

FCC TEST REPORT

FCC ID : VYDQV50L

Applicant : **Hanway Technology Co., Ltd.**
BNN Industrial Zone, Tongji Rd., Nantou Town, Zhongshan, Guangdong,
P.R.China

Equipment Under Test (EUT) :

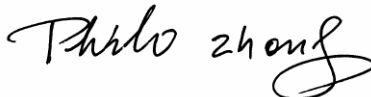
Product description : Ventilation Fan

Model No. : QV50L(BF50QL), QV80L(BF80QL), QV90L(BF90QL),
QV110L(BF110QL), QV130L(BF130QL), QV150L(BF150QL),
QDV70L(BF70QDL), QDV80L(BF80QDL), QDV90L(BF90QDL),
QDV110L(BF110QDL), QDV130L(BF130QDL), QDV150L(BF150QDL)

Standards : FCC Part 18

Date of Test : Feb.29, 2008

Test Engineer : **Tiger Su**

Reviewed By : 

PERPARED BY:

Waltek Services (Shenzhen) Co., Ltd.

8C, West Tower, Aidi Building, No.5003 Binhe Rd, Futian District, Shenzhen518045,
Guangdong, China.

Tel: 86-755-83551033

Fax: 86-755-83552400

2 Contents

	Page
1 COVER PAGE.....	1
2 CONTENTS.....	2
3 TEST SUMMARY.....	3
4 GENERAL INFORMATION.....	4
4.1 CLIENT INFORMATION	4
4.2 GENERAL DESCRIPTION OF E.U.T.....	4
4.3 DETAILS OF E.U.T.	4
4.4 DESCRIPTION OF SUPPORT UNITS	4
4.5 STANDARDS APPLICABLE FOR TESTING.....	4
4.6 TEST METHODOLOGY	4
4.7 TEST FACILITY.....	5
4.8 TEST LOCATION.....	5
5 EQUIPMENT USED DURING TEST	6
6 CONDUCTED EMISSION TEST	7
6.1 TEST EQUIPMENT.....	7
6.2 TEST PROCEDURE	7
6.3 CONDUCTED TEST SETUP	8
6.4 EUT OPERATING CONDITION	8
6.5 CONDUCTED EMISSION LIMITS	9
6.6 SPECTRUM ANALYZER.....	9
6.7 FREQUENCY RANGE OF MEASUREMENTS.....	10
6.8 CONDUCTED EMISSION TEST RESULT	10
6.8.1 Measurement Data.....	10
7 PHOTOGRAPHS OF TESTING.....	13
7.1 CONDUCTED EMISSION TEST VIEW.....	13
8 PHOTOGRAPHS-CONSTRUCTIONAL DETAILS	14
8.1 EUT WITH GLASS CHIMNEY-FRONT VIEW	14
8.2 EUT WITH GLASS CHIMNEY-BACK VIEW.....	14
8.3 EUT WITH GLASS CHIMNEY -OPEN VIEW.....	15
8.4 EUT WITH PLASTIC CHIMNEY-FRONT VIEW.....	16
8.5 EUT WITH PLASTIC CHIMNEY-BACK VIEW	16
8.6 EUT WITH PLASTIC CHIMNEY -OPEN VIEW.....	17
8.7 ELECTRONIC BALLAST-FRONT VIEW	18
8.8 ELECTRONIC BALLAST-BACK VIEW.....	18
8.9 PCB-FRONT VIEW	19
8.10 PCB-BACK VIEW.....	19
9 FCC ID LABEL.....	20

3 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 18: 2003	ANSI C63.4:2003	Class B	N/A
Conducted Emission (450KHz to 30MHz)	FCC PART 18: 2003	ANSI C63.4:2003	Class B	PASS

4 General Information

4.1 Client Information

Applicant: **Hanway Technology Co., Ltd.**
Address of Applicant: BNN Industrial Zone, Tongji Rd., Nantou Town, Zhongshan, Guangdong, P.R.China

4.2 General Description of E.U.T.

Product description: Ventilation Fan
Model No.: QV50L(BF50QL), QV80L(BF80QL), QV90L(BF90QL),
QV110L(BF110QL), QV130L(BF130QL), QV150L(BF150QL),
QDV70L(BF70QDL), QDV80L(BF80QDL),
QDV90L(BF90QDL), QDV110L(BF110QDL),
QDV130L(BF130QDL), QDV150L(BF150QDL)

4.3 Details of E.U.T.

Power Supply: 120VAC / 60Hz

4.4 Description of Support Units

The EUT has been tested as an independent unit.

4.5 Standards Applicable for Testing

The customer requested FCC tests for a Ventilation Fan. The standards used were FCC Part18.

4.6 Test Methodology

All measurements contained in this report are conducted with FCC Measurement Procedure MP-5, technical requirements for Methods of Measurement of Radio-Noise Emission from ISM Equipment.

4.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC – Registration No.: 759397**
Solid Industrial (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 759397, December 28, 2006.

4.8 Test Location

All Emissions tests were performed at:-

Solid Industrial (Shenzhen) Co., Ltd. at 333 Bulong Highway Buji Longgang, Shenzhen, Guangdong, China.

5 Equipment Used during Test

	Conducted Emission Test				
Item	Test Equipment	Manufacturer	Model No.	Series No.	Last Cal.
1	EMI Test Receiver	R&S	ESS	100038	2007-8
2	LISN	Kyoritsu	KNW-403D	N/A	2007-8
3	Pulse Limiter	R&S	ESHSZ2	100044	2007-8

6 Conducted Emission Test

Product Name:	Ventilation Fan
Test Requirement:	FCC Part 18
Test Method:	Based on FCC Part 18
Test Date:	Feb.29, 2008
Frequency Range:	450kHz to 30MHz
Class:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

6.1 Test Equipment

Please refer to Section 5 this report.

6.2 Test Procedure

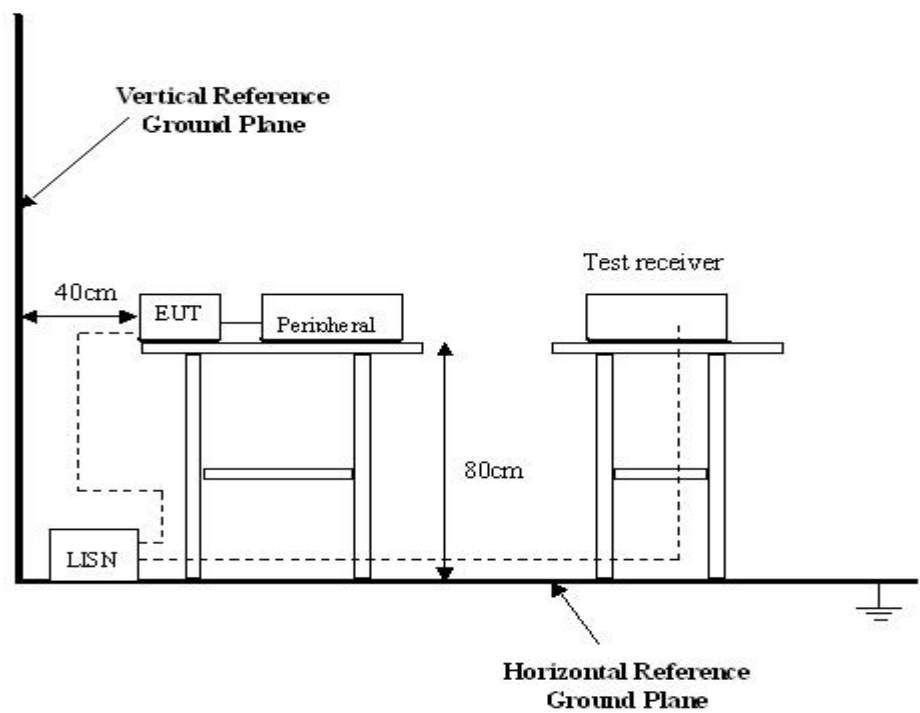
1. During the conducted emission test, the power cord of the EUT is connected to the auxiliary outlet of the LISN.
2. The EUT was tested according to FCC MP-5. The frequency spectrum from 450kHz to 30MHz was investigated.
3. Conducted emissions shall be measured in accordance with the procedure outlined in FCC Rules, Part 18. Compliance of the RF Lighting Device will be based on comparison with the limits that are specified in Section 6.5. The RF Lighting Device shall not generate conducted emission that exceed this specified limits.

6.3 Conducted Test Setup

The conducted emission tests were performed using the setup accordance with the FCC MP-5 measurement procedure.

The EUT is tested independently.

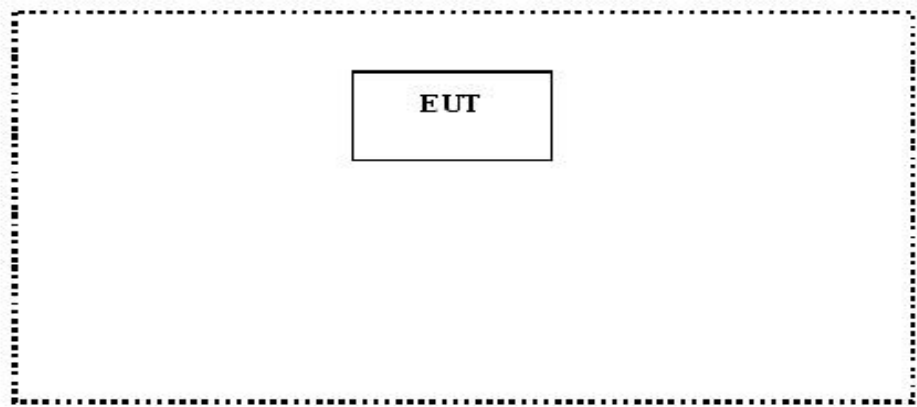
The power supply used by the EUT is connected to a 120VAC / 60Hz power source.



6.4 EUT Operating Condition

Operating condition is according to FCC MP-5.

- A. Setup the EUT and simulators as shown on follow.
- B. Enable RF signal and confirm EUT active.
- C. Modulate output capacity of EUT up to specification.



6.5 Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBUV)- Quasi-peak
0.45-2.51	47.95
2.51-3.0	69.54
3.0-30	47.95

Note: In the above limits, the tighter limit applies at the band edges.

6.6 Spectrum Analyzer

The spectrum analyzer is configured during the conduction test is as follows:

Start Frequency..... 450 kHz
Stop Frequency 30 MHz
Sweep Speed..... Auto
IF Bandwidth 9 kHz
Video Bandwidth 100 kHz
Quasi-Peak Adaptor Bandwidth..... 9 kHz
Quasi-Peak Adaptor Mode..... Normal

6.7 Frequency Range Of Measurements

Frequency band in which device operates (MHz)	Range of frequency measurements	
	Lowest frequency	Highest frequency
Below 1.705	Lowest frequency generated in the device, but not lower than 9 kHz.	30MHz.
1.705 to 30	Lowest frequency generated in the device, but not lower than 9 kHz.	400MHz.
30 to 500	Lowest frequency generated in the device or 25MHz, whichever is lower.	Tenth harmonic or 1,000MHz, whichever is higher.
500 to 1,000	Lowest frequency generated in the device or 100MHz, whichever is lower.	Tenth harmonic.
Above 1,000	do	Tenth harmonic or highest detectable emission.

6.8 Conducted Emission Test Result

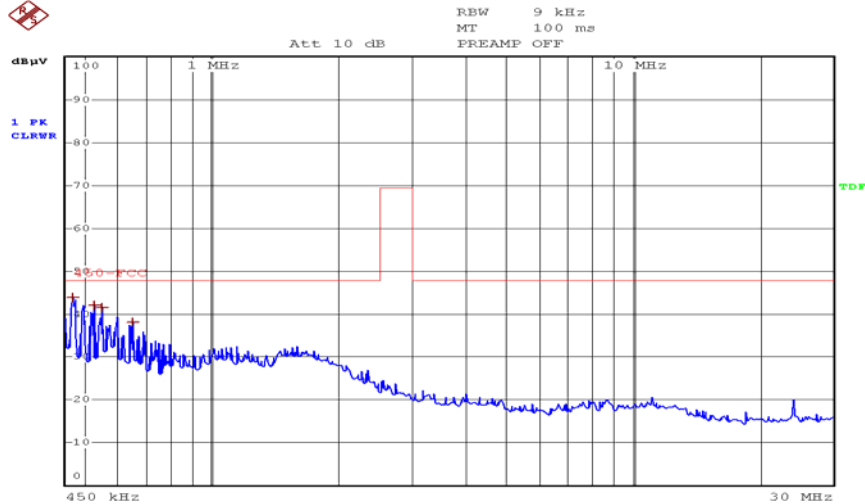
Test Item:	Conducted Emission Test
Test Voltage:	120VAC / 60Hz
Test Mode:	Normal
Temperature:	24 °C
Humidity:	52%RH
Test Result:	PASS

6.8.1 Measurement Data

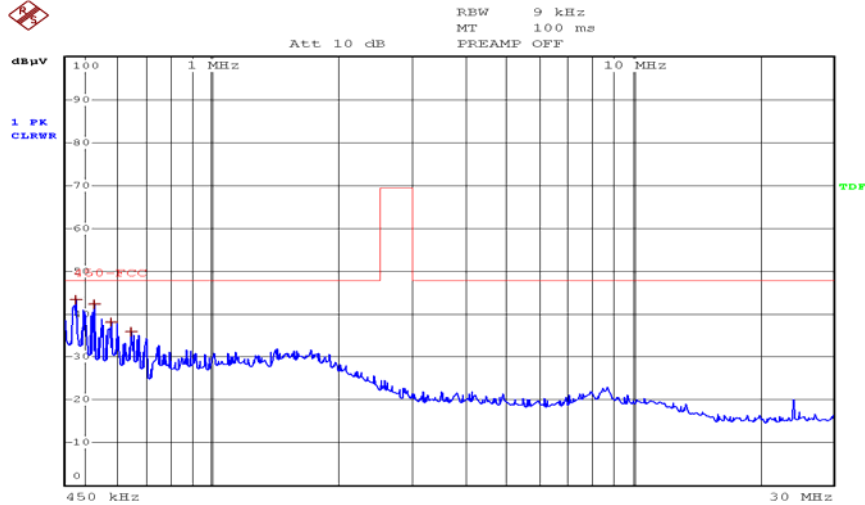
The conducted emissions from the RF Lighting Device complied with FCC Part 18 limit under all configurations. No anomalies were noted.

Please refer to the following test data for reference.

Live Line



Neutral Line



Live Line

NO.	Frequency [MHz]	Level [dBuV]	Limit [dBuV]	Type	Margin [dB]
1	0.46	42.21	47.95	Quasi Peak	5.74
2	0.48	41.79	47.95	Quasi Peak	6.16
3	0.55	37.62	47.95	Quasi Peak	10.33
4	1.64	32.73	47.95	Quasi Peak	15.22
5	20.49	20.00	47.95	Quasi Peak	27.95

Neutral Line

NO.	Frequency [MHz]	Level [dBuV]	Limit [dBuV]	Type	Margin [dB]
1	0.46	41.75	47.95	Quasi Peak	6.20
2	0.48	38.32	47.95	Quasi Peak	9.63
3	0.54	36.69	47.95	Quasi Peak	11.26
4	1.62	31.78	47.95	Quasi Peak	16.17
5	20.47	20.00	47.95	Quasi Peak	27.95

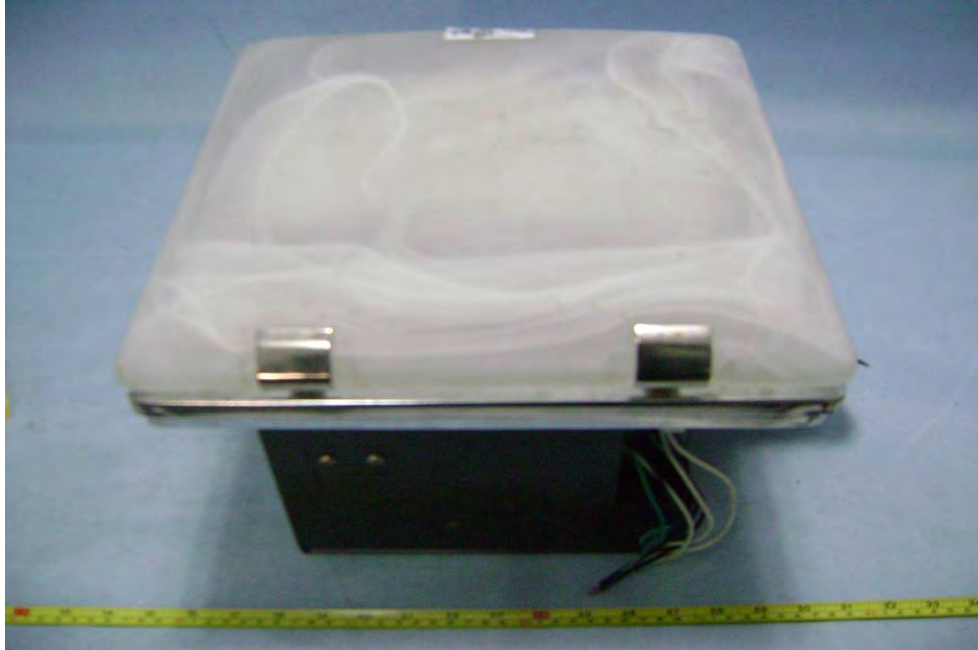
7 Photographs of Testing

7.1 Conducted Emission Test View



8 Photographs-Constructional Details

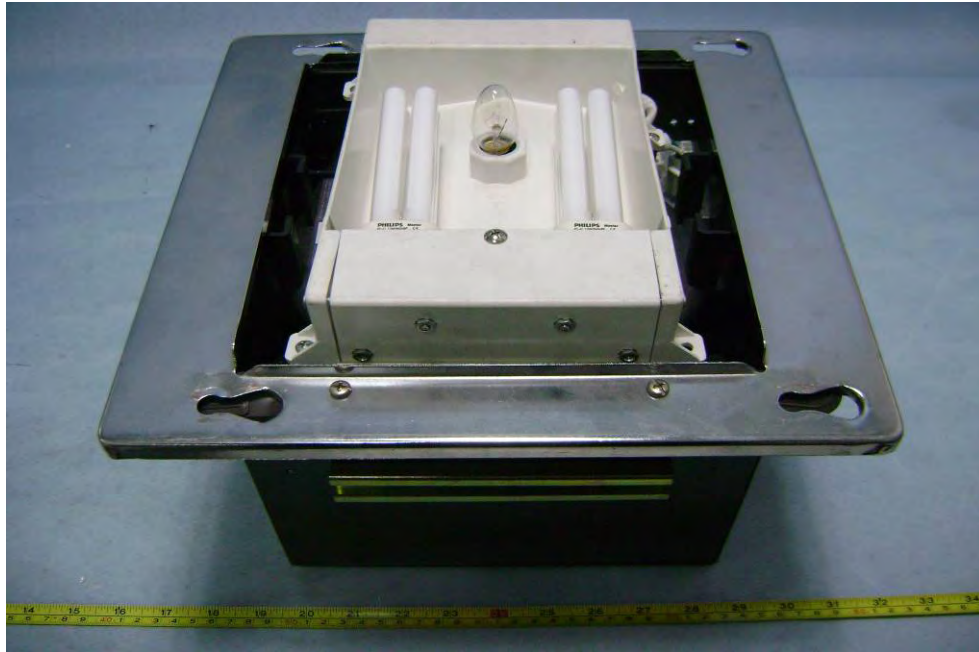
8.1 EUT with glass chimney-Front View



8.2 EUT with glass chimney-Back View



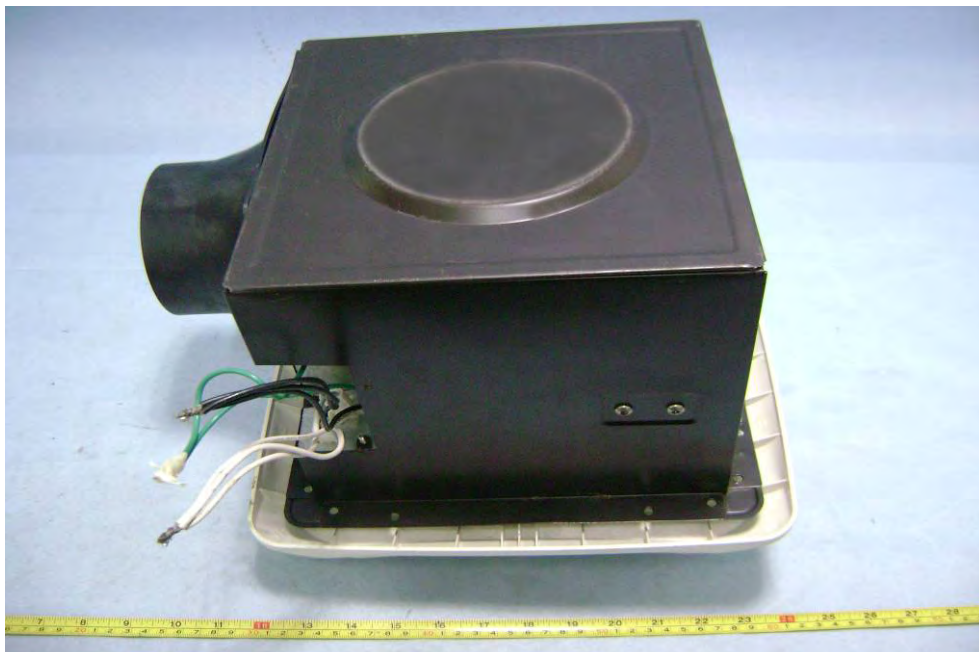
8.3 EUT with glass chimney -Open View



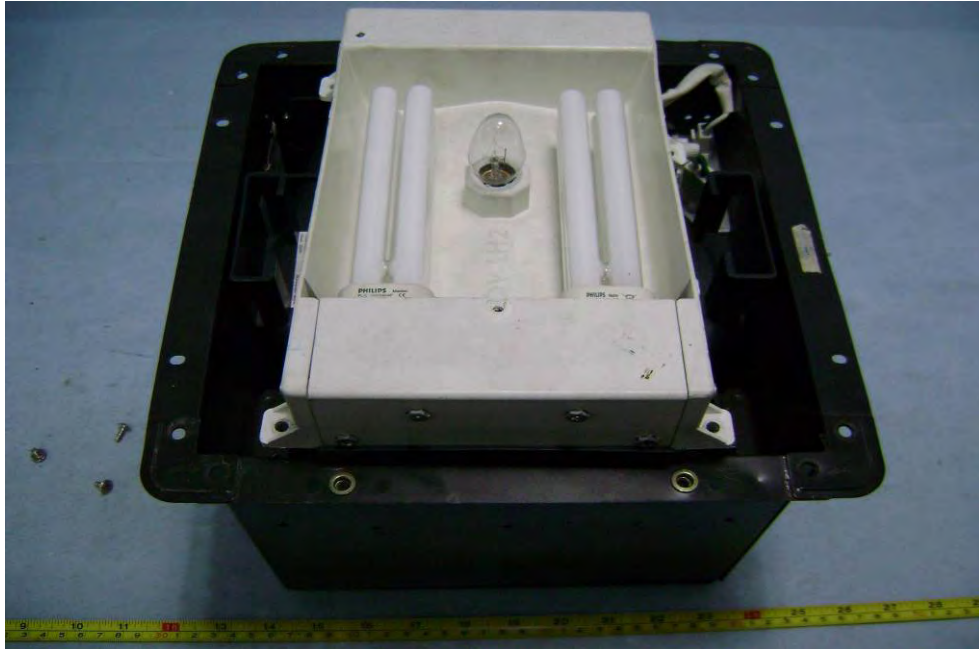
8.4 EUT with plastic chimney-Front View



8.5 EUT with plastic chimney-Back View



8.6 EUT with plastic chimney -Open View



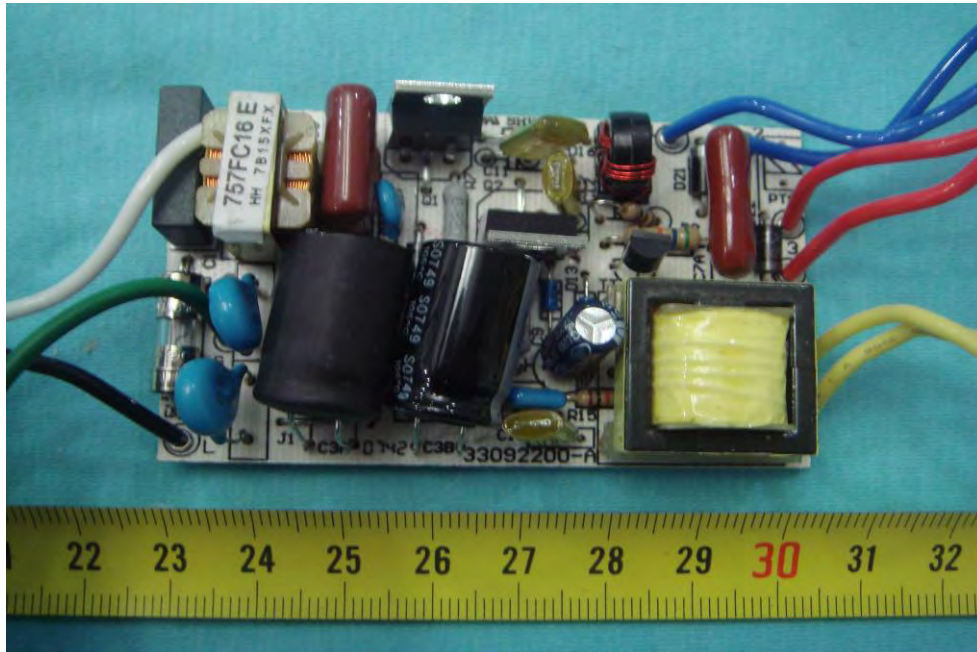
8.7 Electronic ballast-Front View



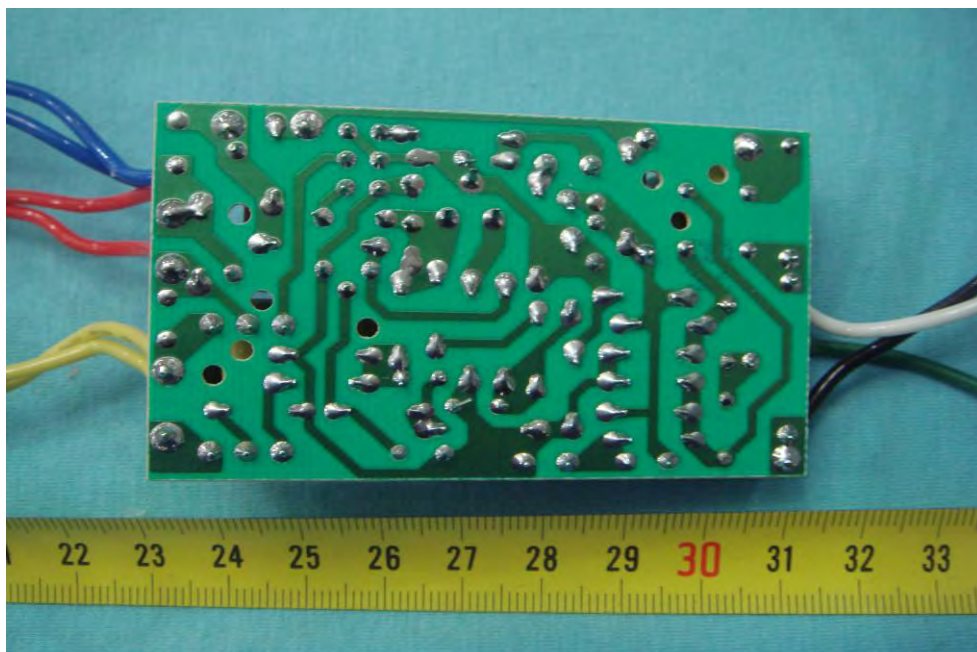
8.8 Electronic ballast-Back View



8.9 PCB-Front View



8.10 PCB-Back View



9 FCC ID Label

This device complies with Part 18 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT
EUT Top View/ proposed FCC Mark Location

