C-TICK TEST REPORT
For

Global Tech China Limited

Solar Light(Large)/28W,16W

Model No.**:** 00013022

Additional Model No: Please Refer To Page 21

Prepared for	**:**	Global Tech China Limited
Address	**:**	3 Flat A, Wai Yip Industrial Building, 171 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Prepared by	**:**	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	**:**	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
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Web	**:**	www.LCS-cert.com
Mail	**:**	webmaster@LCS-cert.com
Date of receipt of test sample	**:**	December 04, 2014
Number of tested samples	**:**	1
Serial number	**:**	Prototype
Date of Test	**:**	December 04, 2014 - December 09, 2014
Date of Report	**:**	December 09, 2014

C-TICK TEST REPORT

AS/NZS CISPR 15: 2011

Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

Report Reference No. ..... :	**LCS1412090520E**
Date Of Issue ..... :	December 09, 2014
Testing Laboratory Name ..... :	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address ..... :	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure..... :	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name ..... :	**Global Tech China Limited**
Address ..... :	3 Flat A, Wai Yip Industrial Building, 171 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Test Specification:	
Standard ..... :	AS/NZS CISPR 15: 2011
Test Report Form No. ..... :	LCSEMC-1.0
TRF Originator ..... :	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF ..... :	Dated 2011-03

Test Item Description. ..... :	**Solar Light(Large)/28W,16W**
Trade Mark ..... :	Mightylite
Model/ Type Reference ..... :	00013022
Ratings ..... :	DC 6V, 28W
Result ..... :	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Yoyo Wang/ File administrators	Danny Huang/ Technique principal	Gavin Liang/ Manager

C-TICK -- TEST REPORT

Test Report No. : LCS1412090520E	December 09, 2014 Date of issue

Type / Model.....	:	00013022
EUT.....	:	Solar Light(Large)/28W,16W
Applicant.....	**:**	**Global Tech China Limited**
Address.....	:	3 Flat A, Wai Yip Industrial Building, 171 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Telephone.....	:	/
Fax.....	:	/
Manufacturer.....	:	**QMlighting Co., Ltd.**
Address.....	:	No.23, Hekeng Industrial Zone, Liulian Community, Pingdi, Longgang District, Shenzhen, China
Telephone.....	:	
Fax.....	:	
Factory.....	**:**	**QMlighting Co., Ltd.**
Address.....	:	No.23, Hekeng Industrial Zone, Liulian Community, Pingdi, Longgang District, Shenzhen, China
Telephone.....	:	
Fax.....	:	/

Test Result according to the standards on page 6:	**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

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	AS/NZS CISPR 15: 2011	--------	N/A
Magnetic field emission	AS/NZS CISPR 15: 2011	--------	PASS
Radiated disturbance	AS/NZS CISPR 15: 2011	--------	PASS
N/A is an abbreviation for Not Applicable.			

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

EUT : Solar Light(Large)/28W,16W

Model Number : 00013022

Power Supply : DC 6V, 28W

2.2.Description of Test Facility

Site Description

EMC Lab. Accredited by CNAS, April 28, 2013
The Certificate Registration Number. is L4595.

Accredited by FCC, July 14, 2011
The Certificate Registration Number. is 899208.

Accredited by Industry Canada, May. 02, 2011
The Certificate Registration Number. is 9642A-1

Accredited by VCCI, Japan January 30, 2012
The Certificate Registration Number. is C-4260 and R-3804

Accredited by ESMD, April 24, 2012
The Certificate Registration Number. is ARCB0108.

Accredited by UL, July 25, 2013
The Certificate Registration Number. is 100571-492.

Accredited by TUV, December 23, 2013
The Certificate Registration Number. is SCN1134

Accredited by Intertek, October 30, 2013
The Certificate Registration Number. is 2011-RTL-L1-50.

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 LCS 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	±2.96dB	(1)
		200MHz~1000MHz	±3.10dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	±1.63dB	(1)
Power disturbance	:	30MHz~300MHz	±1.60dB	(1)

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

3. MEASURING DEVICES AND TEST EQUIPMENT

3.1.Conducted Disturbance

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2014/06/18
2	10dB Attenuator	SCHWARZBECK	OSPAM236	9729	2014/06/18
3	Artificial Mains	ROHDE & SCHWARZ	ENV216	101288	2014/06/18
4	EMI Test Software	AUDIX	E3	N/A	2014/06/18

3.2.Disturbance Power

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101142	2014/06/18
2	Absorbing clamp	ROHDE & SCHWARZ	MDS 21	4033	2014/10/28
3	EMI Test Software	AUDIX	E3	N/A	2014/06/18

3.3.Radiated Electromagnetic Disturbance

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	1011423	2014/06/18
2	Triple-loop Antenna	EVERFINE	LLA-2	11050003	2014/06/18
3	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2014/06/18
4	EMI Test Software	AUDIX	E3	N/A	2014/06/18

3.4.Radiated Disturbance (Electric Field)

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2014/02/04
2	EMI Test Receiver	ROHDE & SCHWARZ	ESPI	101840	2014/06/18
3	Log per Antenna	SCHWARZBECK	VULB9163	9163-470	2014/06/18
4	EMI Test Software	AUDIX	E3	N/A	2014/06/18
5	Positioning Controller	MF	MF-7082	/	2014/06/18

3.5.Harmonic Current

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power Analyzer Test System	Voltech	PM6000	20000670053	2014/06/18

3.6.Voltage fluctuation and Flicker

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power Analyzer Test System	Voltech	PM6000	20000670053	2014/06/18

3.7.Electrostatic Discharge

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	KIKUSUI	KC001311	KES4021	2014/09/02

3.8.RF Field Strength Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	SIGNAL GENERATOR	HP	8648A	625U00573	2014/06/18
2	Amplifier	AR	500A100	17034	2014/06/18
3	Amplifier	AR	100W/1000M1	17028	2014/06/18
4	Isotropic Field Monitor	AR	FM2000	16829	2014/06/18
5	Isotropic Field Probe	AR	FP2000	16755	2014/06/18
6	Bi-conic Antenna	EMCO	3108	9507-2534	2014/06/18
7	By-log-periodic Antenna	AR	AT1080	16812	2014/06/18
8	EMS Test Software	ROHDE & SCHWARZ	ESK1	N/A	2014/06/18

3.9.Electrical Fast Transient/Burst

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Electrical fast transient(EFT)generator	3CTEST	EFT-4021	EC0461044	2014/01/20
2	Coupling Clamp	3CTEST	EFTC	EC0441098	2014/06/18

3.10.Surge

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Surge test system	3CTEST	SG5006G	EC5581070	2014/06/18
2	Coupling/decoupling network	3CTEST	SGN-5010G	CS5591033	2014/06/18

3.11.Conducted Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Simulator	EMTEST	CIT-10	A126A1195	2014/06/18
2	CDN	EMTEST	CDN-M2	A2210177	2014/06/18
3	CDN	EMTEST	CDN-M3	A2210177	2014/06/18
4	Attenuator	EMTEST	ATT6	50FP-006-H3B	2014/06/18

3.12.Power Frequency Magnetic Field Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power frequency mag-field generator System	EVERFINE	EMS61000-8K	906003	2014/06/18

3.13.Voltage Dips

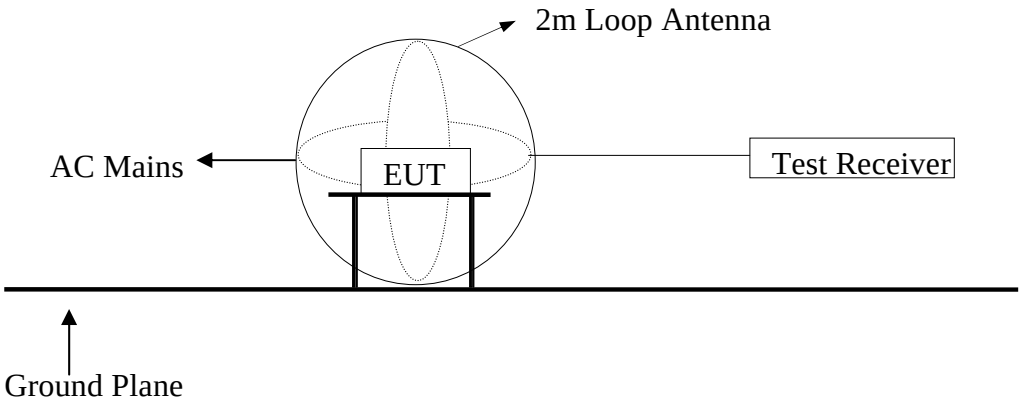
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Voltage dips and up generator	3CTEST	VDG-1105G	EC0171014	2014/06/18

3.14.Voltage Short Interruptions

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Voltage dips and up generator	3CTEST	VDG-1105G	EC0171014	2014/06/18

4. MAGNETIC FIELD EMISSION MEASUREMENT

4.1.Block Diagram of Test Setup



4.2.Magnetic Field Emission Measurement Standard and Limits

4.2.1.Test Standard

AS/NZS CISPR 15: 2011

4.2.2.Test Limits

Frequency	Limits for loop diameter (dBμA)
	2m
9kHz ~ 70kHz	88
70kHz ~ 150kHz	88 ~ 58*
150kHz ~ 3.0MHz	58 ~ 22*
3.0MHz ~ 30MHz	22

1. At the transition frequency the lower limit applies.
2. * decreasing linearly with logarithm of the frequency.

4.3.EUT Configuration on Test

The configuration of the EUT is same as Section 2.1.

4.4.Operating Condition of EUT

Same as conducted measurement which is listed in Section 4.4, except the test set up replaced by Section 5.1.

4.5.Test Procedure

The EUT is placed on a wood table in the center of a loop antenna. The induced current in the loop antenna is measured by means of a current probe and the test receiver. Three field components are checked by means of a coaxial switch.

The frequency range from 9kHz to 30MHz is investigated. The receiver is measured with the quasi-peak detector. For frequency band 9kHz to 150kHz, the bandwidth of the field strength meter is set at 200Hz. For frequency band 150kHz to 30MHz, the bandwidth is set at 9kHz.

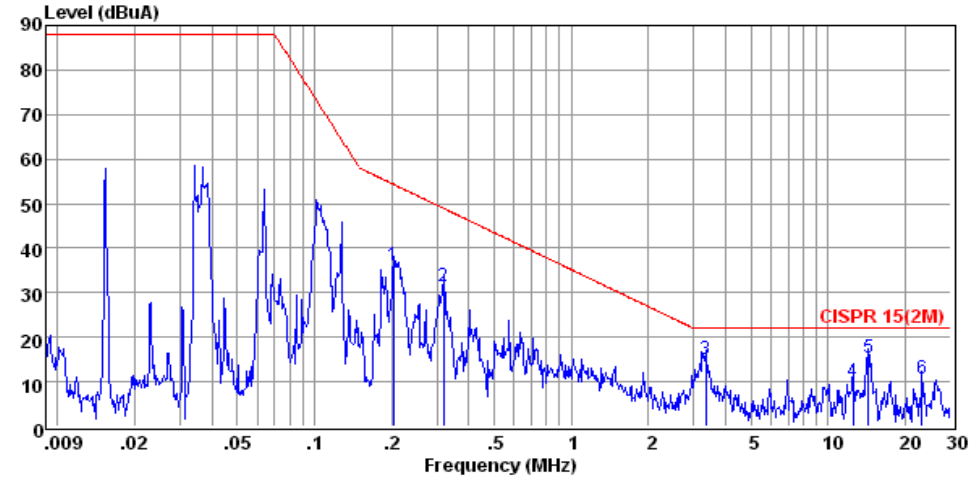
All the test results are listed in Section 5.6.

4.6.Test Results

PASS.

The frequency range from 9kHz to 30MHz is investigated.

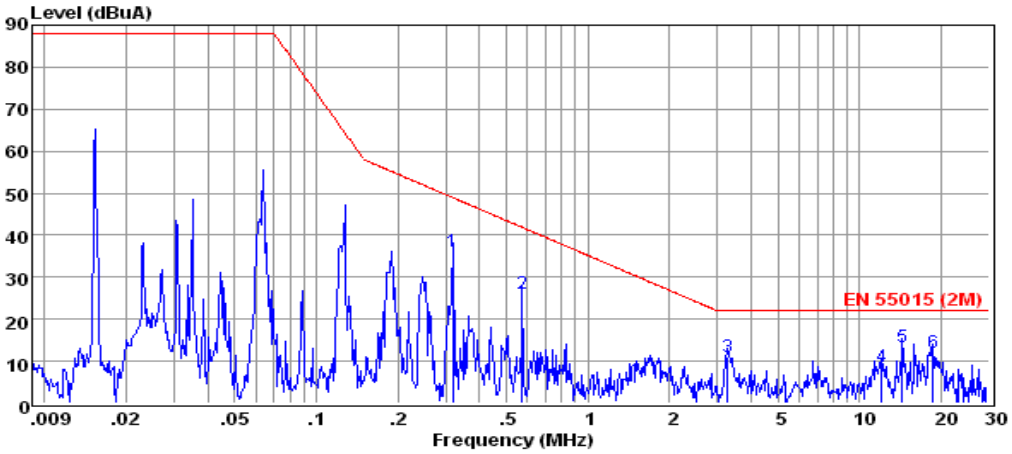
Model No.	00013022	**Test Mode**	ON
Environmental Conditions	24℃/ 56% RH	**Test Engineer**	Tiny
Pol	X		



	Freq	Reading	LisnFac	CabLos	Measured	Limit	Over	Remark
	MHz	dBuA	dB	dB	dBuA	dBuA	dB	
1	0.20	26.11	9.63	0.56	36.30	54.38	-18.08	QP
2	0.32	21.18	9.62	0.60	31.40	48.92	-17.52	QP
3	3.33	4.61	9.65	0.70	14.96	22.00	-7.04	QP
4	12.49	-0.53	9.70	0.83	10.00	22.00	-12.00	QP
5	14.34	4.95	9.71	0.84	15.50	22.00	-6.50	QP
6	23.14	-0.05	9.71	0.88	10.54	22.00	-11.46	QP

Remarks: 1. Measured = Reading + Lisn Factor +Cable Loss.
2. The emission levels that are 20dB below the official limit are not reported.

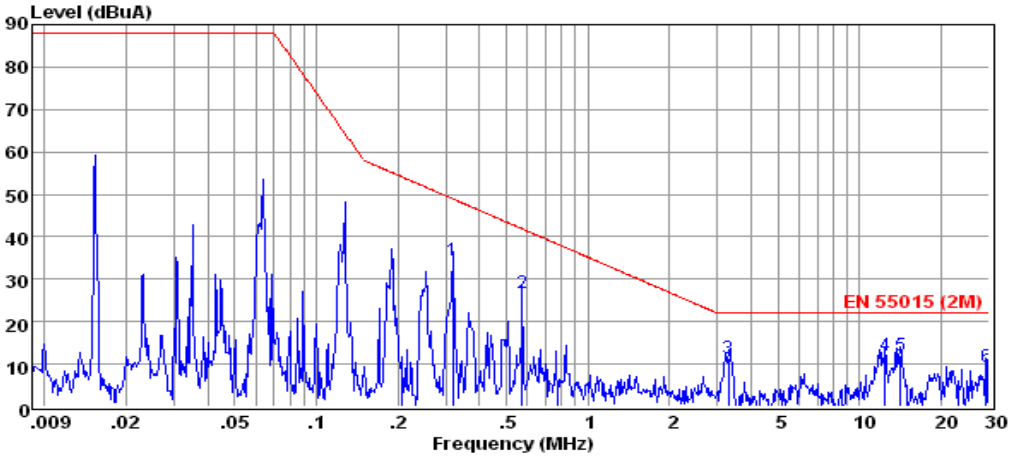
Model No.	00013022	**Test Mode**	ON
Environmental Conditions	24℃/ 56% RH	**Test Engineer**	Tiny
Pol	Y		



	Freq	Reading	LisnFac	CabLos	Measured	Limit	Over	Remark
	MHz	dBuA	dB	dB	dBuA	dBuA	dB	
1	0.32	25.78	9.61	0.60	35.99	48.92	-12.93	QP
2	0.57	15.78	9.62	0.64	26.04	41.90	-15.86	QP
3	3.28	0.56	9.65	0.70	10.91	22.00	-11.09	QP
4	12.09	-1.88	9.73	0.83	8.68	22.00	-13.32	QP
5	14.34	2.67	9.74	0.84	13.25	22.00	-8.75	QP
6	18.59	1.43	9.83	0.86	12.12	22.00	-9.88	QP

Remarks: 1. Measured = Reading + Lisn Factor +Cable Loss.
2. The emission levels that are 20dB below the official limit are not reported.

Model No.	00013022	**Test Mode**	ON
Environmental Conditions	24℃/ 56% RH	**Test Engineer**	Tiny
Pol	Z		

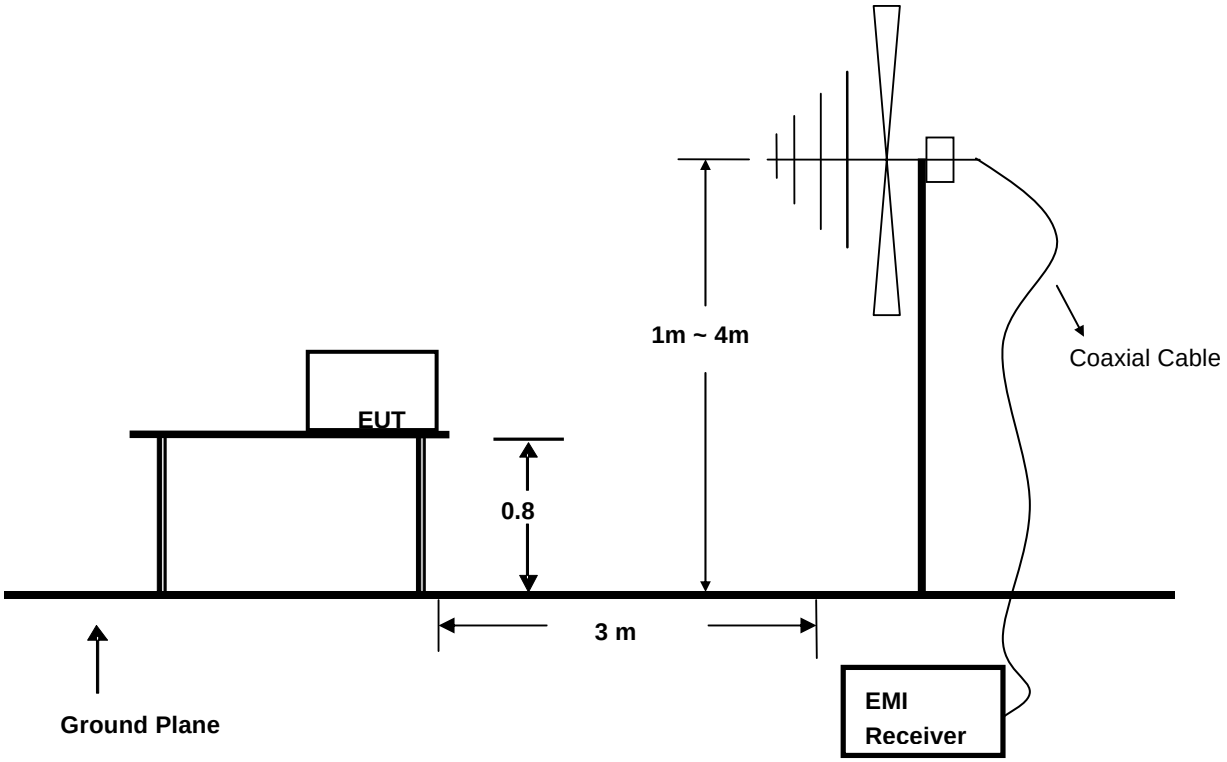


	Freq	Reading	LisnFac	CabLos	Measured	Limit	Over	Remark
	MHz	dBuA	dB	dB	dBuA	dBuA	dB	
1	0.32	24.09	9.62	0.60	34.31	48.92	-14.61	QP
2	0.57	16.65	9.63	0.64	26.92	41.90	-14.98	QP
3	3.30	1.10	9.65	0.70	11.45	22.00	-10.55	QP
4	12.39	1.67	9.70	0.83	12.20	22.00	-9.80	QP
5	14.11	1.62	9.71	0.84	12.17	22.00	-9.83	QP
6	29.28	-1.11	9.71	0.90	9.50	22.00	-12.50	QP

Remarks: 1. Measured = Reading + Lisn Factor +Cable Loss.
2. The emission levels that are 20dB below the official limit are not reported.

5. RADIATED EMISSION MEASUREMENT

5.1.Block Diagram of Test Setup



5.2.Test Standard

AS/NZS CISPR 15: 2011

5.3.Radiated Emission Limits

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dBμV/m)
30 ~ 230	3	40
230 ~ 300	3	47

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

5.4.EUT Configuration on Test

The CISPR 15 regulations test method must be used to find the maximum emission during radiated emission measurement.

5.5.Operating Condition of EUT

5.5.1 Turn on the power.

5.5.2 After that, let the EUT work in test mode (ON) and measure it.

5.6.Test Procedure

The EUT is placed on a turntable, which is 0.8 meter high above the ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. By-log antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver is set at 120kHz.

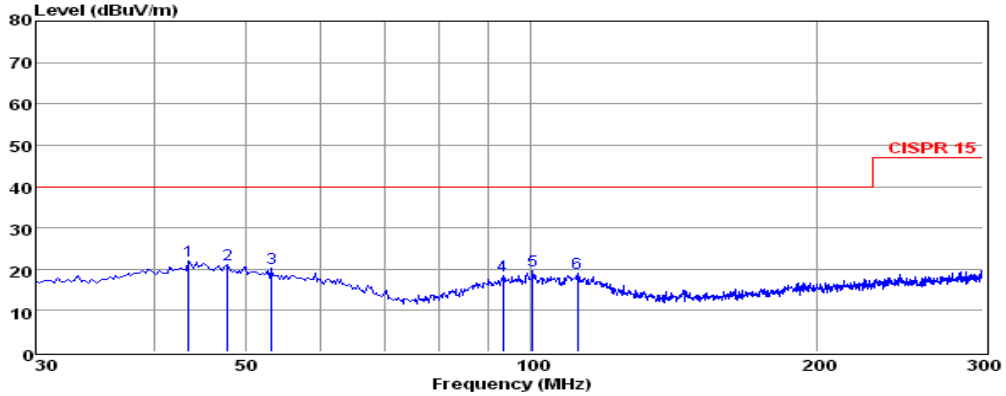
The frequency range from 30MHz to 300MHz is investigated.

5.7.Test Results

PASS.

All the scanning waveform is in next page.

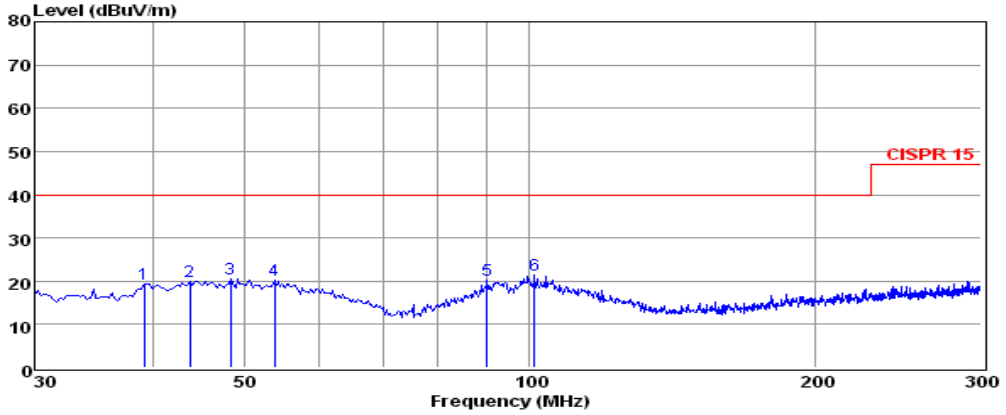
Model No.	00013022	**Test Mode**	ON
Environmental Conditions	24℃/ 56% RH	**Detector Function**	Quasi-peak
Pol	Vertical	**Distance**	3m
Test Engineer	Tiny		



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	43.50	7.90	0.41	13.56	21.87	40.00	-18.13	QP
2	47.82	7.37	0.35	13.38	21.10	40.00	-18.90	QP
3	53.22	6.55	0.46	13.10	20.11	40.00	-19.89	QP
4	93.45	5.43	0.56	12.55	18.54	40.00	-21.46	QP
5	100.47	6.05	0.60	13.12	19.77	40.00	-20.23	QP
6	112.08	6.65	0.65	11.88	19.18	40.00	-20.82	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Model No.	00013022	**Test Mode**	ON
Environmental Conditions	24℃/ 56% RH	**Detector Function**	Quasi-peak
Pol	Horizontal	**Distance**	3m
Test Engineer	Tiny		



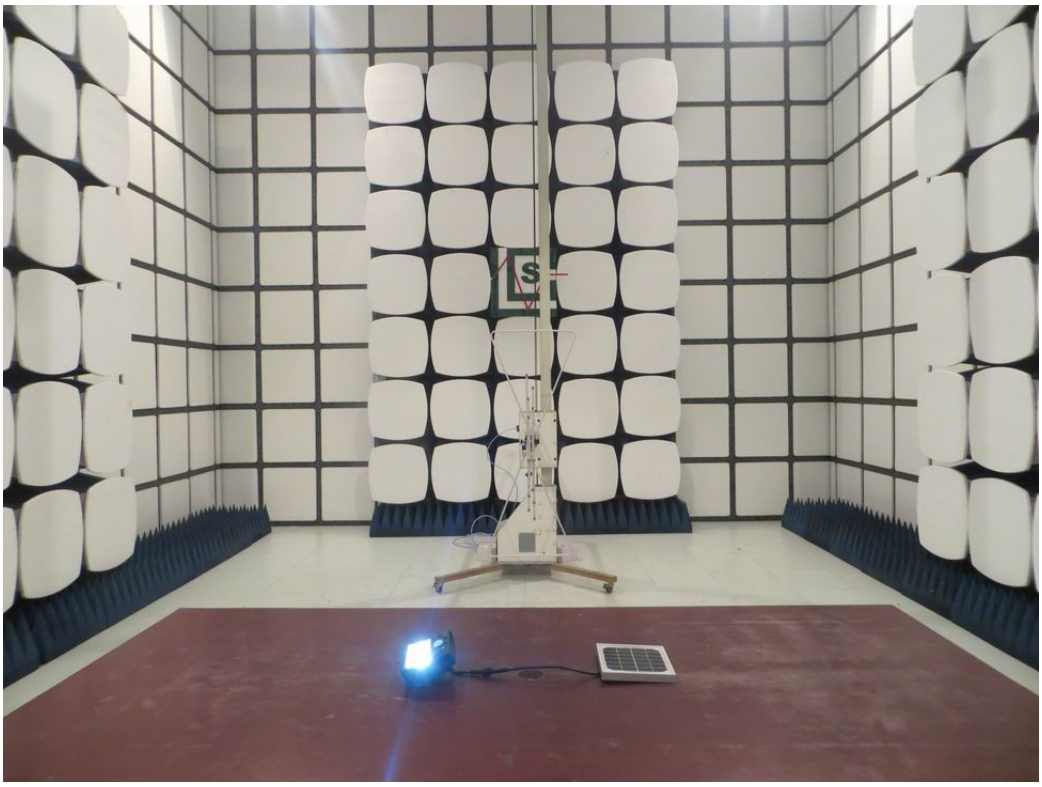
	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	39.18	5.64	0.38	13.37	19.39	40.00	-20.61	QP
2	43.77	5.93	0.41	13.56	19.90	40.00	-20.10	QP
3	48.36	6.91	0.35	13.35	20.61	40.00	-19.39	QP
4	53.76	6.65	0.46	13.08	20.19	40.00	-19.81	QP
5	90.21	7.57	0.68	11.94	20.19	40.00	-19.81	QP
6	101.28	7.78	0.60	13.04	21.42	40.00	-18.58	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

6. PHOTOGRAPH

6.1. Photo of Radiated Electromagnetic Disturbance Measurement

6.2. Photo of Radiated Measurement



7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

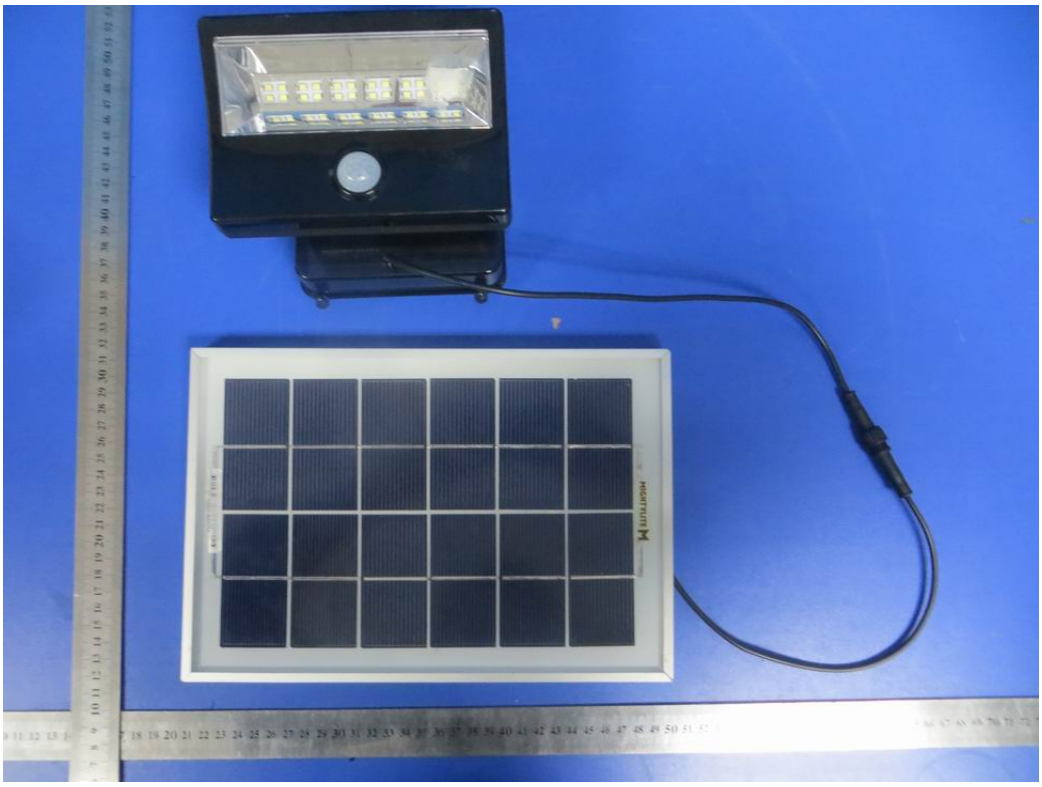


Fig. 1

Fig. 2

Fig. 3

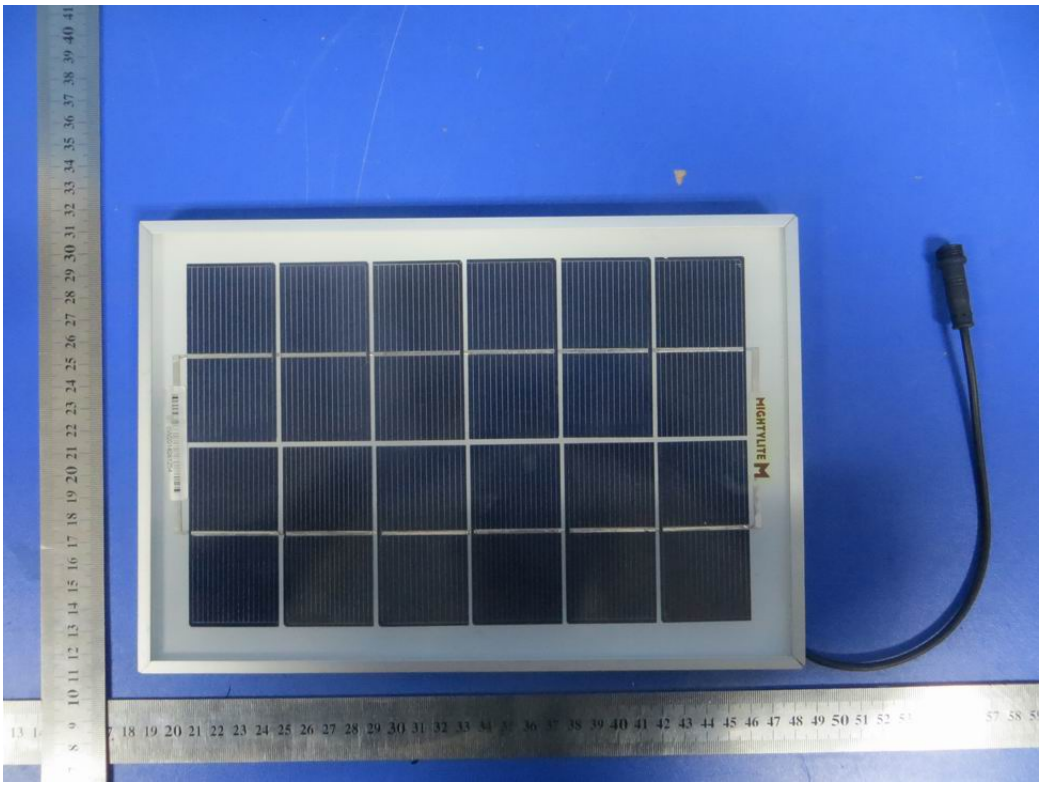


Fig. 4

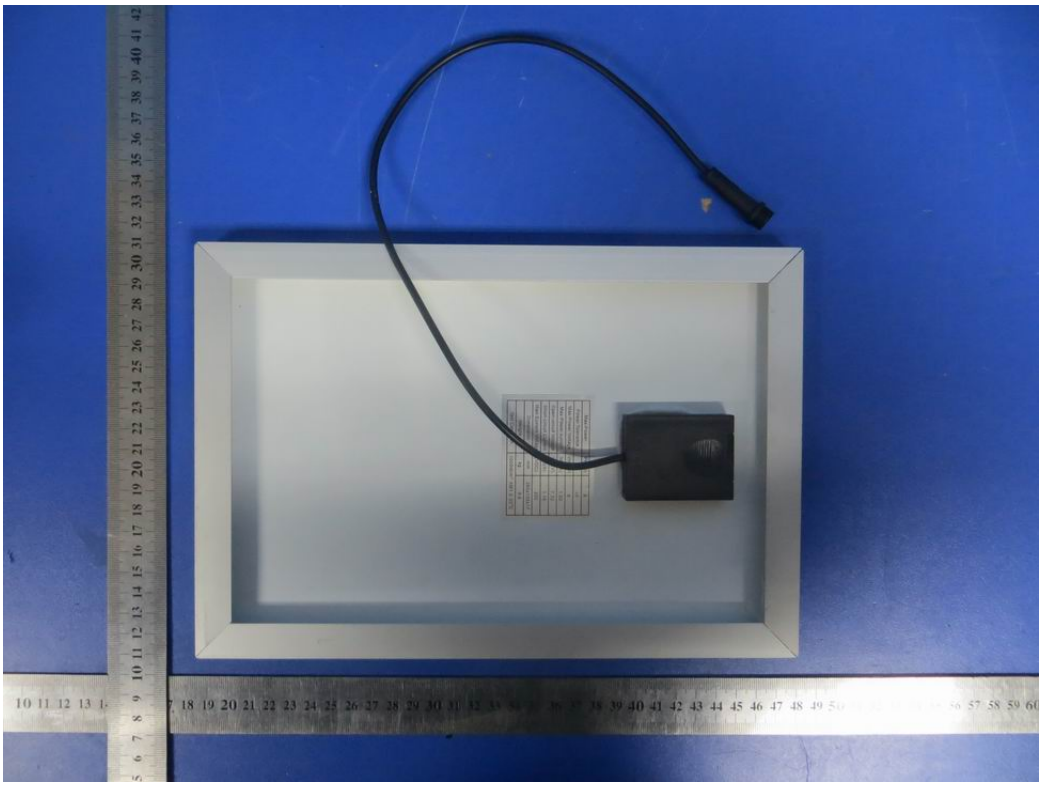


Fig. 5

8. MANUFACTURER/ APPROVAL HOLDER DECLARATION

The following identical model(S):

00013021	00013222	00013062	00013061
00013262	00013261	--	--

Belong to the tested device:

Product description : Solar Light(Large)/28W,16W
Model name : 00013022

Remark: PCB board, structure and internal of these model(s) are the same, So no additional models were tested.

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