yes ☒ No ☐	¾
	For Integral module; Note to 1.2.1 in IEC 60598-1 applies.		¾

7	MARKING		N/A
	Requirements not applicable to the evaluated product.		¾

8	TERMINALS		N/A
	Requirements not applicable to the evaluated product.		¾

9 (9)	PROVISION FOR PROTECTIVE EARTHING		N/A
	Requirements not applicable to the evaluated product.		¾

10 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		¾
	Requirements not applicable to the evaluated product.		N/A

11 (11)	MOISTURE RESISTANCE AND INSULATION		¾
	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MW):		P

Attachment No. 3

Page 2 of 6

Report No.: 211-14180651-000

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	For basic insulation ³ 2 MW	100MW	P
	For double or reinforced insulation ³ 4 MW.....		N/A
	Between primary and secondary circuits in controlgear providing SELV, values in Annex L in IEC 61347-1		N/A

12 (12)	ELECTRIC STRENGTH		¾
	Immediately after clause 11 electric strength test for 1 min		P
	Basic insulation for SELV, test voltage 500 V		P
	Working voltage £ 50 V, test voltage 500 V		N/A
	Working voltage > 50 V £ 1000 V, test voltage (V):		N/A
	Basic insulation, 2U + 1000 V		N/A
	Supplementary insulation, 2U + 1000 V		N/A
	Double or reinforced insulation, 4U + 2000 V		N/A
	No flashover or breakdown		P
	Solid or thin sheet insulation for double or reinforced insulation fulfil the requirements in Annex N in IEC 61347-1		N/A

13 (14)	FAULT CONDITIONS		¾
- (14)	When operated under fault conditions the controlgear:		N/A
	- does not emit flames or molten material		N/A
	- does not produce flammable gases		N/A
	- protection against accidental contact not impaired		N/A
	Thermally protected controlgear does not exceed the marked temperature value		N/A
	Fault conditions: capacitors, resistors or inductors without proof of compliance with relevant specifications have been short-circuited or disconnected	(see appended table)	N/A
- (14.1)	Short-circuit of creepage distances and clearances if less than specified in clause 16 in Part 1 (except between live parts and accessible metal parts)	(see appended table)	N/A
	Creepage distances on printed boards less than specified in clause 16 in Part 1 provided with coating according to IEC 60664-3		N/A
- (14.2)	Short-circuit or interruption of semiconductor devices	(see appended table)	N/A
- (14.3)	Short-circuit across insulation consisting of lacquer, enamel or textile	(see appended table)	N/A

Attachment No. 3

Page 3 of 6

Report No.: 211-14180651-000

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
- (14.4)	Short-circuit across electrolytic capacitors	(see appended table)	N/A
- (14.5)	After the tests has been carried out on three samples:		N/A
	The insulation resistance ³ 1 MW :		N/A
	No flammable gases		N/A
	No accessible parts have become live		N/A
	During the tests, a five-layer tissue paper, where the test specimen is wrapped, does not ignite		N/A
- (14.6)	Relevant fault condition tests with high-power supply		N/A
13.2	Overpower condition		P
	Module withstands overpower condition >15 min.		P
	Module with automatic protective device or power limiter, test performed 15 min. at limit.		N/A
	No fire, smoke or flammable gas is produced		P
	Molten material does not ignite tissue paper, spread below the module		P
15	CONSTRUCTION		¾
	Wood, cotton, silk, paper and similar fibrous material not used as insulation		P
16 (16)	CREEPAGE DISTANCES AND CLEARANCES		¾
- (16)	Creepage and distances and clearances in compliance with IEC 61347-1	(see appended table)	N/A
	Insulating lining of metallic enclosures		N/A
	Basic insulation on printed boards tested according to clause 14		N/A
	Distances subjected to both sinusoidal voltage as non-sinusoidal pulses not less than value in Table 16		N/A
	Creepage distances not less than minimum clearance		N/A
16 (-)	Conductive accessible parts in compliance with applicable parts of IEC 60598-1	See table 3.7 (11.2) of IEC 60598-2-3	P
17 (17)	SCREWS, CURRENT-CARRYING PARTS AND CONNECTIONS		¾
	Cl. 17 refer to Cl. 17 of IEC 61347-1 which refer to Cl. 4.11 and 4.12 of IEC 60598-1 (clause numbers between parentheses refer to IEC 60598-1)		¾
(4.11)	Electrical connections		P
(4.11.1)	Contact pressure		P
(4.11.2)	Screws:		N/A

Attachment No. 3

Page 4 of 6

Report No.: 211-14180651-000

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
	- self-tapping screws		N/A
	- thread-cutting screws		N/A
(4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
(4.11.4)	Material of current-carrying parts		P
(4.11.5)	No contact to wood or mounting surface		P
(4.11.6)	Electro-mechanical contact systems		N/A
(4.12)	Mechanical connections and glands		N/A
(4.12.1)	Screws not made of soft metal		N/A
	Screws of insulating material		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
	Torque test: torque (Nm); part.....:		N/A
(4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
(4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm).....:		N/A
	- lampholder; torque (Nm).....:		N/A
	- push-button switches; torque 0,8 Nm.....:		N/A
(4.12.5)	Screwed glands; force (Nm).....:		N/A
18 (18)	RESISTANCE TO HEAT, FIRE AND TRACKING		¾
- (18.1)	Ball-pressure test	See Test Table 18 (18.1)	N/A
- (18.3)	Glow-wire test (650°C)	See Test Table 18 (18.3)	N/A
- (18.4)	Needle-flame test (10 s)	See Test Table 18 (18.4)	N/A
- (18.5)	Proof tracking test	See Test Table 18 (18.5)	N/A
19 (19)	RESISTANCE TO CORROSION		¾
	- test according 4.18.1 of IEC 60598-1		N/A
	- adequate varnish on the outer surface		N/A
20	INFORMATION FOR LUMINAIRE DESIGN		¾
	Information in Annex D (informative)		¾



Attachment No. 3

Page 5 of 6

Report No.: 211-14180651-000

IEC 62031			
Clause	Requirement + Test	Result - Remark	Verdict
21	HEAT MANAGEMENT		¾
21.1	General		N/A
	Exchangeability is safeguarded by cap or base		N/A
21.2	Heat-conducting foil and paste		N/A
	Heat-conducting foil delivered with the module if necessary		N/A
22	PHOTOBIOLOGICAL SAFETY		¾
22.1	UV radiation		N/A
	Luminous radiation not exceed 2mW/klm		N/A
22.2	Blue light hazard		P
	Assessed according to IEC TR 62778	RG1	P
22.3	Infrared radiation		N/A
	Requirements for infrared radiation when required		N/A
A	ANNEX A - TESTS		¾
	All tests performed in accordance with the advice given in Annex H of IEC 61347-1, if applicable		P
ANNEX 1	SELV-operated LED modules		N/A
	Requirements not applicable to the evaluated product.		¾



Attachment No. 3

Page 6 of 6

Report No.: 211-14180651-000

IEC62031E - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62031 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES LED modules for general lighting – Safety specifications			
Differences according to.....: EN 62031:2008+A1:2013+A2:2015			

	CENELEC COMMON MODIFICATIONS (EN)		N/A
	No Common modifications		N/A

ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
	No special National conditions		N/A

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
	No National deviations		N/A

Attachment No. 4

Page 1 of 2

Report No.: 211-14180651-000

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

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

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

Attachment No. 4

Page 2 of 2

Report No.: 211-14180651-000

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Spectroradiometric measurement				P
	Measurement performed on:	☐ LED package ☐ LED module ☐ Lamp ☒ Luminaire		
	Model number.....:	1). PL-LD-057-250W; 2). PL-LD-068S-250W		
	Test voltage (V).....:	240V		¾
	Test current (A).....:	1). 1,068A 2). 1,075A		¾
	Test frequency (Hz).....:	50Hz		¾
	Ambient, t (°C).....:	25°C		¾
	Measurement distance.....:	☒ 20 cm ☐ ... cm		¾
	Source size	☒ Non-small ☐ Small: mm		¾
	Field of view	☐ 100 mrad ☒ 11 mrad ☐ 1,7 mrad (for small sources)		¾
Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	/	--
x/y colour coordinates			/	--
Blue light hazard radiance	L _B	W/(m ² •sr ¹)	1). 4150 2). 2940	RG1
Blue light hazard irradiance	E _B	W/m ²	/	--
Luminance	L	cd/m ²	1). 2,83x10 ⁶ 2). 1,95x10 ⁶	--
Illuminance	E	lx		--
Supplementary information: --				

Attachment No. 5

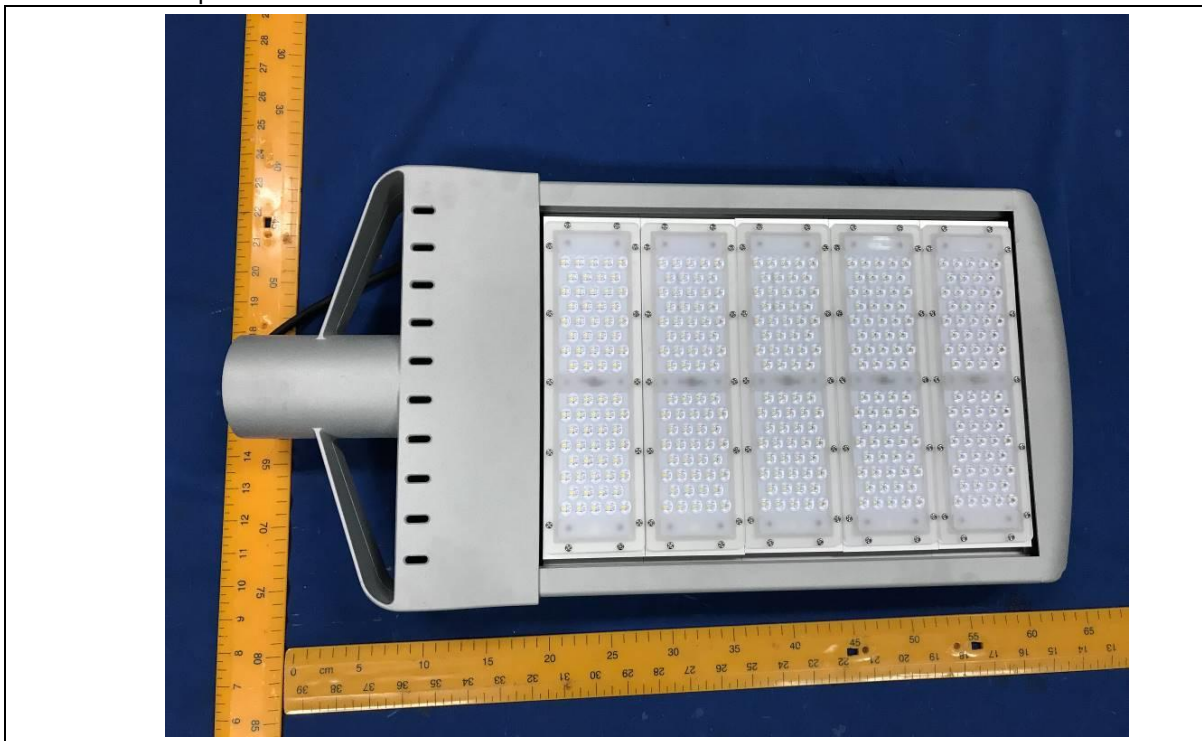
Photo documentation

Page 1 of 55

Report No.: 211-14180651-000

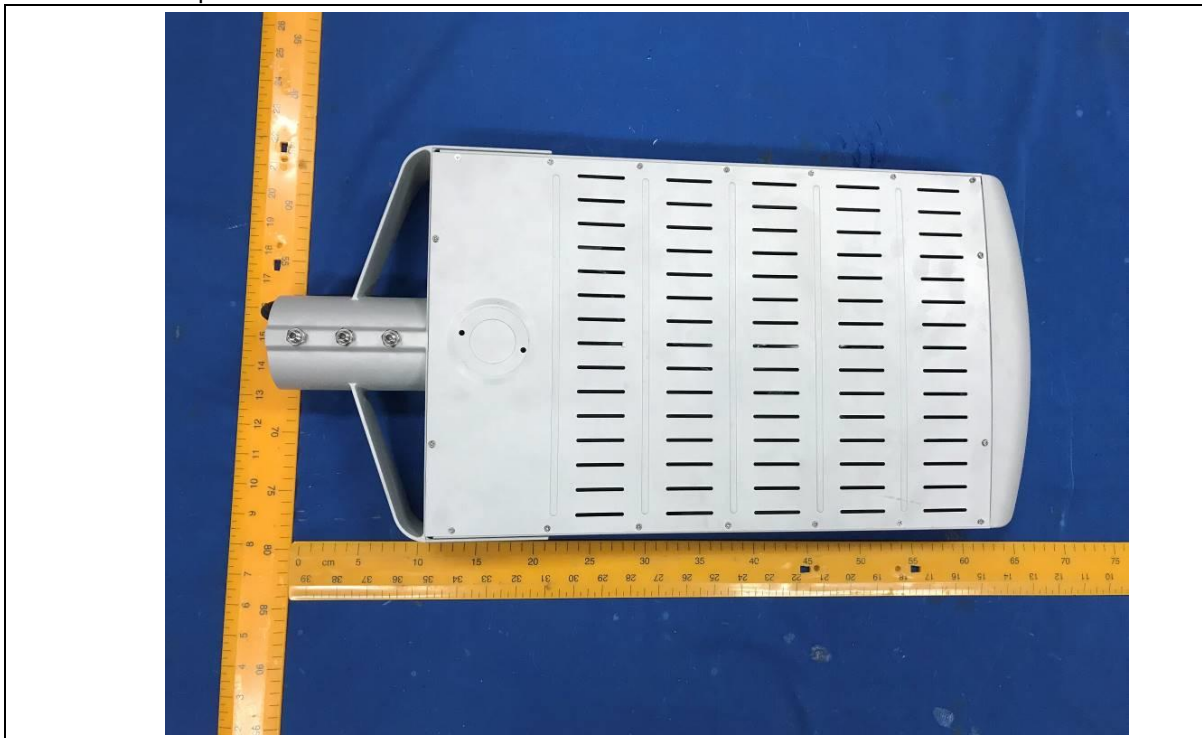
Details of: Outlook for 057 series models

Remark: Representative model PL-LD-057-250W



Details of: Outlook for 057 series models

Remark: Representative model PL-LD-057-250W



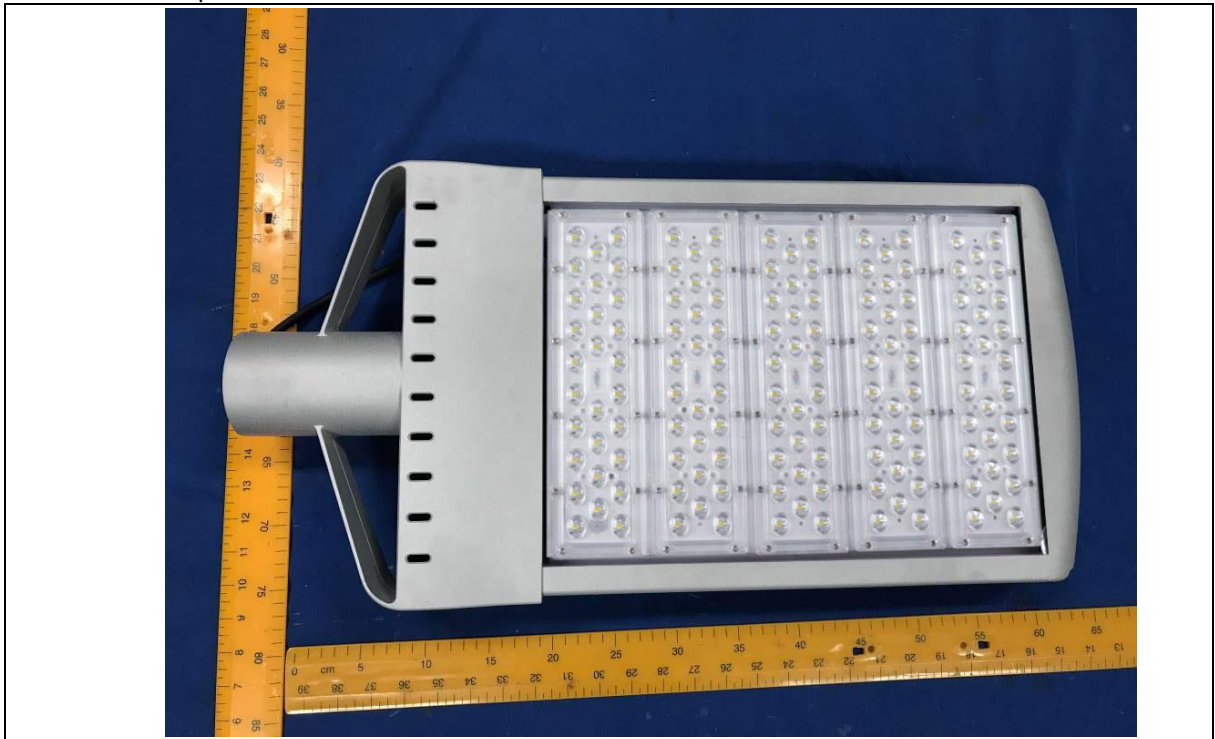
Attachment No. 5

Photo documentation

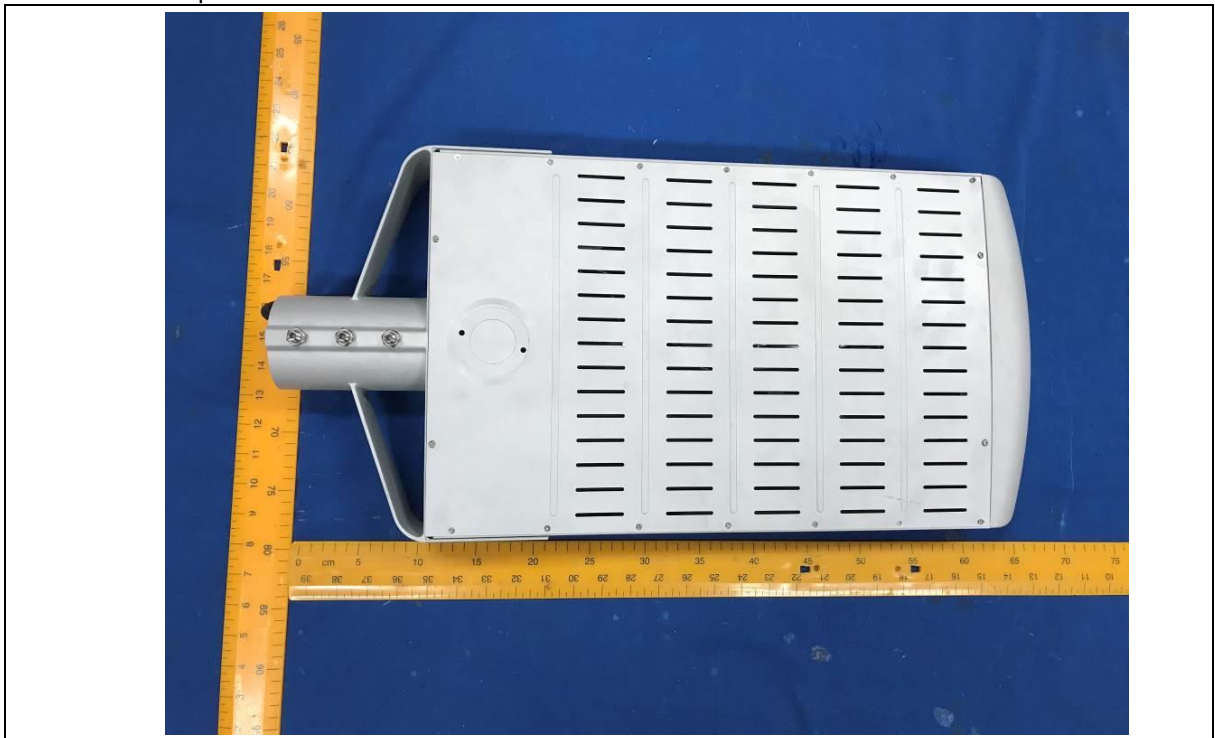
Page 2 of 55

Report No.: 211-14180651-000

Details of: Outlook for 057S series models
 Remark: Representative model PL-LD-057S-250W



Details of: Outlook for 057S series models
 Remark: Representative model PL-LD-057S-250W



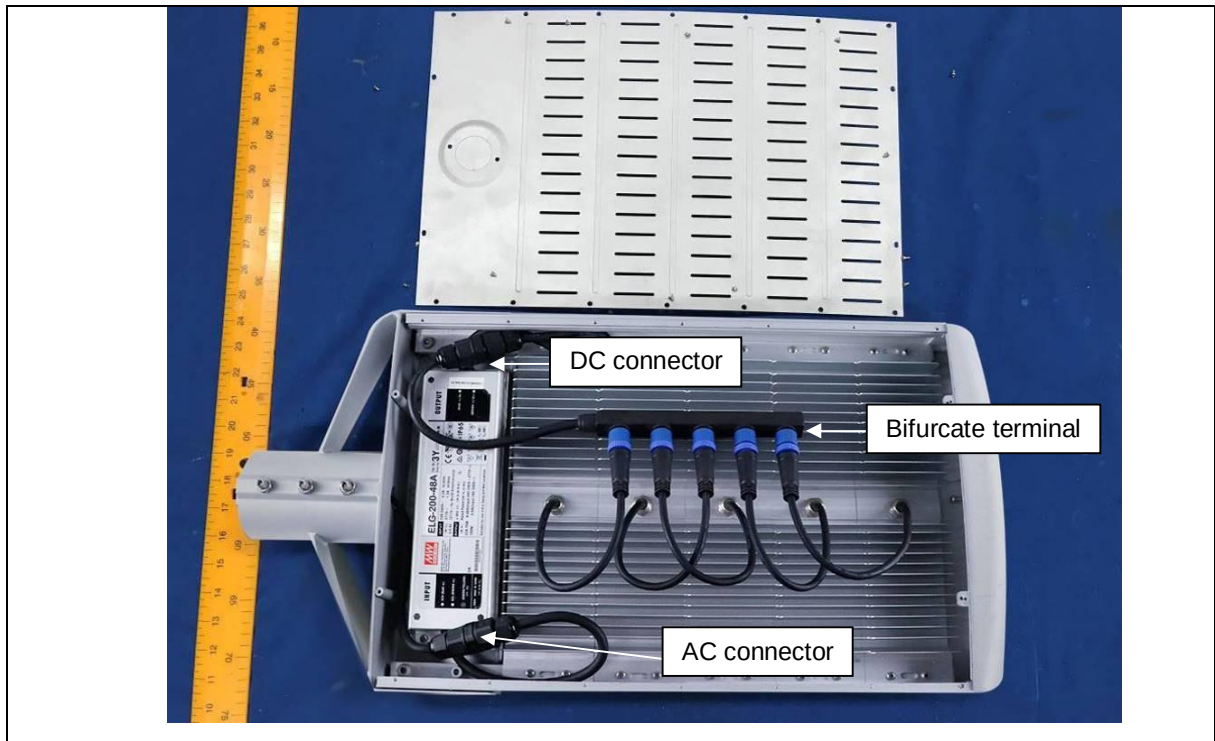
Attachment No. 5

Photo documentation

Page 3 of 55

Report No.: 211-14180651-000

Details of: Internal view for 057 and 057S series models



Details of: AC connector view for 057 and 057S series models



Attachment No. 5

Photo documentation

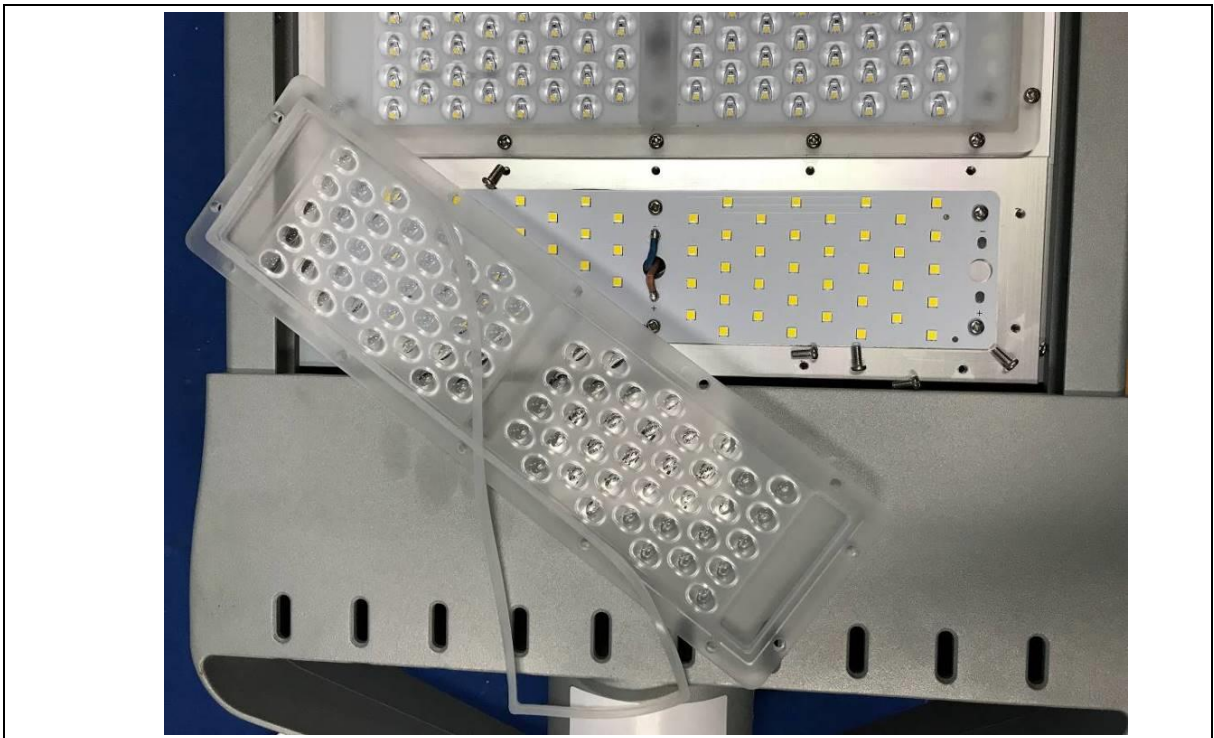
Page 4 of 55

Report No.: 211-14180651-000

Details of: AC connector internal view for 057 and 057S series models



Details of: LED module view for 057 series models



Attachment No. 5

Photo documentation

Page 5 of 55

Report No.: 211-14180651-000

Details of: LED module view for 057S series models



Details of: Outlook for 058 series models

Remark: Representative model PL-LD-058-250W



Attachment No. 5

Photo documentation

Page 6 of 55

Report No.: 211-14180651-000

Details of: Outlook for 058 series models

Remark: Representative model PL-LD-058-250W



Details of: Outlook for 058S series models

Remark: Representative model PL-LD-058S-250W



Attachment No. 5

Photo documentation

Page 7 of 55

Report No.: 211-14180651-000

Details of: Outlook for 058S series models
Remark: Representative model PL-LD-058S-250W



Details of: Detail view for 058 and 058S series models



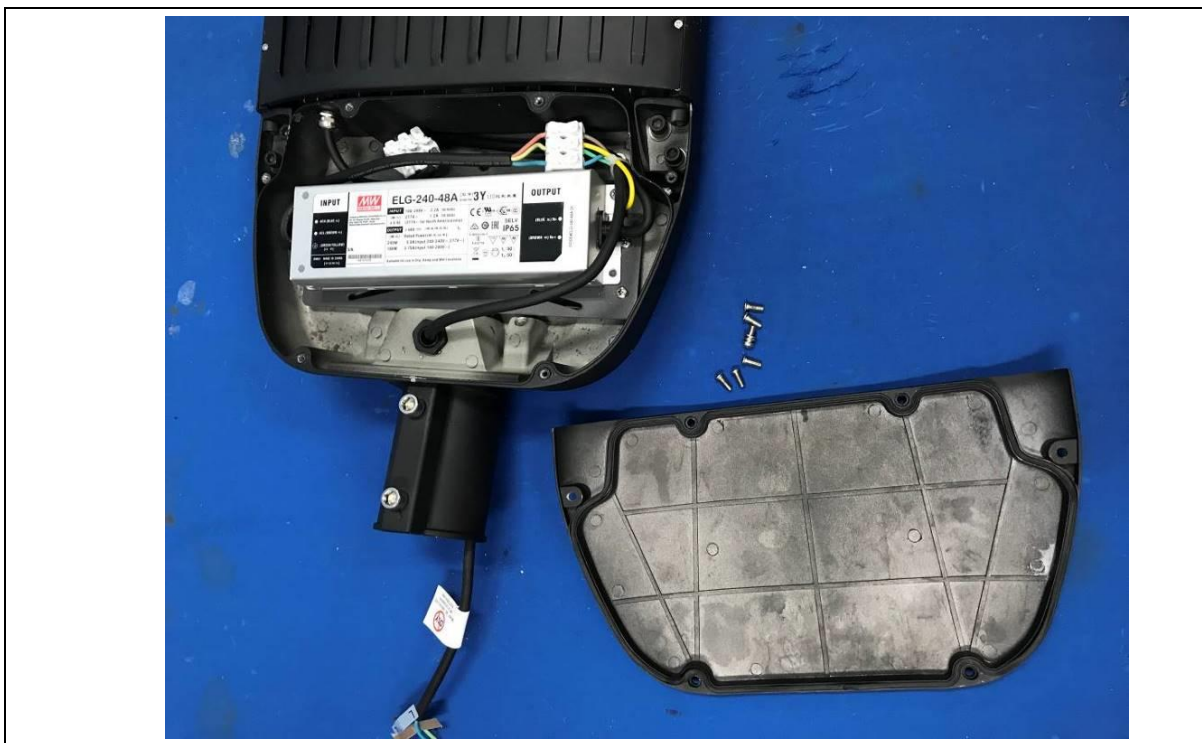
Attachment No. 5

Photo documentation

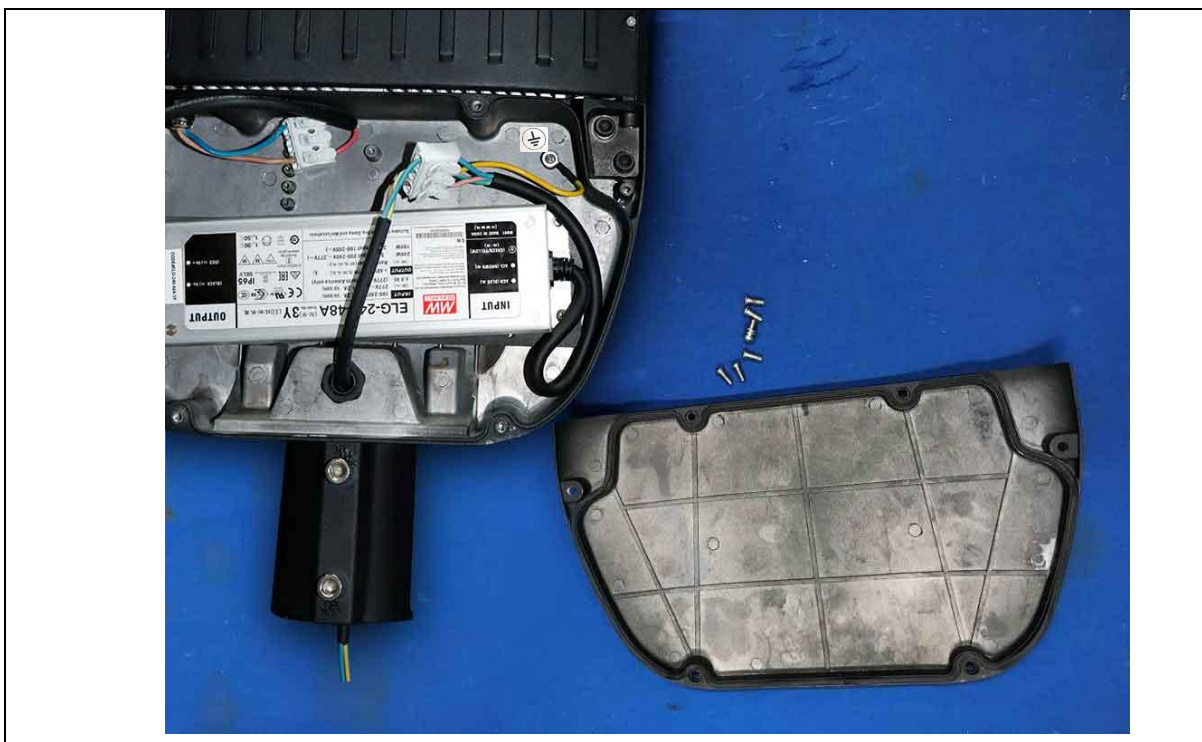
Page 8 of 55

Report No.: 211-14180651-000

Details of: Internal view for 058 and 058S series models



Details of: Earthing terminal view for 058 and 058S series models



Attachment No. 5

Photo documentation

Page 9 of 55

Report No.: 211-14180651-000

Details of: Internal view for 058 and 058S series models



Details of: LED module view for 058 series models



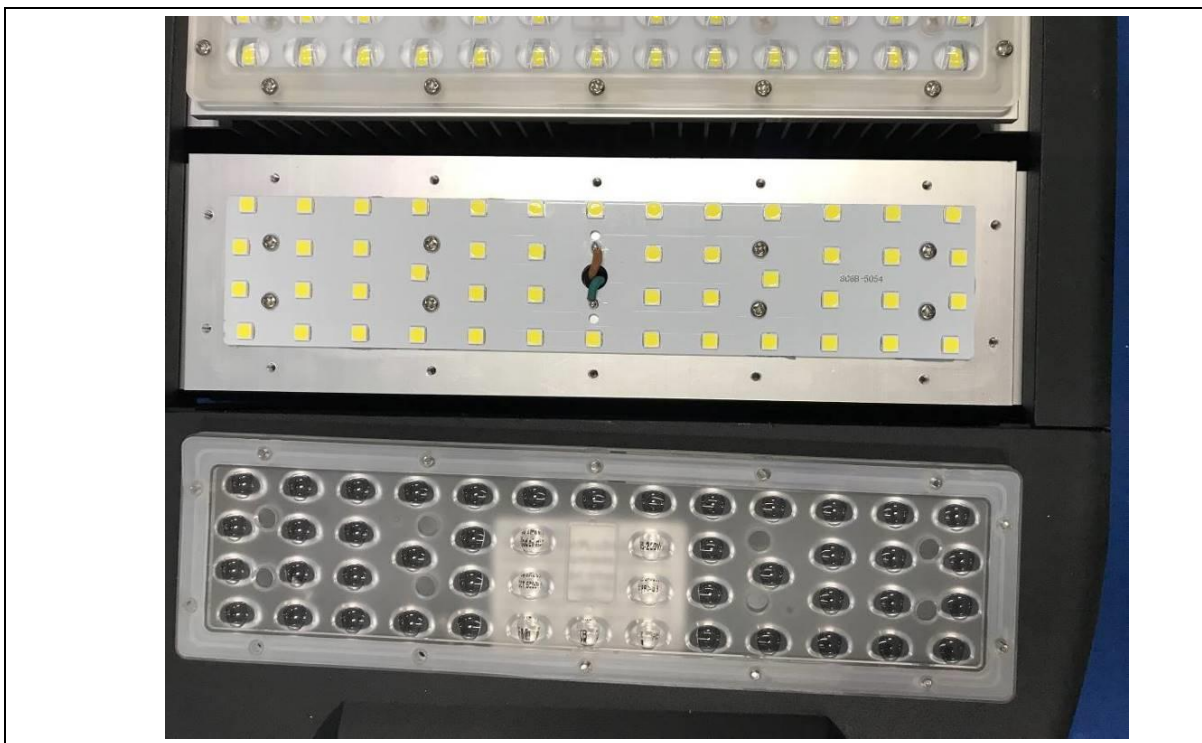
Attachment No. 5

Photo documentation

Page 10 of 55

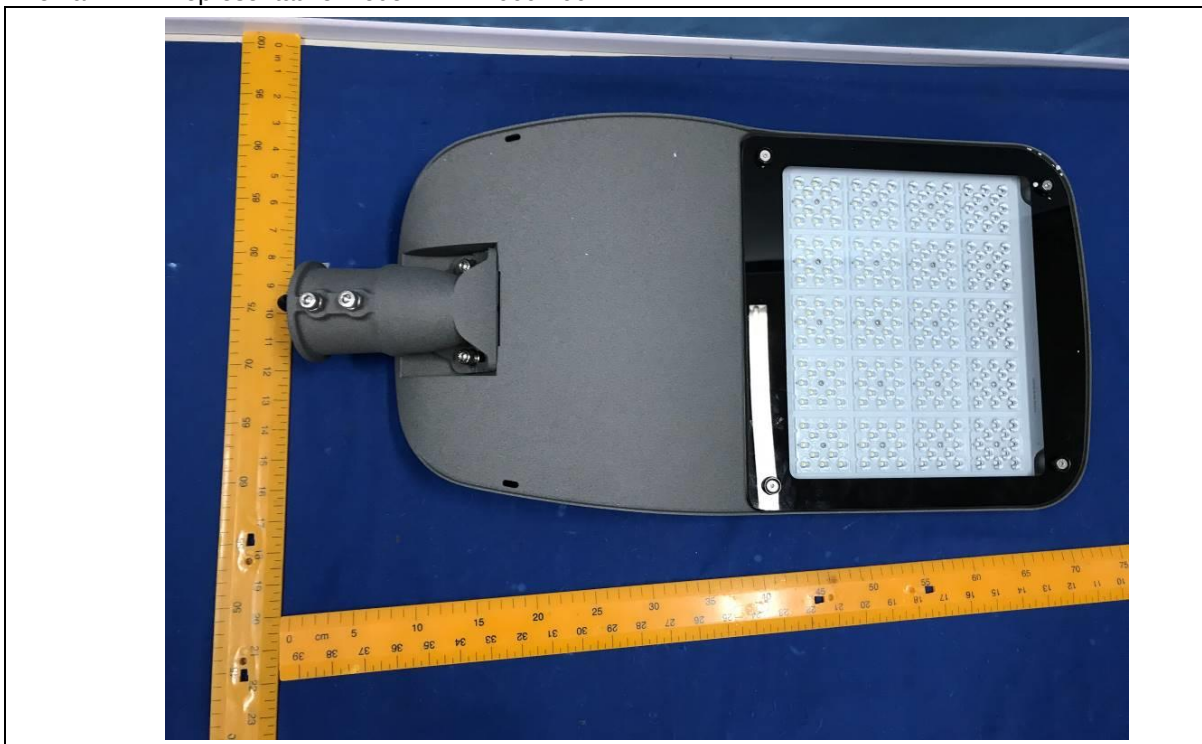
Report No.: 211-14180651-000

Details of: LED module view for 058S series models



Details of: Outlook for 060 series models

Remark: Representative model PL-LD-060-200W



Attachment No. 5

Photo documentation

Page 11 of 55

Report No.: 211-14180651-000

Details of: Outlook for 060 series models
 Remark: Representative model PL-LD-060-200W



Details of: Internal view for 060 series models
 Representative model PL-LD-060-200W



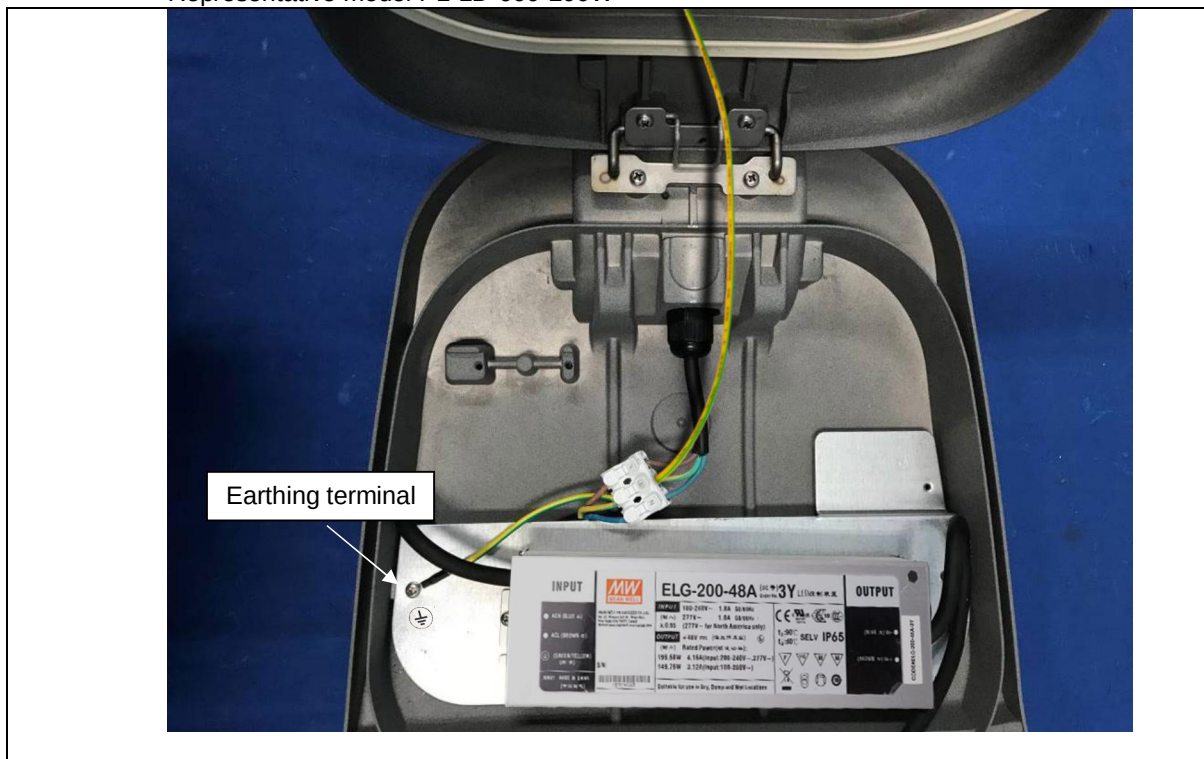
Attachment No. 5

Photo documentation

Page 12 of 55

Report No.: 211-14180651-000

Details of: Internal view for 060 series models
 Remark: Representative model PL-LD-060-200W



Details of: LED module view for 060 series models
 Remark: Representative model PL-LD-060-200W



Attachment No. 5

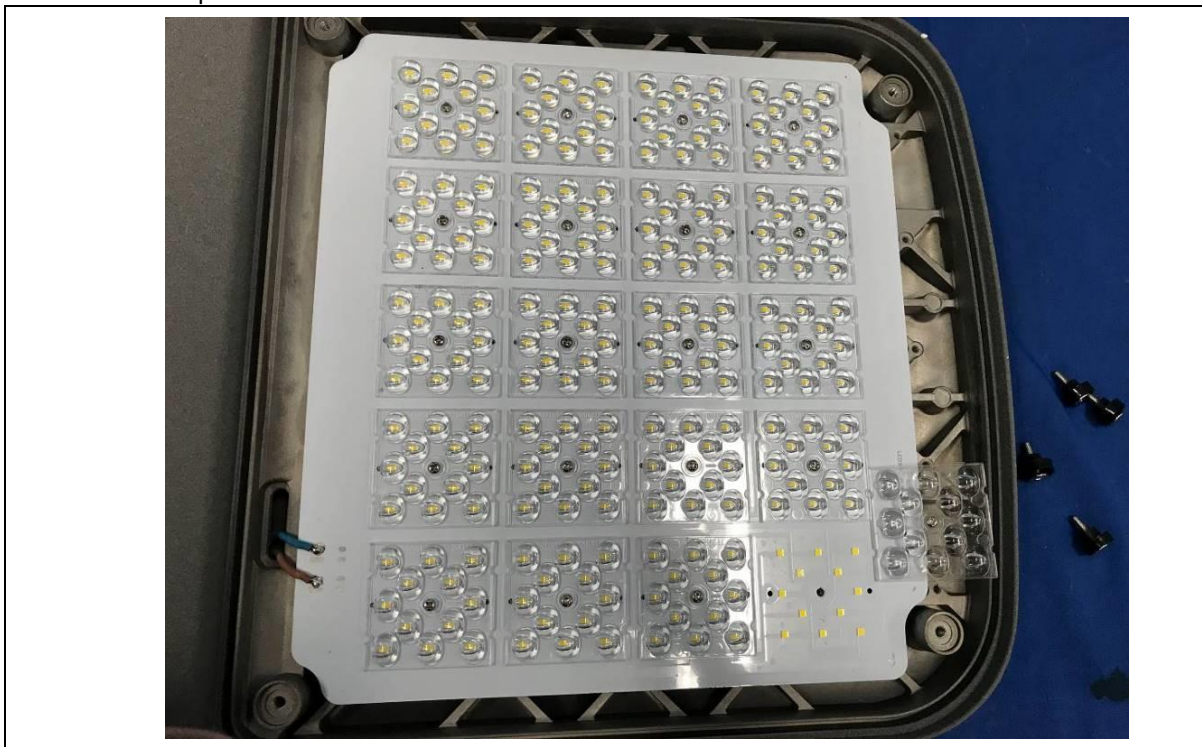
Photo documentation

Page 13 of 55

Report No.: 211-14180651-000

Details of: LED module view for 060 series models

Remark: Representative model PL-LD-060-200W



Details of: Outlook for 061 series models

Remark: Representative model PL-LD-061-200W



Attachment No. 5

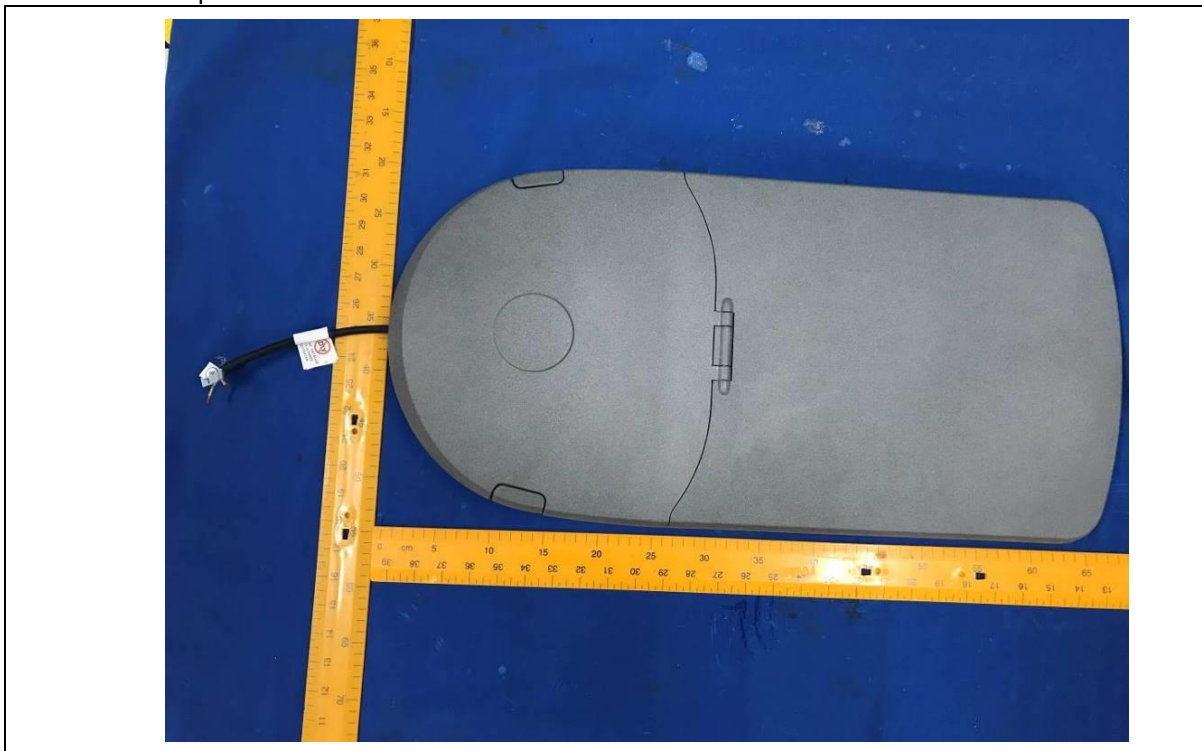
Photo documentation

Page 14 of 55

Report No.: 211-14180651-000

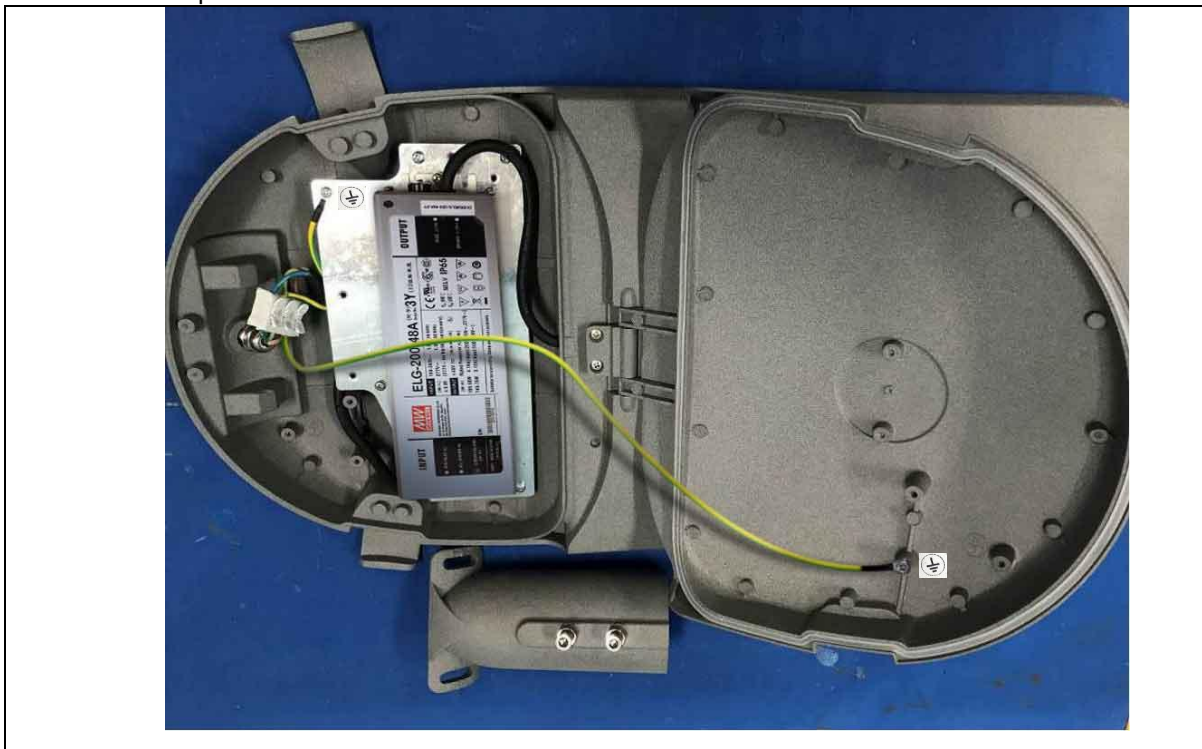
Details of: Outlook for 061 series models

Remark: Representative model PL-LD-061-200W



Details of: Internal view for 061 series models

Remark: Representative model PL-LD-061-200W



Details of: Internal view for 061 series models

Remark: Representative model PL-LD-061-200W



Details of: LED module view for 061 series models

Remark: Representative model PL-LD-061-200W



Attachment No. 5

Photo documentation

Page 16 of 55

Report No.: 211-14180651-000

Details of: LED module view for 061 series models

Remark: Representative model PL-LD-061-200W



Details of: Outlook for 062 series models

Remark: Representative model PL-LD-062-150W



Attachment No. 5

Photo documentation

Page 17 of 55

Report No.: 211-14180651-000

Details of: Outlook for 062 series models
Remark: Representative model PL-LD-062-150W



Details of: Internal view for 062 series models



Attachment No. 5

Photo documentation

Page 18 of 55

Report No.: 211-14180651-000

Details of: Internal view for 062 series models

Remark: Representative model PL-LD-062-150W



Details of: LED module view for 062 series models

Remark: Representative model PL-LD-062-150W



Attachment No. 5

Photo documentation

Page 19 of 55

Report No.: 211-14180651-000

Details of: Outlook for 065 series models

Remark: Representative model PL-LD-065-200W



Details of: Outlook for 065 series models

Remark: Representative model PL-LD-065-200W



Attachment No. 5

Photo documentation

Page 20 of 55

Report No.: 211-14180651-000

Details of: Internal view for 065 series models
 Remark: Representative model PL-LD-065-200W



Details of: LED module view for 065 series models
 Remark: Representative model PL-LD-065-200W



Attachment No. 5

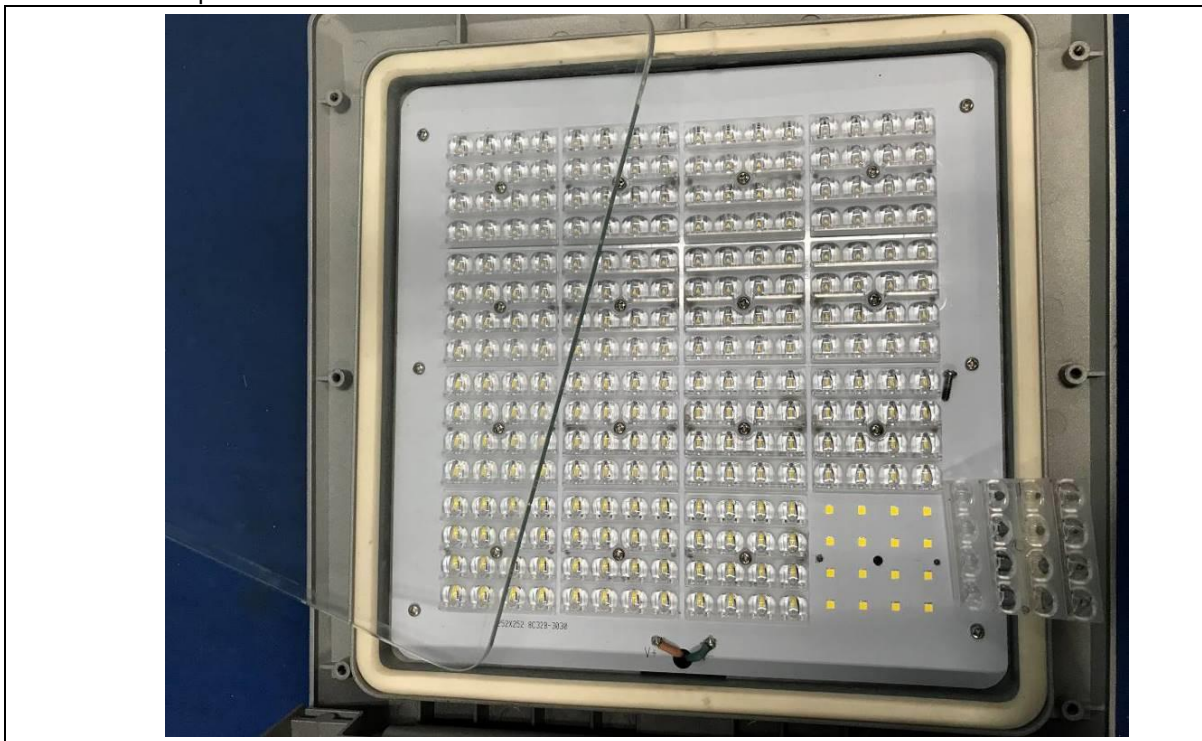
Photo documentation

Page 21 of 55

Report No.: 211-14180651-000

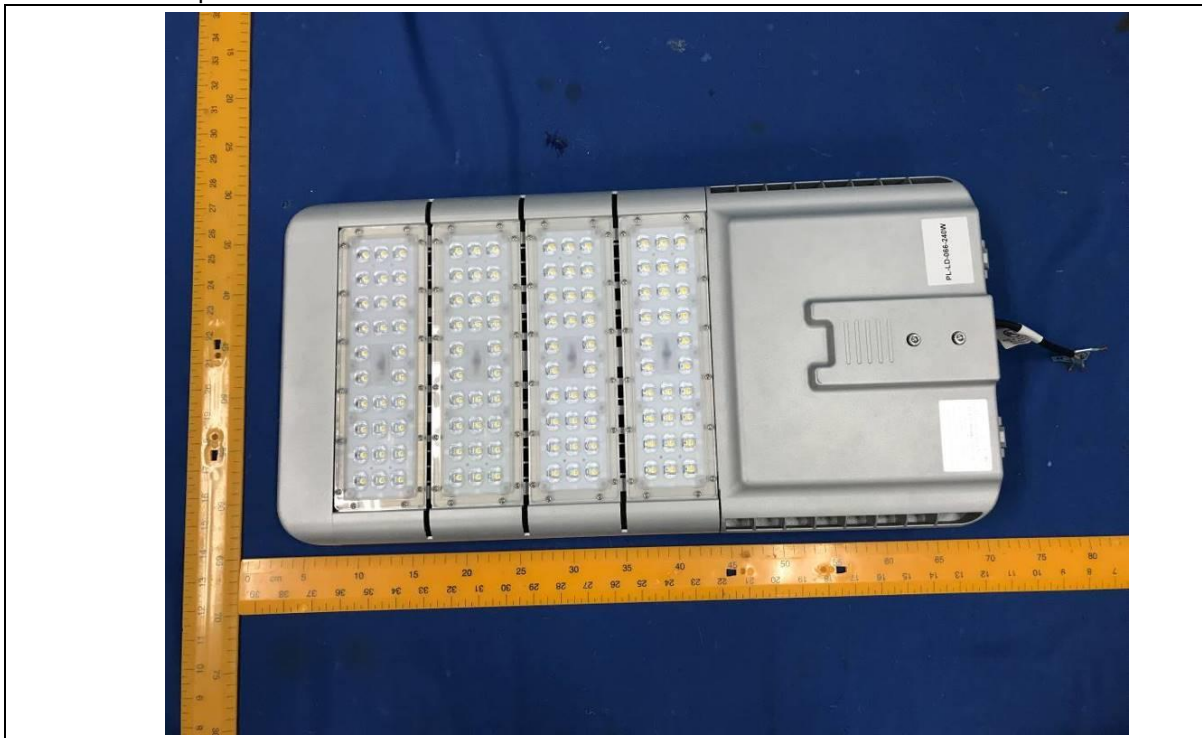
Details of: LED module view for 065 series models

Remark: Representative model PL-LD-065-200W



Details of: Outlook for 066 series models

Remark: Representative model PL-LD-066-240W



Attachment No. 5

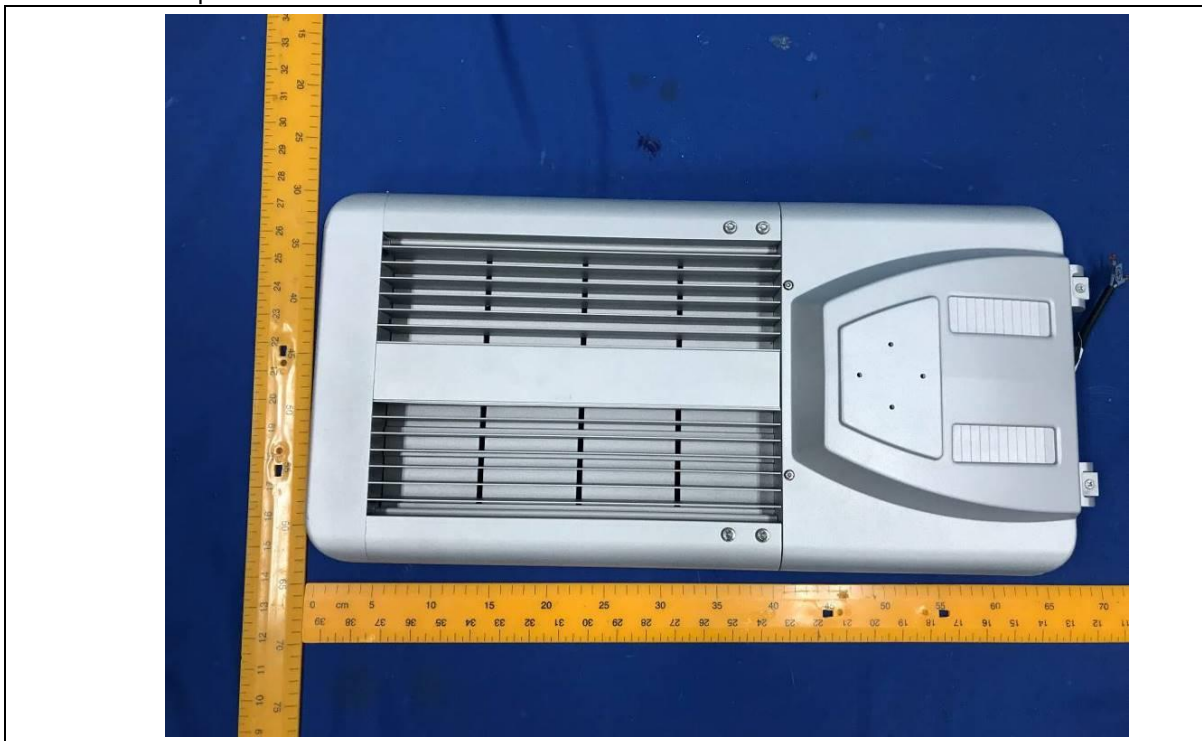
Photo documentation

Page 22 of 55

Report No.: 211-14180651-000

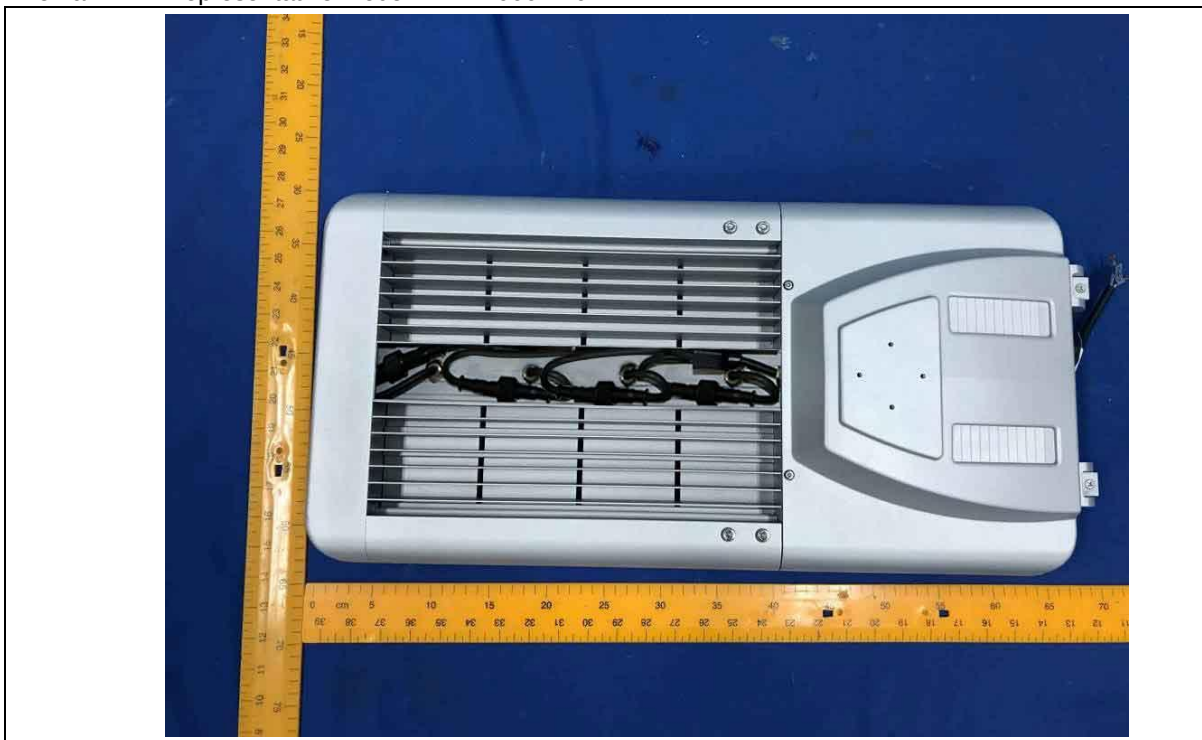
Details of: Outlook for 066 series models

Remark: Representative model PL-LD-066-240W



Details of: Back internal view for 066 series models

Remark: Representative model PL-LD-066-240W



Attachment No. 5

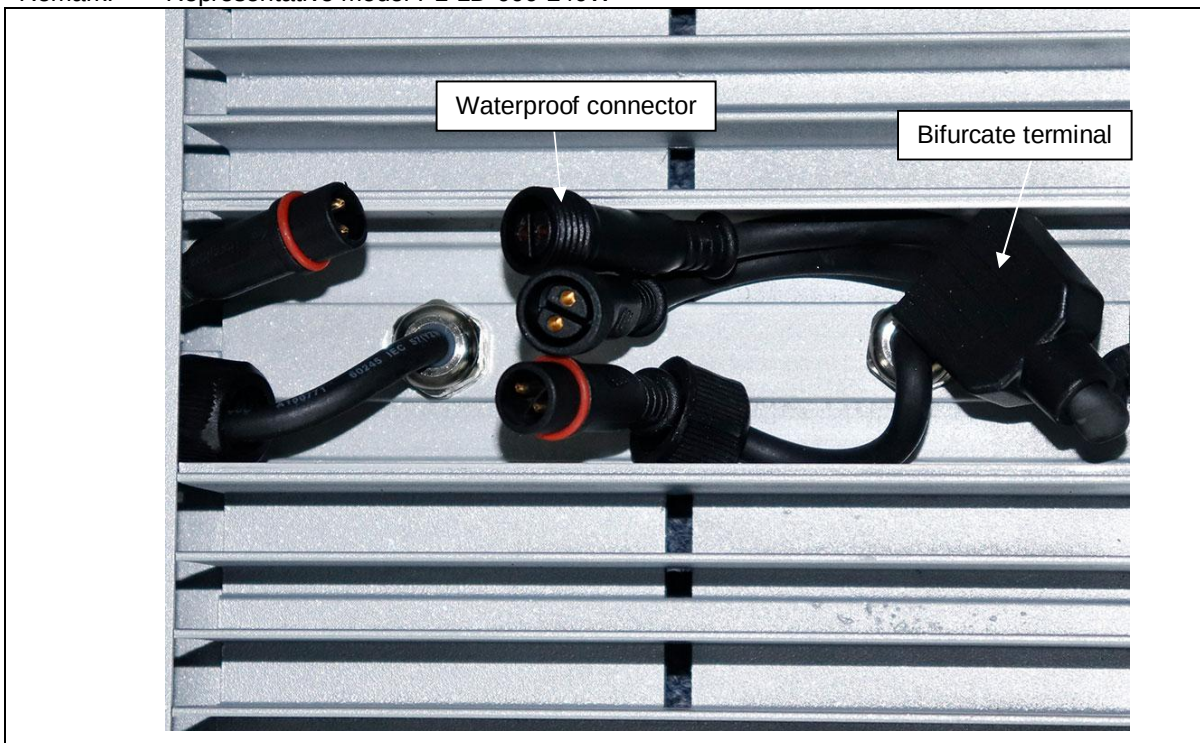
Photo documentation

Page 23 of 55

Report No.: 211-14180651-000

Details of: Waterproof connector and bifurcate terminal view for 066 series models

Remark: Representative model PL-LD-066-240W



Details of: Bifurcate terminal view for 066 series models

Remark: Representative model PL-LD-066-240W



Attachment No. 5

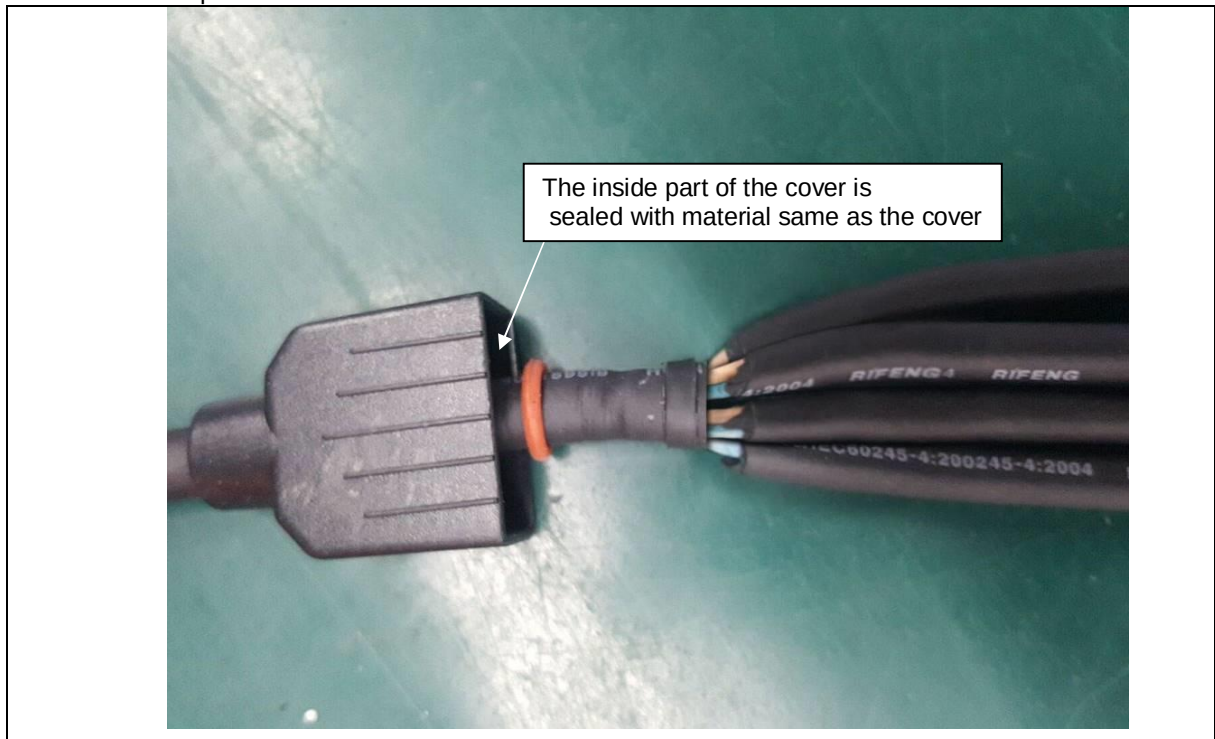
Photo documentation

Page 24 of 55

Report No.: 211-14180651-000

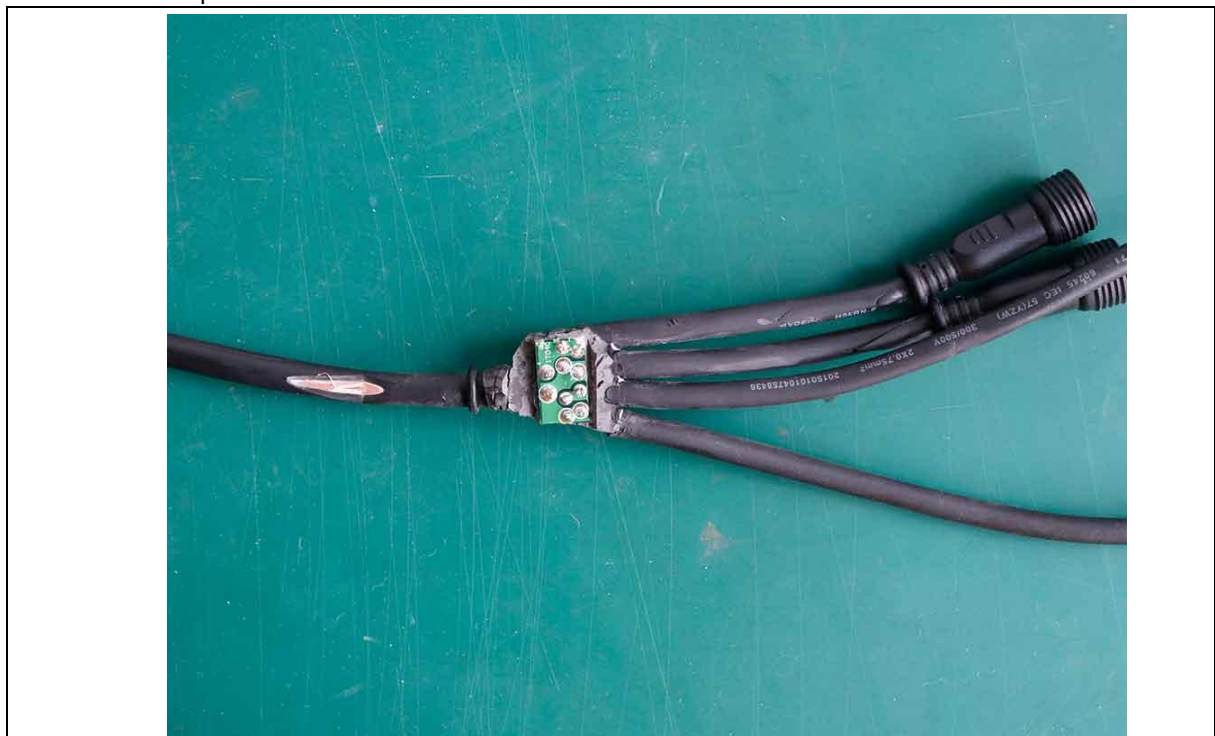
Details of: Bifurcate terminal internal view for 066 series models

Remark: Representative model PL-LD-066-240W



Details of: Bifurcate terminal internal view for 066 series models

Remark: Representative model PL-LD-066-240W



Attachment No. 5

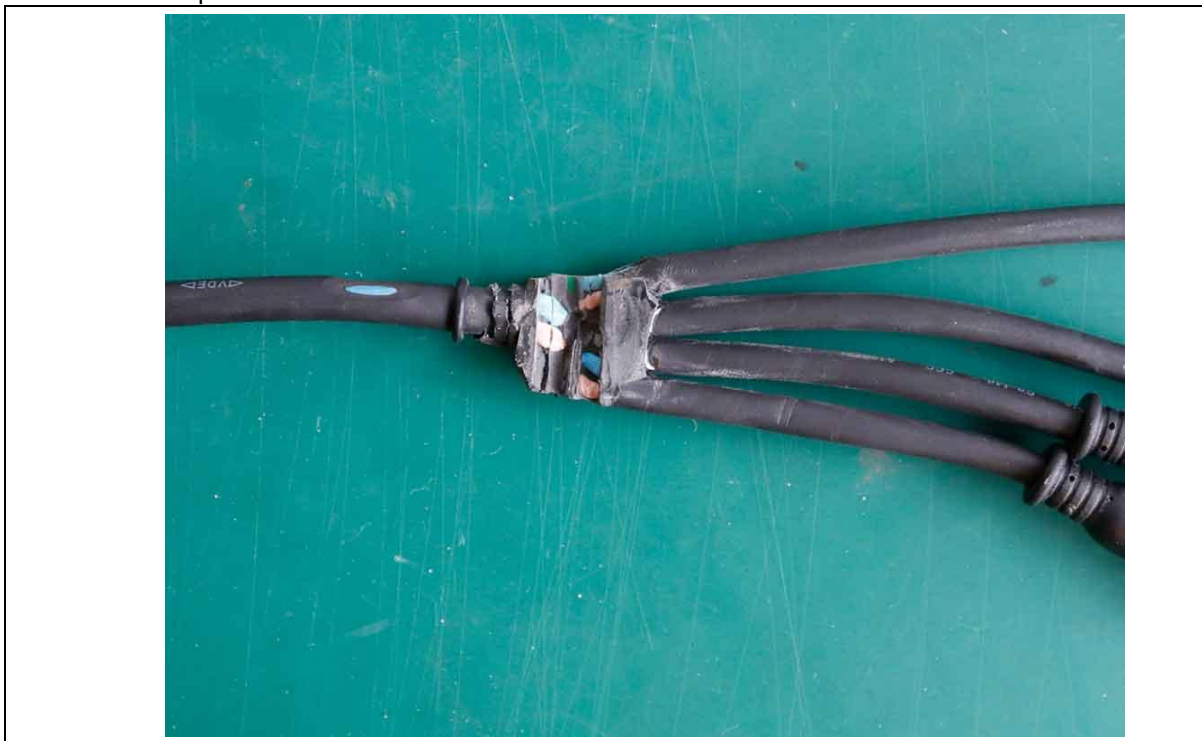
Photo documentation

Page 25 of 55

Report No.: 211-14180651-000

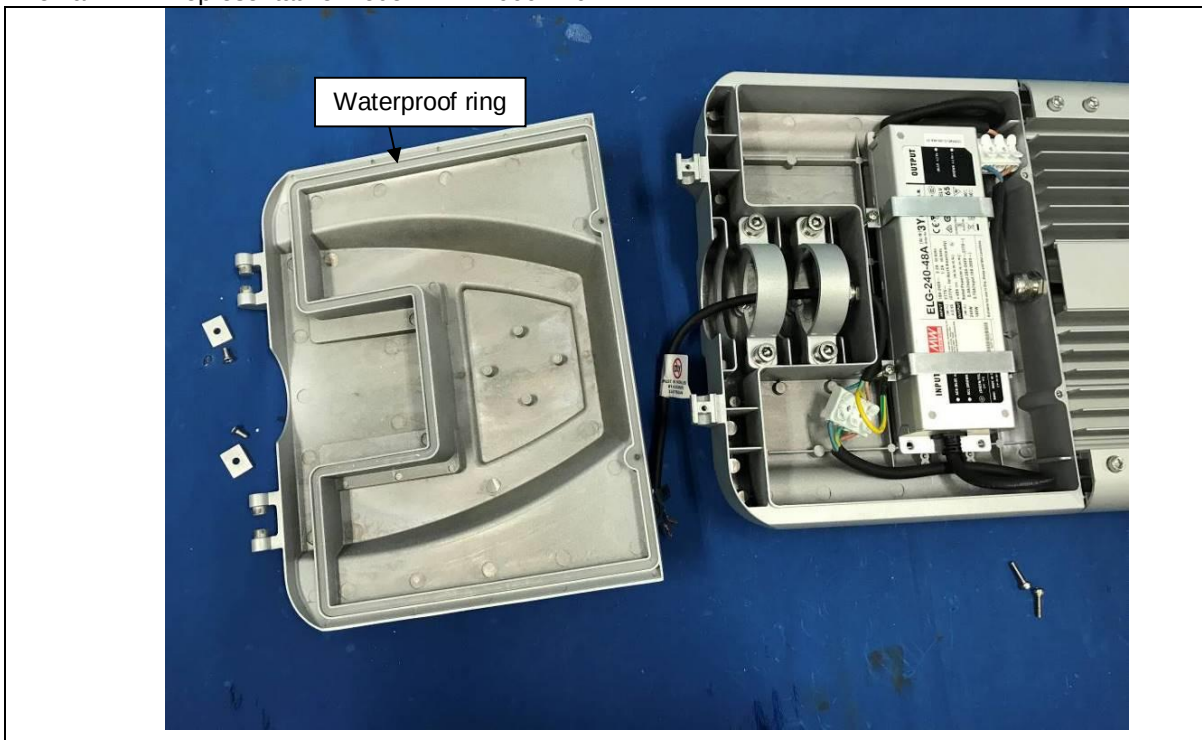
Details of: Bifurcate terminal internal view for 066 series models

Remark: Representative model PL-LD-066-240W



Details of: Internal view for 066 series models

Remark: Representative model PL-LD-066-240W



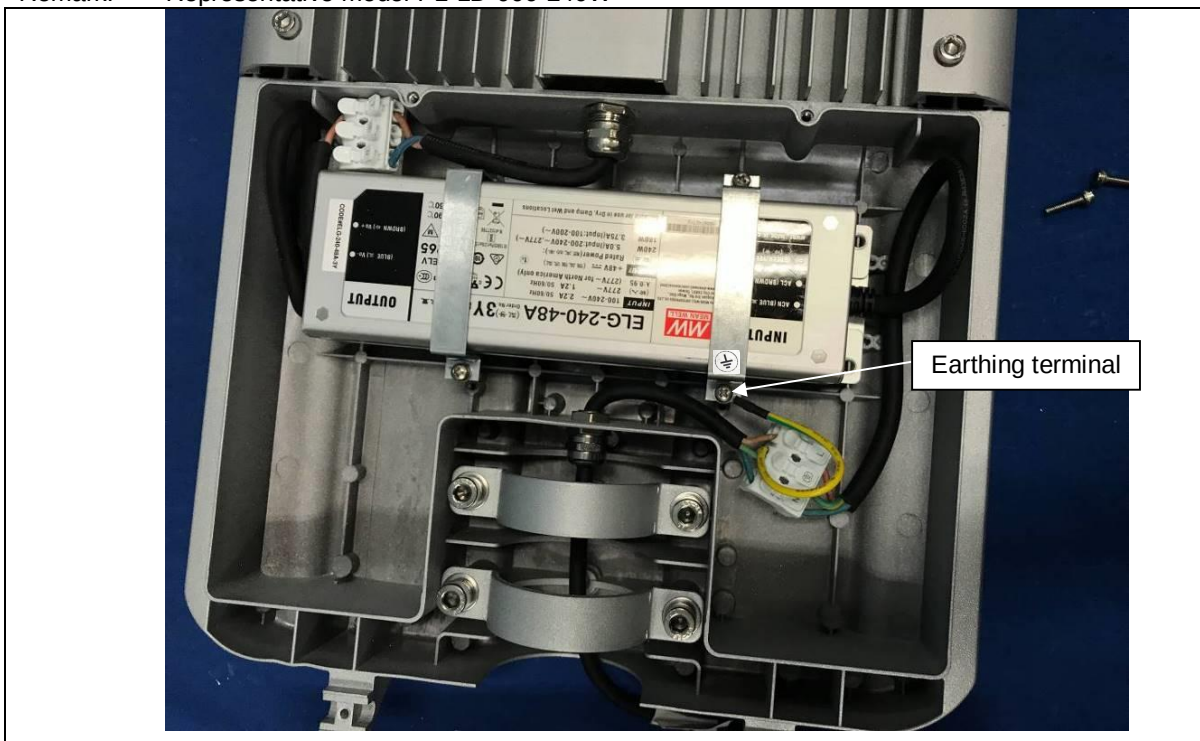
Attachment No. 5

Photo documentation

Page 26 of 55

Report No.: 211-14180651-000

Details of: Internal view for 066 series models
 Remark: Representative model PL-LD-066-240W



Details of: LED module view for 066 series models
 Remark: Representative model PL-LD-066-240W



Attachment No. 5

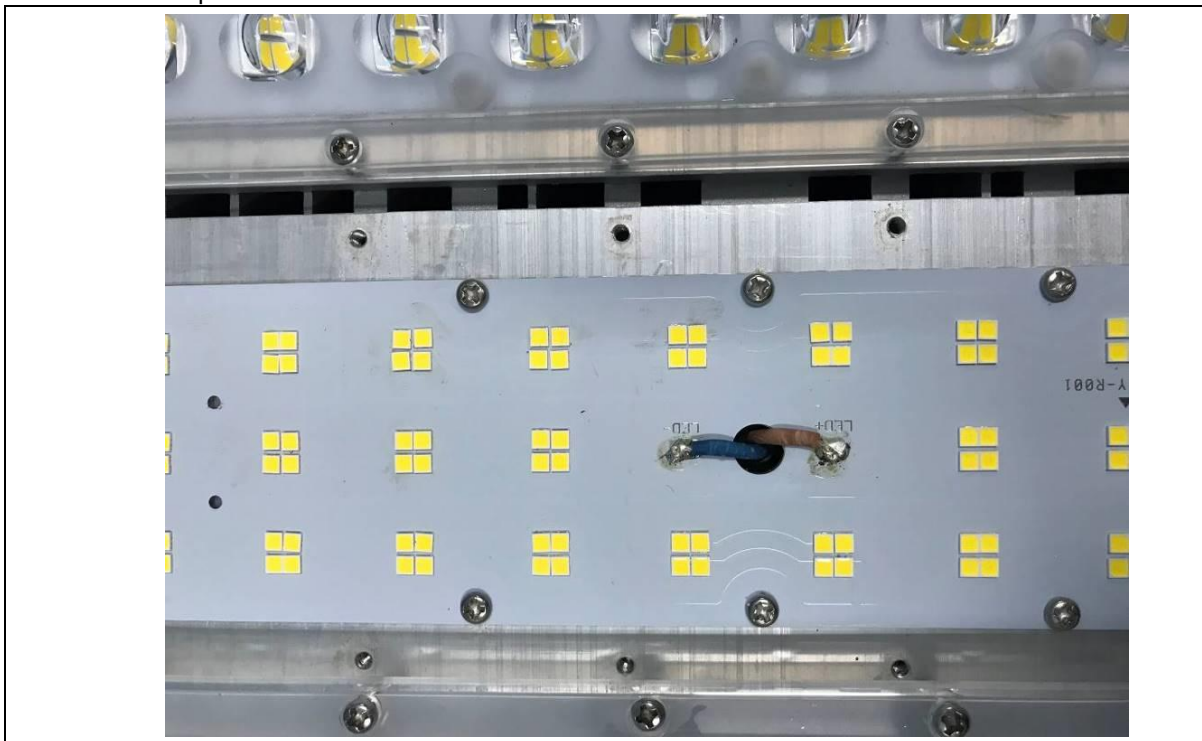
Photo documentation

Page 27 of 55

Report No.: 211-14180651-000

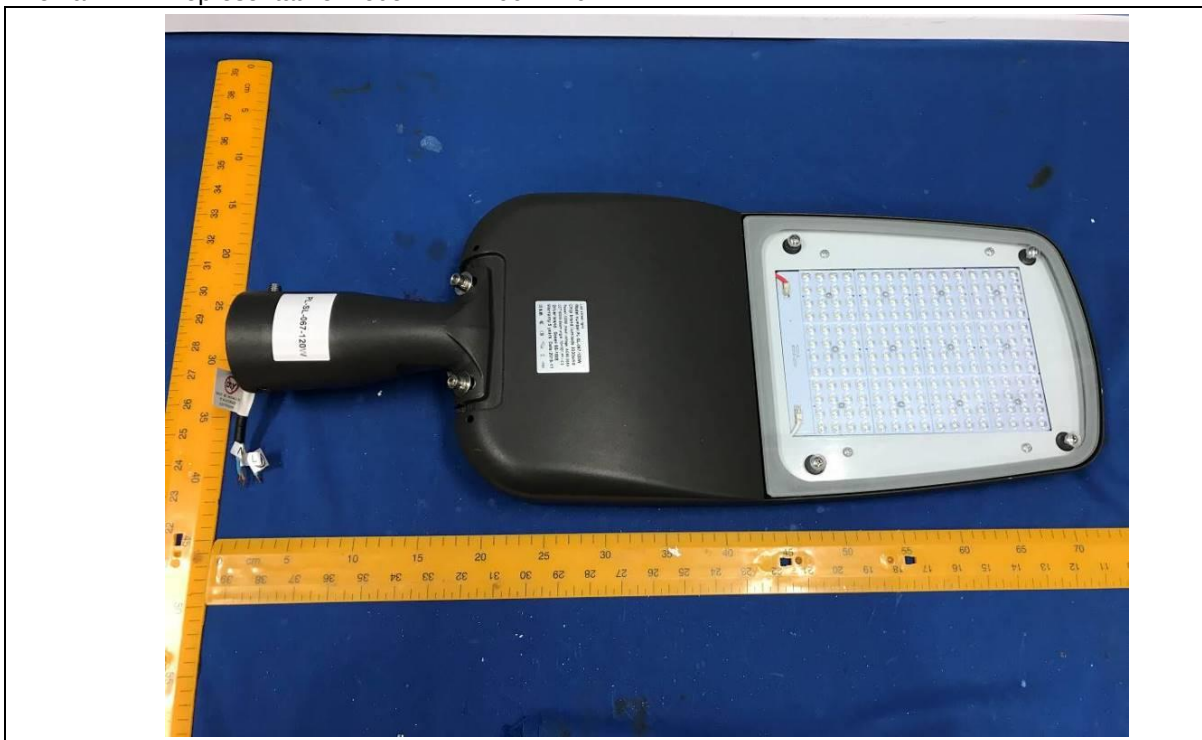
Details of: LED module view for 066 series models

Remark: Representative model PL-LD-066-240W



Details of: Outlook for 067 series models

Remark: Representative model PL-LD-067-120W



Attachment No. 5

Photo documentation

Page 28 of 55

Report No.: 211-14180651-000

Details of: Outlook for 067 series models
 Remark: Representative model PL-LD-067-120W



Details of: Outlook for 067S series models
 Remark: Representative model PL-LD-067S-200W



Attachment No. 5

Photo documentation

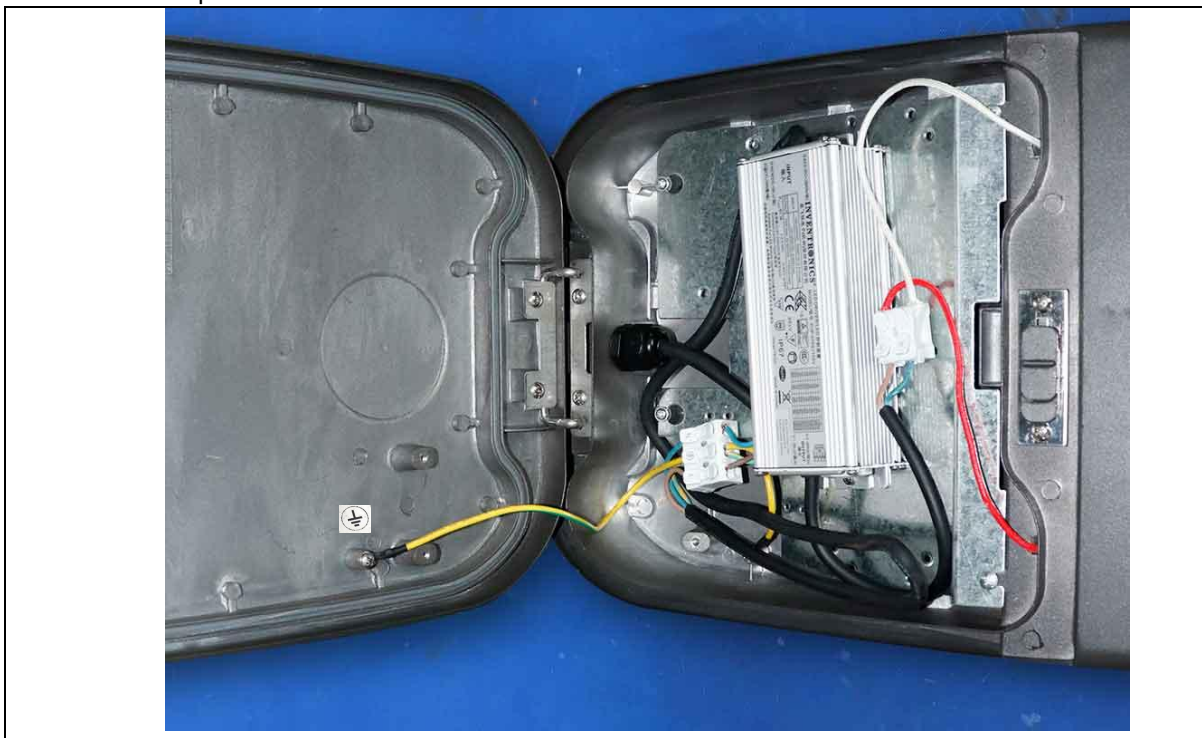
Page 29 of 55

Report No.: 211-14180651-000

Details of: Outlook for 067S series models
 Remark: Representative model PL-LD-067S-200W



Details of: Internal view for 067 and 067S series models
 Remark: Representative model PL-LD-067-120W



Attachment No. 5

Photo documentation

Page 30 of 55

Report No.: 211-14180651-000

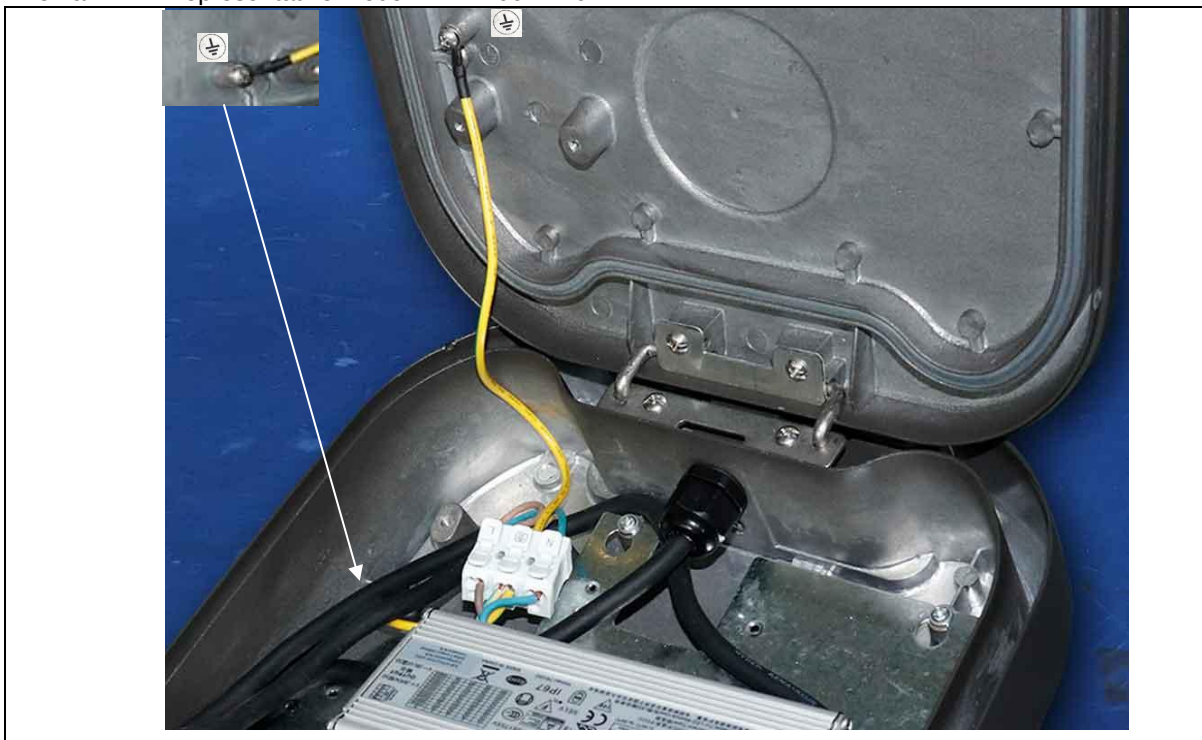
Details of: Internal view for 067 and 067S series models

Remark: Representative model PL-LD-067-120W



Details of: Earthing terminal view for 067 and 067S series models

Remark: Representative model PL-LD-067-120W



Attachment No. 5

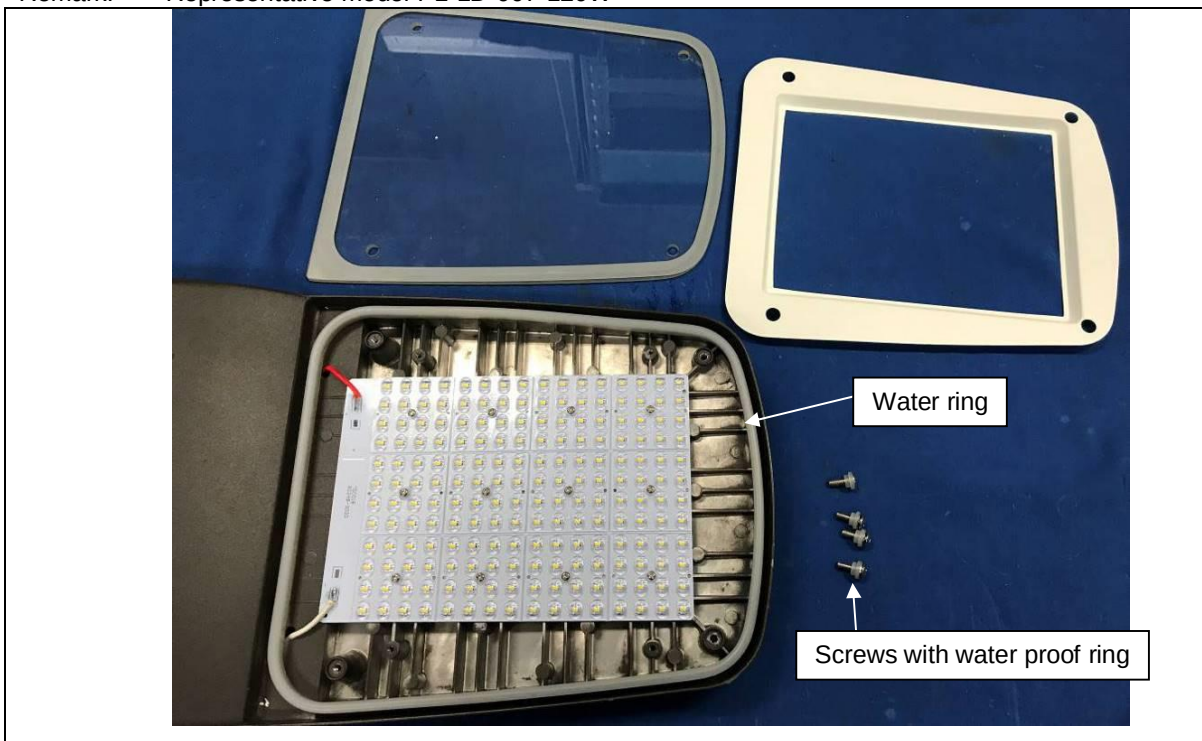
Photo documentation

Page 31 of 55

Report No.: 211-14180651-000

Details of: LED module view for 067 series models

Remark: Representative model PL-LD-067-120W



Details of: LED module view for 067 series models

Remark: Representative model PL-LD-067-120W



Attachment No. 5

Photo documentation

Page 32 of 55

Report No.: 211-14180651-000

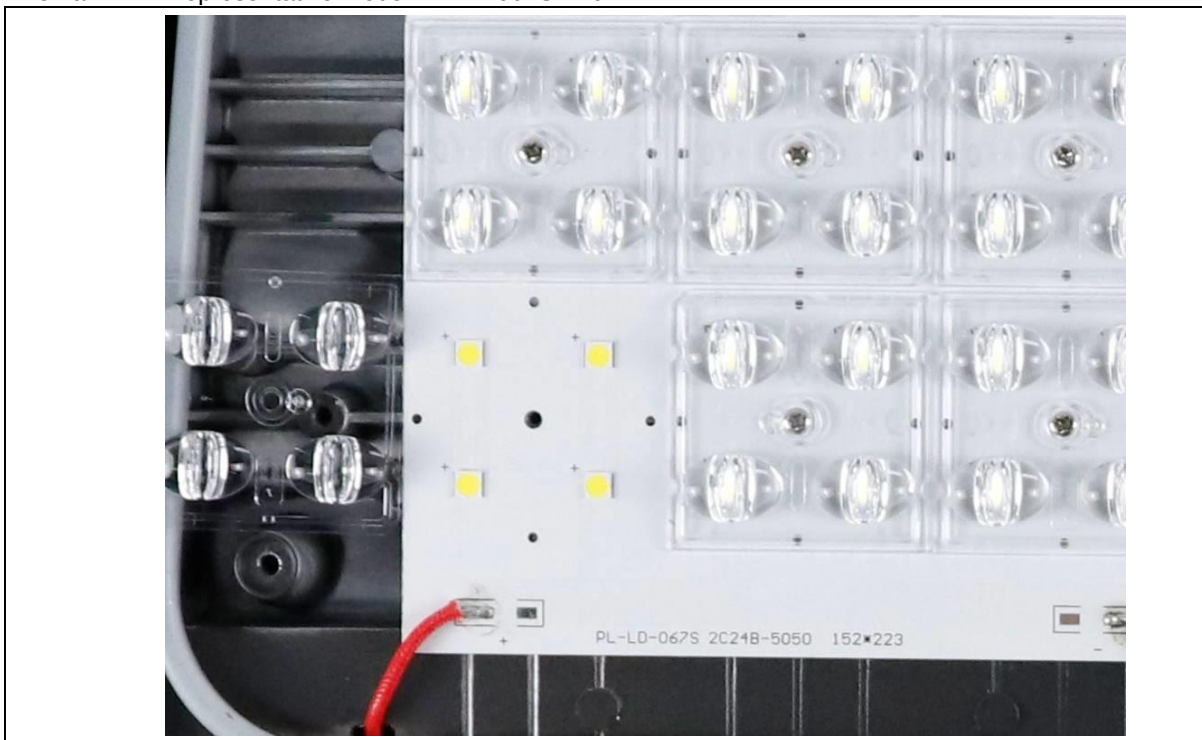
Details of: LED module view for 067S series models

Remark: Representative model PL-LD-067S-120W



Details of: LED module view for 067S series models

Remark: Representative model PL-LD-067S-120W



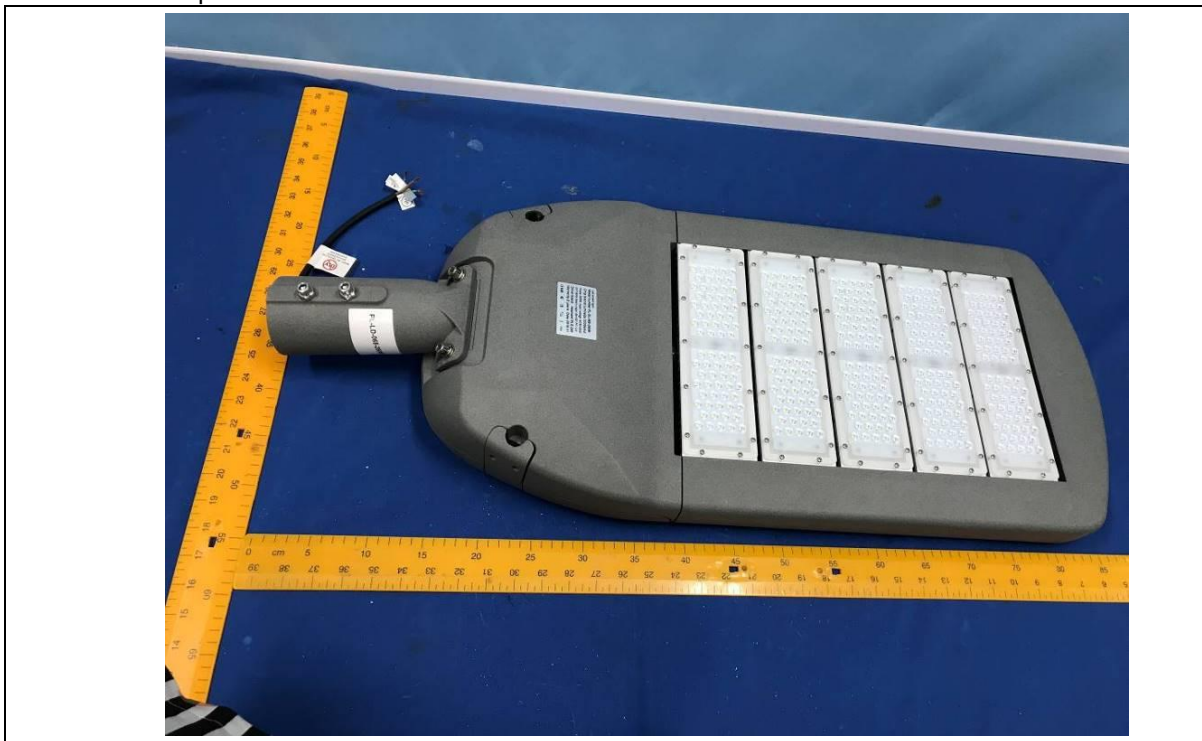
Attachment No. 5

Photo documentation

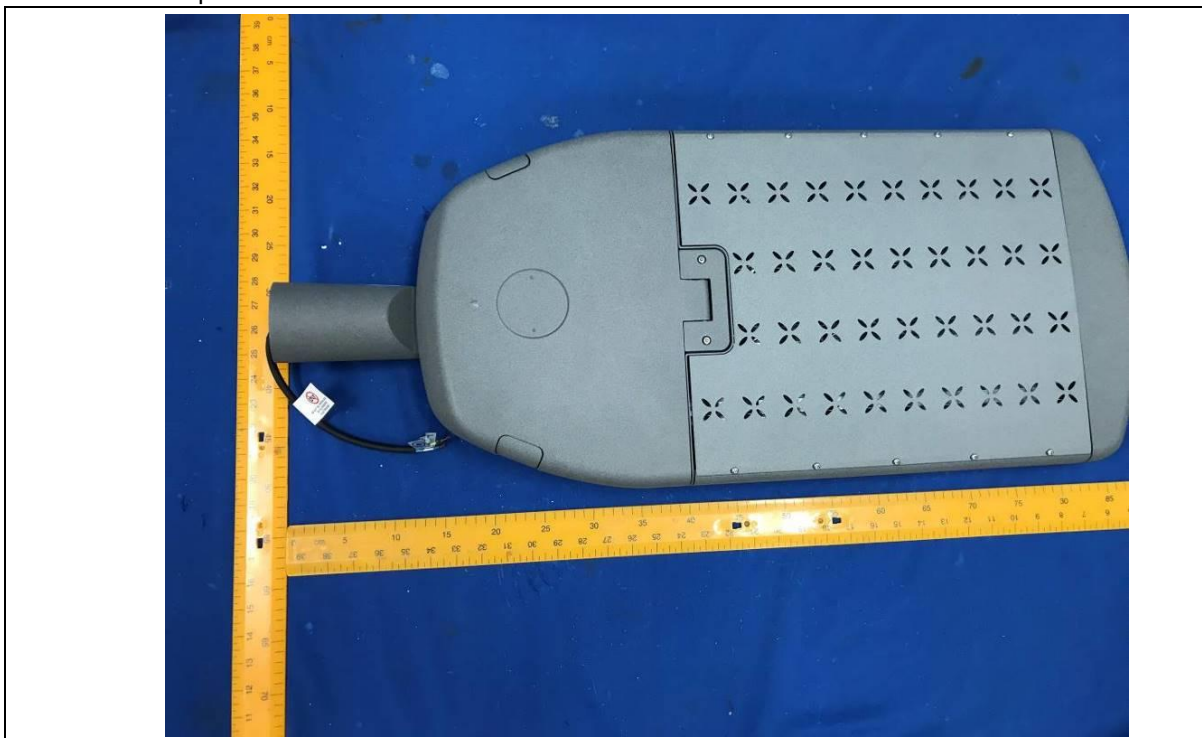
Page 33 of 55

Report No.: 211-14180651-000

Details of: Outlook for 068 series models
 Remark: Representative model PL-LD-068-250W



Details of: Outlook for 068 series models
 Remark: Representative model PL-LD-068-250W



Attachment No. 5

Photo documentation

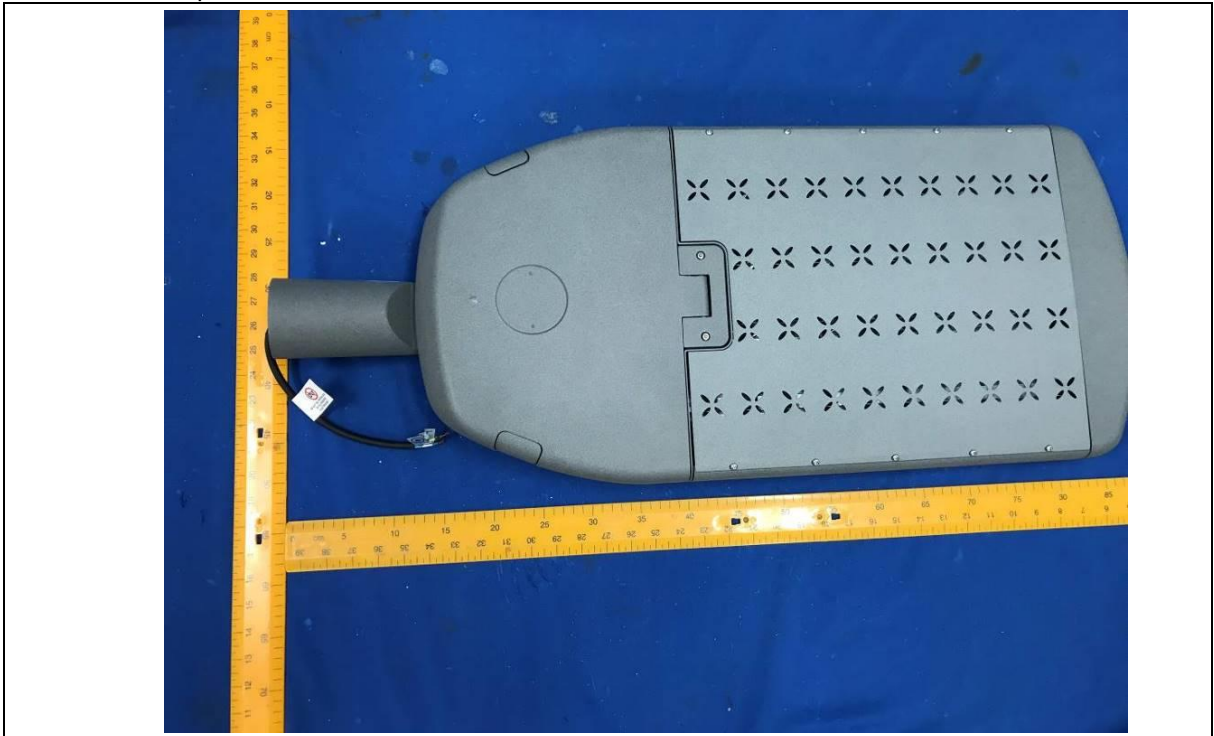
Page 34 of 55

Report No.: 211-14180651-000

Details of: Outlook for 068S series models
Remark: Representative model PL-LD-068S-250W



Details of: Outlook for 068S series models
Remark: Representative model PL-LD-068S-250W



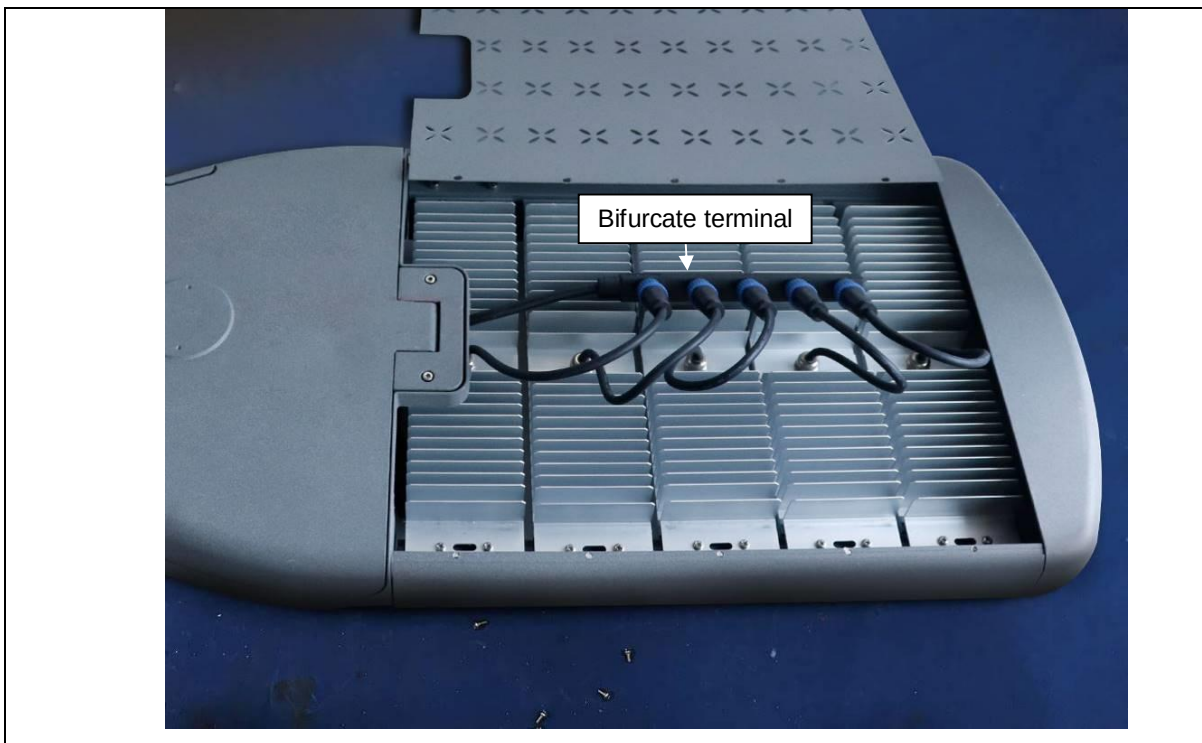
Attachment No. 5

Photo documentation

Page 35 of 55

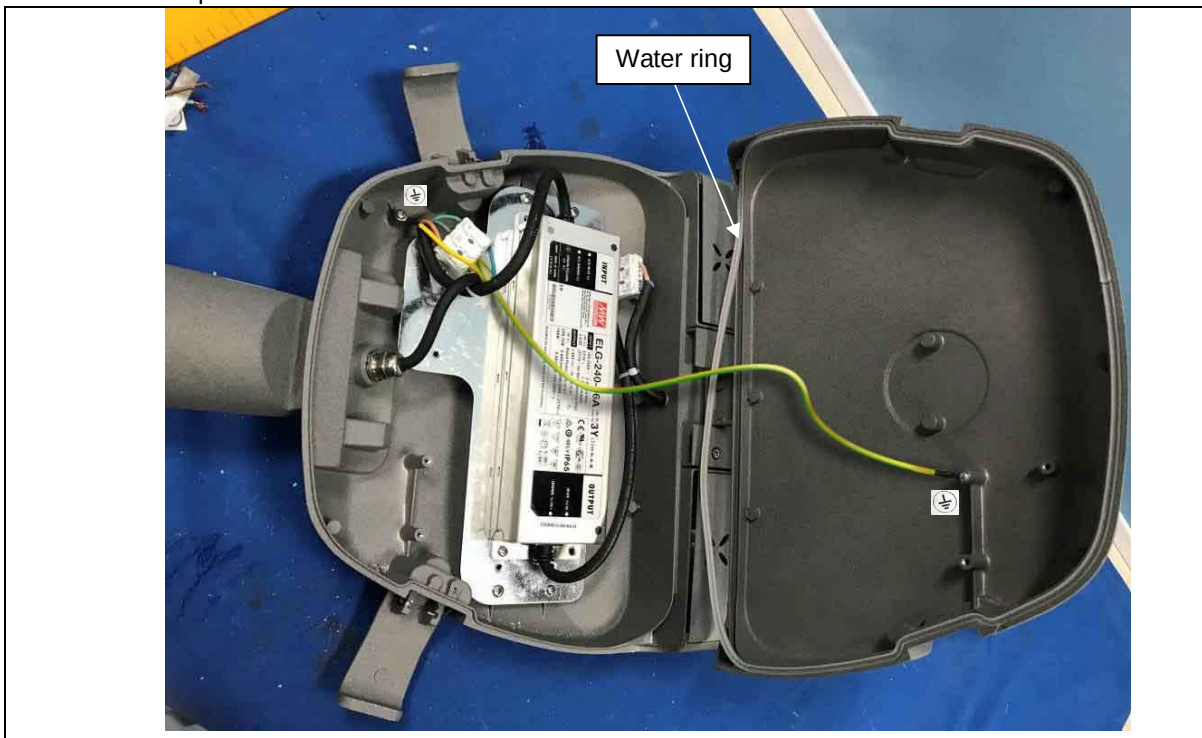
Report No.: 211-14180651-000

Details of: Internal view for 068 and 068S series models



Details of: Internal view for 068 and 068S series models

Remark: Representative model PL-LD-068-250W



Attachment No. 5

Photo documentation

Page 36 of 55

Report No.: 211-14180651-000

Details of: Internal view for 068 and 068S series models

Remark: Representative model PL-LD-068-250W



Details of: LED module view for 068 series models

Remark: Representative model PL-LD-068-250W



Attachment No. 5

Photo documentation

Page 37 of 55

Report No.: 211-14180651-000

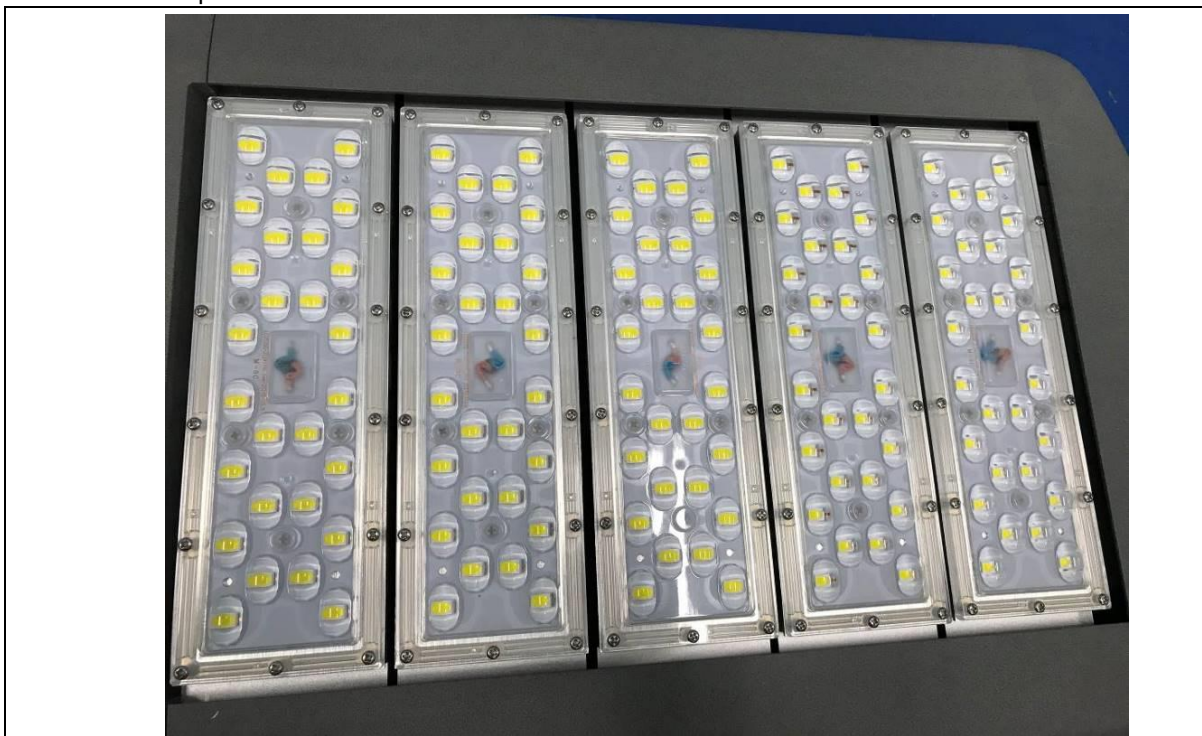
Details of: LED module view for 068 series models

Remark: Representative model PL-LD-068-250W



Details of: LED module view for 068S series models

Remark: Representative model PL-LD-068S-250W



Attachment No. 5

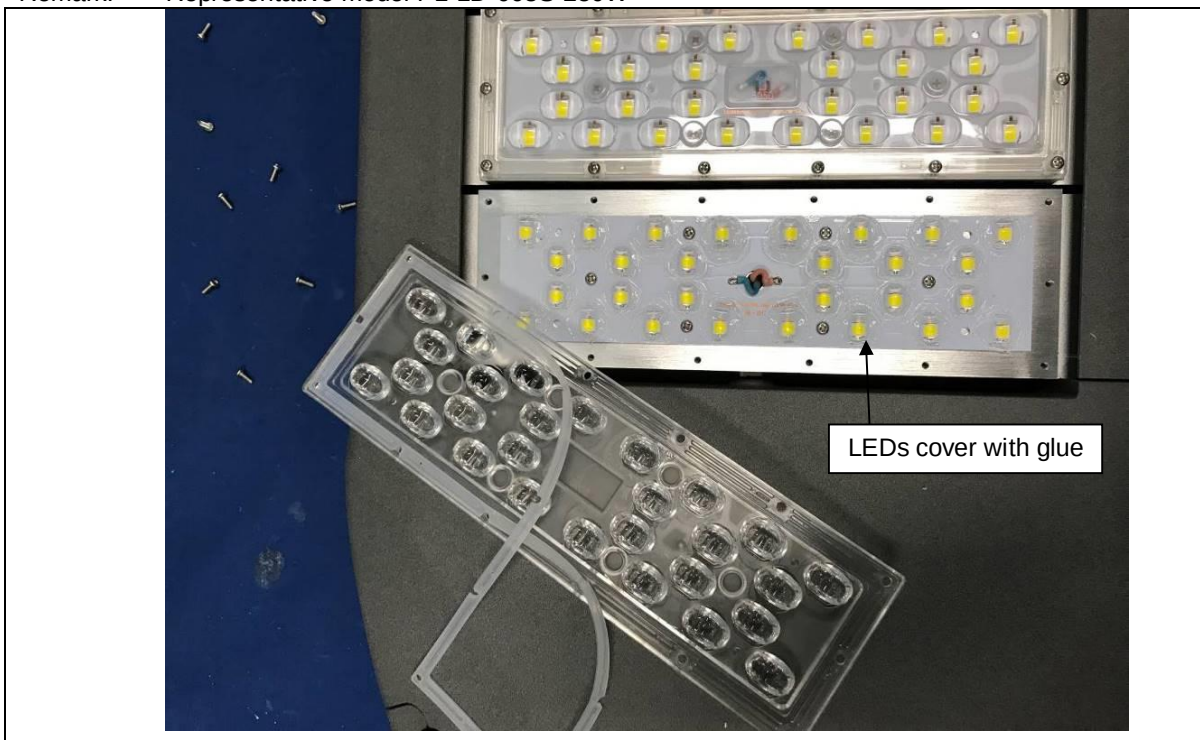
Photo documentation

Page 38 of 55

Report No.: 211-14180651-000

Details of: LED module view for 068S series models

Remark: Representative model PL-LD-068S-250W



Details of: Outlook for 069 series models

Remark: Representative model PL-LD-069-250W



Attachment No. 5

Photo documentation

Page 39 of 55

Report No.: 211-14180651-000

Details of: Outlook for 069 series models
 Remark: Representative model PL-LD-069-250W



Details of: Outlook for 069S series models
 Remark: Representative model PL-LD-069S-250W



Attachment No. 5

Photo documentation

Page 40 of 55

Report No.: 211-14180651-000

Details of: Outlook for 069S series models
 Remark: Representative model PL-LD-069S-250W



Details of: Internal view for 069 and 069S series models
 Remark: Representative model PL-LD-069-250W



Attachment No. 5

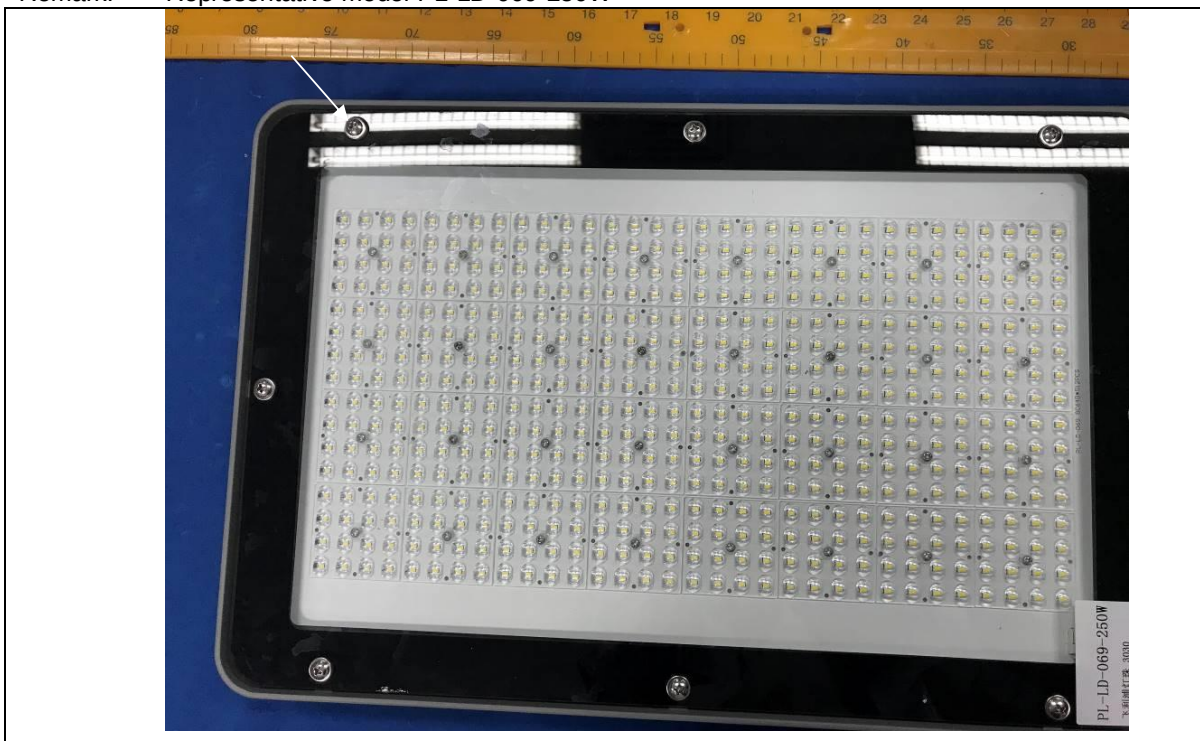
Photo documentation

Page 41 of 55

Report No.: 211-14180651-000

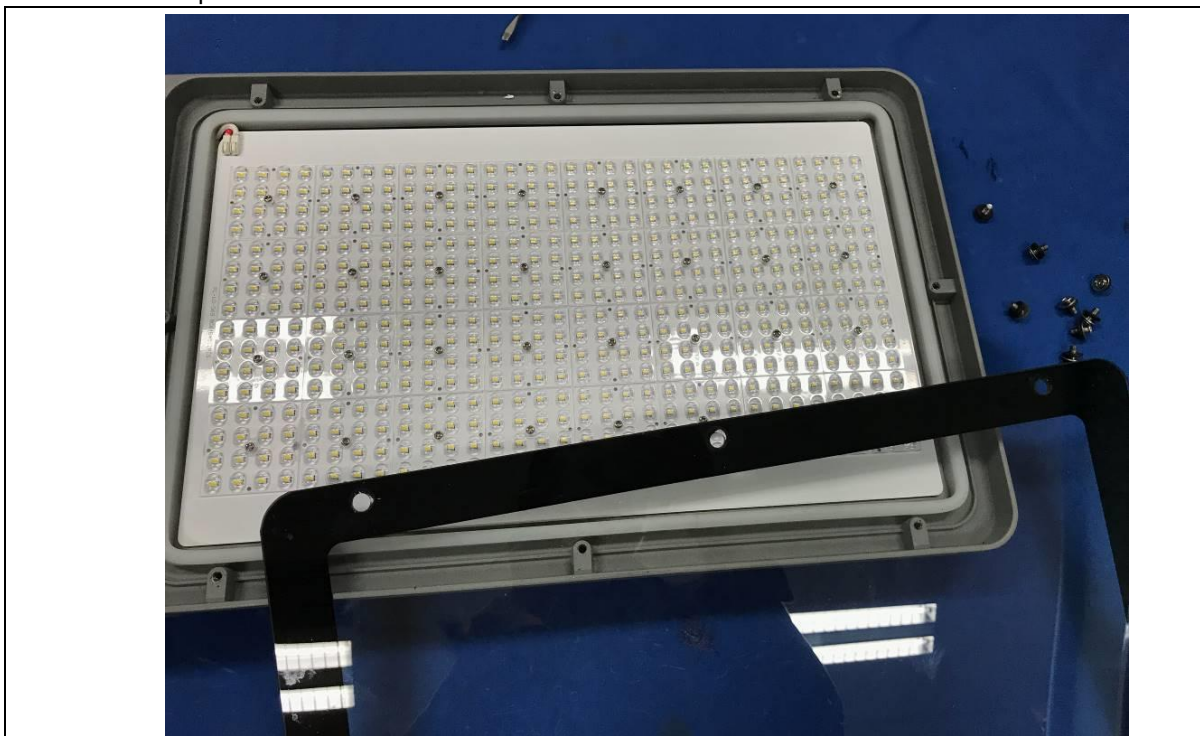
Details of: LED module view for 069 and 069S series models series models

Remark: Representative model PL-LD-069-250W



Details of: LED module view for 069 series models

Remark: Representative model PL-LD-069-250W



Attachment No. 5

Photo documentation

Page 42 of 55

Report No.: 211-14180651-000

Details of: LED module view for 069 series models

Remark: Representative model PL-LD-069-250W



Details of: LED module view for 069S series models

Remark: Representative model PL-LD-069S-250W



Attachment No. 5

Photo documentation

Page 43 of 55

Report No.: 211-14180651-000

Details of: LED module view for 069S series models

Remark: Representative model PL-LD-069S-250W



Details of: Bifurcate terminal view for 057, 057S, 058, 058S, 068 and 068S series models

Representative model: PL-LD-068S-250W



Attachment No. 5

Photo documentation

Page 44 of 55

Report No.: 211-14180651-000

Details of: Connector of bifurcate terminal view for 057, 057S, 058, 058S, 068 and 068S series models
Representative model: PL-LD-068S-250W



Details of: Input terminal block view for models except 057 and 057S series models



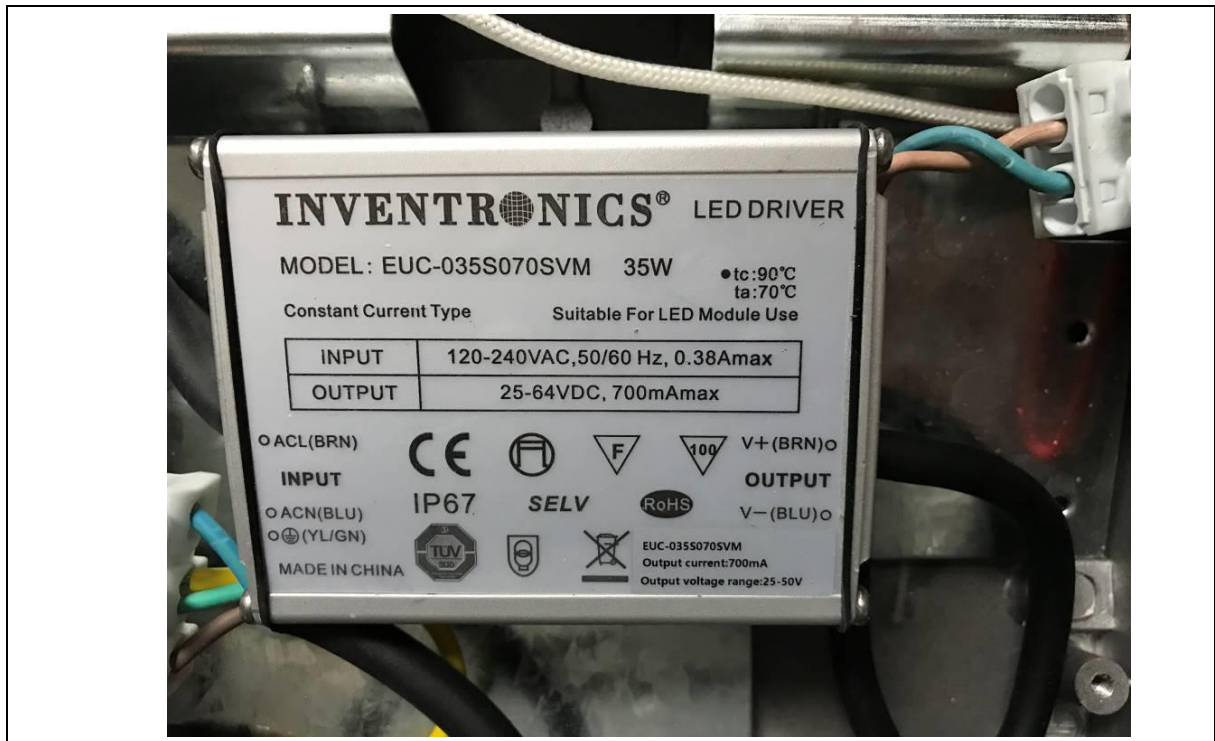
Attachment No. 5

Photo documentation

Page 45 of 55

Report No.: 211-14180651-000

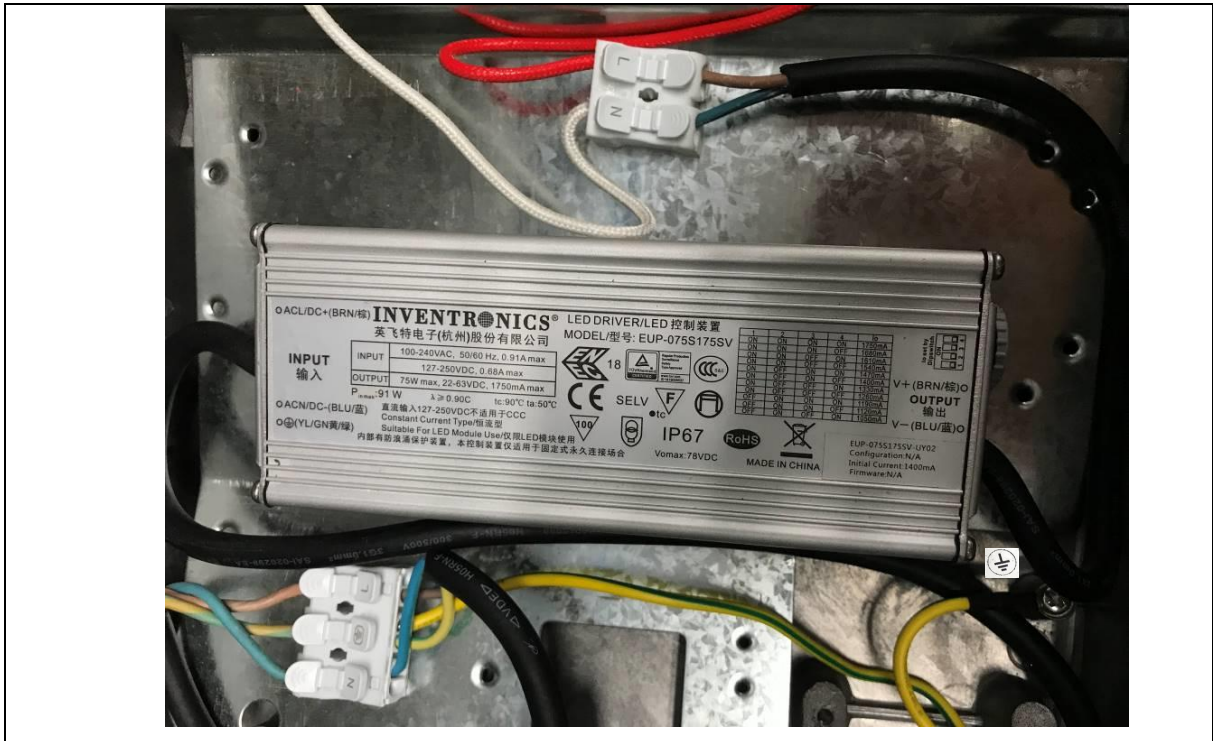
Details of: LED driver view (EUC-035S070SVM)



Details of: LED driver view (EUC-060S105SVM)



Details of: LED driver view (EUP-075S175SV)



Details of: LED driver view (EUP-075S280SV)



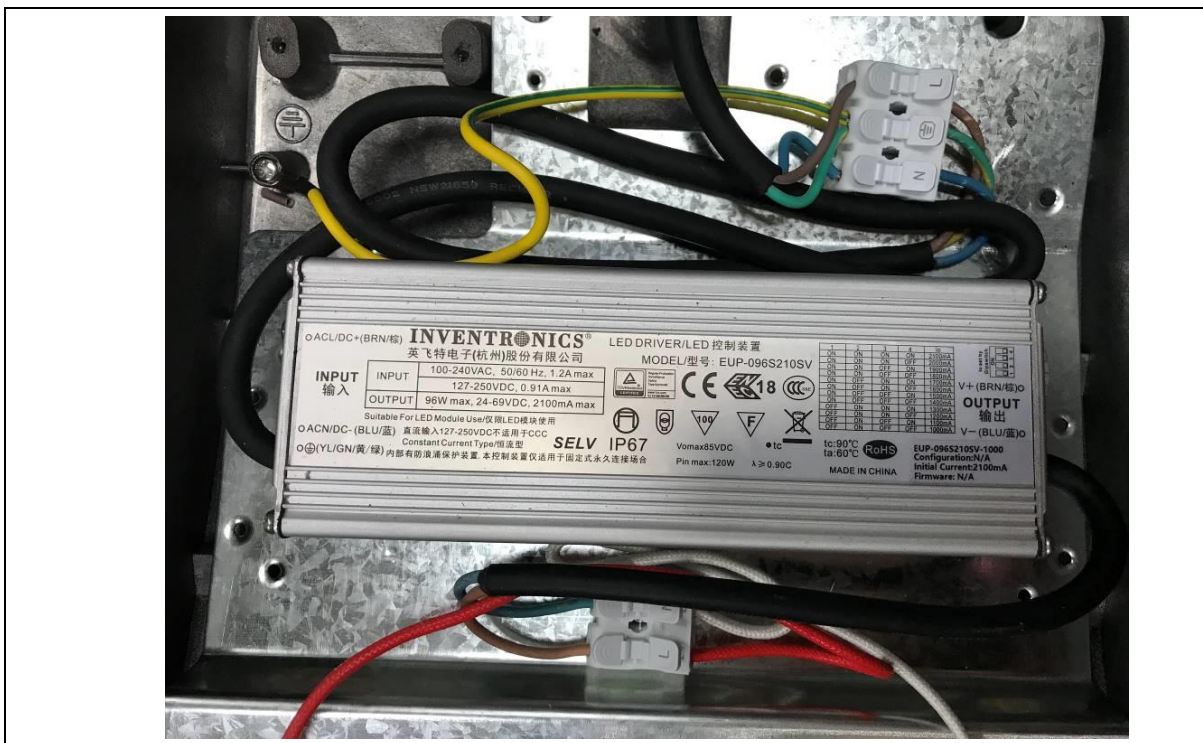
Attachment No. 5

Photo documentation

Page 47 of 55

Report No.: 211-14180651-000

Details of: LED driver view (EUP-096S210SV)



Details of: LED driver view (EUP-096S350SV)



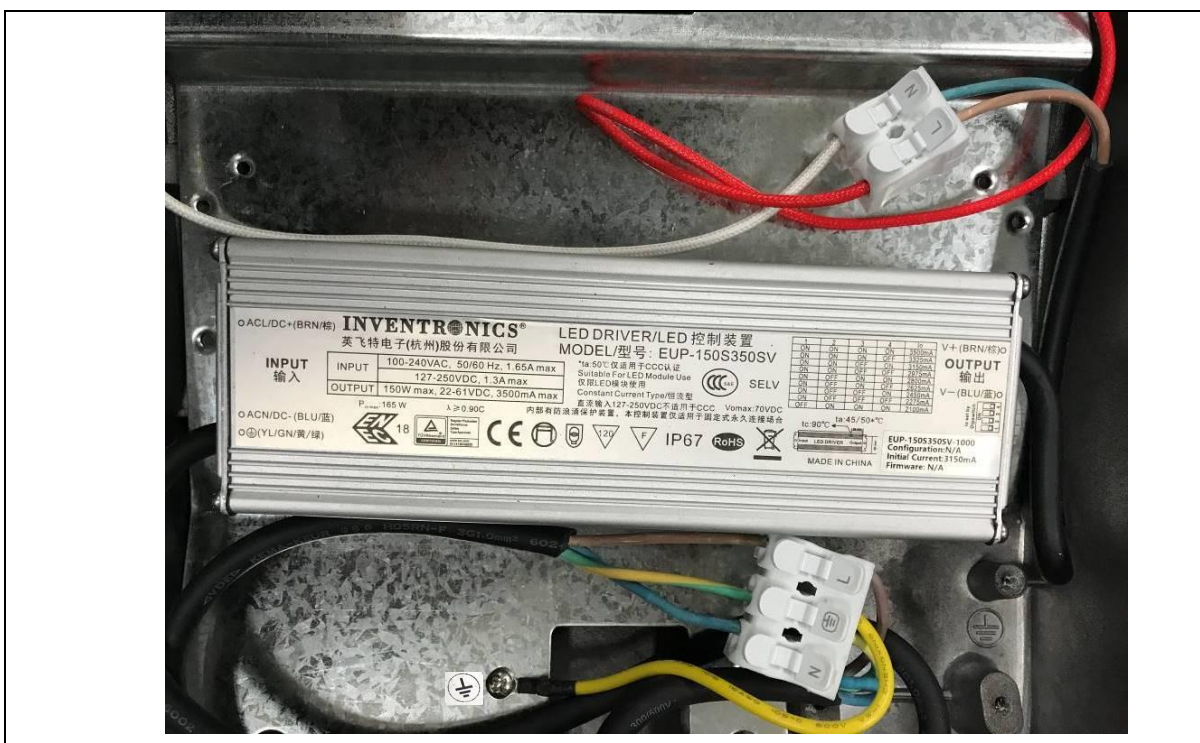
Attachment No. 5

Photo documentation

Page 48 of 55

Report No.: 211-14180651-000

Details of: LED driver view (EUP-150S350SV)



Details of: LED driver view (EUP-150S560SV)



Attachment No. 5

Photo documentation

Page 49 of 55

Report No.: 211-14180651-000

Details of: LED driver view (EUP-200S560SV)



Details of: LED driver view (EUP-240S670SV)



Attachment No. 5

Photo documentation

Page 50 of 55

Report No.: 211-14180651-000

Details of: LED driver view (ELG-75-36A and ELG-75-48A)
Representative model: ELG-75-48A



Details of: LED driver view (ELG-100-36A and ELG-100-48A)
Representative model: ELG-100-48A



Details of: LED driver view (ELG-150-36A and ELG-150-48A)
Representative model: ELG-150-48A



Details of: LED driver view (ELG-200-36A and ELG-200-48A)
Representative model: ELG-200-48A



Attachment No. 5

Photo documentation

Page 52 of 55

Report No.: 211-14180651-000

Details of: LED driver view (ELG-240-36A and ELG-240-48A)
Representative model: ELG-240-48A



Details of: LED driver view (HT-HLB-40H-48)



Attachment No. 5

Photo documentation

Page 53 of 55

Report No.: 211-14180651-000

Details of: LED driver view (HT-HLB-60H-42 and HT-HLB-60H-48)
Representative model: HT-HLB-60H-48



Details of: LED driver view (HT-HLB-80H-42 and HT-HLB-80H-48)
Representative model: HT-HLB-80H-48



Attachment No. 5

Photo documentation

Page 54 of 55

Report No.: 211-14180651-000

Details of: LED driver view (HT-HLB-100H-42 and HT-HLB-100H-48)
Representative model: HT-HLB-100H-48



Details of: LED driver view (HT-HLB-120H-42 and HT-HLB-120H-48)
Representative model: HT-HLB-120H-48



Attachment No. 5

Photo documentation

Page 55 of 55

Report No.: 211-14180651-000

Details of: LED driver view (HT-HLB-150H-42 and HT-HLB-150H-48)
Representative model: HT-HLB-150H-48



Details of: LED driver view (HT-HLB-200H-42 and HT-HLB-200H-48)
Representative model: HT-HLB-200H-48



End of Report