



Test Report issued under the responsibility of:

NCB TÜV SÜD PSB Pte Ltd
1 Science Park Drive, Singapore 118221



TEST REPORT
IEC 61347-2-13
Part 2: Particular requirements:
Section Thirteen – d.c. or a.c. supplied electronic controlgear for
LED modules

Report Number: 077-2218415-100
Date of issue: 2016-02-12
Total number of pages 15 pages

Applicant's name.....: Samsung Electro-Mechanics Co., Ltd.
Address: 150, Maeyoung-Ro (Maetan-Dong), Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, 443-743, Republic of Korea

Test specification:
Standard: IEC 61347-2-13 (First Edition):2006 used in conjunction with IEC 61347-1 (Second Edition):2007+A1:2010+A2:2012
Test procedure: CB Scheme
Non-standard test method.....: N/A

Test Report Form No.....: IEC61347_2_13D
Test Report Form(s) Originator.....: Intertek Semko AB
Master TRF: 2013-10

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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 item description: LED CONVERTER

Trade Mark: SAMSUNG

Manufacturer: Same as applicant

Model/Type reference: PSDH420901A, PSDH420901B

Ratings: Input: 220-240 V a.c.; 50/60Hz; 40 W; Max. 0.35 A, PF=0.9;
ta=-20 °C - +50 °C; tc=+80 °C
Output: 23-40 V d.c. / 0.9 A

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory:	TÜV SÜD Korea Laboratory (TKL)
Testing location/ address	#315 and 316, MARIO Tower, 222-12, Guro-dong, Guro-Gu, Seoul, Korea
<input type="checkbox"/> Associated CB Laboratory:	
Testing location/ address	N/A
Tested by (name + signature): James Lee	
Approved by (+ signature).....: Martin Kim	
<input type="checkbox"/> Testing procedure: TMP	
Testing location/ address	N/A
Tested by (name + signature): N/A	
Approved by (+ signature).....: N/A	
<input type="checkbox"/> Testing procedure: WMT	
Testing location/ address	N/A
Tested by (name + signature): N/A	
Witnessed by (+ signature): N/A	
Approved by (+ signature).....: N/A	
<input type="checkbox"/> Testing procedure: SMT	
Testing location/ address	N/A
Tested by (name + signature): N/A	
Approved by (+ signature).....: N/A	
Supervised by (+ signature): N/A	



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

Remark 1: This test report contains a total 15 pages, including appendices (pages 12 to 15) which consist of:
Appendix I: Photograph

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

All tests

Testing location:

As above testing laboratory

Summary of compliance with National Differences:

List of countries addressed:

European group differences and national differences

The product fulfils the requirements of IEC 61347-2-13 (First Edition):2006 used in conjunction with IEC 61347-1 (Second Edition):2007+A1:2010+A2:2012 / EN 61347-2-13:2006 used in conjunction with EN 61347-1:2008 + A1:2011 + A2:2013.

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.



PRI _ 정격입력
 U_{in} : 220 - 240V~
 50/60 Hz
 I_{in} : MAX 0.35 A
 P_{in} : 40W
 λ 역률 : 0.9
 t_a : -20...+50 °C
 t_c : +80 °C



18AWG
9±0.5mm



BLACK (검정) L
WHITE (흰색) N

LED CONVERTER
 조명기구용 컨버터 (LED 램프용)
 Constant Current (정전류 방식)
 Flickerless Output

Model/모델 : PSDH420901A
 Name /기종 : ILB420N901N1

CAUTION (주의사항)
 Constant current out
 Use for LED Module only
 Do not open the case
 SELV-equivalent control gear : 내장형
 Suitable for dry and damp location
 Input wire : 18AWG/0.75mm²
 Output wire : 22...18AWG/0.2...0.75mm²

www.sem.samsung.com
 AS: +82-31-210-5114
 Made in China Dongguan Samsung Electro-Mechanics



LED+ RED (빨강)
LED- BLUE (파랑)

9±0.5mm
18...22AWG

SEC _ 정격출력
 P_{out} : 35 W
 I_{out} : 0.9 A
 V_{out} : 23 - 40V \equiv
 V_{OLP} : MAX 50V \equiv
 (OLP:Open Lamp_무부하)



SELV CE KC



PRI _ 정격입력
 U_{in} : 220 - 240V~
 50/60 Hz
 I_{in} : MAX 0.35 A
 P_{in} : 40W
 λ 역률 : 0.9
 t_a : -20...+50 °C
 t_c : +80 °C



18AWG
9±0.5mm



BLACK (검정) L
WHITE (흰색) N

LED CONVERTER
 조명기구용 컨버터 (LED 램프용)
 Constant Current (정전류 방식)
 Flickerless Output

Model/모델 : PSDH420901B
 Name /기종 : ILB420N901N1B

CAUTION (주의사항)
 Constant current out
 Use for LED Module only
 Do not open the case
 SELV-equivalent control gear : 내장형
 Suitable for dry and damp location
 Input wire : 18AWG/0.75mm²
 Output wire : 26...22AWG/0.12...0.32mm²

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 Made in China Dongguan Samsung Electro-Mechanics



LED- BLUE (파랑) LED+ RED (빨강)
Wire 22...26AWG

SEC _ 정격출력
 P_{out} : 35 W
 I_{out} : 0.9 A
 V_{out} : 23 - 40V \equiv
 V_{OLP} : MAX 50V \equiv
 (OLP:Open Lamp_무부하)



SELV CE KC

Test item particulars	
Classification of installation and use	Built-in SELV-equivalent controlgear
Supply Connection	Terminal
.....	
.....	
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	2016-02-05
Date (s) of performance of tests.....	2016-02-05 to 2016-02-12

General remarks:

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.

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

Clause numbers between brackets refer to clauses in IEC 61347-1

Remark 1 – This modification report is to supplement the earlier CB Ref. Cert. No. SG-LE-01241.

(Test Report Ref. No.: 077-2218415-000)

- The following is changed.

Components	Before	After
Y-Cap (CY1)	Max. 2200 pF, 400 Vac, Y1	Max. 3300 pF, 400 Vac, Y1

- Dongguan Solum Electronics Ltd. and Dongguan Yingju Power Co., Ltd. are added.

Manufacturer's Declaration per sub-clause 4.2.5 of IEC 61347-1:

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) : Factory 1: Same as Applicant.
 Factory 2: Dongguan Solum Electronics Co., Ltd.
 Hengkeng Management Area, Liaobu Town,
 Dongguan City, Guangdong Province 523413
 People's Republic of China
 Factory 3: Dongguan Solytech Enterprise
 Corporation
 Hong Men Shan Industrial Area, Chang Shan Tou
 Management Area, Qing Xi Town, Dong Guan City,
 Guang Dong Province 523661 People's Republic of
 China
 Factory 4: Dongguan Aptech Electronics Co., Ltd.
 Jinfu 2 Road, TangChun East Area, TangChun
 Village, LiaoBu Town 523407 DongGuan City,
 GuangDong Province, People's Republic of China
 Factory 5: Dongguan Yingju Power Co., Ltd.
 No.6 Yongxing Road, Shayao Village, Shijie Town,
 Dongguan City, Guangdong Province, 523292
 People's Republic of China
 Factory 6: Dongguan Towada Electronics Co., Ltd.
 Fu Da Ind, Zhangyang District, Zhangmutou,
 Dongguan 523636 People's Republic of China
 Factory 7: Dongguan City Yingju Electronics Co.
 Ltd.
 Yewuji Village, Sijia, Shijie Town Dongguan,
 Guangdong 523300 People's Republic of China
 Factory 8: Dongguan Samsung Electro-Mechanics
 Co., Ltd.
 Hengkeng Management Area, Liaobu Town,
 Dongguan City, Guangdong Province 523413
 People's Republic of China

General product information:

1. The product was Built-in type LED control gear and prepared for Class II construction.
2. User's manual is not provided and should be considered in the end product.
3. All requirements should be fulfilled to standard of IEC 61347-2-13 (First Edition):2006 used in conjunction with IEC 61347-1 (Second Edition):2007+A1:2010+A2:2012 / EN 61347-2-13:2006 used in conjunction with EN 61347-1:2008 + A1:2011 + A2:2013 when installing in the end product.
4. Model Differences
 - The basic Model is PSDH420901A which conducted the tests.
 - The model PSDH420901B is similar to basic model except for output connector.

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict
8 (10)	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		P
- (10.1)	Controlgear protected against accidental contact with live parts		P
- (A2)	Voltage measured with 50 k Ω	32.0 V d.c.	P
- (A3)	Voltage > 35 V peak or > 60 V d.c. or protective impedance device		N/A
- (10.4)	Accessible conductive parts in SELV circuits		P
	Output voltage under load \leq 25 V r.m.s. or \leq 60 V d.c.	39.2 V d.c.	P
	If output voltage > 25 V r.m.s. or > 60 V d.c.; No load output \leq 35 V peak or \leq 60 V d.c and touch current does not exceed 0,7 mA (peak) or 2 mA d.c.:		N/A

A	ANNEX A - TEST TO ESTABLISH WHETHER A CONDUCTIVE PART IS A LIVE PART WHICH MAY CAUSE AN ELECTRIC SHOCK		P
A.1	Comply with A.2 or A.3		P
A.2	Voltage \leq 35 V peak or \leq 60 V d.c.:	32.0 V d.c.	P
A.3	If voltage > 35 V peak or > 60 V d.c. or protective impedance device; touch current does not exceed 0,7 mA (peak) or 2 mA d.c.:		N/A
	Comply with Annex G of IEC 60598-1		P

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1: components						P
object/part No.	code	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity
Input connector (CN1)	A	Degson Electronics Co Ltd	DG 250 - 3.5	450 V, 5 A	IEC 60998-1	VDE
Output terminal (CN2) For model: PSDH420901A	A	Degson Electronics Co Ltd	DG 250 - 3.5	450 V, 5 A	IEC 60998-1	VDE
Output connector (CN3) For model: PSDH420901B	A	Yeonho Electronics Co., Ltd	SMW250(#)	250 V, 3 A	UL 1977	UL(E108706)
Alternate	D	Jowle Technology Co., Ltd.	A2512WV0	250 V, 3 A	UL 1977	UL(E144544)
Fuse (F01)	A	Littelfuse Philippines Inc. Conquer Electronics Co., Ltd.	369 series	300V, T3.15AL	IEC 60127-3, EN 60127-3	SEMKO
Alternate	D		MST			SEMKO
Varistor (VAR1)	A	Amotech Co., Ltd	INR14D621	620 Vrms, 4.5 kA,	IEC 61051-2	VDE
Alternate	D	Thinking Electronics Industrial Co., Ltd	TVR14621	620 Vrms, 4.5kA,	IEC 61051-2	VDE
X-Capacitor (CX1)	A	Cowell Fashion Co., Ltd. Pilkor Electronics	PCX2 337	275 Vac, 150 nF	IEC 60384-14 EN 60384-14	SEMKO
Alternate	D	ZhuHai Sung Ho Electronics Co., Ltd.	CMPP			VDE
Coupling Capacitor (CY1)	A	Dong II Electronics Co., Ltd.	DA	Max. 3300 pF, 400 Vac, Y1	IEC 60384-14 EN 60384-14	FIMKO
Alternate	D	Walsin Technology Corporation. (POE)	AH			VDE
Line Choke (LF1)	C	Kwang Sung Electronics H.K Co. Limited	152K	Min.125 °C	IEC 61347-1	Tested in apparatus

IEC 61347-2-13						
Clause	Requirement + Test			Result - Remark		Verdict
Alternate	D	Li Shin Electronic Limited	152L			
Line filter (LX1)	C	Kwang Sung Electronics H.K Co. Limited	KV825030	Min.130 °C	IEC 61347-1	Tested in apparatus
Alternate	D	TNC Co., Ltd	PVA2503UNB2			
Line filter (LX2)	C	TNC Co., Ltd	CV1305400MB 02CF	Min.130 °C	IEC 61347-1	Tested in apparatus
PFC (L01)	C	NamYang Electronics Co., Ltd	FF25-IND	Min.130 °C	IEC 61347-1	Tested in apparatus
Alternate	D	Li Shin Electronic Limited	FF25-IND			
Line filter (LX3)	C	Kwang Sung Electronics H.K Co. Limited	KV0830180	Min.130 °C	IEC 61347-1	Tested in apparatus
Alternate	D	TNC Co., Ltd	PVA30180B1			
Bridge Diode (BD1)	C	Lite On	KBP206G	Min. 600 V, Max. 2 A	IEC 61347-1	Tested in apparatus
Alternate	D	Interchangeable	Interchangeable			
El-capacitor (C71)	C	Interchangeable	Interchangeable	Min. 450V, 22 µF, 105 °C	IEC 61347-1	Tested in apparatus
FET (Q02)	C	AUK	SMK0780FD	Min. 800 V Max. 7.0 A	IEC 61347-1	Tested in apparatus
Alternate	D	Magnachip	MMF80R900P			
Alternate	D	STM	STF6N80K5			
Alternate	D	Interchangeable	Interchangeable			
Transformer (T01)	C	NamYang Electronics Co., Ltd	LL47K-4FM	Class B	IEC 61347-1	Tested in apparatus
Alternate	D	Dong Guan Top Nation Electronics Limited	LL47K-4FM			
PCB	A	Kingboard Laminates Holdings Ltd.	KB-5150&	Min. V-0, 130 °C, CTI, PTI > 600	UL 94, UL 746	UL(E123995)
Alternate	D	Interchangeable	Interchangeable			
Case	A	Samsung SDI Co., Ltd.	HN-1064(+)	Min. V-0 130 °C, Min. 1.5 thick.	UL94	UL (E115797)

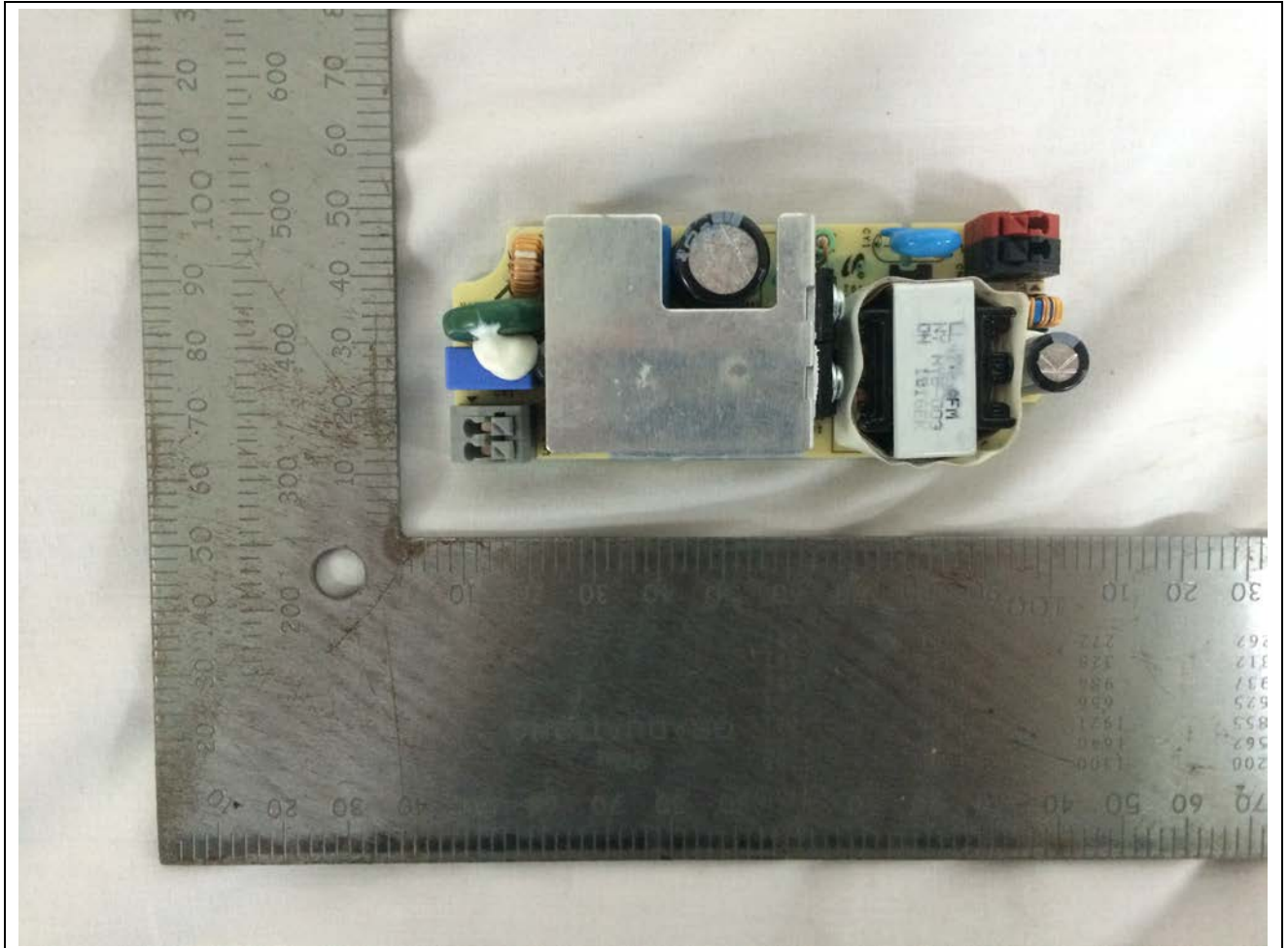
IEC 61347-2-13						
Clause	Requirement + Test			Result - Remark		Verdict
Alternate	D	Samyang Corporation.	3025GR(y)	Min. V-0 125 °C, Min. 1.5 thick.		UL(E121254)
Alternate	D	Interchangeable	Interchangeable			

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

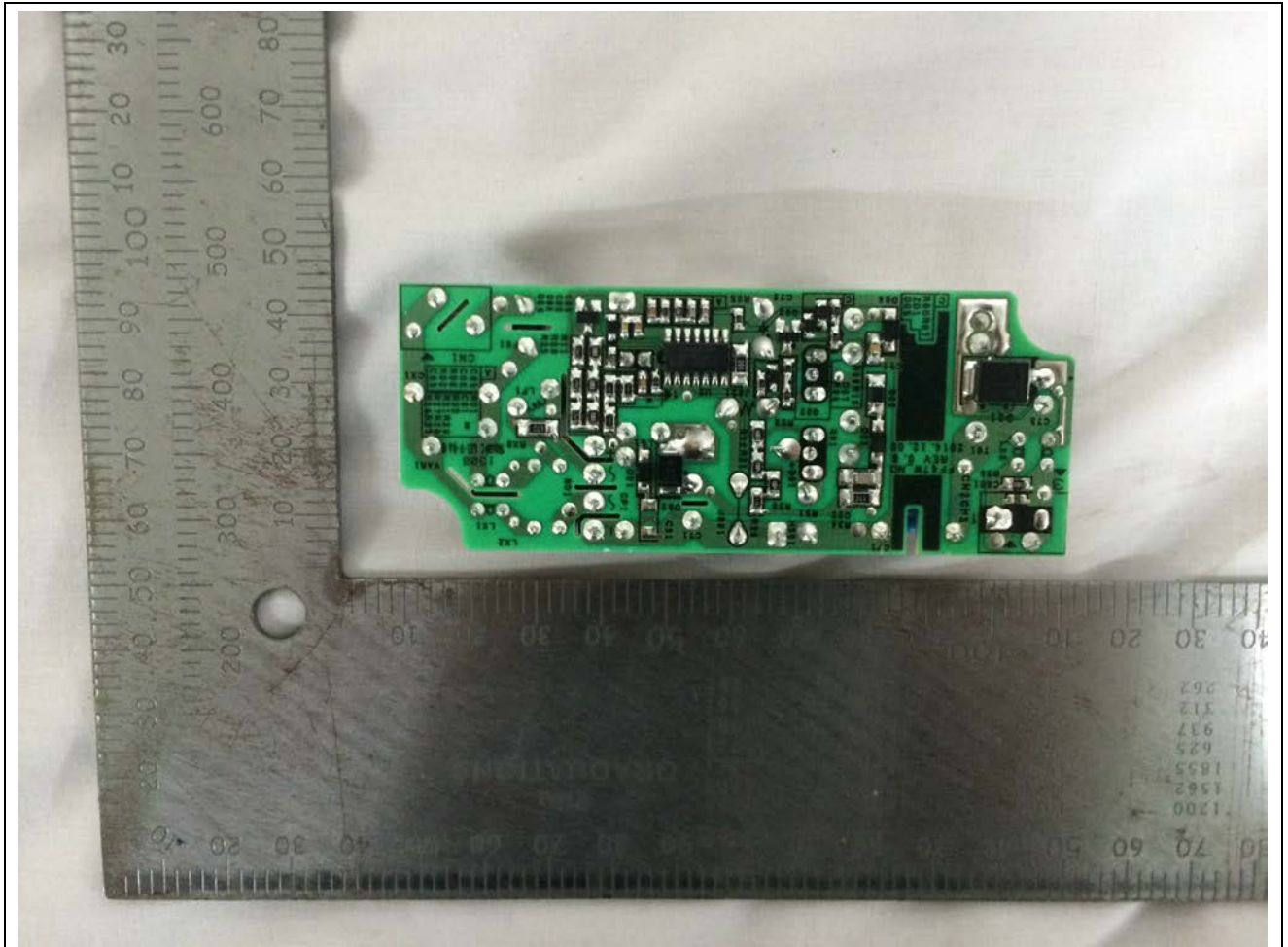
IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict

Appendix I



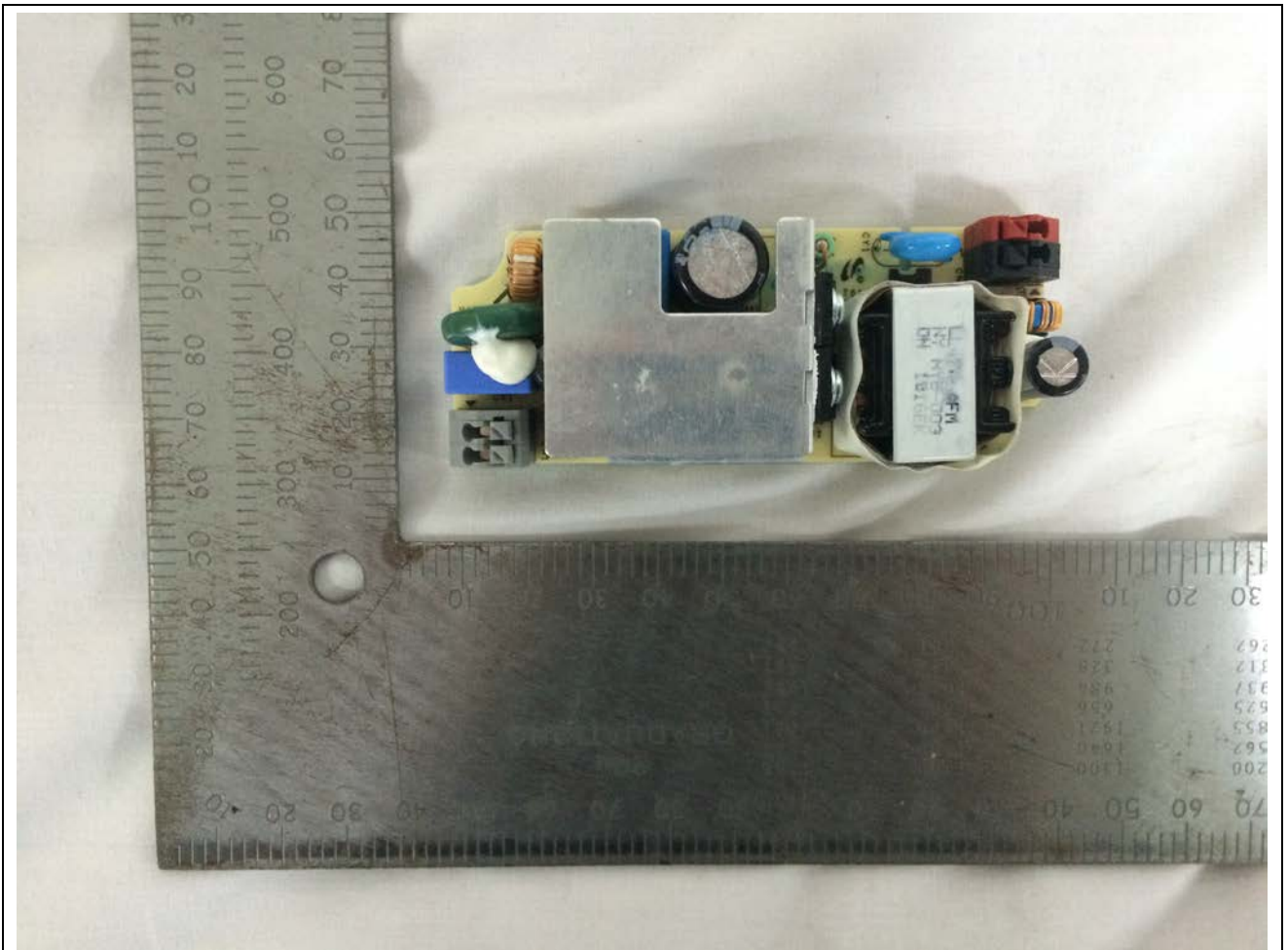
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IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict



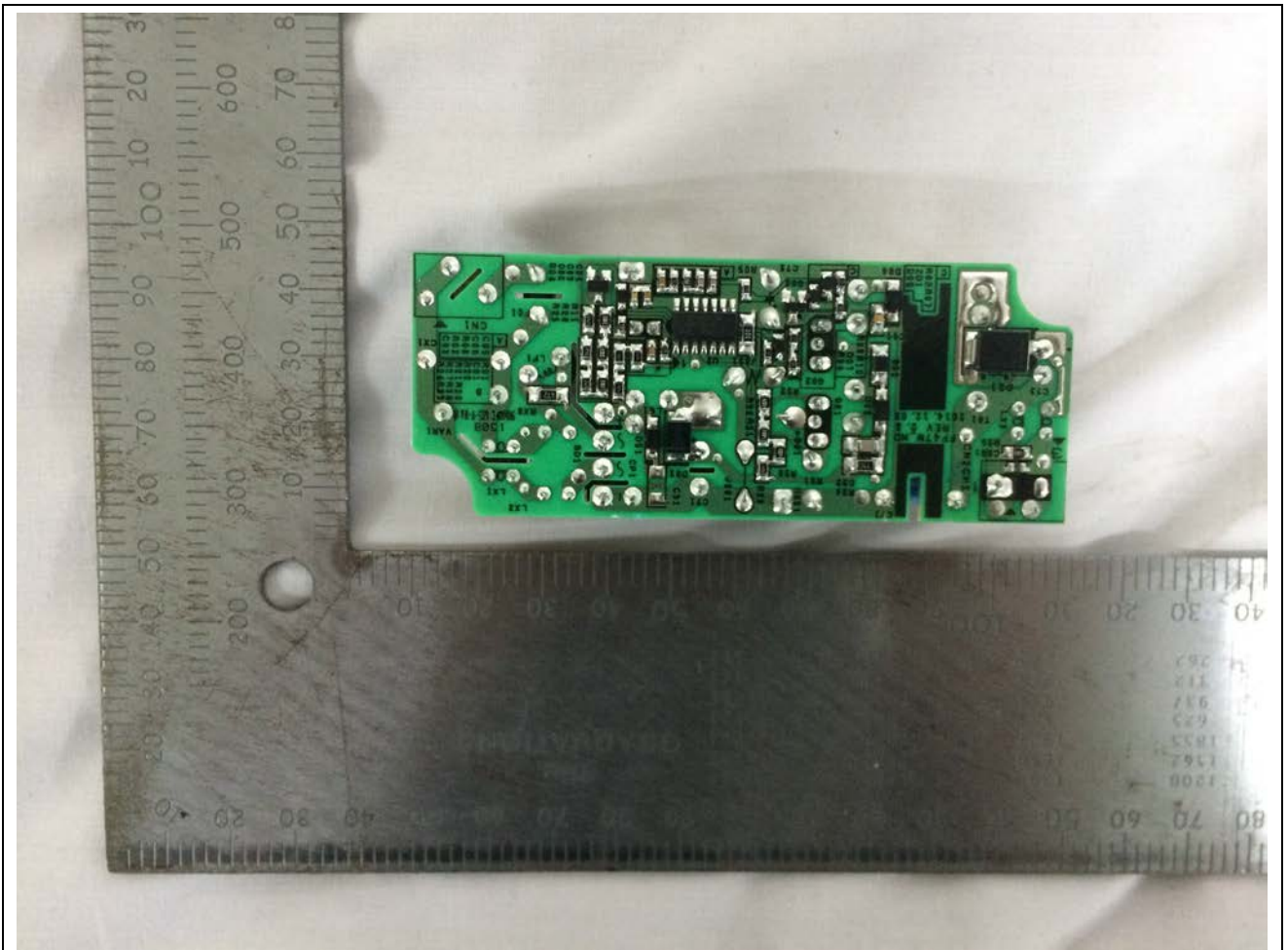
Component Bottom < PSDH420901A >

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict



Component Top < PSDH420901B >

IEC 61347-2-13			
Clause	Requirement + Test	Result - Remark	Verdict



Component Bottom < PSDH420901B >