

# Tanúsítvány Certificate



Tanúsítvány szám *Certificate No.* Oldal *Page*  
HN 69247664 0001

Jegyzőkönyv szám *Test Report No.* Kiadás dátuma *Date of Issue*  
28223426 001 2014-07-28

Tanúsítvány Tulajdonos *Certificate Holder* Gyártóhely *Manufacturing Plant*  
**Philips (China) Investment Co., Ltd.** NINGBO KLITE ELECTRIC MANUFACTURE  
No.2 Building, No. 9 Lane 888, CO., LTD  
Tianlin Road, No. 5, Dapuhe North Rd.,  
Shanghai 200233, Beilun District, Ningbo City,  
P.R.China Zheijang Province 315800, P.R. China

Vizsgálati Jel *Test Mark* Tanúsítás alapjául szolgáló előírások *Tested according to*



EN 61347-2-13:2006  
EN 61347-1:2008+A1+A2  
EN 62384:2006+A1

Tanúsított Termék (Termék azonosítás)  
*Certified Product (Product Identification)*

LED Transformer

Type references: LED Transformer 60W 24VDC;  
LED Transformer 120W 24VDC

Trademark: PHILIPS

Ratings: input: 220 - 240V AC, 50/60Hz;  
In: 0,28-0,32A; 0,5-0,8A;  
IP20; Independent use; SELV;  
output: refer to Annex to this Certificate

A tanúsítvány a fenti termék típusra vonatkozik. A tanúsítvány a TÜV Rheinland InterCert Kft. Vizsgálati, Ellenőrzési és Tanúsítási Szabályzatán alapszik. A tanúsított termék megfelel a fenti vizsgálati előírásoknak, a sorozatgyártása ellenőrzött. A fenti ENEC jel használatának joga engedélyezett a tanúsított terméken. Ezt az Engedélyt egy, a CENELEC Jelhasználati Bizottság ENEC egyezményt aláíró testület adta ki.

*This certificate refers to the above mentioned product type. The certificate is based on the Testing, Inspection and Certification Regulation of TÜV Rheinland InterCert Kft. The certified product fulfils the above listed requirements and its manufacturing is subject to surveillance. The right to use the above ENEC mark is permitted on the certified product. This Licence has been established by a body which is a signatory to the ENEC Agreement.*

Tanúsító Szervezet  
Certification Body

TÜV Rheinland InterCert Kft., MEEI Division – Product Certification  
H-1132 Budapest, Váci út 48/A-B  
www.tuv.hu  
TT 01-T06(e)\_4\_1



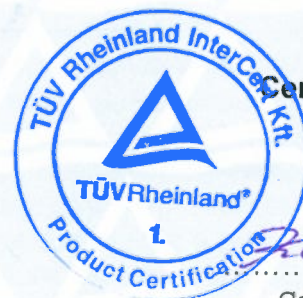
Gábor Kassai

**Annex to Certificate No. HN 69247664 0001**

Page 1/1

**Type references and technical data:**

Type or Model No.	Rated input voltage	Rated input current	Rated output voltage	Output wattage	ta value	tc value	IP
LED Transformer 60W 24VDC	220- 240V~ 50/60Hz	0,28-0,32A	24V DC	60W	50°C	85°C	20
LED Transformer 120W 24VDC	220- 240V~ 50/60Hz	0,5-0,8A	24V DC	120W	50°C	90°C	20

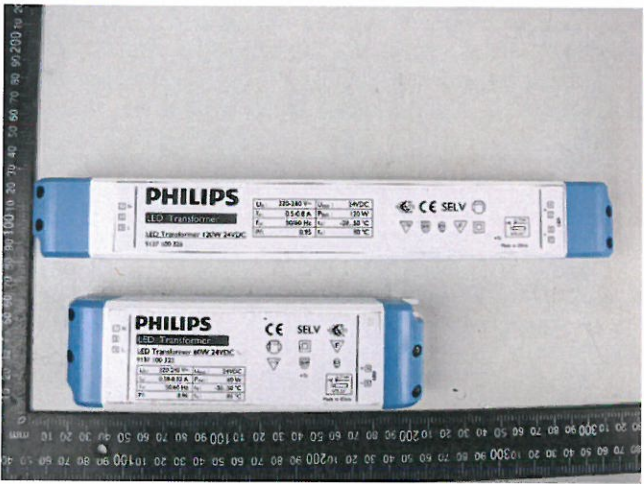


**Certification Body**

**Date of issue:**  
Budapest, 2014-07-28

*Gabor Kassai*  
Gabor Kassai

**TÜV Rheinland InterCert Kft. – Product Certification Body — H-1132 Budapest, Váci út 48/A-B — [www.tuv.hu](http://www.tuv.hu)**

<b>Prüfbericht-Nr.:</b> Test Report No.:	14712651 001	<b>Auftrags-Nr.:</b> Order No.:	1160008996	Seite 1 von 11 Page 1 of 11
<b>Kunden-Referenz-Nr.:</b> Client Reference No.:	N/A	<b>Auftragsdatum:</b> Order date:	21.05.2014	
<b>Auftraggeber:</b> Client:	Philips (China) Investment Co., Ltd. No.2 Building, No.9 Lane 888, Tianlin Road 200233 Shanghai P. R. China			
<b>Prüfgegenstand:</b> Test item:	LED Transformer			
<b>Bezeichnung / Typ-Nr.:</b> Identification / Type No.:	LED Transformer 60W 24VDC, LED Transformer 120W 24VDC			
<b>Auftrags-Inhalt:</b> Order content:	Type test			
<b>Prüfgrundlage:</b> Test specification:	EN 62384: 2006+A1:2009			
<b>Wareneingangsdatum:</b> Date of receipt:	21.05.2014			
<b>Prüfmuster-Nr.:</b> Test sample No.:	N/A			
<b>Prüfzeitraum:</b> Testing period:	26.05.2014 – 25.06.2014			
<b>Ort der Prüfung:</b> Place of testing:	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.			
<b>Prüflaboratorium:</b> Testing laboratory:	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.			
<b>Prüfergebnis*:</b> Test result*:	Pass			
<b>geprüft von / tested by:</b>		<b>kontrolliert von / reviewed by:</b>		
2014.06.25 Chengchao Huang / PE <i>Chengchao Huang</i>		2014.06.25 Guoping Zheng / TC <i>Guoping Zheng</i>		
<b>Datum</b> Date	<b>Name / Stellung</b> Name / Position	<b>Unterschrift</b> Signature	<b>Datum</b> Date	<b>Name / Stellung</b> Name / Position
<b>Sonstiges / Other:</b>	Test report issue only.			
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable
5 = mangelhaft N/T = nicht getestet 5 = poor N/T = not tested				
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				

v04



<p><b>TEST REPORT</b>  <b>EN / IEC 62384</b>  <b>DC or AC supplied electronic control gear for LED modules</b>  <b>Performance requirements</b></p>	
Report Number .....	14712651 001
Date of issue .....	See cover page
Total number of pages .....	See cover page
Applicant's name .....	Philips (China) Investment Co., Ltd.
Address .....	No.2 Building, No.9 Lane 888, Tianlin Road 200233 Shanghai P. R. China
<b>Test specification:</b>	
Standard .....	EN 62384: 2006+A1: 2009
Test procedure .....	Test report
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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Test item description .....	LED Transformer
Trade Mark .....	<b>PHILIPS</b>
Manufacturer .....	Philips (China) Investment Co., Ltd. No.2 Building, No.9 Lane 888, Tianlin Road 200233 Shanghai P. R. China
Model/Type reference .....	LED Transformer 60W 24VDC; LED Transformer 120W 24VDC
Ratings .....	I/P: 220-240V~; 50/60Hz; IP20; Independent use; SELV. Details in "General product information".

**Error! Reference source not found.**

<b>Testing procedure and testing location:</b>		
<input checked="" type="checkbox"/>	<b>Testing Laboratory:</b>	TÜV Rheinland / CCIC (Ningbo) Co., Ltd.
<b>Testing location/ address .....</b>		3F, Building C13, R&D Park, No.32 Lane 299 Guanghua Road, National Hi-Tech Zone, Ningbo 315048, P.R. China
<input type="checkbox"/>	<b>Associated CB Laboratory:</b>	
<b>Testing location/ address .....</b>		
	<b>Tested by (name + signature) ..:</b>	
	<b>Approved by (+ signature).....:</b>	
<input type="checkbox"/>	<b>Testing procedure: TMP</b>	
<b>Testing location/ address .....</b>		
	<b>Tested by (name + signature) ...:</b>	
	<b>Approved by (+ signature).....:</b>	
<input type="checkbox"/>	<b>Testing procedure: WMT</b>	
<b>Testing location/ address .....</b>		
	<b>Tested by (name + signature) ..:</b>	
	<b>Witnessed by (+ signature) .....</b>	
	<b>Approved by (+ signature).....:</b>	
<input type="checkbox"/>	<b>Testing procedure: SMT</b>	
<b>Testing location/ address .....</b>		
	<b>Tested by (name + signature) .....</b>	
	<b>Approved by (+ signature) .....</b>	
	<b>Supervised by (+ signature) .....</b>	

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

Attachment 1: equipment list (1 page).

**Summary of testing:**

**Tests performed (name of test and test clause):**

All tests performed.

Result: Pass

**Testing location:**

TÜV Rheinland / CCIC (Ningbo) Co., Ltd.

3F, Building C13, R&D Park, No.32 Lane 299  
Guanghua Road, National Hi-Tech Zone, Ningbo  
315048, P.R. China






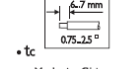
**Summary of compliance with National Differences**





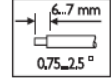
**List of countries addressed:**

N/A

**The product fulfils the requirements of EN 62384: 2006/A1: 2009**

**Error! Reference source not found.**
**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 N 2 3 L	<b>PHILIPS</b> <b>LED Transformer</b> LED Transformer 120W 24VDC 9137 100 325	<table border="1"> <tr> <td><math>U_n</math>: 220-240 V~</td> <td><math>U_{out}</math>: 24VDC</td> </tr> <tr> <td><math>I_n</math>: 0.54-0.70 A</td> <td><math>P_{out}</math>: Max. 120 W</td> </tr> <tr> <td><math>f_n</math>: 50/60 Hz</td> <td><math>t_a</math>: -20...50 °C</td> </tr> <tr> <td>PF: 0.95</td> <td><math>t_c</math>: 90 °C</td> </tr> </table>	$U_n$ : 220-240 V~	$U_{out}$ : 24VDC	$I_n$ : 0.54-0.70 A	$P_{out}$ : Max. 120 W	$f_n$ : 50/60 Hz	$t_a$ : -20...50 °C	PF: 0.95	$t_c$ : 90 °C	 CE SELV     	+ 4 5 6 7 LED
$U_n$ : 220-240 V~	$U_{out}$ : 24VDC											
$I_n$ : 0.54-0.70 A	$P_{out}$ : Max. 120 W											
$f_n$ : 50/60 Hz	$t_a$ : -20...50 °C											
PF: 0.95	$t_c$ : 90 °C											

1 N 2 3 L	<b>PHILIPS</b> <b>LED Transformer</b> LED Transformer 60W 24VDC 9137 100 322	<table border="1"> <tr> <td><math>U_n</math>: 220-240 V~</td> <td><math>U_{out}</math>: 24VDC</td> </tr> <tr> <td><math>I_n</math>: 0.28-0.32 A</td> <td><math>P_{out}</math>: Max. 60 W</td> </tr> <tr> <td><math>f_n</math>: 50/60 Hz</td> <td><math>t_a</math>: -20...50 °C</td> </tr> <tr> <td>PF: 0.95</td> <td><math>t_c</math>: 85 °C</td> </tr> </table>	$U_n$ : 220-240 V~	$U_{out}$ : 24VDC	$I_n$ : 0.28-0.32 A	$P_{out}$ : Max. 60 W	$f_n$ : 50/60 Hz	$t_a$ : -20...50 °C	PF: 0.95	$t_c$ : 85 °C	CE SELV     	+ 4 5 LED
$U_n$ : 220-240 V~	$U_{out}$ : 24VDC											
$I_n$ : 0.28-0.32 A	$P_{out}$ : Max. 60 W											
$f_n$ : 50/60 Hz	$t_a$ : -20...50 °C											
PF: 0.95	$t_c$ : 85 °C											

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<b>Test item particulars</b> .....	LED Transformer
<b>Classification of installation and use</b> .....	Independent
<b>Supply Connection</b> .....	Terminal block
.....	
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing</b> .....	
Date of receipt of test item .....	2014.05.21
Date (s) of performance of tests .....	2014.05.25 to 2014.06.25
<b>General remarks:</b>	
<p>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 testing laboratory.  "(See Enclosure #)" refers to additional information appended to the report.  "(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>	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-1:</b>	
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 .....	<input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>Not applicable</b>
<p><b>When differences exist; they shall be identified in the General product information section.</b></p>	
<b>Name and address of factory (ies)</b> .....	NINGBO KLITE ELECTRIC MANUFACTURE CO., LTD. No.5 Dapuhe North Rd., Beilun District, Ningbo City, Zhejiang Province 315800 P.R. China



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**General product information:**

1. The tested LED Transformers with plastic enclosure are intended to be independent use, suitable for use together with LED lighting source.
2. Input voltage/Frequency: 220-240V~, 50/60Hz. The suitable use ambient temperature is -20°C to 50°C, the maximum case temperature (tc): 85°C for LED Transformer 60W 24VDC and 90°C for LED Transformer 120W 24VDC.
3. The LED Transformers are provided reinforced insulation between AC input circuit and DC output circuit, between AC input circuit and enclosure.
4. The LED Transformers are filled with self-harden material.

Type or Model No.	Rated input voltage	Rated input current	Rated output voltage (VDC)	Ouput wattage (W)	ta value	tc value	Transformer	IP
LED Transformer 60W 24VDC	220-240V~ 50/60Hz	0,28-0,32A	24VDC	60W	50°C	85°C	PQ2620	20
LED Transformer 120W 24VDC	220-240V~ 50/60Hz	0,5-0,8A	24VDC	120W	50°C	90°C	PQ3220	20

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EN / IEC 62384			
Clause	Requirement + Test	Result - Remark	Verdict

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

<b>6</b>	<b>MARKING</b>		<b>P</b>
6.1	Mandatory marking		P
6.1.1	Circuit power factor.....	0,95	P
6.1.2	a) temperature range.....	-20 to +50°C	P
	b) stabilized output voltage.....	24VDC	P
	c) stabilized output current .....		N/A
	d) operation with a mains supply dimmer .....		N/A
	e) operation mode .....	PWM	P
6.2	Optional markings		P
	Total circuit power .....	68W for LED Transformer 60W 24VDC 136W for LED Transformer 120W 24VDC	P
	b) Z symbol.....		N/A
	c) short-circuit proof type control gear.....	in user manual	P

<b>7</b>	<b>OUTPUT VOLTAGE AND CURRENT</b>		<b>P</b>
7.1	Starting and connecting requirements		P
	The output should be within 110% of the rated value within 2 s	101,7% when tested with the minimum rated power	P
7.2	Voltage and current during operation		P

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<b>EN / IEC 62384</b>			
<b>Clause</b>	<b>Requirement + Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	- 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		N/A
	- 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	Under 92% rated voltage: minimum load: +1,7% maximum load: 0,4% Under 106% rated voltage: minimum load: +1,7% maximum load: 0,4%	P
	- 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	Under 220V~: minimum load: 1,7% maximum load: 0,4% Under 240V~: minimum load: 1,7% maximum load: 0,4%	P
	- 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		N/A
7.3	Capacitive load requirement		N/A
(A.2 fig. A.1a)	- The LED module or any additional control unit shall not disturb the control gear overcurrent detection		N/A
(A.2 fig. A.1b)	- The LED module or any additional control unit shall not disturb the starting process of the control gear		N/A
7.4	Voltage surges during switching and operation		P
	Voltage surges superimposed on the output voltage shall not exceed the values .....	Under consideration	P
<b>8</b>	<b>TOTAL CIRCUIT POWER</b>		<b>P</b>
	The total circuit power shall not be more than 110% of the value declared by the manufacturer	99% for LED Transformer 60W 24VDC 99,3% for LED Transformer 120W 24VDC	P
<b>9</b>	<b>CIRCUIT POWER FACTOR</b>		<b>P</b>
	The measured circuit power factor shall not differ from the marked value by more than 0,05	0,035 for LED Transformer 60W 24VDC 0 for LED Transformer 120W 24VDC	P

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<b>EN / IEC 62384</b>			
<b>Clause</b>	<b>Requirement + Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
<b>10</b>	<b>SUPPLY CURRENT</b>		<b>P</b>
	The supply current shall not differ by more than +10% from the marked value	1,4%-0,3% for LED Transformer 60W 24VDC 9,3%-(-8,5%) for LED Transformer 120W 24VDC	P
<b>11</b>	<b>IMPEDANCE AT AUDIO –FREQUENCIES (Appendix A, A.3)</b>		<b>N/A</b>
	Audio frequency impedance (400 Hz - 2000 Hz)		N/A
<b>12</b>	<b>OPERATIONAL TESTS FOR ABNORMAL CONDITIONS</b>		<b>P</b>
	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
<b>13</b>	<b>ENDURANCE</b>		<b>P</b>
13.1	a) temperature cycling shock test .....	Non-energised; -20°C(1h); 50°C(1h)	P
	5 cycles are carried out		P
	b) supply voltage switching test.....	220-240V~	P
	1000 cycles are carried out		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		P
	at the end of this time the ballast shall correctly start and operate for 15 min		P

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EN / 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 ( $\Omega$ )	Remarks	
supplementary information:					

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