


TEST REPORT CISPR 15 Equipment for General Lighting Purposes – EMC Requirements													
Report Reference No.:	E50004-2018												
Date of issue:	26-January-2018												
Total number pages:	107												
Applicant's name	Philips Lighting B.V.												
Address	High Tech Campus 45, 5656 AE Eindhoven, The Netherlands												
Test specification:													
Standard.....:	IEC CISPR 15 (Eighth Edition) + A1:2015 in conjunction with IEC 61547 (Second Edition), IEC 61000-3-2 (Fourth Edition), IEC 61000-3-3 (Third Edition)												
Test procedure													
Non-standard test method	N/A												
Supplementary information	---												
Test Report Form No.:	IECCISPR15H												
Test Report Form(s) Originator.....:	VDE Testing and Certification Institute												
Master TRF	2015-05												
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Test item description	LED Electronic driver for LED modules												
Trademark.....:	PHILIPS												
Manufacturer	Philips Lighting B.V.												
	High Tech Campus 45, 5656 AE Eindhoven, The Netherlands												
Model / Type reference	Xitanium 300W 0.5-1.4A 300V iXt TD 230V 9290 016 084												
Rating(s).....:	<table border="0"> <tr> <td>Uin: 220 ... 240 V</td> <td>Iin: 1.43 A</td> <td>Pin: 315 W</td> </tr> <tr> <td>fn: 50 ... 60 Hz; DC</td> <td>PF: 0.9C</td> <td>tc max: 90 °C</td> </tr> <tr> <td>ta: -40 ... + 60°C</td> <td colspan="2">Vout (Max, open circuit): 330 V</td> </tr> <tr> <td>Uout: 100 ... 300 V</td> <td>Pout.: 300 W</td> <td>Iout: 0.5 ... 1.4 A</td> </tr> </table>	Uin: 220 ... 240 V	Iin: 1.43 A	Pin: 315 W	fn: 50 ... 60 Hz; DC	PF: 0.9C	tc max: 90 °C	ta: -40 ... + 60°C	Vout (Max, open circuit): 330 V		Uout: 100 ... 300 V	Pout.: 300 W	Iout: 0.5 ... 1.4 A
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Testing procedure and testing location:	
<input type="checkbox"/>	CB Testing Laboratory:
Testing location / address	
Testing location/ address	
<input type="checkbox"/>	Associated CB Test Laboratory
Testing location/ address	
Tested by (name + signature) Approved by (name + signature)	
<input type="checkbox"/>	Testing procedure: TMP/CTF stage 1
Tested by (name + signature) Approved by (name + signature) Testing location/ address	
<input type="checkbox"/>	Testing procedure: WMT/CTF stage 2
Tested by (name + signature) Witnessed by (name + signature) Approved by (name + signature) Testing location/ address	
<input checked="" type="checkbox"/>	Testing procedure: TDAP
Tested by (name + signature) J. Montfoort Approved by (name + signature) F. Gubbels Supervised by (name + signature) Testing location/ address Philips Lighting B.V. High Tech Campus 26, 5656 AE Eindhoven, The Netherlands	

List of Attachments (including a total number of pages in each attachment):	
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Summary of testing:	See "Verdict summary section" 2 below.
Summary of compliance with National Differences:	P
List of countries addressed	EU group differences
<input checked="" type="checkbox"/> The product fulfils the requirements of.....	EN 55015:2013 + A1:2015 NOTE: there are no differences between EN 55015:2013+ A1:2015 & CISPR 15 ed. 8.1 EN 61547:2009 NOTE: there are no differences between EN 61547:2009 & IEC61547 ed. 2.0 EN 61000-3-2:2014 NOTE: there are no differences between EN 61000-3-2:2014 & IEC 61000-3-2 ed. 4.0 EN 61000-3-3:2013 NOTE: there are no differences between EN 61000-3-3:2013 & IEC 61000-3-3 ed. 3.0
Copy of marking plate.....	See section 1.2 on page 8.
Testing.....	
Date of receipt of test item	14 December 2017
Date(s) of performance of tests...	See dates for each test case.
Manufacturer's Declaration regarding factories.....	
The application for obtaining a 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.....	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Yes (When differences exist, they shall be identified in the General Product Information section.)
Name and address of factory(ies)	
General remarks:	
"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. A cross <input checked="" type="checkbox"/> in a rectangular shape means that this option is applied.	
Possible test case verdicts:	
- test case does not apply to test object..:	N/A
- test object does meet requirement.....:	P (Pass)
- test object does not meet requirement..:	F (Fail)

Definition of symbols used in this test report:

☒ Indicates that the listed condition, standard or equipment is applicable for this report.

☐ Indicates that the listed condition, standard or equipment is not applicable for this report.

Decimal separator used in this report.....: ☐ Comma (,)

☒ Point (.)

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1 General description of test item(s)

Description	LED Electronic driver for LED modules					
Model Number	Xitanium 300W 0.5-1.4A 300V iXt TD 230V					
Serial Number.....	VA1700139					
Brand name	PHILIPS					
Ports	Port name and description	Cable				
		Specified length [m]	Attached during test	Shielded		
	AC power port / Mains input	Not specified	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
	Signal port / DALI interface	< 3 m	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
	Signal port / Touch Dim	< 3 m	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
	Load port / LED output	0.50 m	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Supplemental information to the ports.....	---					
Rated power supply.....	Voltage and Frequency		Reference poles			
			N	L1	L2	L3
	<input checked="" type="checkbox"/>	AC: 220-240V, 50-60Hz	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	AC:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	DC: 220-240V				
Rated Power.....	315 W					
Protection Class	I					
Clock frequencies	40-380 kHz					
Other parameters	Uin: 220 - 240 V Iin: 1.43 A Pin: 315 W fn: 50/60 Hz; DC PF: 0.9C tc max: 90 °C ta; -40 ... +60 °C Vout (Max, open circuit): 330 V Uout: 100 - 300 V Pout.: 300 W Iout: 0.5 – 1.4 A					
Software version.....	---					
Hardware version	---					
Dimensions in cm (W x H x D)	5.0 x 2.7 x 36.0					
Mounting position:	<input checked="" type="checkbox"/>	Table top equipment				
	<input type="checkbox"/>	Wall/Ceiling mounted equipment				
	<input type="checkbox"/>	Floor standing equipment				
	<input type="checkbox"/>	Hand-held equipment				
	<input type="checkbox"/>	Other:				
Modules/parts	Module/parts of test item		Type	Manufacturer		

Operating modes..... :	No.	Operating mode of test item	Applied for testing	
			Emission	Immunity
	1	1x 300W LED array @ 230Vac max. light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2	1x 300W LED array @ 230Vac 50% light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	3	1x 300W LED array @ 230Vac min. light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	4	1x 300W LED array @ 230Vac 75% light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	5	1x 300W LED array @ 230Vac 25% light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	6	1x 300W LED array @ 230Vac TD max. light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	7	1x 300W LED array @ 230Vac TD min. light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	8	1x 300W LED array @ 230Vac max. light output 0.5 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	9	1x 300W LED array @ 230Vac 50% light output 0.5 A (4 x series)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	10	1x 300W LED array @ 230Vac min. light output 0.5 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	11	1x 300W LED array @ 230Vac TD max. light output 0.5 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	12	1x 300W LED array @ 230Vac TD min. light output 0.5 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	13	1x 300W LED array @ 230Vdc 15% light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	14	1x 300W LED array @ 230Vdc 15% light output 0.5 A (4 series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	15	1x 300W LED array @ 230Vdc 50% light output 1.4 A (4 x series)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	16	1x 300W LED array @ 230Vac max. light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	17	1x 300W LED array @ 230Vac 50% light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	18	1x 300W LED array @ 230Vac min. light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	19	1x 300W LED array @ 230Vac 75% light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	20	1x 300W LED array @ 230Vac 25% light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	21	1x 300W LED array @ 230Vac TD max. light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	22	1x 300W LED array @ 230Vac TD min. light output 1.4 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	23	1x 300W LED array @ 230Vac max. light output 0.5 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	24	1x 300W LED array @ 230Vac min. light output 0.5 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	25	1x 300W LED array @ 230Vac TD max. light output 0.5 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	26	1x 300W LED array @ 230Vac TD min. light output 0.5 A (2 x series)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Supplemental information to the operating modes..... :	---
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Accessories (not part of the test item)..... :	Accessory	Type	Manufacturer
	DALI Controller	LCN 8600	Philips
Documents as provided by the applicant	Description	File name	Issue date
Modifications to the test item during testing	None		

1.1.1 Lamp technology used in test item(s)

Lamp technology used	<input type="checkbox"/>	Fluorescent lamp
	<input type="checkbox"/>	High pressure discharge lamp (HID)
	<input checked="" type="checkbox"/>	Light emitting diode (LED/OLED)
	<input type="checkbox"/>	Tungsten halogen lamp
	<input type="checkbox"/>	Incandescent lamp
	<input type="checkbox"/>	Others:

1.2 Photos of the test item

Copy of marking plate :

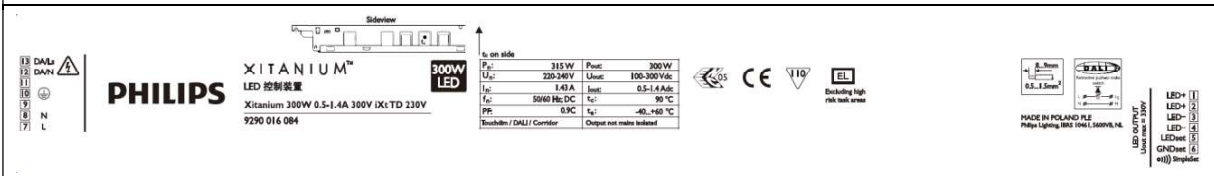
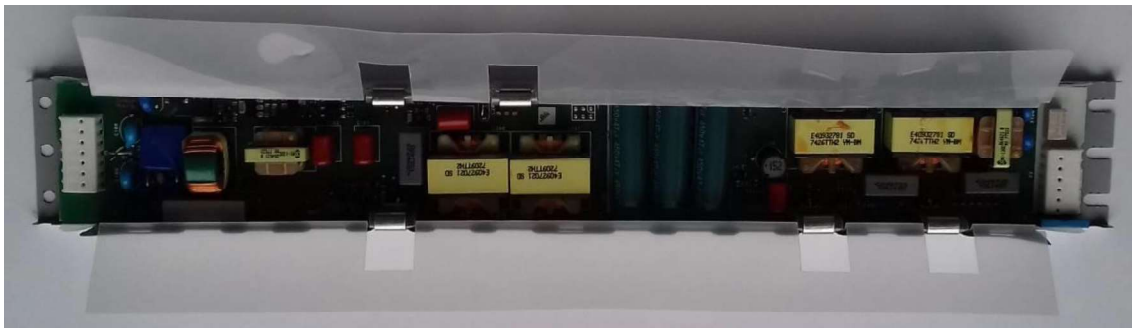
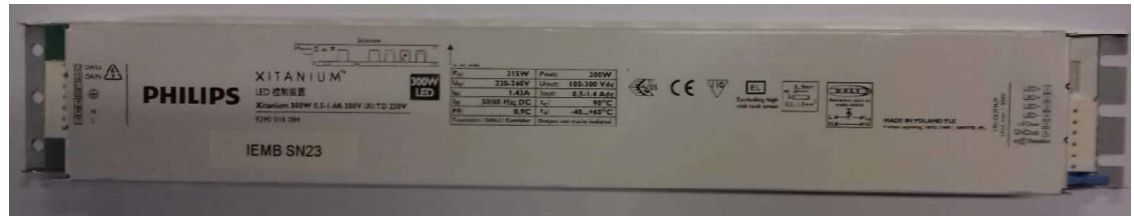


Photo of test item



2 Verdict summary section

CISPR-15			
Clause	Requirement – Test case	Basic standard	Verdict
4.2	Insertion loss	CISPR 15 (ed. 8) + A1:2015	N/A
4.3.1	Disturbance voltage at mains terminals	CISPR 15 (ed. 8) + A1:2015	P
4.3.2	Disturbance voltage at load terminals	CISPR 16-1-2 (ed. 1) +am1+am2	N/A
4.3.3	Disturbance voltage at control terminals	CISPR 32 (ed.1)	P
4.4.1	Radiated electromagnetic disturbances (9 kHz to 30 MHz)	CISPR 16-1-4 (ed. 3) CISPR 15 (ed. 8) + A1:2015	P
4.4.2	Radiated electromagnetic disturbances (30 MHz to 300 MHz)	CISPR 32 (ed. 1)	N/A
Annex B	Independent method of measurement of radiated emission (CDNE)	CISPR 15(ed. 8) + A1:2015	P
Supplementary information:			
Clause 4.2. : Only for fluorescent lamp luminaires with starters.			
Clause 4.3.2.: Not applicable because driver has no load terminals.			
Clause 4.4.2.: Alternative measurement according to Annex B of CISPR 15 has been performed.			
IEC 61000-3-2			
Clause	Requirement – Test case	Basic standard	Verdict
6.1	Control principle shall be allowed for the application according to the clause 6.1	IEC 61000-3-2 (ed. 4)	P
6.2	Harmonic current emissions	IEC 61000-4-7 (edition see page 81)	P
Supplementary information:			
IEC 61000-3-3			
Clause	Requirement – Test case	Basic standard	Verdict
4	Voltage changes, voltage fluctuations and flicker	IEC 61000-4-15 (ed. 2)	P
Supplementary information:			
Clause 4: Incandescent lamp luminaires with ratings less than or equal to 1 000 W and discharge lamp luminaires with ratings less than or equal to 600 W and LED luminaires with ratings less than or equal to 200 W, are deemed to comply with the dmax limits in this standard and are not required to be tested			
IEC 61547			
Clause	Requirement – Test case	Basic standard	Verdict
5.2	Electrostatic discharge	IEC 61000-4-2 (ed. 2)	P
5.3	Radio-frequency electromagnetic fields	IEC 61000-4-3 (ed. 3) + am1	P
5.4	Power frequency magnetic fields	IEC 61000-4-8 (ed. 1) + am1	N/A
5.5	Fast transients	IEC 61000-4-4 (ed. 2)	P
5.6	Injected currents (radio-frequency common mode)	IEC 61000-4-6 (ed. 3)	P
5.7	Surges	IEC 61000-4-5 (ed. 2)	P
5.8	Voltage dips and short interruptions	IEC 61000-4-11 (ed. 2)	P
Supplementary information:			
Clause 5.4: Only applicable if the EUT contains components which are susceptible for power magnetic fields, like Hall-generator, magnetic field sensors etc			