

FCC TEST REPORT

On Behalf of

Shenzhen XinShengLi Power Co.,LTD.

Battery Charger

Model No.: Lii-500

Prepared for : Shenzhen XinShengLi Power Co.,LTD.
Address : (MaoBang Industrial park)6th Floor,No.8,Lingwu
industrial zone,Junzibu,Guanlan town,
Shenzhen,Guangdong,China

Prepared by : Shenzhen STONG Compliance Testing Laboratory
Co.,Ltd.
Address : F/4, Building 10, Da Yuan Industrial Zone, Xili Town,
Nanshan District, Shenzhen, Guangdong, China
Tel : (+86)755-26909822
Fax : (+86)755-61605504
Web : www.atllab.org
Mail : atllab@ atllab.org

Date of receipt of test sample : Nov 12, 2015
Number of tested samples : 1
Serial number : Prototype
Date of Test : Nov 12, 2015 - Nov 27, 2015
Date of Report : Nov 27, 2015

FCC TEST REPORT
FCC CFR 47 PART 15 Subpart B: 2013

Report Reference No. : R20151112239E

Date Of Issue : Nov 27, 2015

Testing Laboratory Name..... : Shenzhen STONG Compliance Testing Laboratory Co.,Ltd.

Address : F/4, Building 10, Da Yuan Industrial Zone, Xili Town, Nanshan District, Shenzhen, Guangdong, China

Testing Location/ Procedure..... : Full application of Harmonised standards [checked]
Partial application of Harmonised standards []
Other standard testing method []

Applicant's Name..... : Shenzhen XinShengLi Power Co.,LTD.

Address : (MaoBang Industrial park)6th Floor,No.8,Lingwu industrial zone,Junzibu,Guanlan town, Shenzhen,Guangdong,China

Test Specification

Standard : FCC CFR 47 PART 15 Subpart B: 2013, ANSI C63.4-2009

Test Report Form No. : EMC-1.0

TRF Originator : Shenzhen STONG Compliance Testing Laboratory Co.,Ltd.

Master TRF..... : Dated 2015-03

SHENZHEN STONG COMPLIANCE TESTING LABORATORY CO.,LTD. All rights reserved.
This publication may be reproduced in whole or in part for non-commercial purposes as long as the SHENZHEN STONG COMPLIANCE TESTING LABORATORY CO.,LTD. is acknowledged as copyright owner and source of the material. SHENZHEN STONG COMPLIANCE TESTING LABORATORY CO.,LTD. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test Item Description. : Battery Charger

Trade Mark : LiitoKala® XSL 鑫威力

Model/ Type reference..... : Lii-500

Ratings For charger: Input:12V~ 1500mA
Output:5V~ 1A

Result : Positive

Compiled by:

Sifeifei

Supervised by:

Xielingling

Approved by:

Xu Peng

Si feifei / File administrators

Xie Lingling / Technique principal

Xu Peng / Manager

FCC -- TEST REPORT**Test Report No. : R20151112239E**Nov 27, 2015

Date of issue

Type / Model..... : Lii-500

EUT..... : Battery Charger

Applicant..... : Shenzhen XinShengLi Power Co.,LTD.

Address..... : (MaoBang Industrial park)6th Floor,No.8,Lingwu industrial zone,Junzibu,Guanlan town, Shenzhen,Guangdong,China

Telephone..... : /

Fax..... : /

Manufacturer..... : Shenzhen XinShengLi Power Co.,LTD.

Address..... : (MaoBang Industrial park)6th Floor,No.8,Lingwu industrial zone,Junzibu,Guanlan town, Shenzhen,Guangdong,China

Telephone..... : /

Fax..... : /

Factory..... : Shenzhen XinShengLi Power Co.,LTD.

Address..... : (MaoBang Industrial park)6th Floor,No.8,Lingwu industrial zone,Junzibu,Guanlan town, Shenzhen,Guangdong,China

Telephone..... : /

Fax..... : /

Test Result according to the standards on page 5: **Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

TABLE OF CONTENTS

Test Report Description	Page
1. SUMMARY OF STANDARDS AND RESULTS	5
1.1. Description of Standards and Results	5
2. GENERAL INFORMATION	6
2.1. Description of Device (EUT)	6
2.2. Description of Test Facility	6
2.3. Statement of the measurement uncertainty	6
2.4. Measurement Uncertainty	6
3. POWER LINE CONDUCTED MEASUREMENT	7
3.1. Test Equipment	7
3.2. Block Diagram of Test Setup	7
3.3. Power Line Conducted Emission Measurement Limits (Class B)	7
3.4. Configuration of EUT on Measurement	7
3.5. Operating Condition of EUT	8
3.6. Test Procedure	8
3.7. Power Line Conducted Emission Measurement Results	8
4. RADIATED EMISSION MEASUREMENT	9
4.1. Test Equipment	9
4.2. Block Diagram of Test Setup	9
4.3. Radiated Emission Limit (Class B)	9
4.4. EUT Configuration on Measurement	10
4.5. Operating Condition of EUT	10
4.6. Test Procedure	10
4.7. Radiated Emission Noise Measurement Result	10
5. PHOTOGRAPH	12
5.1. Photo of Conducted Measurement	12
6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	13
7. MANUFACTURER/ APPROVAL HOLDER DECLARATION	16

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	FCC CFR 47 PART 15 Subpart B: 2013	Class B	PASS
Radiated disturbance	FCC CFR 47 PART 15 Subpart B: 2013	Class B	PASS

N/A is an abbreviation for Not Applicable.

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Battery Charger

Model Number : Lii-500

Power Supply : For charger: Input:12V $\overline{\text{---}}$ 1500mA
Output:5V $\overline{\text{---}}$ 1A

EUT Clock Frequency : \leq 108MHz

2.2. Description of Test Facility

Site Description

Test Lab. : Shenzhen STONG Compliance Testing Laboratory Co.,Ltd.
Add. : F/4, Building 10, Da Yuan Industrial Zone, Xili Town, Nanshan District, Shenzhen, Guangdong, China.
Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

2.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the STONG quality system acc. To DIN EN ISO/IEC 17025.

Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.4. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Radiation Uncertainty	30MHz~200MHz	$\pm 2.96\text{dB}$	(1)
	200MHz~1000MHz	$\pm 3.10\text{dB}$	(1)
Conduction Uncertainty	150kHz~30MHz	$\pm 1.63\text{dB}$	(1)
Power disturbance	30MHz~300MHz	$\pm 1.60\text{dB}$	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

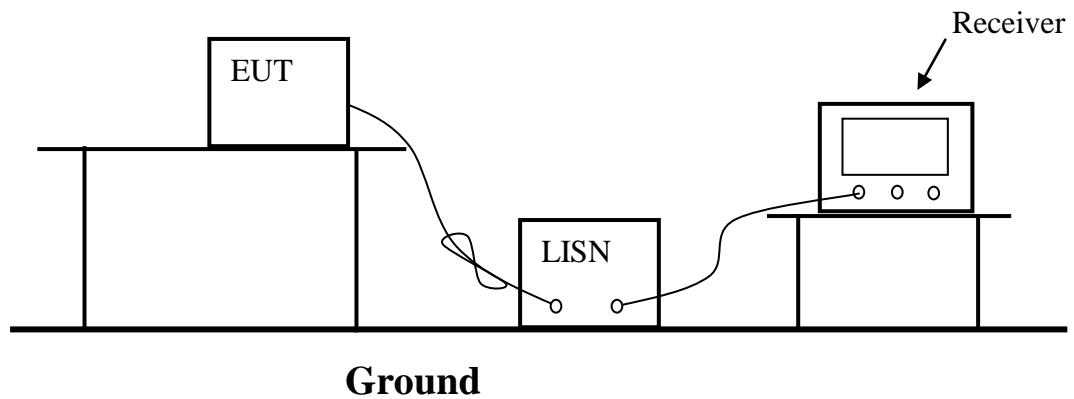
3. POWER LINE CONDUCTED MEASUREMENT

3.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2015/06/18
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2015/06/18
3	Artificial Mains	ROHDE & SCHWARZ	ENV216	101288	2015/06/18
4	EMI Test Software	AUDIX	E3	N/A	2015/06/18

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Measurement Limits (Class B)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.50	66 to 56*	56 to 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turn on the power of all equipment.

3.5.3. Let the EUT work in test mode (ON) and measure it.

3.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2009 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.7. Power Line Conducted Emission Measurement Results

PASS.

All the scanning waveforms for Conducted Emission Measurement are refer to the next page.

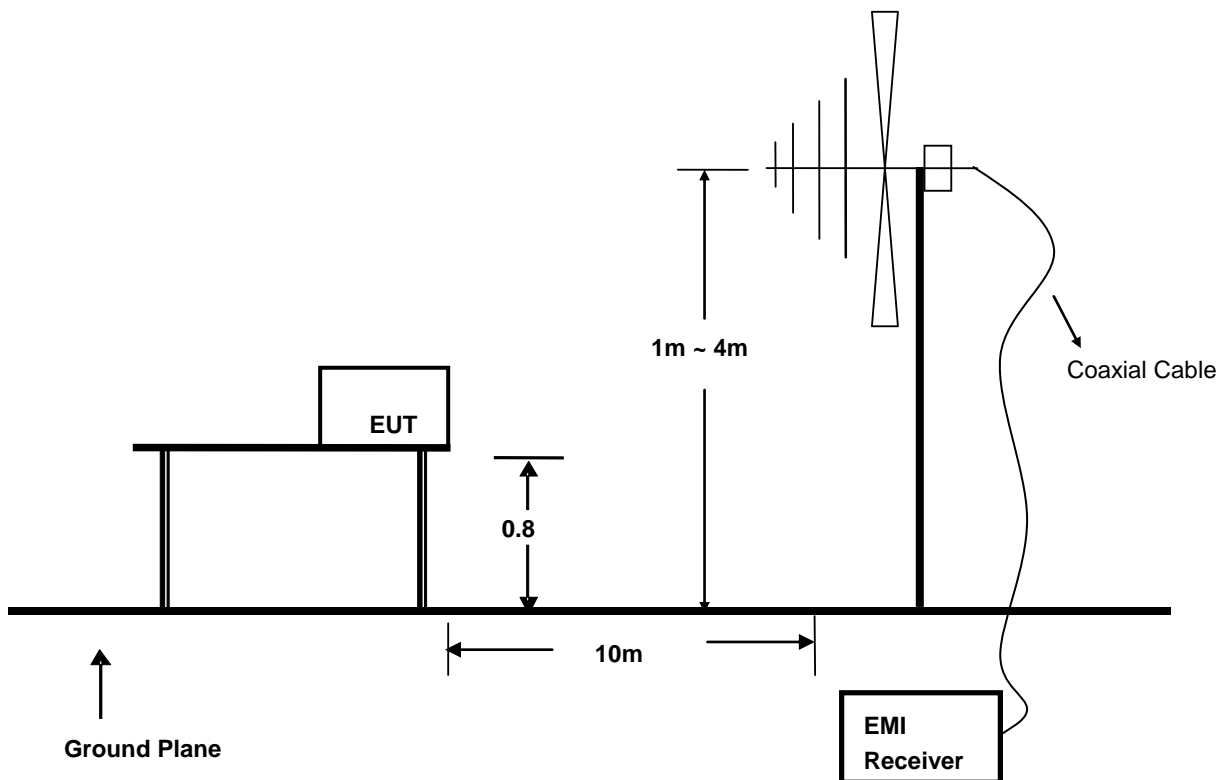
4. RADIATED EMISSION MEASUREMENT

4.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	1166.5950.03	2015/06/18
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	1164.6407.03	2015/06/18
3	Log per Antenna	ROHDE & SCHWARZ	VULB9163	9163-470	2015/06/18
4	Amplifier	SCHWARZBECK	PAP-0001	21002	2015/06/18
5	Spectrum Analyzer	Agilent	E4407B	MY41440754	2015/07/16
6	Horn Antenna	ETS.LINDGREN	3115	00034771	2015/12/11
7	EMI Test Software	AUDIX	E3	N/A	2015/06/18

4.2. Block Diagram of Test Setup



4.3. Radiated Emission Limit (Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	10	100	30.0
88 ~ 216	10	150	33.5
216 ~ 960	10	200	36.0
960 ~ 1000	10	500	44.0

- Remark :
- (1) Emission level (dB)μV = 20 log Emission level μV/m
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4.EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.5.Operating Condition of EUT

4.5.1.Setup the EUT as shown in Section 4.2.

4.5.2.Let the EUT work in test mode (on) and measure it.

4.6.Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 10 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission measurement.

The bandwidth of the EMI test receiver is set at 120kHz.

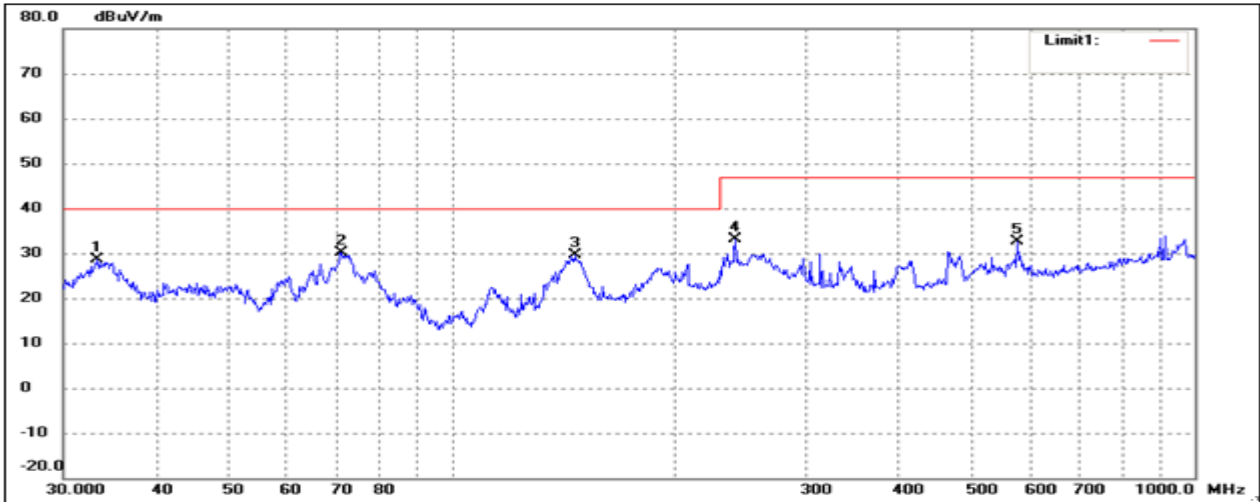
The frequency range from 30MHz to 1000MHz is checked.

4.7.Radiated Emission Noise Measurement Result

PASS.

The scanning waveforms please refer to the next page.

Model No.	Lii-500	Test Date	Nov 23, 2015
Environmental Conditions	24°C, 56% RH	Test Mode	ON
Pol	Vertical	Detector Function	Quasi-peak
Test Engineer	Kano	Distance	10m



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1.	33.3279.	39.96.	-11.36.	28.60.	40.00.	-11.40.	.	.	peak.
2.	71.0803.	43.35.	-13.16.	30.19.	40.00.	-9.81.	.	.	peak.
3.	146.3735.	41.05.	-11.52.	29.53.	40.00.	-10.47.	.	.	peak.
4.	240.8304.	39.93.	-6.82.	33.11.	47.00.	-13.89.	.	.	peak.
5.	576.6443.	32.00.	0.51.	32.51.	47.00.	-14.49.	.	.	peak.

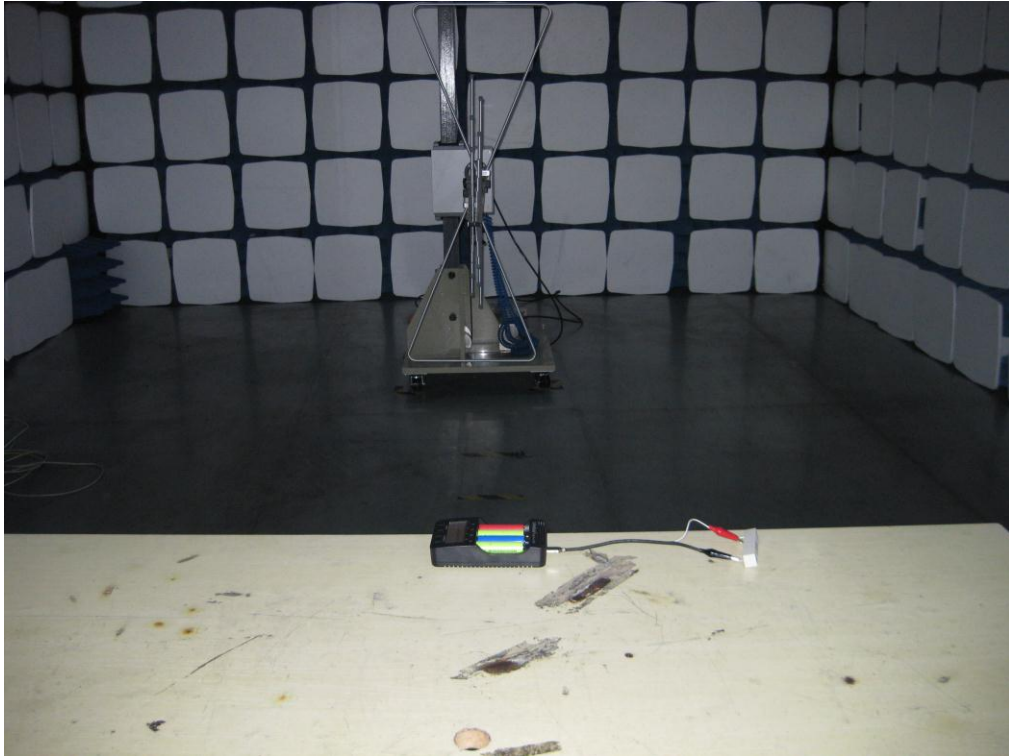
Model No.	Lii-500	Test Date	Nov 23, 2015
Environmental Conditions	24°C, 56% RH	Test Mode	ON
Pol	Horizontal	Detector Function	Quasi-peak
Test Engineer	Kano	Distance	10m



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1.	137.4202.	37.58.	-11.42.	26.16.	40.00.	-13.84.	.	.	peak.
2.	199.9856.	36.66.	-8.56.	28.10.	40.00.	-11.90.	.	.	peak.
3.	239.9874.	44.12.	-6.85.	37.27.	47.00.	-9.73.	.	.	peak.
4.	313.2760.	38.88.	-5.05.	33.83.	47.00.	-13.17.	.	.	peak.

5. PHOTOGRAPH

5.1.Photo of Conducted Measurement



6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig. 1



Fig. 2

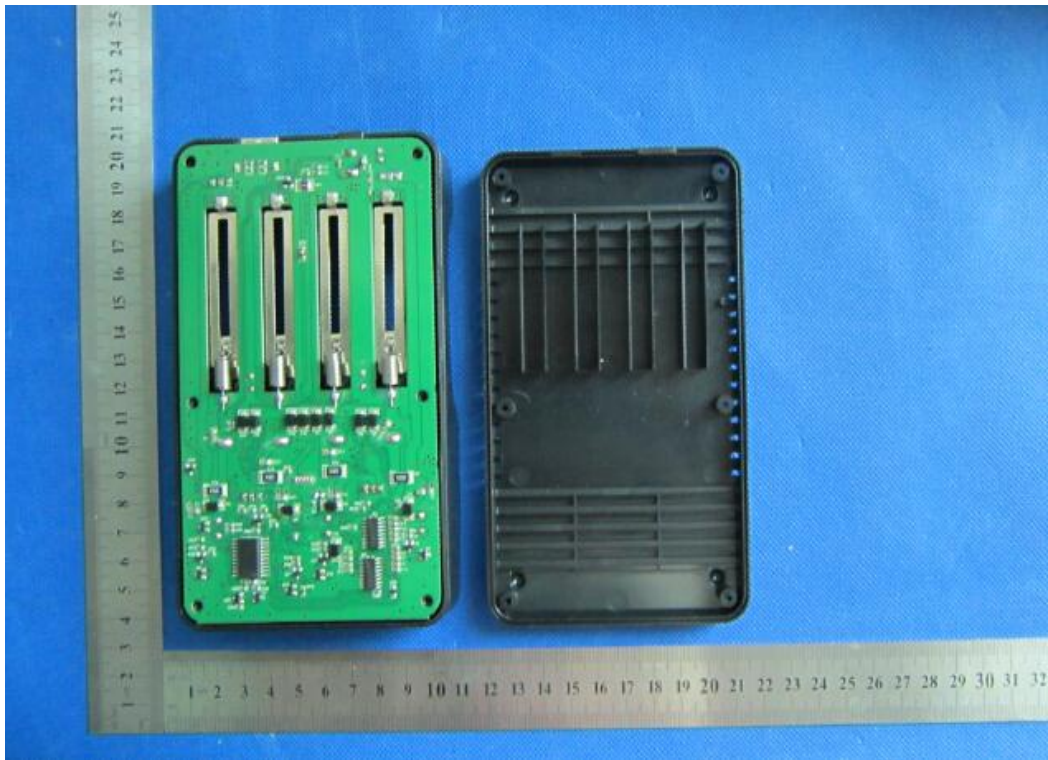


Fig. 3



Fig. 4

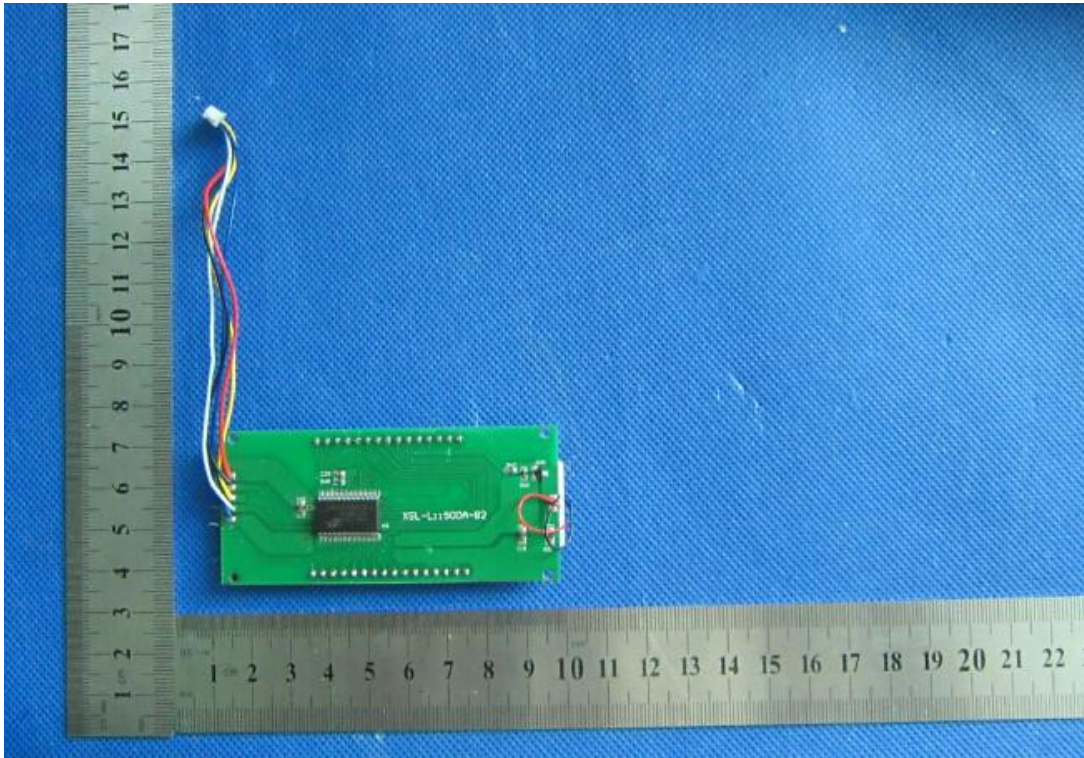


Fig. 5

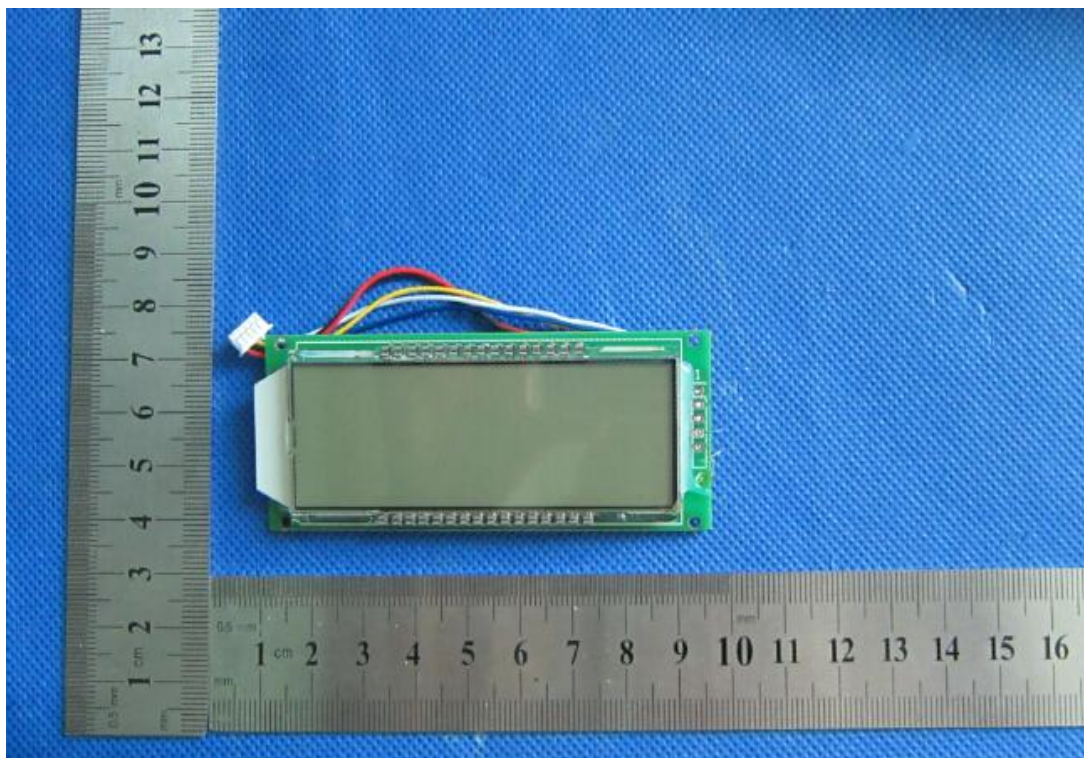


Fig. 6

7. MANUFACTURER/ APPROVAL HOLDER DECLARATION

The following identical model(S):

--	--	--	--
----	----	----	----

Belong to the tested device:

Product description : Battery Charger

Model name : Lii-500

Remark: no additional models were tested.

-----THE END OF REPORT-----