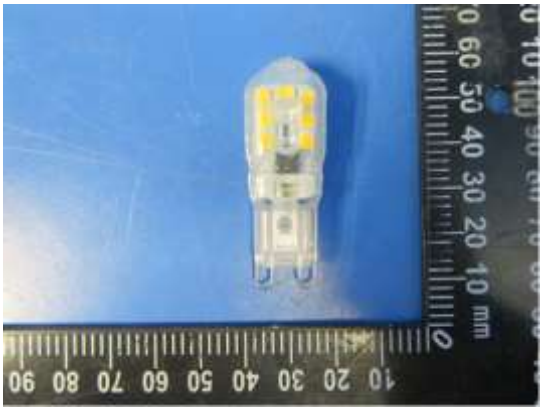
Prüfbericht-Nr.: *Test Report No.:*	50140581 001	**Auftrags-Nr.:** *Order No.:*	174072846	Seite 1 von 31 *Page 1 of 31*
Kunden-Referenz-Nr.: *Client Reference No.:*	342925	**Auftragsdatum:** *Order date.:*	27 Sep, 2017	
Auftraggeber: *Client:*	Foshan Electrical And Lighting Co., Ltd. 64 North Fenjiang Road, Foshan, Guangdong 528000, P. R. China			
Prüfgegenstand: *Test item:*	LED BULB			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	G9-2.2-XX/G19/54, G9-2-XX/G19/54 (refer to section 3 for detailed variable XX)			
Auftrags-Inhalt: *Order content:*	TUV Rheinland – EMC Service			
Prüfgrundlage: *Test specification:*	EN 55015:2013 EN 55015:2013+A1 EN 61547:2009 EN 61000-3-2:2014 EN 61000-3-3:2013			

Wareneingangsdatum: *Date of receipt:*	11 Dec, 2017
Prüfmuster-Nr.: *Test sample No.:*	174072846-001
Prüfzeitraum: *Testing period:*	Refer to test report
Ort der Prüfung: *Place of testing:*	Refer to section 2.1
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Guangdong) Ltd.
Prüfergebnis*: *Test result*:*	Pass



geprüft von / *tested by:*			**kontrolliert von /** *reviewed by:*		
02 May, 2018	Amy Wang/PM		03 May, 2018	Jeffery Xie/TC	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other:*

Zustand des PrüfgegenstandesbeiAnlieferung: *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	5 = mangelhalt N/T = nichtgetestet
Legend:	1 = very good P(ass) = passed a.m. test specifications(s)	2 = good	3 = satisfactory F(ail) = failed a.m. test specifications(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested

TEST SUMMARY

5.1.1 HARMONICS CURRENT EMISSION ON AC MAINS
RESULT: *Pass*

5.1.2 VOLTAGE CHANGES, VOLTAGE FLUCTUATIONS AND FLICKER
RESULT: *Pass*

5.1.3 TERMINAL CONTINUOUS DISTURBANCE VOLTAGE
RESULT: *Pass*

5.1.4 RADIATED ELECTROMAGNETIC DISTURBANCES
RESULT: *Pass*

5.2.1 RADIATED DISTURBANCE (30 MHZ – 300 MHZ, CDN METHOD)
RESULT: *Pass*

6.2.1 POWER-FREQUENCY MAGNETIC FIELDS
RESULT: *N/A*

6.2.2 RADIO-FREQUENCY COMMON MODE / CONDUCTED SUSCEPTIBILITY (CS)
RESULT: *Pass*

6.2.3 RADIO-FREQUENCY ELECTROMAGNETIC FIELDS (RS)
RESULT: *Pass*

6.3.1 ELECTRICAL FAST TRANSIENTS (EFT)
RESULT: *Pass*

6.3.2 SURGE
RESULT: *Pass*

6.3.3 ELECTROSTATIC DISCHARGES (ESD)
RESULT: *Pass*

6.4.1 VOLTAGE DIPS AND INTERRUPTIONS
RESULT: *Pass*

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1. General Remarks

When applying the basic standards in this test report, please refer to the applied generic or product family standards for edition information:
For dated basic standards, only the edition cited applies. For undated basic standards, the latest edition (including any amendments) applies.

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:
Appendix 1: Test result.
Appendix 2: List of Test and Measurement Equipment.

2. Test Sites

2.1 Test Facilities

1) WALTEK SERVICES (FO SHAN) CO., LTD.
No.13-19,2/F, 2nd Building, Sunlink International Machinery City, Chencun Town, Shunde District, Foshan528313, Guangdong, China
Test items: Others
2) WALTEK SERVICES (NING BO) CO., LTD.
1F,No.6 Building,No.1177 Lingyun Road,Ningbo National Hi-Tech Zone,Ningbo,Zhejiang Province,315040, China
Test items: RS

The test at these test sites has been conducted under the supervision of a TÜV Rheinland engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Refer to attached Appendix 2.

3. General Product Information

The following submitted samples are general light source of LED module with integral LED driver and lamp cap for indoor used only.
All models have the same circuit diagram, PCB layout except the rated power and LED model name are different.

Item	Model	Rated input	Rated current (A)	Rated Power (W)	LED model name	LED quantity (pcs)	Lamp cap
1	**G9-2.2-XX/G19/54**	AC220-240V~ 50/60Hz	0,01	2,2	3528 Series	14	G9
2	G9-2-XX/G19/54		0,01	2	M-SP3528WXS-460R-R70/R80	14	G9

Remark: XX is two numbers 27-65, stand for colour temperature 2700-6500K.

Based on above information, full EMC tests were performed on models G9-2.2-XX/G19/54.

For details please refer to the Technical Documentation.

3.1 Product Function and Intended Use

Refer to Technical Documentation.

3.2 Ratings and System Details

Type designation: Refer to section 3
Rated power: Refer to section 3
Input voltage: Refer to section 3

For details please refer to the Technical Documentation.

3.3 Independent Operation Modes

The basic operation modes are:

A: On.
B: Off.

Refer to the Technical Documentation for further information.

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Technical Documentation for further information.

3.5 Submitted Documents

Construction Drawing
Circuit Diagram
Difference Declaration
PCB Layout
Component List
Rating Label
User Manual

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Immunity: The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Physical Configuration for Testing

Refer to relative paragraphs of this test report.

4.3 Test Operation and Test Software

Refer to test setup in chapter 5 and chapter 6.

4.4 Special Accessories and Auxiliary Equipment

None.

4.5 Countermeasures to achieve EMC Compliance

No additional countermeasures to the submitted test sample(s) were employed to achieve compliance.

5. Test Results EMISSION

5.1 Emission in the Frequency Range up to 30 MHz

5.1.1 Harmonics Current Emission on AC Mains

RESULT: **Pass**

Test Specification

Basic standard	:	EN 61000-3-2:2014
Measurement equipment requirement	:	IEC 61000-4-7
Measured harmonics	:	1 – 40
Equipment class	:	C
Limits	:	Clause 7.3

There is no limit described in EN 61000-3-2:2014 for class C equipment below or equal to 25W other than discharge lighting equipment, so this test is not applicable for these models.

5.1.2 Voltage Changes, Voltage Fluctuations and Flicker

RESULT: **Pass**

Test Specification

Basic standard	:	EN 61000-3-3:2013
Measurement equipment requirement	:	IEC 61000-4-15
Limits	:	EN 61000-3-3:2013, Clause 5

According to EN 61000-3-3:2013, clause A.2* the voltage fluctuation and flicker on AC Mains were not measured.

* EN 61000-3-3:2013,clause A.2:
“Pst and Plt evaluations are required only for lighting equipment which is likely to produce flicker; for example: disco lighting and automatically regulated equipment.”
“Incandescent lamp luminaires with ratings less than or equal to 1000 W and discharge lamp luminaires with ratings less than or equal to 600 W and LED luminaires with ratings less than or equal to 200W, are deemed to comply with the dmax limits in this standard and are not required to be tested.”

5.1.3 Terminal Continuous Disturbance Voltage

RESULT: **Pass**

Test Specification

Test procedure	:	EN 55015:2013+A1,EN 55015:2013
Port	:	AC Mains
Frequency range of Mains	:	9kHz-30MHz
Test site	:	Shielded Room
Limits	:	EN 55015:2013+A1, EN 55015:2013, Clause 4.3.1,Table 2a

Test Setup

Date of testing	:	Refer to the Appendix 1
Input voltage	:	Refer to the Appendix 1
Operation mode	:	On
Artificial hand	:	N/A
Test configuration	:	Table-top
Temperature	:	Refer to the Appendix 1
Humidity	:	Refer to the Appendix 1
Air pressure	:	Refer to the Appendix 1

Photograph 1: Set-up for Continuous Disturbance Voltage

Test Result

Measurement uncertainty:2.66dB (k=2, σ= 95%)

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector has been omitted.

Disturbances other than those mentioned are small or not detectable.

For test results, please refer to the attached Appendix 1.

5.1.4 Radiated Electromagnetic Disturbances

RESULT: **Pass**

Test Specification

Test procedure	:	EN 55015:2013+A1, EN 55015:2013, Clause 9
Port	:	Enclosure
Frequency range	:	9kHz-30MHz
Test site	:	Shielded Room
Limits	:	EN 55015:2013+A1, EN 55015:2013, Clause 4.4, Table 3a

Test Setup

Date of testing	:	Refer to the Appendix 1
Input voltage	:	Refer to the Appendix 1
Operation mode	:	On
Temperature	:	Refer to the Appendix 1
Humidity	:	Refer to the Appendix 1
Air pressure	:	Refer to the Appendix 1

Photograph 2: Set-up for Radiated Electromagnetic Disturbances

Test Result

Measurement uncertainty:3.00dB (k=2, σ= 95%)

Refer to the attached Appendix 1

5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated Disturbance (30 MHz – 300 MHz, CDN method)

RESULT: **Pass**

Test Specification

Family standard	:	EN 55015:2013, EN 55015:2013+A1
Port	:	AC mains
Frequency range	:	30MHz -300MHz
Test site	:	Shielded Room
Limits	:	B.6, Table B.1

Test Setup

Date of testing	:	Refer to the Appendix 1
Input voltage	:	Refer to the Appendix 1
Operation mode	:	On
Temperature	:	Refer to the Appendix 1
Humidity	:	Refer to the Appendix 1
Air pressure	:	Refer to the Appendix 1

Photograph 3: Set-up for Radiated Disturbance (CDN method)

Test Result

Measurement uncertainty: 3.21dB (k=2, σ= 95%)

Disturbances other than those mentioned are small or not detectable.

Refer to the attached Appendix 1.

6. Test Results IMMUNITY

6.1 Classification of Apparatus

According to EN 61547:2009, the appliance shall fulfill the requirements of:

Continuous Disturbances

Power-frequency magnetic field	**Criterion A**
Radio-Frequency Common Mode / Conducted Susceptibility (CS)	**Criterion A**
Radio-frequency Electromagnetic Fields (RS)	**Criterion A**

Transient Disturbances

Electrical Fast Transients (EFT)	**Criterion B**
Surge	**Criterion C**
Electrostatic Discharges (ESD)	**Criterion B**

Power Supply Alterations

Voltage Dips and Interruptions	**Criterion B + C**

6.2 Continuous Disturbances

6.2.1 Power-frequency Magnetic Fields

RESULT: **N/A**

Test Specification

Family Standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-8
Test Level (A/m)	:	3A/m
Frequency	:	50Hz and 60Hz
Performance criterion	:	A

The immunity against power frequency magnetic field was not tested because the EUT does not contain components, which are susceptible to magnetic fields.According to EN 61547:2009, clause 5.4: “these tests … need only to be applied to equipment containing components susceptible to magnetic fields.”

6.2.2 Radio-frequency Common Mode / Conducted Susceptibility (CS)

RESULT: **Pass**

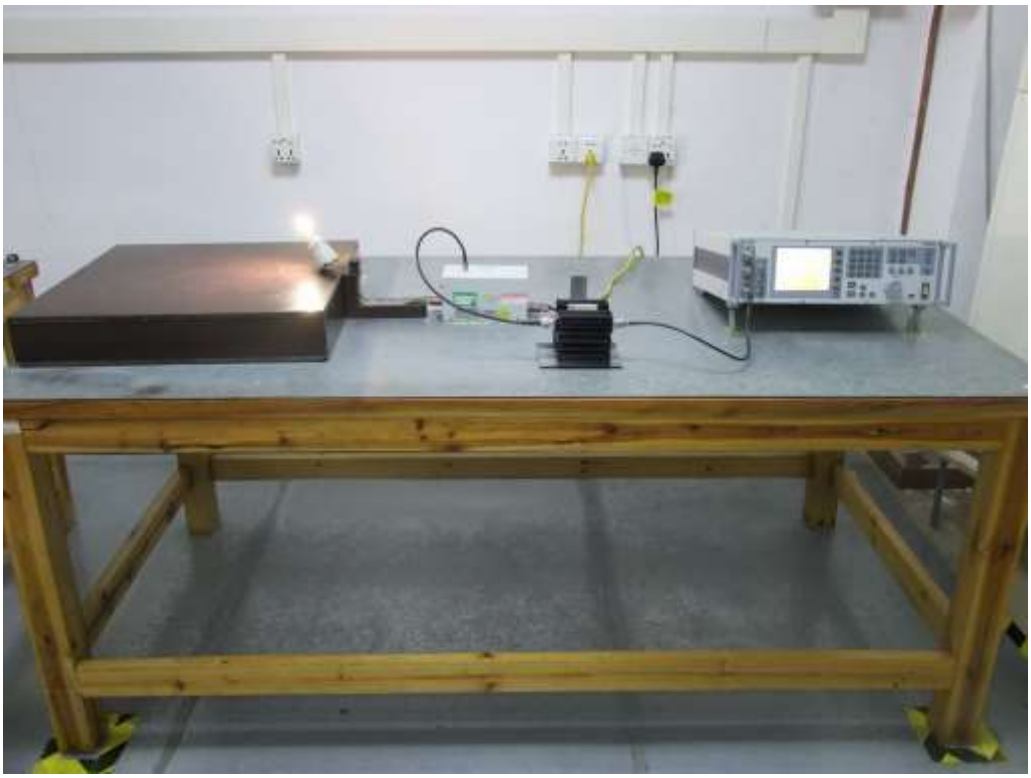
Test Specification

Family standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-6
Characteristics of the test generator	:	
Output impedance	:	50 Ω
Harmonics and distortion	:	Any spurious spectral line at least 15 dB below the carrier level
Direct injection device		100 Ω impedance
Frequency bandwidth	:	150 kHz to 80MHz
Frequency step	:	1% with 1 s dwell time
Performance criterion	:	A

Test Setup

Date of testing	:	12 Dec, 2017
Input voltage	:	AC 230V, 50Hz
Operation mode	:	On mode
Artificial hand	:	N/A
Signal lines and control lines	:	N/A
Output dc power ports	:	N/A
Input ac power ports	:	3V (rms)
Temperature	:	23.4°C
Humidity	:	52.1%
Air pressure	:	101.2kPa

Photograph 4: Set-up for Radio-frequency Common Mode / Conducted Susceptibility (CS)



Test Result

Table 2: Immunity against Radio-frequency Common Mode / Conducted Susceptibility (CS)

Coupling point	Application	Level (V(r.m.s))	Remark
Power ports			
AC input port	CDN-M2	3	Applied, *)
DC output port	EM clamp	3	N/A
Signal and control lines			
	Current Clamp	3	N/A
	EM clamp	3	N/A

*) Remark: No degradation was found.

6.2.3 Radio-frequency Electromagnetic Fields (RS)

RESULT: **Pass**

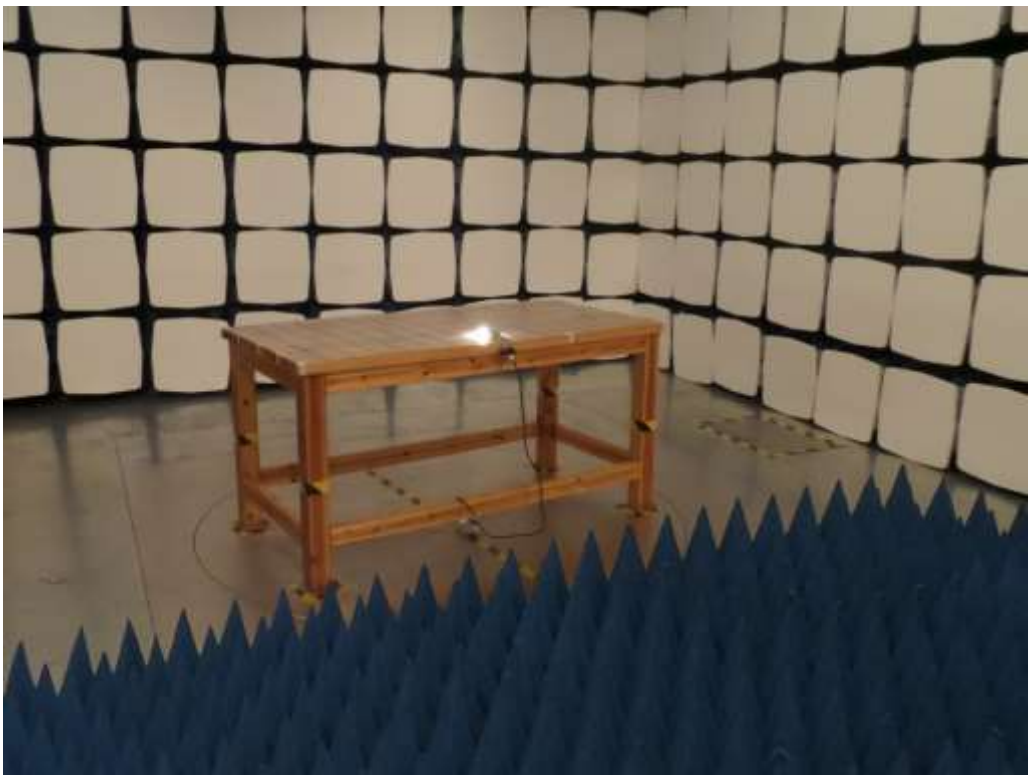
Test Specification

Family standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-3
Test site	:	FAC
Uniform field area (UFA)	:	1.5 m x 1.5 m, 16 points with a minimum UFA size 0.5 m x 0.5 m,75 % of calibration points within specifications if UFA is larger than 0.5 m x 0.5 m . 100 % (all 4 points) in the specifications for 0.5 x 0.5 m UFA
Amplitude modulation	:	80 % ± 5 % in depth, 1 kHz ± 10 % sine wave
Frequency bandwidth	:	80MHz to 1000MHz
Level	:	3 V/ m(un-modulated)
Frequency step	:	1% with 1 s dwell time
Performance criterion	:	A

Test Setup

Date of testing	:	22 Dec, 2017
Input voltage	:	AC 230V, 50Hz
Operation mode	:	On mode
Artificial hand	:	N/A
Temperature	:	21.0°C
Humidity	:	44.5%
Air pressure	:	100.8kPa

Photograph 5: Set-up for Radio-frequency Electromagnetic Fields (RS)



Test Result

Table 3: Immunity against Radio-frequency Electromagnetic Fields (RS)

Side of the equipment under test	Frequency (MHz)	Antenna polarization (Vertical/Horizontal)	Remark
Front	80-1000	V and H	Applied, *)
Rear	80-1000	V and H	Applied, *)
Right	80-1000	V and H	Applied, *)
Left	80-1000	V and H	Applied, *)

*) Remark: No degradation was found.

6.3 Transient Disturbances

6.3.1 Electrical Fast Transients (EFT)

RESULT: **Pass**

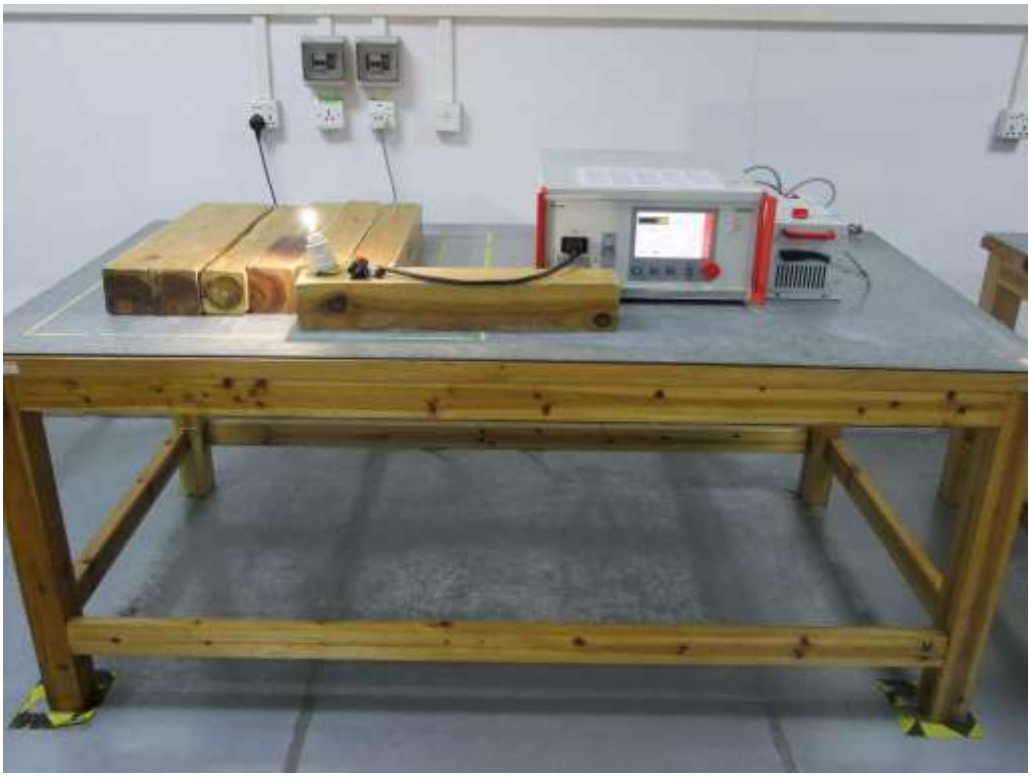
Test Specification

Family standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-4
Wave shape of the pulse in 50 Ω load	:	
Rise time		5 ns ± 30 %
Duration		50 ns ± 30 %
Wave shape into 1 kΩ load	:	
Rise time		5 ns ± 30 %
Duration		50 ns with a tolerance of -15 ns to+100 ns
Burst duration	:	15 ms ± 20 % at 5 kHz
Burst period	:	300 ms ± 20 %
Repetition frequency	:	5 kHz
Polarity	:	Positive and negative
Time of application	:	2 minutes
Performance criterion	:	B

Test Setup

Date of testing	:	11 Dec, 2017
Input voltage	:	AC 230V, 50Hz
Operation mode	:	On mode
Artificial hand	:	N/A
Signal and telecommunication ports	:	N/A
Output dc power ports	:	N/A
Input ac power ports	:	1kV
Temperature	:	23.6°C
Humidity	:	52.4%
Air pressure	:	101.1kPa

Photograph 6: Set-up for Electrical Fast Transient (EFT)



Test Result

Table 4: Immunity against Electrical Fast Transients (EFT)

Coupling point	Application	Level (kV)	Polarity	Remark
Power ports				
AC power port	Coupling network	1	+	Applied, *)
		1	-	Applied, *)
DC power port	Coupling clamp	0.5	+	N/A
		0.5	-	N/A

*) Remark: No degradation was found.

6.3.2 Surge

RESULT: **Pass**

Test Specification

Family standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-5
Definitions of the waveform parameters	:	
Front time		1.2 µs ± 30 %
Time to half value		50 µs ± 20 %
Source impedance	:	
Power line symmetrical		2 Ω + 18 µF
Power line unsymmetrical		12 Ω + 9 µF
Polarity	:	Positive and negative
Number of surges / polarity /phase angle	:	5
Phase angles	:	90°and 270 °
Repetition rate	:	60 s
Performance criterion	:	C

Test Setup

Date of testing	:	11 Dec, 2017
Input voltage	:	AC 230V, 50Hz
Operation mode	:	On mode
Temperature	:	23.4°C
Humidity	:	52.6%
Air pressure	:	101.2kPa

Photograph 7: Set-up for Surge

Test Result

Table 5: Surge Immunity Tests

Coupling point	Application	Level (kV)	Polarity	Remark
AC power port	Between phase and neutral	0.5	+	Applied, *)
		0.5	-	Applied, *)
AC power port	Between phase and earth	0.5,1,2	+	N/A
		0.5,1,2	-	N/A
AC power port	Between neutral and earth	0.5,1,2	+	N/A
		0.5,1,2	-	N/A

*) Remark: No degradation was found.

6.3.3 Electrostatic Discharges (ESD)

RESULT: **Pass**

Test Specification

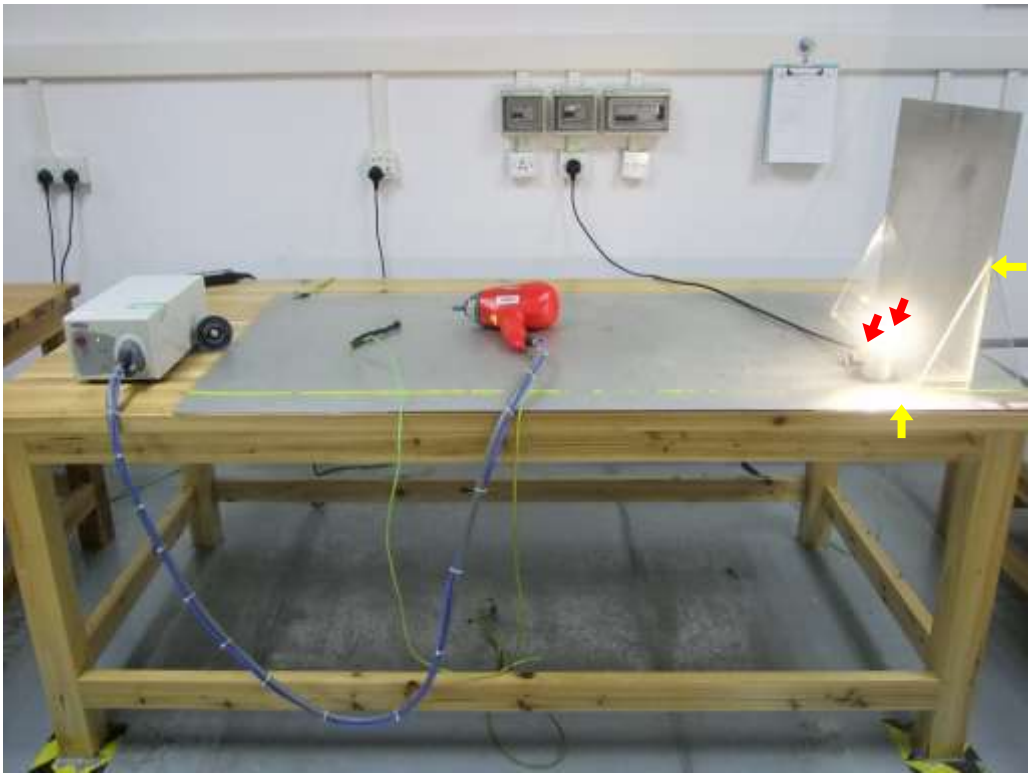
Family standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-2
Discharge impedance	:	330 Ω / 150 pF
Number of discharges	:	≥ 10
Polarity	:	Positive and negative
Discharge location	:	See photo documentation of the test set-up All external locations accessible by hand Horizontal coupling plate (HCP) Vertical coupling plate (VCP)
Performance criterion	:	B

Test Setup

Date of testing	:	11 Dec, 2017
Input voltage	:	AC 230V, 50Hz
Operation mode	:	On mode
Temperature	:	23.4°C
Humidity	:	52.1%
Air pressure	:	101.2kPa

Photograph 8: Set-up for Electrostatic Discharge

Contact Discharge ±4kV Air Discharge ±2,4,8kV



Test Result

Table 6: Electrostatic Discharge

Direct discharges			
Air discharges Discharge location	Air discharge voltage (kV)	Polarity	Remark
Refer to Photograph of ESD setup	2, 4, 8	+	Applied, *)
Refer to Photograph of ESD setup	2, 4, 8	-	Applied, *)
Non-conductive parts of enclosure	2, 4, 8	+/-	Applied, *)
Contact discharges Discharge location	Contact discharge voltage (kV)	Polarity	Remark
Refer to Photograph of ESD setup	4	+	N/A
Refer to Photograph of ESD setup	4	-	N/A
Conductive parts	4	+/-	Applied, *)
Indirect discharges			
Contact discharges Discharge location	Contact discharge voltage (kV)	Polarity	Remark
HCP	4	+/-	Applied, *)
VCP	4	+/-	Applied, *)

*) Remark: No degradation was found.

6.4 Power Supply Alterations

6.4.1 Voltage Dips and Interruptions

RESULT: **Pass**

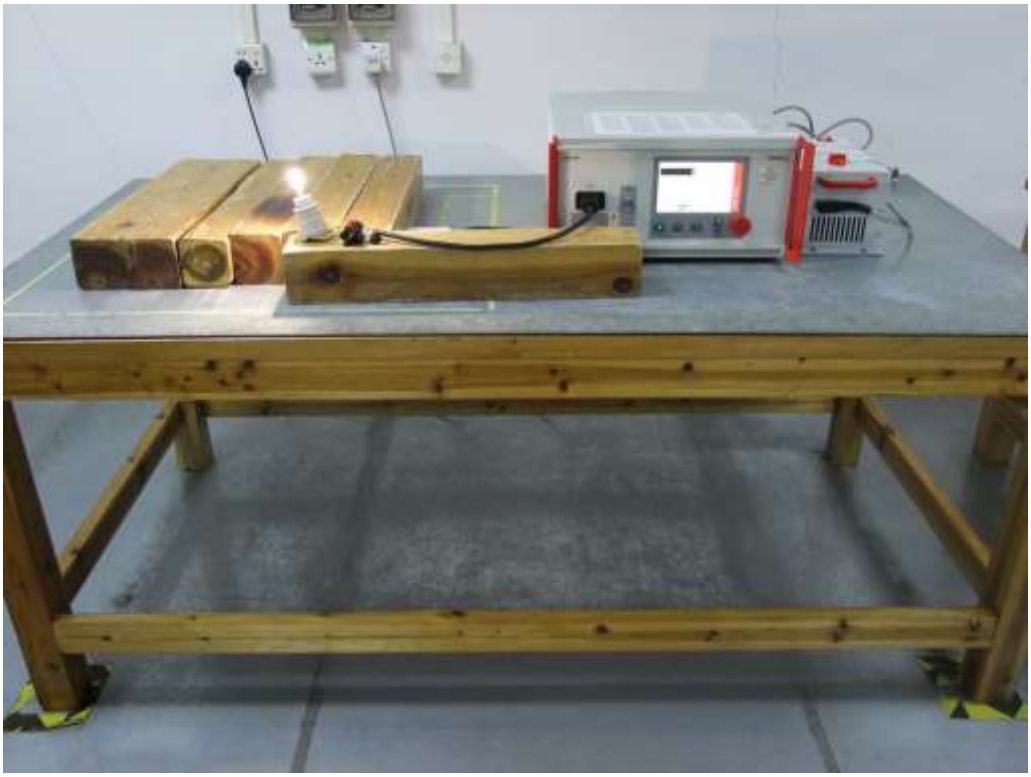
Test Specification

Family standard	:	EN 61547:2009
Basic standard	:	IEC 61000-4-11
Test voltage generator characteristics for interruptions:		
Rise time		Between 1 µs and 5 µs
Fall time		Between 1 µs and 5 µs
Output impedance of test voltage generator:		<(0.4 + j 0.25 Ω)
Phase angle	:	0°
Nominal mains voltage (Ut)	:	AC230V
Rated frequency	:	50/60Hz
Interval	:	>10s
Performance criterion	:	B+C

Test Setup

Date of testing	:	11 Dec, 2017
Input	:	AC 230V, 50Hz
Operation mode	:	On mode
Temperature	:	23.4°C
Humidity	:	52.5%
Air pressure	:	101.2 kPa

Photograph 9: Set-up for Voltage Dips and Interruptions



Test Result

Table 7: Voltage Dip and Interruptions Immunity

Interruptions			
Test level (% Ut)	Duration (cycle)	Number of interruptions	Result
0	0.5	3	Applied, *)
Voltage dips			
Test level (% Ut)	Duration (cycle)	Number of voltage dips	Result
70	10	3	Applied, *)

*) Remark: No degradation was found.

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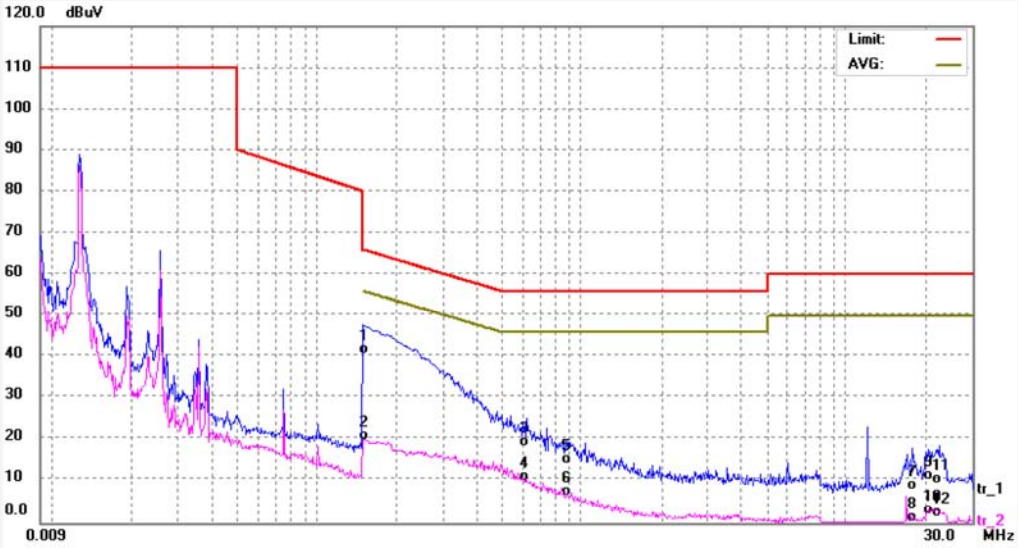
Prüfbericht - Nr.: **50140581 001**
Test Report No.

WALTEK SERVICES CO., LTD.
2/f,2nd Building,Sunlink International Machinery City,
Chencun Town,Shunde District,Foshan City,China.
Tel:+86-0757-23811398
Fax:+86-0757-23811381

Job No.: 20171025	Phase: L1
Standard: EN 55015_QP	Power Source: AC 245V/50Hz
Test item: Conduction Test	Date: 2017/12/08
Temp.(C)/Hum.(%): 24.8 C / 49.3 %	Time: 18:00:59
EUT: G9 2.2W 230Lm	Engineer Signature: Leo
Mode: Lighting mode	
Model: G9-2.2-XX/G19/54	
Note:	



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1527	31.03	9.67	40.70	65.85	-25.15	QP	
2	0.1527	10.18	9.67	19.85	55.85	-36.00	AVG	
3	0.6220	8.72	9.72	18.44	56.00	-37.56	QP	
4	0.6220	0.23	9.72	9.95	46.00	-36.05	AVG	
5	0.8740	4.65	9.73	14.38	56.00	-41.62	QP	
6	0.8740	-3.28	9.73	6.45	46.00	-39.55	AVG	
7	17.8420	-2.48	10.47	7.99	60.00	-52.01	QP	
8	17.8420	-10.36	10.47	0.11	50.00	-49.89	AVG	
9	20.4619	-0.44	10.71	10.27	60.00	-49.73	QP	
10	20.4619	-8.68	10.71	2.03	50.00	-47.97	AVG	
11	22.5260	-1.10	10.63	9.53	60.00	-50.47	QP	
12	22.5260	-9.35	10.63	1.28	50.00	-48.72	AVG	

Tested by: Leo. Feng Reviewed by: Tom Xiao

WALTEK SERVICES CO., LTD.
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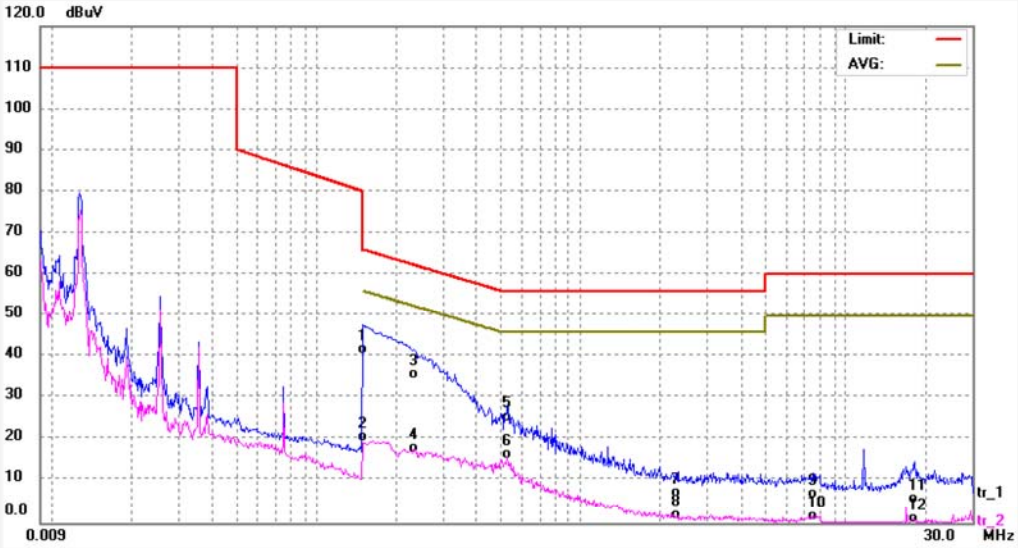
Job No.: 20171025	Phase: N
Standard: EN 55015_QP	Power Source: AC 245V/50Hz
Test item: Conduction Test	Date: 2017/12/08
Temp.(C)/Hum.(%): 24.8 C / 49.3 %	Time: 18:06:22
EUT: G9 2.2W 230Lm	Engineer Signature: Leo
Mode: Lighting mode	
Model: G9-2.2-XX/G19/54	

Note:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	31.10	9.67	40.77	65.99	-25.22	QP	
2	0.1500	9.86	9.67	19.53	55.99	-36.46	AVG	
3	0.2347	24.93	9.69	34.62	62.28	-27.66	QP	
4	0.2347	7.26	9.69	16.95	52.28	-35.33	AVG	
5	0.5260	14.79	9.70	24.49	56.00	-31.51	QP	
6	0.5260	5.74	9.70	15.44	46.00	-30.56	AVG	
7	2.3140	-3.53	9.79	6.26	56.00	-49.74	QP	
8	2.3140	-9.07	9.79	0.72	46.00	-45.28	AVG	
9	7.4660	-4.05	9.99	5.94	60.00	-54.06	QP	
10	7.4660	-9.42	9.99	0.57	50.00	-49.43	AVG	
11	18.2099	-5.73	10.51	4.78	60.00	-55.22	QP	
12	18.2099	-11.56	10.51	-1.05	50.00	-51.05	AVG	

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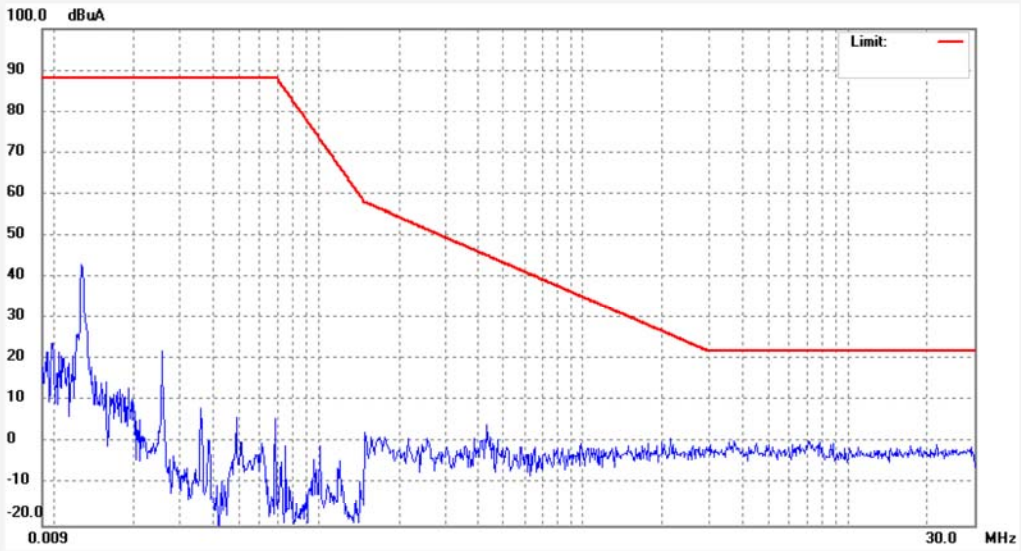
Job No.: 20171025	Polarization: X
Standard: 15_LOOP	Power Source: AC 245V/50Hz
Test item: Radiation Test	Date: 17/10/25/
Temp.(C)/Hum.(%): 24.8 C / 49.3 %	Time: 14/21/49
EUT: G9 2.2W 230Lm	Engineer Signature: Leo
Mode: Lighting mode	Distance:
Model: G9-2.2-XX/G19/54	

Note:



No.	Freq. (MHz)	Reading (dBuA)	Factor (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Detector	Remark

WALTEK SERVICES CO., LTD.
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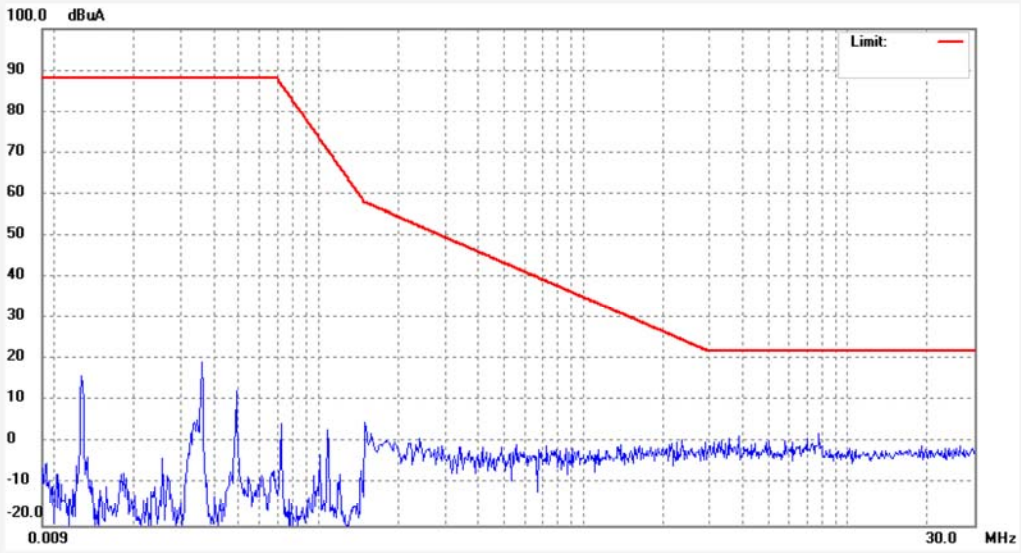
Job No.: 20171025	Polarization: Y
Standard: 15_LOOP	Power Source: AC 245V/50Hz
Test item: Radiation Test	Date: 17/10/25/
Temp.(C)/Hum.(%): 24.8 C / 49.3 %	Time: 14/23/56
EUT: G9 2.2W 230Lm	Engineer Signature: Leo
Mode: Lighting mode	Distance:
Model: G9-2.2-XX/G19/54	

Note:



No.	Freq. (MHz)	Reading (dBuA)	Factor (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Detector	Remark

WALTEK SERVICES CO., LTD.
2/f,2nd Building,Sunlink International Machinery City,
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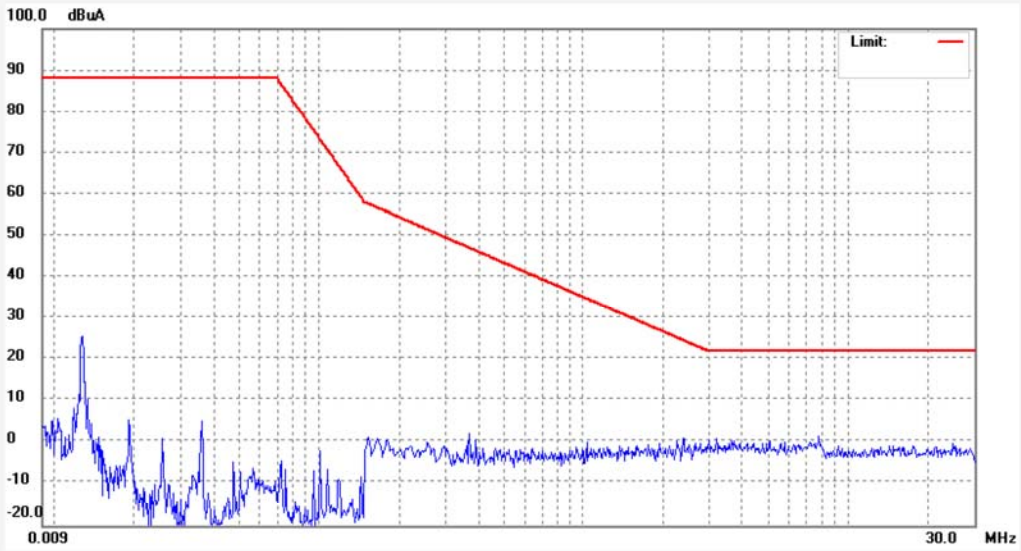
Job No.: 20171025	Polarization: Z
Standard: 15_LOOP	Power Source: AC 245V/50Hz
Test item: Radiation Test	Date: 17/10/25/
Temp.(C)/Hum.(%): 24.8 C / 49.3 %	Time: 14/27/53
EUT: G9 2.2W 230Lm	Engineer Signature: Leo
Mode: Lighting mode	Distance:
Model: G9-2.2-XX/G19/54	

Note:



No.	Freq. (MHz)	Reading (dBuA)	Factor (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Detector	Remark

WALTEK SERVICES CO., LTD.
2/f,2nd Building,Sunlink International Machinery City,
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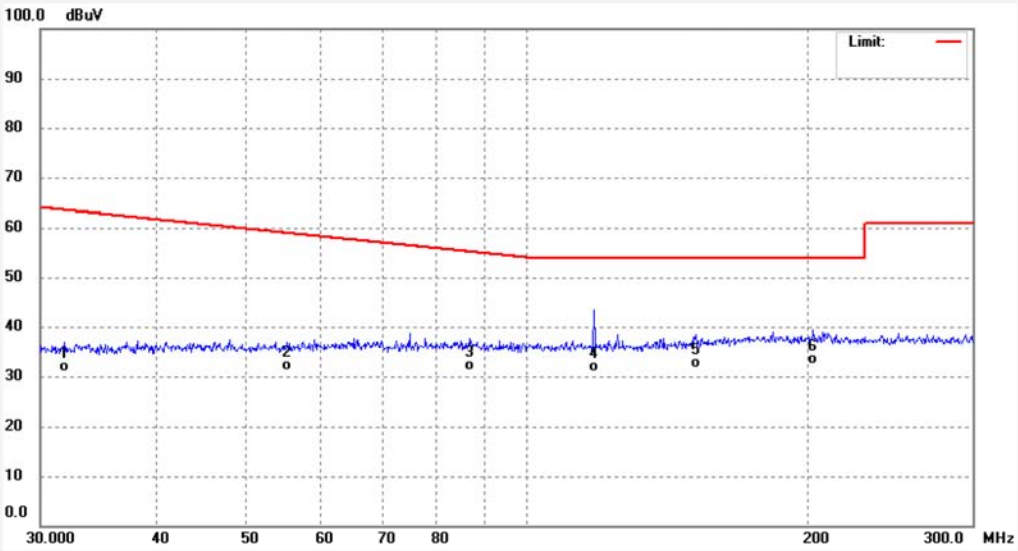
Tel:+86-0757-23811398
Fax:+86-0757-23811381

Job No.: 20171025	Polarization: Horizontal
Standard: EN 55015 CDN	Power Source: AC 245V/50Hz
Test item: Radiation Test	Date: 17/10/25/
Temp.(C)/Hum.(%): 24.8 C / 49.3 %	Time: 13/58/27
EUT: G9 2.2W 230Lm	Engineer Signature: Leo
Mode: Lighting mode	Distance:
Model: G9-2.2-XX/G19/54	

Note:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	31.9200	14.29	16.59	30.88	63.48	-32.60	QP	
2	55.3200	14.35	16.74	31.09	58.92	-27.83	QP	
3	86.9200	14.17	16.90	31.07	55.16	-24.09	QP	
4	118.0400	13.80	16.96	30.76	54.00	-23.24	QP	
5	151.7200	14.65	17.06	31.71	54.00	-22.29	QP	
6	202.8000	15.10	17.18	32.28	54.00	-21.72	QP	

Prüfbericht - Nr.: **50140581 001**
Test Report No.

Test Equipment	Model	Manufacturer	Serial No.	Cal Until
WALTEK SERVICES (FO SHAN) CO., LTD.				
Disturbance Voltage				☒
EMI Test Receiver	ESCI	R&S	101178	04.Jan.2019
LISN	ENV216	R&S	101215	04.Jan.2019
Cable	CBL2-NN-3M	HUBER+SUHNER	2230300	04.Jan.2019
Switch	RSU/M2	ESE	---	04.Jan.2019
Radiated electromagnetic disturbance(9kHz to 30MHz)				☒
EMI Test Receiver	ESCI	R&S	101178	04.Jan.2019
Three Loops Antenna	HXYZ9170	SCHWARZBECK	213	04.Jan.2019
CDN method for Lighting Equipments' Radiated Disturbance				☒
EMI Test Receiver	ESRI	R&S	101178	04.Jan.2019
CDN	M016	TESEQ	31586	04.Jan.2019
Cable	CBL2-NN-3M	HUBER+SUHNER	2230300	04.Jan.2019
Electrostatic Discharge(ESD)				☒
ESD Simulator	NSG437	TESEQ	521	04.Jan.2019
Electrical Fast Transient(EFT)				☒
EMS test system	NSG3040	TESEQ	0319	04.Jan.2019
Step Transformer	INA6501	TESEQ	206	04.Jan.2019
Surge				☒
Surge Simulator	NSG3060	TESEQ	1395	04.Jan.2019
Conducted Susceptibility (150kHz-230MHz)/(150kHz-80MHz)				☒
Conducted Immunitytest system	NSG4070-75	TESEQ	31469	04.Jan.2019

Test Equipment	Model	Manufacturer	Serial No.	Cal Until
CDN	M016	TESEQ	31586	04.Jan.2019
Voltage Dips and Interruptions				☒
EMS test system	NSG3040	TESEQ	0319	04.Jan.2019
Step Transformer	INA6501	TESEQ	206	04.Jan.2019
WALTEK SERVICES (NINGBO) CO., LTD.				
Radiated Susceptibility				☒
RF Power Amplifier	5225F	OPHIR	1051/1712	11.May.2019
RF Power Amplifier	5293F	OPHIR	1051/171.	11.May.2019
Stacked double logarithmic periodic antenna	STLP9128E-SPECIAL	SCHWARZBECK	STLP 9128E	04.May.2019
Stacked double logarithmic periodic antenna	STLP 9149	SCHWARZBECK	STLP 9149 #476	04.May.2019
RF signal generator	N5181A	Agilent	MY48080720	04.Jan.2019
Power meter	NRP6A	RS	101133	11.May.2019
Power meter	NRP6A	RS	101134	11.May.2019
Electric field probe	EP 601	Narda S.T.S/PMM	---	---