



Test report issued under the responsibility of:



TEST REPORT IEC 62384 DC or AC supplied electronic control gear for LED modules Performance requirements	
Report Number.....	2171195.51
Date of issue	2014-06-16
Total number of pages	10
Applicant's name	Philips (China) Investment Co., Ltd.
Address	#9, Lane 888 Tianlin Road Shanghai Business Park, Shanghai, P. R. China 200233
Test specification:	
Standard	IEC 62384: 2006 (First Edition) + A1: 2009
Test procedure.....	CB
Non-standard test method	N/A
Test Report Form No.	IEC62384B
Test Report Form(s) Originator....	IMQ S.p.A.
Master TRF	Dated 2012-10
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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.	
Test Report Form No.	LED driver
Trade Mark	PHILIPS
Manufacturer	Philips (China) Investment Co., Ltd. #9, Lane 888 Tianlin Road Shanghai Business Park, Shanghai, P. R. China 200233
Model/Type reference	XITANIUM 40W 0,7A Prog 230V-J sXt
Ratings	VA-in: 49 VA; Vin: 220-240 V; In: 0,24 A; PF: 0,98; freq: 50/60 Hz; Iout: 0,1-0,7 A; Vout: 20-77 V; Vout (Max.)=100 V; tc: 80 °C

Testing procedure and testing location:			
<input checked="" type="checkbox"/>	CB Testing Laboratory:	DEKRA Certification B.V.	
Testing location/ address.....:		Meander 1051, 6825 MJ Arnhem, The Netherlands.	
<input type="checkbox"/>	Associated CB Laboratory:		
Testing location/ address.....:			
	Tested by (name + signature)..:	J.G.H. Gelink	
	Approved by (+ signature).....:	T.H.J.M. Michels	
<input type="checkbox"/>	Testing procedure: TMP		
Testing location/ address..... :			
Tested by (name + signature)....:			
Approved by (+ signature).....:			
<input type="checkbox"/>	Testing procedure: WMT		
Testing location/ address			
Tested by (name + signature)..:			
Witnessed by (+ signature).....:			
Approved by (+ signature).....:			
<input type="checkbox"/>	Testing procedure: SMT		
Testing location/ address.....:			
Tested by (name + signature).....:			
Approved by (+ signature).....:			
Supervised by (+ signature)			

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

N/A

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

Full type testing according to the IEC/EN 62384 requirements.

Testing location:

DEKRA Certification B.V.

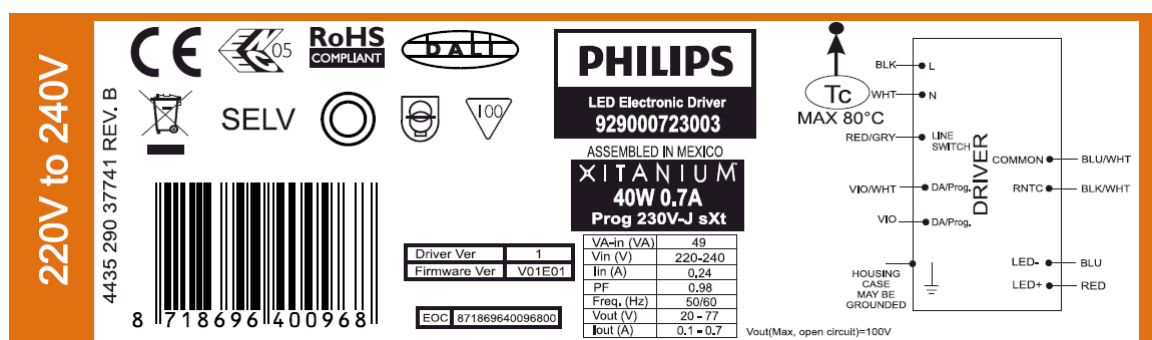
Meander 1051, 6825 MJ Arnhem, The Netherlands.

Summary of compliance with National Differences:
List of countries addressed:
☒ The product fulfils the requirements of

- EN 62384:2006+A1:2009

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.



Test item particulars	
Classification of installation and use	Built-in
Supply Connection	Lead wire
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: 2014-04	
Date (s) of performance of tests.....: 2014-04 ~ 2014-06	
General remarks:	
<p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p> <p>Although not listed in the report, the following standards are taken into account:</p> <ul style="list-style-type: none"> - EN 62384:2006+A1:2009 - IEC 62384:2006+A1:2009 	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:	
<p>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.....:</p> <p>When differences exist; they shall be identified in the General product information section.</p>	
Name and address of factory (ies)	Philips Lighting Electronics, N America Av. Del Aguila Real 19451, 22570 Tijuana, Baja California Mexico

General product information:

The XITANIUMTM drivers are designed specifically to optimally power high LEDs. The XITANIUM 40W 0,7A Prog 230V-J sXt driver provides 0,1-0,7A @ 20-76Vdc output. The constant DC current output provides the long life and optimum of high power LEDs.

LED driver is completely potted with asphalt.

The insulation between primary and secondary is SELV.

The insulation between primary and housing is considered as double insulation.

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Clause	Requirement + Test	Result - Remark	Verdict

5	CLASSIFICATION		P
5.1	Classification according to the load		P
	a) Single value load control gear.....:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	P
	b) Multiple value load control gear	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	P
5.2	Classification according to the output voltage		P
	a) Control gear with stabilized output voltage.....:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
	b) Control gear without stabilized output voltage.:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	P
5.3	Classification according to the output current		P
	a) Control gear with stabilized output current	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	P
	b) Control gear without stabilized output current..:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	P

6	MARKING		P
6.1	Mandatory marking		P
6.1.1	Circuit power factor.....:	0,98	P
6.1.2	a) temperature range	-40 °C...+55 °C	P
	b) stabilized output voltage		N/A
	c) stabilized output current.....:	0,1-0,7 A	P
	d) operation with a mains supply dimmer		N/A
	e) operation mode.....:		N/A
6.2	Optional markings		P
	Total circuit power	49 VA	P
	b) Z symbol.....:		N/A
	c) short-circuit proof type control gear.....:	--	P

7	OUTPUT VOLTAGE AND CURRENT		P
7.1	Starting and connecting requirements		P
	The output should be within 110% of the rated value within 2 s	59,5 V (Declared: 77 V) 0,708 A (Declared: 0,70 A) 42,2 W (Declared: 40 W)	P
7.2	Voltage and current during operation		P
	- For non-stabilized output voltage, when supplied with the rated supply voltage, the output voltage shall not differ by more than $\pm 10\%$ of the rated voltage	59,2 V (Declared: 77 V)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- For stabilized output voltage, when supplied between 92% and 106% of the rated supply voltage, the output voltage shall not differ by more than $\pm 10\%$ of the rated value		N/A
	- For non-stabilized output current, when supplied with the rated supply voltage, the output current shall not differ by more than $\pm 10\%$ of the rated voltage		N/A
	- For stabilized output current, when supplied between 92% and 106% of the rated supply voltage, the output current shall not differ by more than $\pm 10\%$ of the rated value	0,706 A (Declared: 0,70 A)	P
7.3	Capacitive load requirement		P
(A.2 fig. A.1a)	- The LED module or any additional control unit shall not disturb the control gear overcurrent detection		P
(A.2 fig. A.1b)	- The LED module or any additional control unit shall not disturb the starting process of the control gear		P
7.4	Voltage surges during switching and operation		N/A
	Voltage surges superimposed on the output voltage shall not exceed the values.....:	Under consideration	N/A
8	TOTAL CIRCUIT POWER		P
	The total circuit power shall not be more than 110% of the value declared by the manufacturer	48,1 VA (Declared: 49 VA)	P
9	CIRCUIT POWER FACTOR		P
	The measured circuit power factor shall not differ from the marked value by more than 0,05	0,990	P

IEC 62384			
Clause	Requirement + Test	Result - Remark	Verdict

10	SUPPLY CURRENT		P
	The supply current shall not differ by more than +10% from the marked value	220V(50Hz) – 0,219A 230V(50Hz) – 0,209A 240V(50Hz) – 0,200A 220V(60Hz) – 0,219A 230V(60Hz) – 0,209A 240V(60Hz) – 0,201A (Declared: 0,24A)	P

11	IMPEDANCE AT AUDIO –FREQUENCIES (Appendix A, A.3)		N/A
	Audio frequency impedance (400 Hz - 2000 Hz)		N/A

12	OPERATIONAL TESTS FOR ABNORMAL CONDITIONS		P
	a) without LED module(s) inserted		P
	at the end of this test the lamps(s) shall operate normally		P
	b) test for reduced LED module resistance	Under consideration	N/A
	c) Short-circuit proof control gear		P
	After the tests and after restoration of a protecting device, function normally		P

13	ENDURANCE		P
13.1	a) temperature cycling shock test.....:	-40 °C, 1 hour; +80 °C, 1 hour	P
	5 cycles are carried out		P
	b) supply voltage switching test.....:	230 V/50 Hz	P
	1000 cycles are carried out	200 times with no load 800 times with load	P
13.2	The control gear shall then be operated at rated supply voltage and in ambient temperature which produces tc, until a test period of 200 h has elapsed	In an oven at tc 80 °C for 200 hours	P
	at the end of this time the ballast shall correctly start and operate for 15 min		P

IEC 62384			
Clause	Requirement + Test	Result - Remark	Verdict

14	TABLE: audio frequency impedance (400 Hz – 2000 Hz)				N/A
fr (Hz)	Ur (V)	fs (Hz)	Z (Ω)	Remarks	
supplementary information:					

14	TABLE: audio frequency impedance (250 Hz – 400 Hz)				N/A
fr (Hz)	Ur (V)	fs (Hz)	Z (Ω)	Remarks	
supplementary information:					

Appendix 1: Photograph

